

Videocassette Recorder

Model:

UVW-1400A/1400AP

Operating Instructions page 1(E)

Before operating the unit, please read this manual thoroughly and retain it for future reference.

Mode d'emploi page 1(F)

Avant la mise en service de cet appareil, prière de lire attentivement ce mode d'emploi que l'on conservera pour toute référence ultérieure.



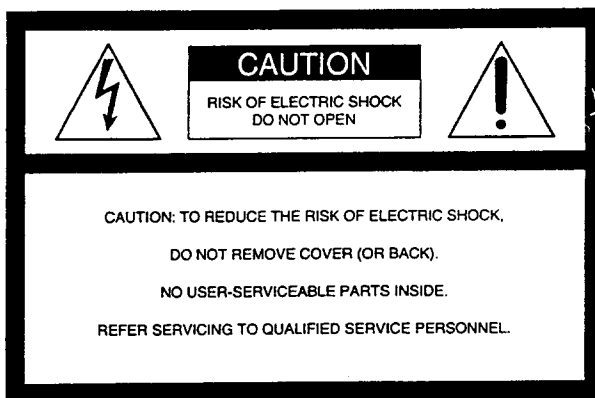
Owner's Record

The model and serial numbers are located at the rear. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. UVW-1400A Serial No. _____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.



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.

Caution

Television programs, films, video tapes and other materials may be copyrighted. Unauthorized recording of such material may be contrary to the provisions of the copyright laws.

For customers in the USA

WARNING

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

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

The shielded interface cable recommended in this manual must be used with this equipment 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 United Kingdom

WARNING

THIS APPARATUS MUST BE EARTHED.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

| | |
|-------------------|---------|
| Green-and-yellow: | Earth |
| Blue: | Neutral |
| Brown: | Live |

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol \perp or coloured green or green-and-yellow.

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

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To take best advantage of the many features of this unit, note the following important points.

Usable cassette tapes (see page 3-3(E))

Use only metal cassette tapes with this unit. Do not use oxide tapes.

Reference video input (see page 3-5(E))

When recording or playing back videotapes on this unit, always input a composite video signal synchronized with the video signal to be used to the REF. VIDEO INPUT connector. Especially when recording, failure to input a reference video signal to the REF. VIDEO INPUT connector will prevent the built-in time base stabilizer (TBS) from functioning correctly, causing picture breakup. Even if you are recording only audio signal or time code, do not fail to input a reference video signal.

Selecting the input video signal types (see page 4-11(E))

When recording, set the VIDEO IN selector switches on the subsidiary control panel to match the type of video input signal. Note that when inputting component video signals you must set both the upper and lower VIDEO IN selector switches properly. If these switches are not set to the correct positions, pictures will not appear on the monitor and recording is impossible.

Setting the cassette record-inhibit plug (see page 3-4(E))

Recording on a cassette is impossible when its record-inhibit plug is pushed in. If the record-inhibit plug is pushed in on the cassette you are going to use, either use a new tape, or pull out the plug and use the tape after making sure that it contains no important material.

Controlling tape transport remotely (see page 6-4(E))

The tape transport buttons on this unit are normally disabled when the REMOTE indicator is lit. However, you can use these buttons if you set the LOCAL ENABLE menu item to ALL ENABLE. The factory default setting for this item is STOP & EJECT.

Storing in a rack

When installing this unit in a standard 19-inch rack, you can stack up to three units in one rack. When stacking four or more units, be sure to leave space equivalent to one unit height, or 44.45 mm (1 3/4 inches) between units.

Chapter 1

Overview

This chapter overviews the features of this unit.

Features 1-2 (E)

The UVW-1400A/1400AP is a Betacam SP videocassette recorder, capable of recording and playing back composite video, component video and analog audio signals.

The UVW-1400A is for the NTSC system, and the UVW-1400AP is for the PAL system. The descriptions and explanations in this manual are common to both the UVW-1400A and UVW-1400AP unless otherwise indicated.

Betacam SP format

Excellent video and audio performance

The Betacam SP format provides superior video and audio performance, with an improved signal-to-noise ratio, better frequency response and improved reproduction of details, for greatly enhanced video and audio quality.

Compatibility with other Betacam SP VTRs

A metal tape cassette recorded on this unit can also be played back on other Betacam SP VTRs¹⁾. Again metal tape cassettes recorded on other Betacam SP VTRs can be played back on the UVW-1400A/1400AP. The cassette size is detected automatically.

Full range of recording and playback functions

RGB signal recording and playback

Direct input and output of RGB signals is possible. You can either use an RGB signal including a sync signal or input or output an independent sync signal.

Built-in time code generator and reader

The built-in time code generator allows the unit to record time codes (LTC or user's bits) simultaneously with the video and audio signals. The built-in time code reader allows the unit to read time codes (LTC or user's bits) from a tape.

Built-in time base stabilizer (TBS)

The built-in time base stabilizer allows you to obtain a stable playback picture with no horizontal jitter or color fluctuation.


Microprocessor servo system

Four microprocessor-controlled DC motors provide direct drive for the drum, capstan and reels, enabling quick and accurate tape access.

Audio noise reduction

Longitudinal audio tracks 1 and 2 use the same Dolby C-type noise reduction²⁾ as a conventional Betacam SP System. These circuits are always operating when recording or playing back.

1) Because this unit does not record the AFM carrier wave, noise may be heard when tapes recorded on this unit are played back by other VTRs in the BVW series. If necessary, lower the audio levels of channels 3 and 4 on the other VTR.

2) Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

Backspace edit

This unit has a backspace edit function. It allows you to pause and resume recording with no breakup in the picture when controlling this unit from a remote control unit or computer.

Repeat playback

A repeat playback between selected two points is possible.

Foot switch for start and pause control of recording

By connecting a Sony RS-20 or other foot switch to the REMOTE 2 connector on the rear panel, you can start and pause recording by foot control. Three types of foot switch are supported: select the type by a menu operation.

Triggering a video printer

By connecting the REMOTE OUT connector on the rear panel to the REMOTE 2 connector of a Sony UP-5000/7000-series or other video printer, you can automatically output a desired frame on the video printer by pressing the FREEZE button on an SVRM-100/100A remote control unit. Use a menu operation to set the output timing according to the video printer being used.

Other features**Compact, power-saving design**

The unit is light and simple, and very energy-efficient.

Menu system

All the initial settings for system operation conditions and so forth are accessed through a simple menu system, from the subsidiary control panel.

Remote control function

The unit can be operated from a computer unit through the RS-232C serial interface.

It is also possible to use the CONTROL S connector on the front panel to connect a simple remote control unit (SIRCS type remote control unit such as an SVRM-100/100A) to carry out search operations.

Digital hours meter

The digital hours meter keeps cumulative totals of four values: the total hours powered on, the drum rotation time, the tape running time, and the numbering of threading/unthreading operations. These are displayed as superimposed text on the video monitor.

Superimposed text output

The VIDEO 2 (SUPER) OUTPUT connector provides a monitor video output which can have various information (time codes, tape speed, system settings, etc.) superimposed on it. The superimpose function can be enabled or disabled as required.



S-video connectors

With VTRs or other peripheral equipment having S-video connectors, these connectors provide a high-grade interface for video signal transfer.

Self-diagnostics

If an operating fault occurs, the system attempts to diagnose the problem, and produces an error code on the time counter display and superimposed video output.

Alarm indications

If a misoperations or faulty connections are made, the system superimposes information on the monitor screen giving nature of the error and actions to be taken. The cause of the problem is also indicated in the time counter display.

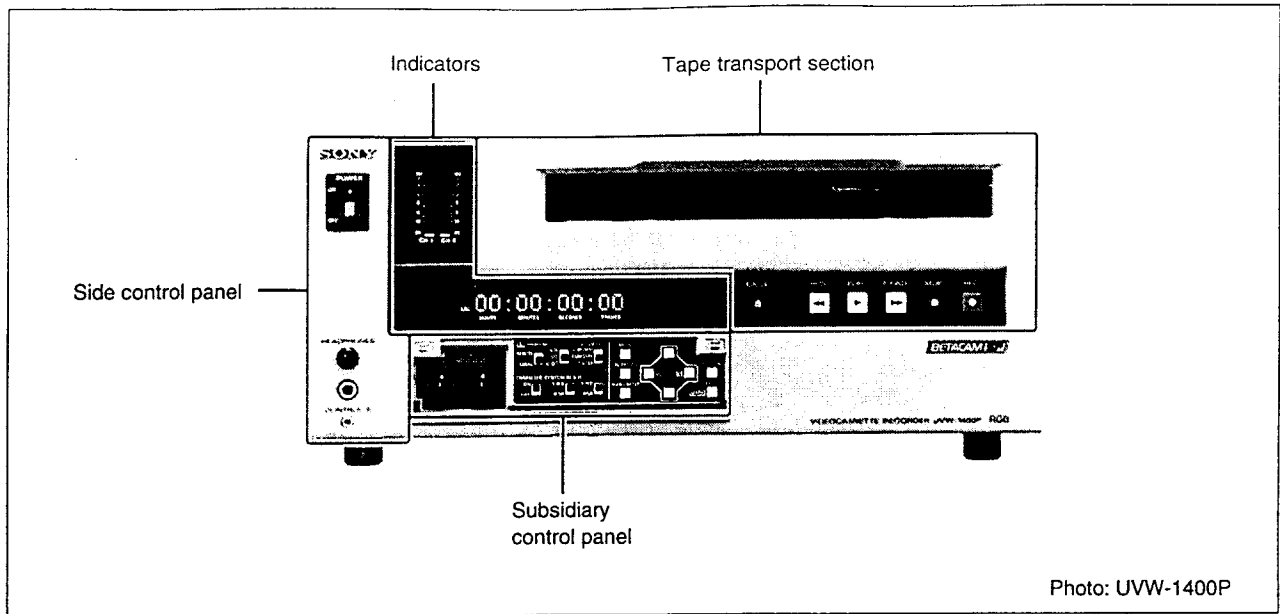
Chapter 2

Location of Parts and Controls

This chapter lists the names of all the controls and other components used in the operation of the unit.

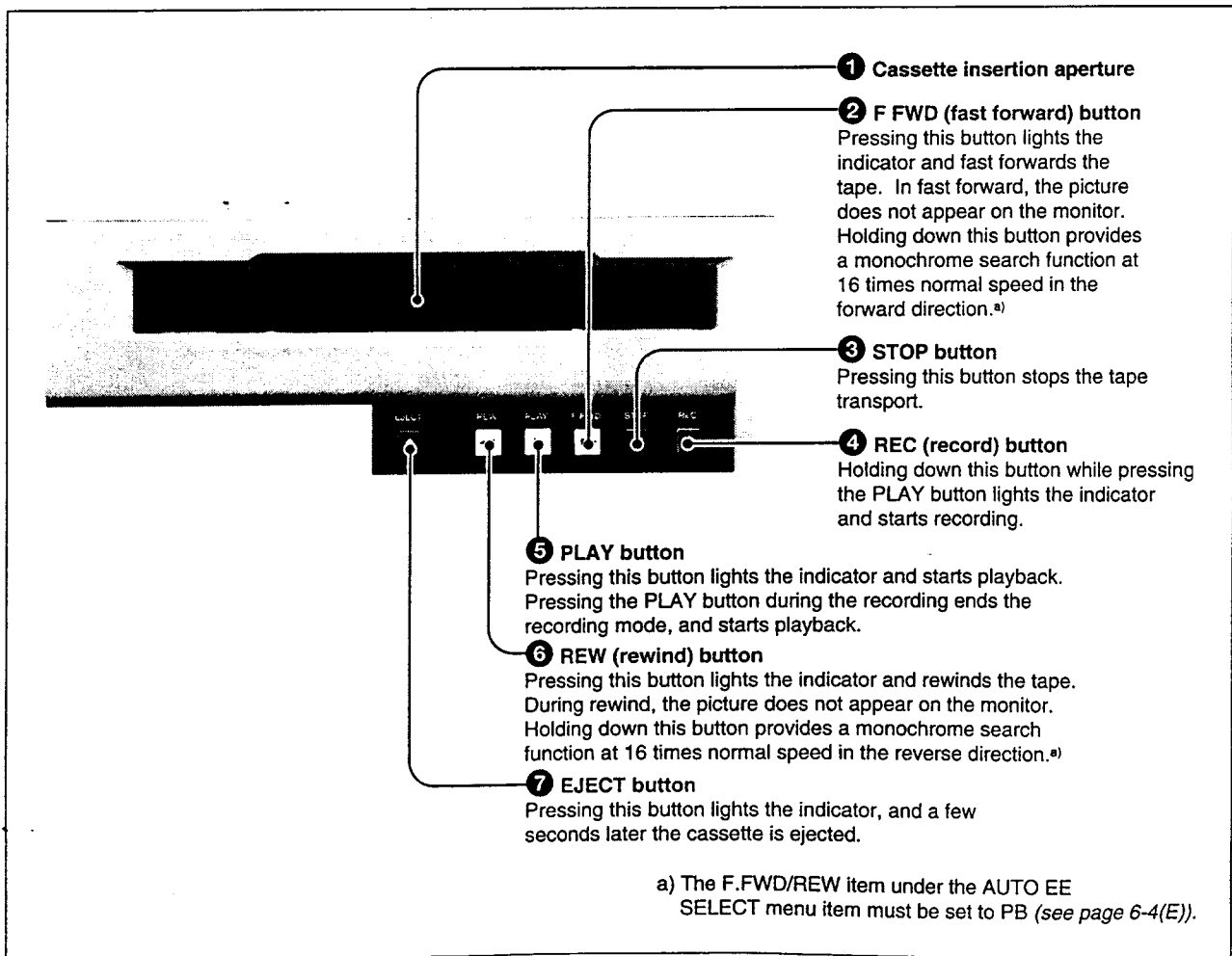
| | |
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Front Panel



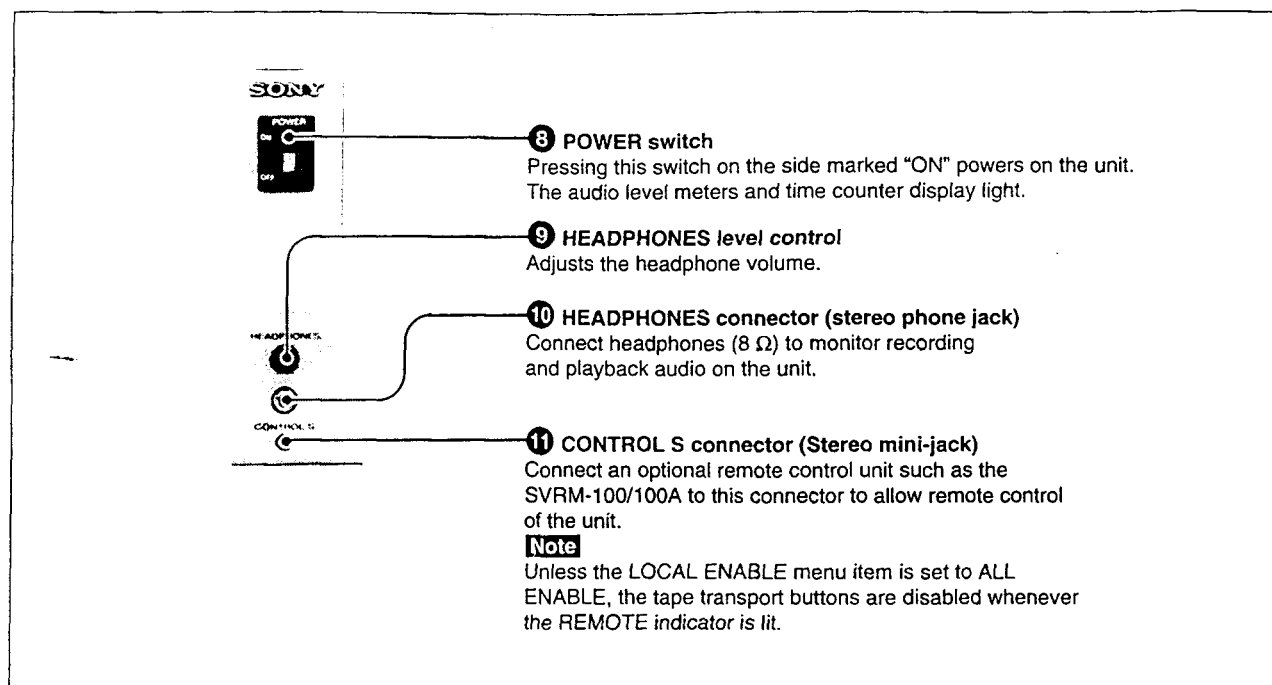
Front Panel

Tape transport section



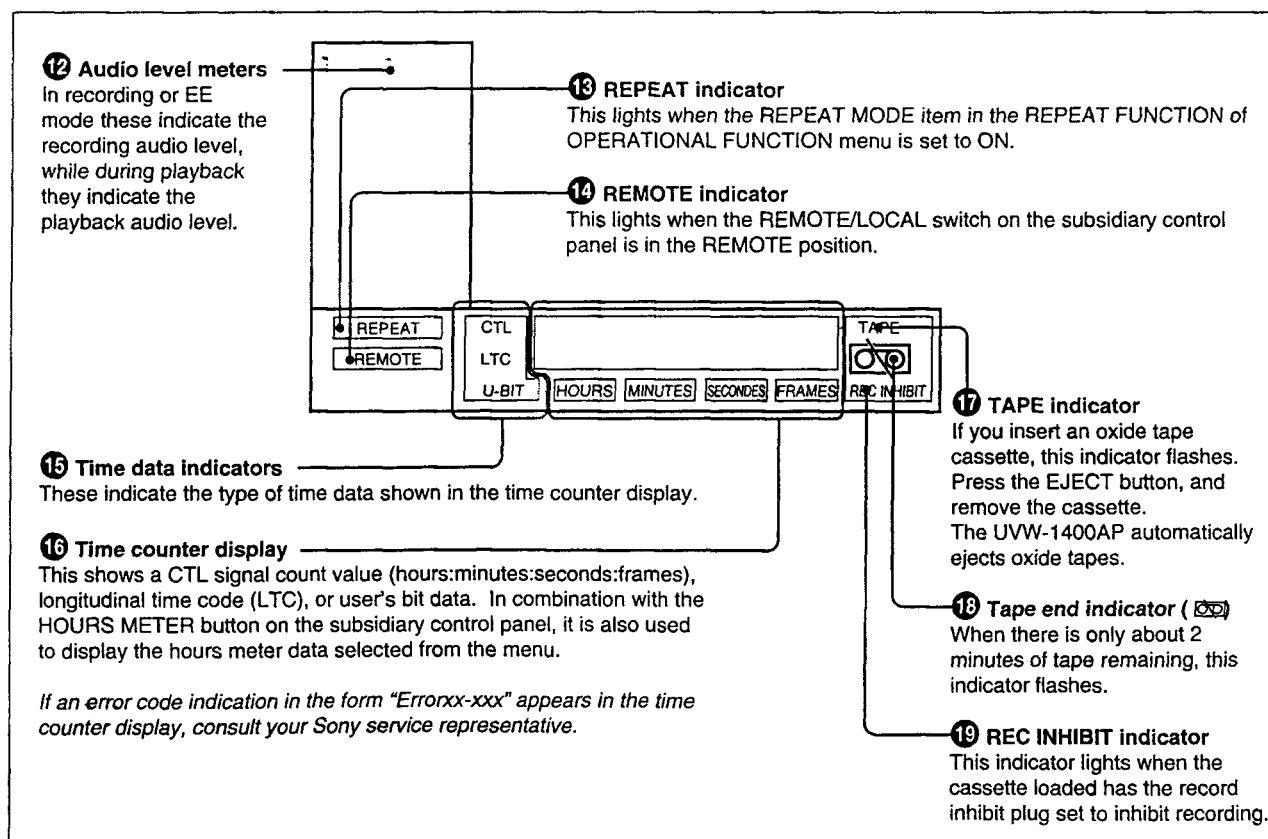
Tape transport section

Side control panel



Side control panel

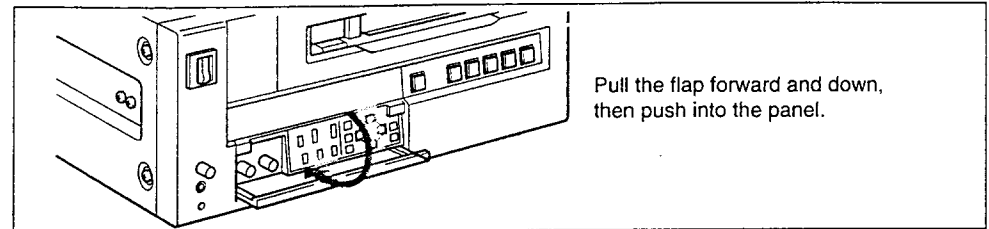
Indicators



Indicators

Subsidiary control panel

The subsidiary control panel is behind a flap on the front panel. Open the flap as shown in the figure.



Pull the flap forward and down, then push into the panel.

Accessing the subsidiary control panel

Switches and Controls

25 AUDIO INPUT LEVEL controls
These adjust the audio input levels for each of channels 1 and 2 when recording.

20 REMOTE/LOCAL switch

Selects whether the unit is controlled remotely from a device connected to the REMOTE connector on the rear panel, or locally from the control panel.

21 CTL/LTC/U-BIT switch

Selects the type of time data (CTL, LTC or user's bits) displayed.

22 VIDEO IN selector switches

Select the type of video input signal for recording or playing back a component signal (the Y-R,B or RGB position), a composite signal (COMPOSITE position), or an S-video signal (S-VIDEO position).

23 COMPONENT OUT selection switch

Selects R/G/B signals or Y/R-Y/B-Y signals for output from the RGB/COMPONENT connectors.

24 CHARACTER switch

Determines whether or not character information such as time codes is superimposed on the video output signal from the VIDEO 2 (SUPER) OUTPUT connector.

Menu Control, Time Code and Digital Hours Meter Button

30 TC (time code) PRESET button
Press this button to preset the LTC or user's bit value shown on the time counter display.

For details of how to set time code values, see the section "Setting Longitudinal Time Code and User's Bits" (page 5-3(E)).

26 MENU button

Pressing this button displays menu options on the monitor screen and the time counter display. Pressing the button again returns to normal operating mode.

For details of menu operations, see the section "Menu Operations" (page 6-10(E)).

27 Arrow direction

((A) (B)) buttons

Use these buttons to move around the menu settings, for setting time code values and also for setting the repeat A and B points.

For details of how to set time code values, see the section "Setting Longitudinal Time Code and User's Bits" (page 5-3(E)).

31 HOURS METER button

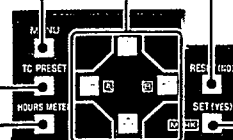
Pressing this button switches the information superimposed on the monitor screen to show the digital hours meter values. The time counter display at the same time. Pressing the button again returns to the normal indications.
For details of the digital hours meter, see the section "Digital Hours Meter" (page 7-4(E)).

28 RESET (NO) button

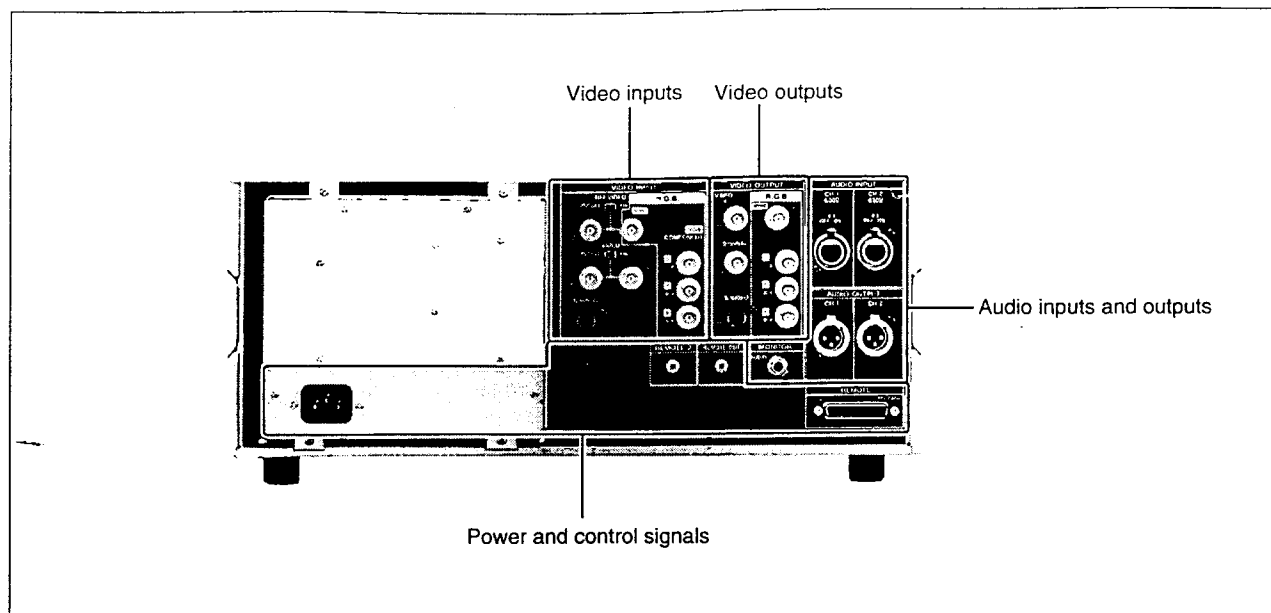
This button resets menu settings to their factory defaults, resets a time code value to zero, and is also used for a negative response to a menu question.

29 SET (YES) (MARK) button

This button confirms new menu or time code settings. It is also used for a positive response to a menu question and for setting the repeat A and B points.

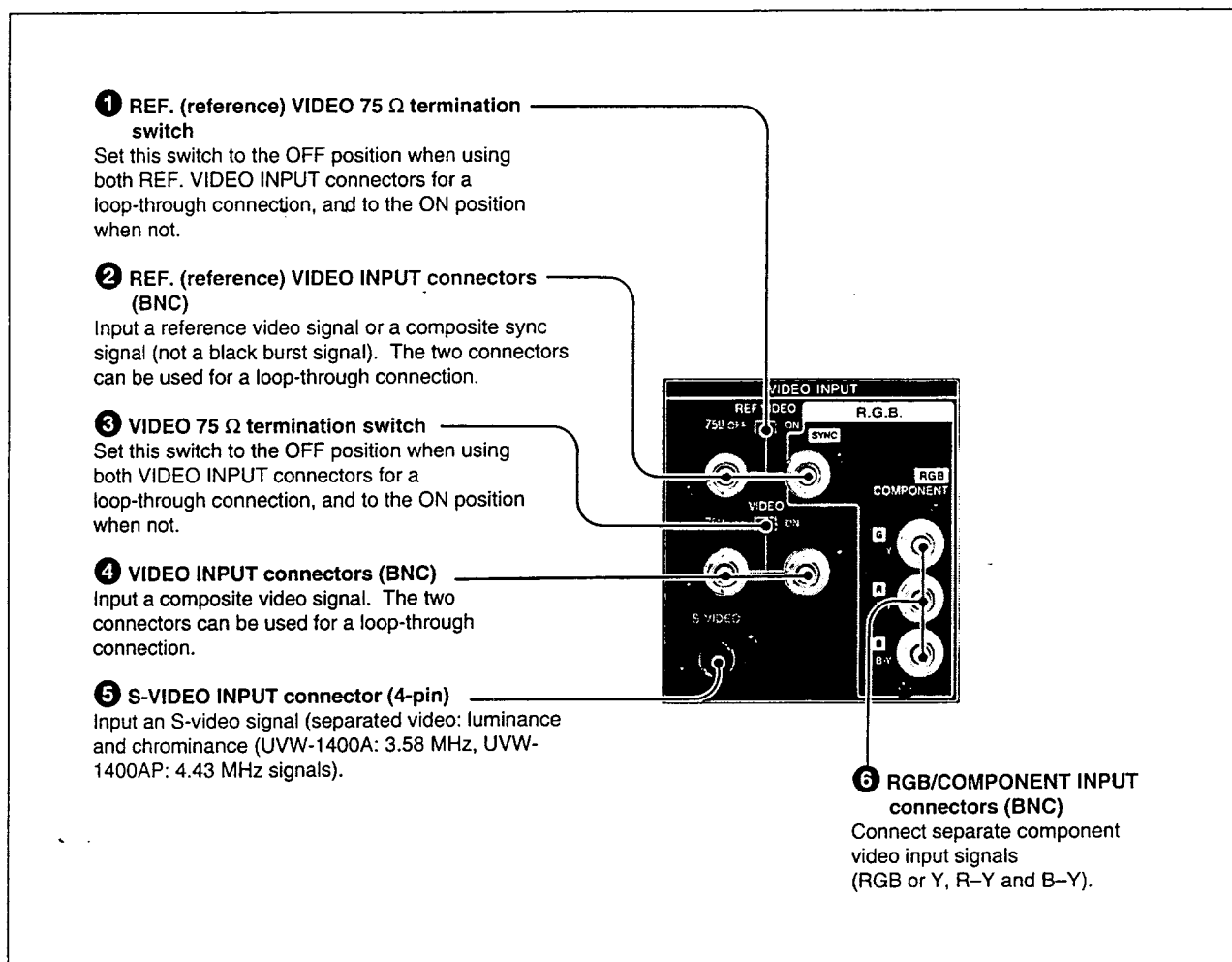


Subsidiary control panel



Rear Panel

Video inputs



Video inputs

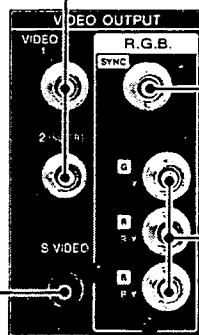
Video outputs

7 VIDEO 1 and 2 (SUPER) OUTPUT connectors (BNC)

Output composite video signals. When the CHARACTER switch on the subsidiary control panel is in the ON position, character information is superimposed on the video signal output from the VIDEO 2 (SUPER) OUTPUT connector.

8 S-VIDEO OUTPUT connector (4-pin)

Outputs an S-video signal (separated video: luminance and chrominance (UVW-1400A: 3.58 MHz, UVW-1400AP: 4.43 MHz) signals).



9 RGB SYNC OUTPUT connector (BNC)

This outputs a composite sync signal (not a black burst signal).

10 RGB/COMPONENT OUTPUT connectors (BNC)

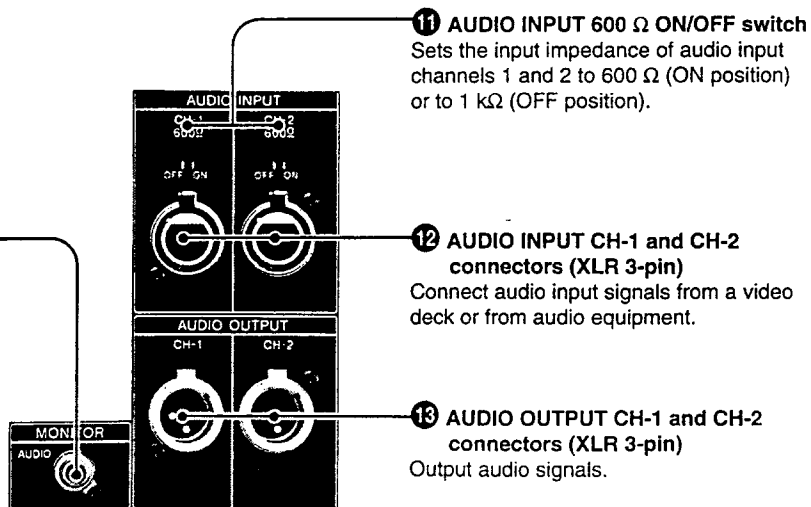
Output separate component video signals (RGB or Y, R-Y and B-Y).

Video outputs

Audio inputs and outputs

14 MONITOR AUDIO connector (RCA)

Outputs an audio signal for the video monitor.



11 AUDIO INPUT 600 Ω ON/OFF switch

Sets the input impedance of audio input channels 1 and 2 to 600 Ω (ON position) or to 1 k Ω (OFF position).

12 AUDIO INPUT CH-1 and CH-2 connectors (XLR 3-pin)

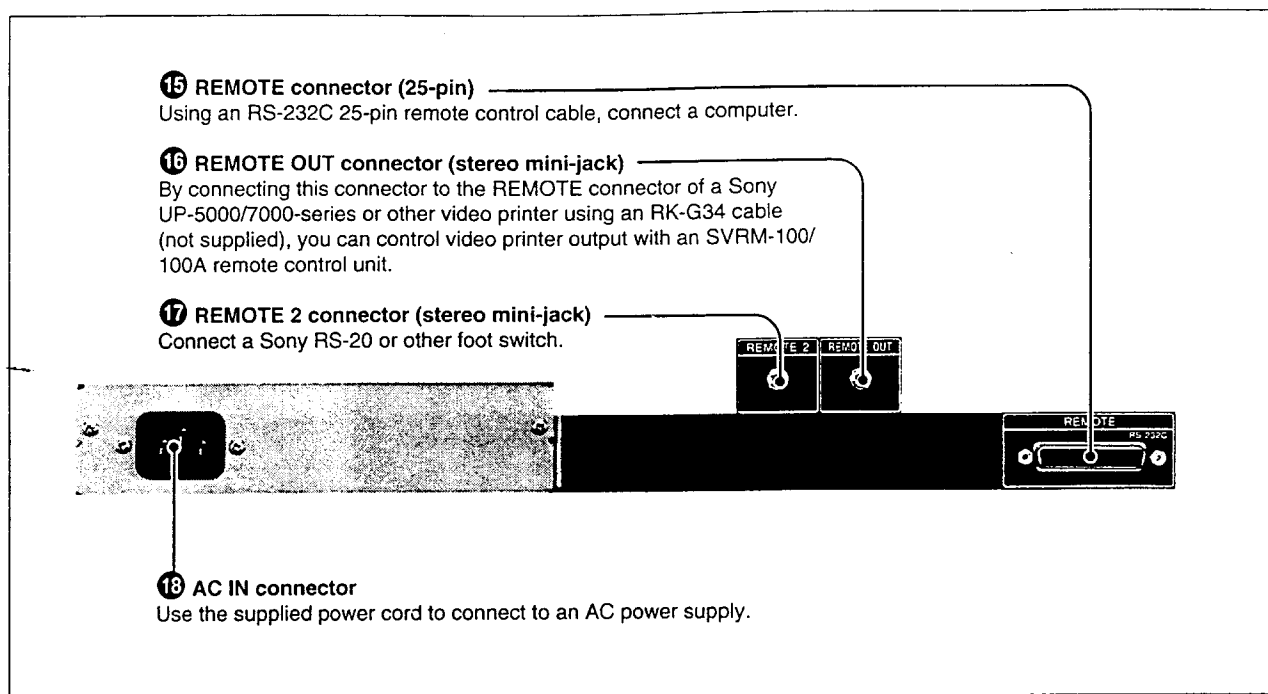
Connect audio input signals from a video deck or from audio equipment.

13 AUDIO OUTPUT CH-1 and CH-2 connectors (XLR 3-pin)

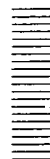
Output audio signals.

Audio inputs and outputs

Power and control signals



Power and control signals



Chapter 3

Preparations

This chapter describes various preparatory aspects of operation of this unit.

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Safety notes

Power supply

- Ensure that the unit is connected to a power supply of the correct rating.
- Do not place any heavy objects on the power cord, and be careful not to damage the power cord. Using a damaged power cord is dangerous.
- When disconnecting the power cord, not pull the cord itself, hold the plug while pulling it out.

Do not disassemble the unit

Do not remove the casing. If you insert your hand there is a danger of electric shock.

Do not drop foreign objects into the casing

If flammable objects, metal objects, water or other undesirable substances enter the casing, this can be a cause of malfunction.

In the event of a malfunction

If there should be a strange sound or smell or smoke emanating from the unit, immediately power off the unit, and disconnect the power supply and all signal connections, then refer to your supplier or Sony service representative.

Notes on operation

Operation and storage locations

Avoid operation or storage in any of the following places.

- Locations subject to extremes of temperature (operating temperature range 5 °C to 40 °C (41 °F to 104 °F))
- Locations subject to direct sunlight for long periods, or close to heating appliances (Note that the interior of a car left in summer with the windows closed can exceed 50 °C (122 °F)).

Operate the unit in a horizontal position

This unit is designed to be operated in a horizontal position. Do not operate it on its side, or tilted through an excessive angle (exceeding 20 °).

Avoid violent impacts

Dropping the unit, or otherwise imparting a violent shock to it, is likely to cause it to malfunction.

Do not obstruct ventilation openings

To prevent the unit from overheating, do not obstruct the ventilation openings, by for example wrapping the unit in a cloth while it is in operation.

Care

If the casing or panel is dirty, wipe it gently with a soft dry cloth. In the event of extreme dirt, use a cloth steeped in a neutral detergent to remove the dirt, then wipe with a dry cloth. Applying alcohol, thinners, insecticides, or other volatile solvents may result in deforming the casing or damaging the finish.

Shipping

- Always remove the cassette before shipping the unit.
- Pack the unit in its original carton or equivalent packing, and take care not to impart violent shocks in transit.

Usable Cassettes

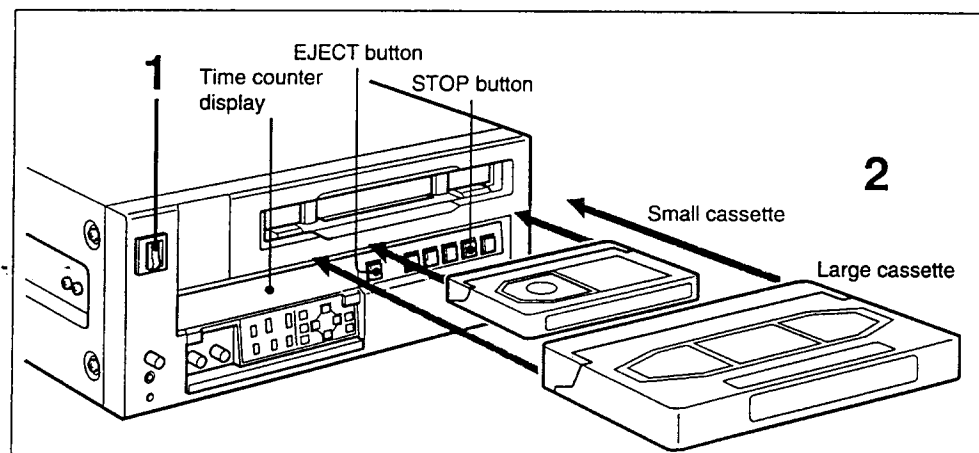
This unit only accepts metal tapes.
Use the following 1/2-inch Betacam SP cassettes.

| | Metal tape |
|---------------------|----------------------------------------------------------|
| Small (S) cassettes | BCT-5MA/10MA/20MA/30MA, UVWT-10MA/20MA/30MA |
| Large (L) cassettes | BCT-5MLA/10MLA/20MLA/30MLA/60MLA/90MLA, UVWT-60MLA/90MLA |

Inserting and Ejecting a Cassette

Always check that the unit is powered on before attempting to insert or eject a cassette.

Inserting a cassette



Inserting a cassette

- 1 Turn the POWER switch on.
- 2 Check the following points, then insert the cassette.
 - The cassette must be inserted with the side that the tape is visible uppermost.
 - There must be no slack in the tape.
 - There must be no message "HUMID !" in the time counter display.

For details of how to remove slack in the tape, see the section "Removing slack in the tape" on the next page.

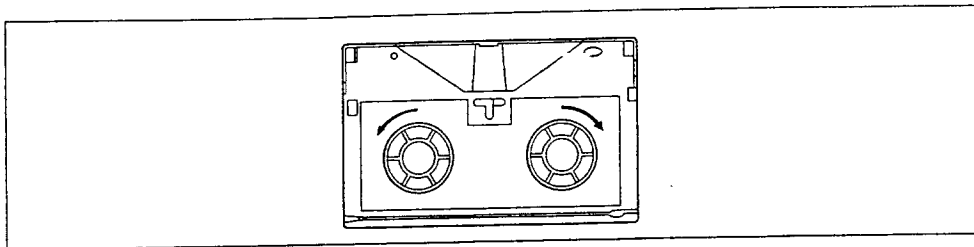
If the message "HUMID !" appears in the time counter display, see the section "Condensation" (page 7-3(E)).

To insert a small cassette, align it with the marks on the cassette compartment.

The cassette is automatically drawn into the unit, and the tape wound round the head drum. The tape is stationary while the head drum rotates, and the STOP button lights.

Removing slack in the tape

Carefully rotate one of the reels with your finger in the direction of the arrows until it stops.



Removing slack in the tape

No double insertion of cassettes

When you insert a cassette, the orange lock-out plate appears in the cassette compartment to prevent double insertion.

Ejecting the cassette

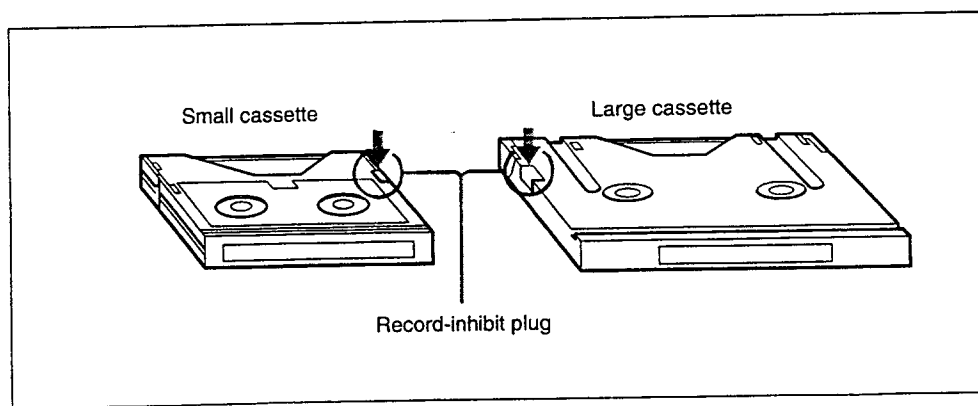
Press the EJECT button.

The tape is wound back into the cassette (this takes several seconds), and then the cassette is ejected from the unit.

If the time counter display is showing CTL values, it is reset.

Record Inhibit Function

To protect recorded material which you wish to keep, press in the record-inhibit plug on the cassette.



Record-inhibit plug

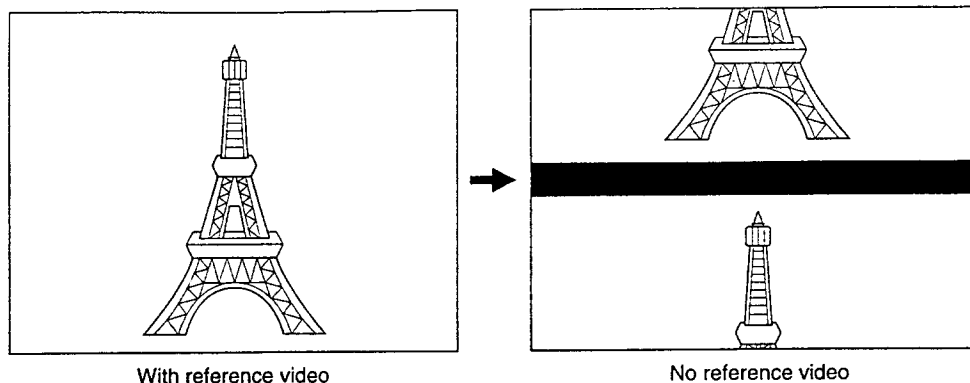
When you insert a cassette with the record-inhibit plug pushed in into the cassette compartment, the REC INHIBIT indicator lights, and it is not possible to record.

To re-record on the cassette, return the record-inhibit plug to its original position.

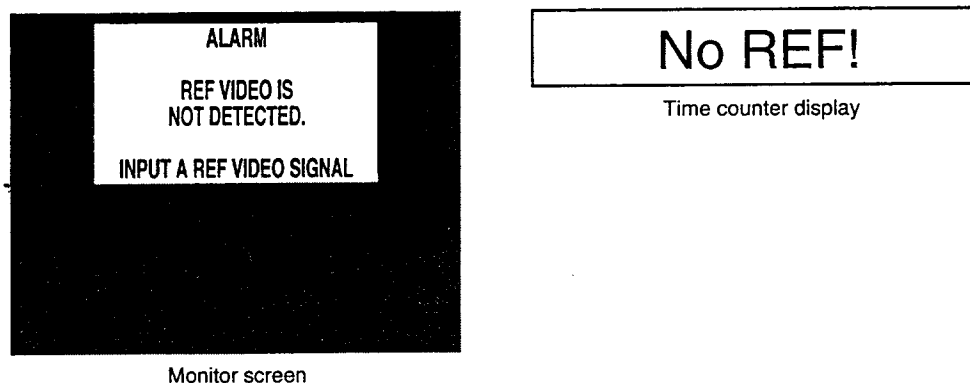
Reference Video Signals

In order to enable the time base stabilizer (TBS) to operate correctly, and ensure stable operation, you must input a composite video signal synchronized to the signal being used to the REF. VIDEO INPUT connector.

If no reference video signal is input, then during recording or in EE mode the monitor screen will tend to drift vertically, as shown in the figure below.



The monitor screen and the time counter display also show alarm messages. (Example: When the VIDEO 2 (SUPER) OUTPUT connector is used with the REF. ALARM set to "ON" in the menu.)



During playback, a monitor picture is normally stable without a reference video signal input.

For details of changing the menu settings, see the section "Menu Operations" (page 6-10(E)).

Reference Video Signals

Using RGB signals

Input

Input a sync signal synchronized to the RGB signal into the REF. VIDEO INPUT connector whether the RGB signal includes a sync signal or not.

Output

You can select in a menu whether or not to add a sync signal to the green signal. In either case the signal output from the RGB SYNC OUTPUT connector is always a composite sync signal (no burst signal).

For details of menu settings, see the item "SYNC ON GREEN" (page 6-8(E)) in Chapter 6 "Menus."



Chapter 4

Playback and Recording

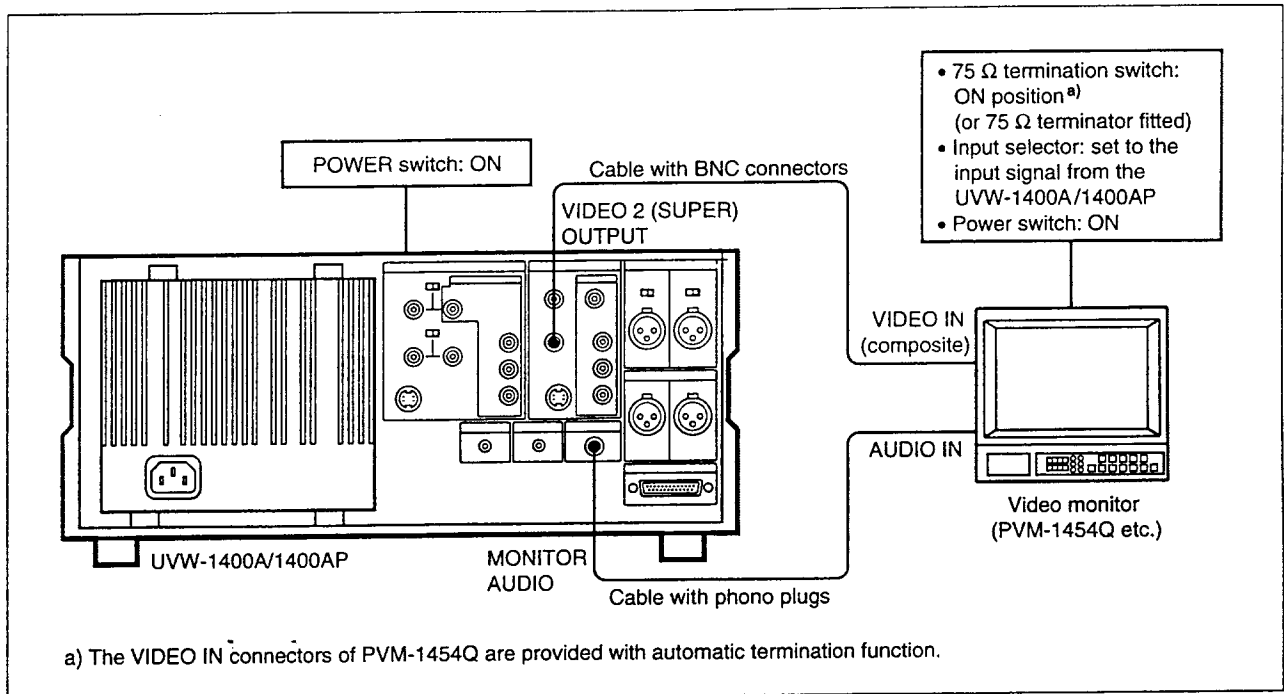
This chapter describes the preparation necessary before using the unit for playback and recording, including connections and switch settings, and operating procedures. It also describes the text information which can be superimposed on the monitor screen.

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This section describes the connections, switch settings, and basic operating procedures for playback of both video and audio signals.

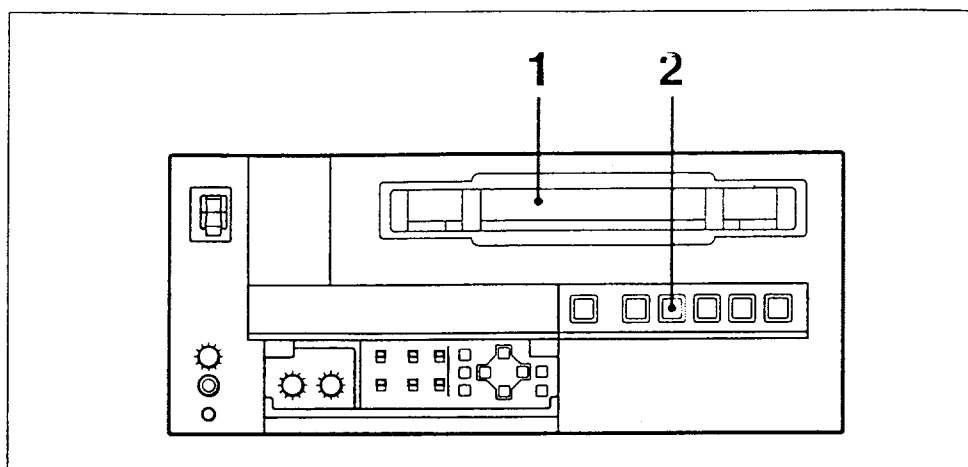
Preparation for Playback

Connect the unit to the monitor and make the switch settings as shown in the following figure.



Connections and switch settings

Playback Operation



Playback

1 Insert a metal tape cassette.

The STOP button lights, then a few seconds later the tape is ready to start running. At this point a still picture appears on the monitor. Always be sure to use a metal tape.

2 Press the PLAY button.

Playback begins.

To stop playback

Press the STOP button.

This puts the UVW-1400A/1400AP into stop mode. This unit automatically enters standby-off mode if it is left in stop mode for eight minutes.

You can change the time to switch to stand-by off mode in the TAPE PROTECTION menu. For details, see under "TAPE PROTECTION" (page 6-7(E)).

If the tape reaches the end during playback

The tape is automatically rewound to the beginning and the unit stops. You can disable this automatic rewind function using the menu.

For details, see "AUTO REW" (page 6-4(E)).

Adjusting the audio playback volume

Carry this out on the monitor.

Simple search function

With the F.FWD/REW item in the AUTO EE SELECT of OPERATIONAL FUNCTION menu set to PB, holding down the F FWD or REW button provides a monochrome search function at 16 times normal speed in the forward or reverse direction respectively. Press the PLAY button again to return to normal playback.

Repeat Playback

This unit has a repeat playback function, for continuous playback of video between selected top and end points.

Repeat top and end points

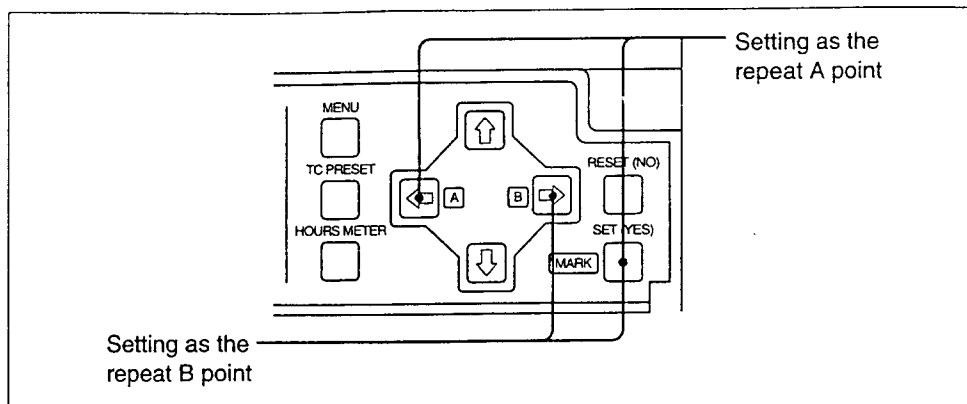
| Repeat top points | Repeat end points |
|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none">• A point set by user• Top of tape | <ul style="list-style-type: none">• B point set by user• End of tape• End of recorded materials |

Select the current repeat top and end points with the REPEAT TOP and REPEAT END menu items, located under the REPEAT FUNCTION menu.
If you set the REPEAT MODE item located under the REPEAT FUNCTION menu to ON (the REPEAT indicator on the front panel lights), the tape is cued up to the repeat top point when you power the unit on or press the PLAY button.



Note
In repeat playback mode, pressing the PLAY button cues up the repeat top point instead of starting normal playback. If you want to carry out normal playback, you will have to set the REPEAT MODE menu item to OFF.

For more information about the REPEAT FUNCTION menu, see page 6-3(E).

Setting the current tape position as the repeat A or B point



Setting the current tape position as the repeat A or B point



While holding down the SET (YES) (MARK) button on the subsidiary control panel, press the  (A) or  (B) button. The current tape position (time code value) is set as the repeat A or B point, and a message “A set” or “B set” flashes momentarily in the time counter display.



Once set, an A or B point time code value is held in the unit’s non-volatile memory until changed. It is not lost when the unit is powered off.

Note

You can only set a time code value as an A or B point. You cannot set a CTL value even when you set the CTL/LTC/U-BIT switch to CTL. Before setting an A or B point, make sure that time codes are recorded on the tape.

To check an A or B point

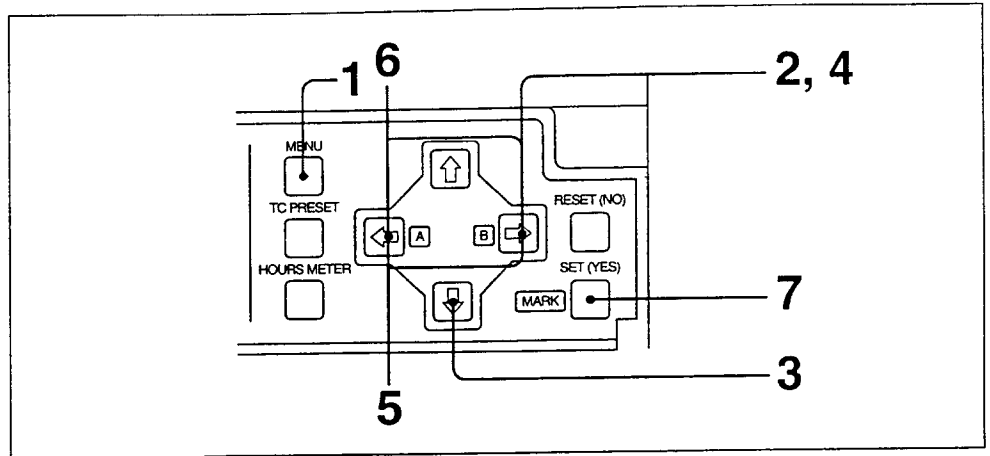
Press the  (A) or  (B) button. While the button is held down, the A or B point time code value is displayed on the monitor and in the time counter display.

If you hold down both the  (A) or  (B) buttons, the value shown is the B point time code value minus the A point time code value. If the A point time code value is greater than the B point time code value, a minus sign (–) is shown before the value.



Changing A and B points

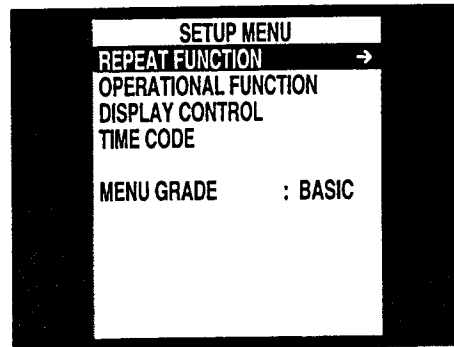
Proceed as follows to change A and B points.



Changing A and B points

- 1 Press the MENU button.


The setup menu appears.



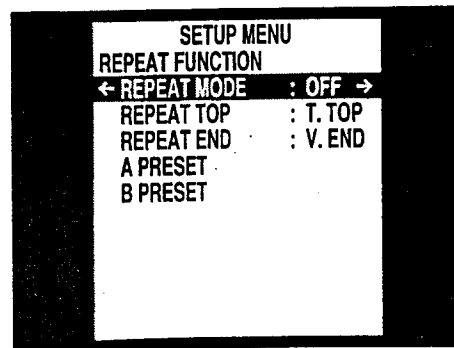
Monitor



Time counter display

- 2 Press the  (B) button.


The REPEAT FUNCTION menu screen appears.

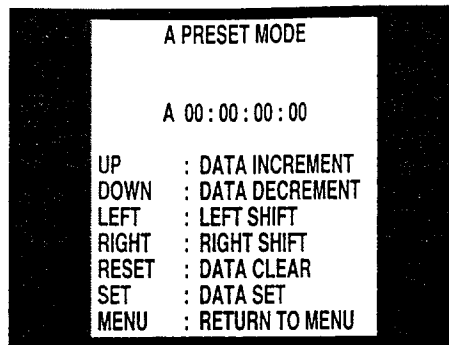


Monitor




Time counter display

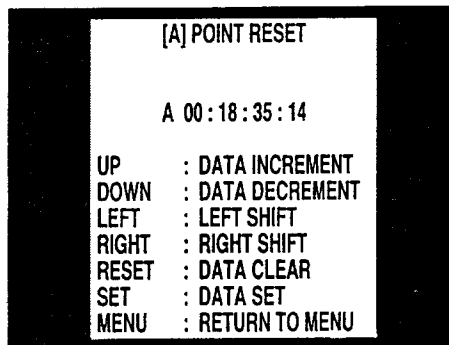
- 3 Use the  button to highlight the A PRESET or B PRESET item in reverse video.





Monitor

- 4 Press the  (B) button.



The A point or B point reset screen appears. The first item in the screen shows the current time code value of the A or B point.



Monitor

- 5 Press the  (A) or  (B) button until the digit that you want to change starts flashing.

Each press of the button causes the digit to the left or right to begin flashing. Holding the button down moves the flashing digit continuously. If you want to clear the value, press the RESET (NO) button. The value is cleared to 00:00:00:00, and the leftmost digit begins flashing.

- 6 Press the  or  button to increment or decrement the value.

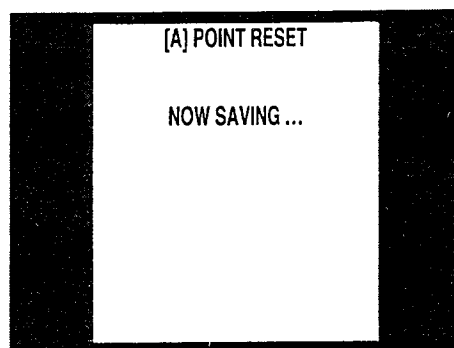
Each press of the button increments or decrements the value. Holding the button down increments or decrements the value continuously. To change other digits, return to step 5.

(Continued)

- 7 Press the SET (YES) (MARK) button to set the displayed value.

The value is saved as the A or B point, and the display changes to the main setup menu.

If you want to discard the changed value, press the MENU button to return to the main setup menu immediately. To exit the menu system, press the MENU button from the main setup menu. If you have made any changes to menu items, the following screen appears.



Monitor

Note

To prevent the loss of data, do not power the unit off while this screen is displayed.

Triggering a Video Printer

When using a Sony UP-5000/7000-series or other video printer, by connecting the REMOTE OUT connector on the rear panel to the REMOTE 2 connector of the printer, you can control video printer output with an optional SVRM-100/100A remote control unit.

- 1 Connect the SVRM-100/100A, printer, monitor and any other equipment to this unit. Connect the REMOTE OUT connector to the REMOTE 2 connector of the printer, using an RK-G34 cable (not supplied).

For details of the basic connections between this unit and the video printer, refer to the operating instructions for the printer.

- 2 Set the output timing according to the type of printer connected, by a menu selection.

For details of the output timing settings, see the item "VIDEO PRINTER" (page 6-9(E)) in Chapter 6 "Menus."

3 Display the frame to be printed as a still picture in jog/shuttle mode or by pausing.

4 Press the FREEZE button on the SVRM-100/100A.

This unit carries out a preroll and playback sequence, and outputs the specified frame to the video printer.

Triggering a video printer during playback

1 Carry out step 1 in the preceding procedure.

2 Press the PLAY button on the SVRM-100/100A.

This starts playback on this unit.

3 Press the FREEZE button on the SVRM-100/100A when the frame to be printed appears on the monitor.

This outputs the specified frame to the video printer.

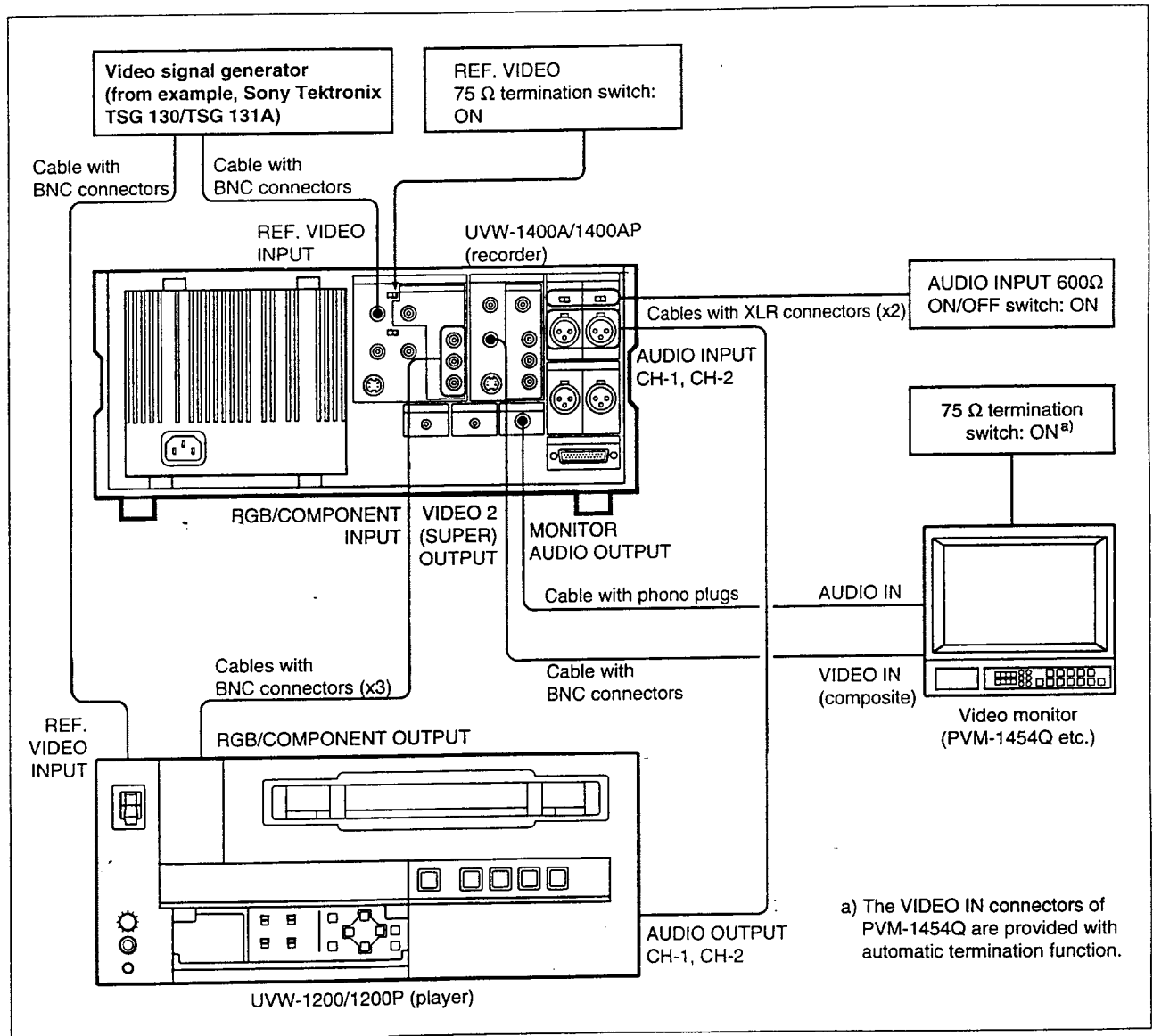
For details, refer to the Operating Instructions for the SVRM-100 or SVRM-100A.



This section describes the connections, switch settings, and operating procedures for recording a component video signal and audio signal.

Preparation for Recording

Connect this unit as the recorder and a UVW-1200/1200P as the player as shown in the following figure. To check the video and audio signals being recorded, connect this unit to a monitor as described in the section "Playback" (page 4-2(E)).



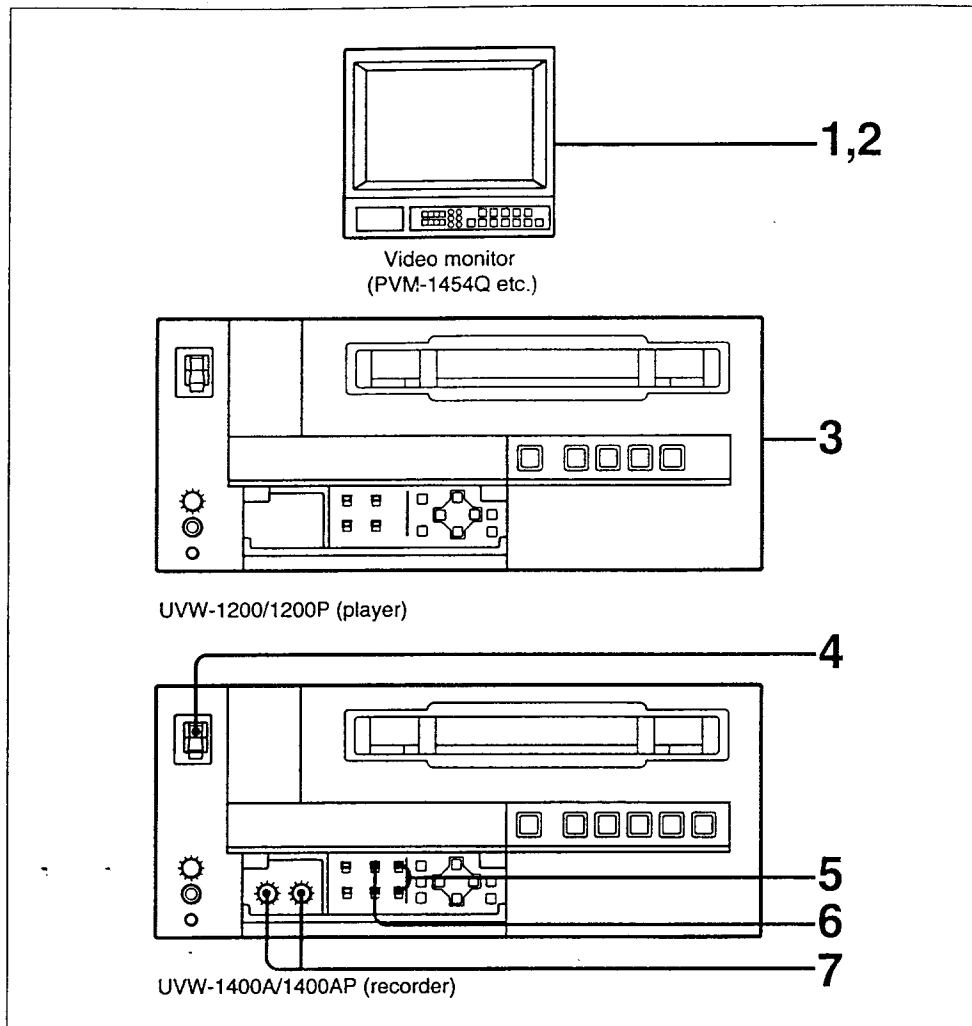
Note

If you do not input a reference video signal, the monitor picture will be subject to vertical instability. When carrying out recording, always input a reference video signal.

For details of reference video signals, see the section "Reference Video Signals" (page 3-5(E)).

Switch and control settings

After completing the connections, make the switch and control settings as follows.

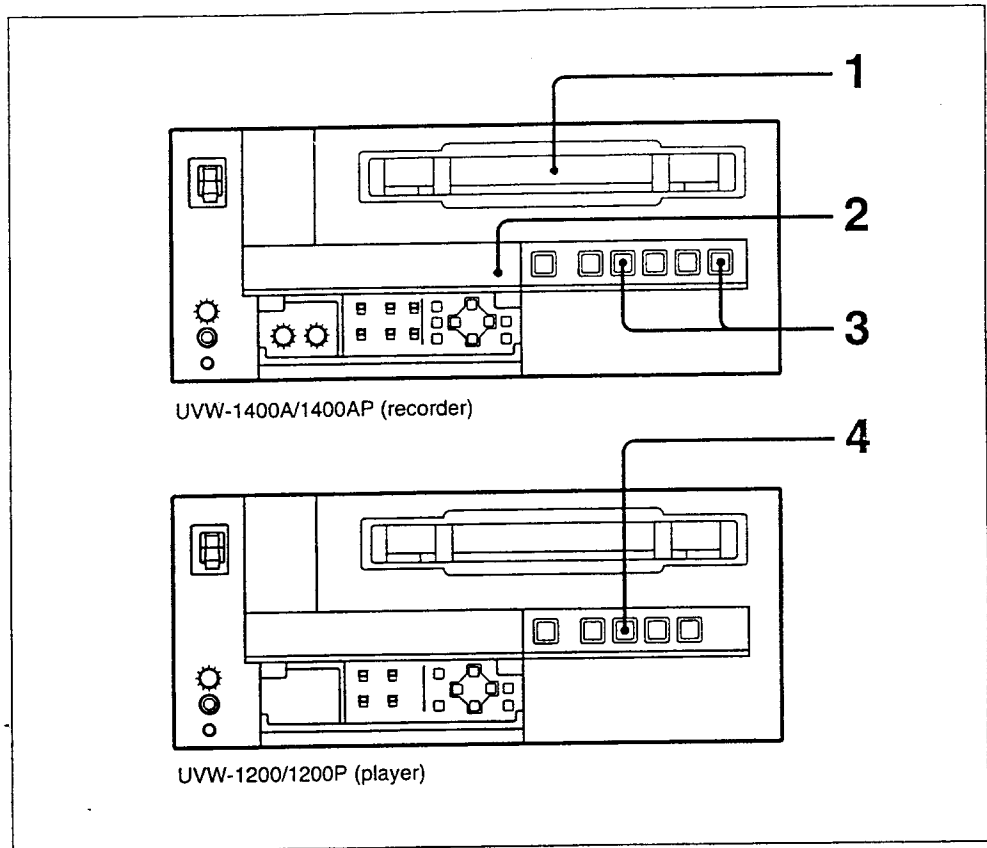


Switch and control settings

- 1** Power on the video monitor.
- 2** Set the input selector of the monitor to the input connector connected to the UVW-1400A/1400AP.
- 3** Following the instructions in the appropriate operation manual, and prepare the player for playback.
- 4** Power on the UVW-1400A/1400AP.
- 5** Set the upper VIDEO IN selector switch to COMPONENT, and the lower VIDEO IN selector switch to Y-R, B.
- 6** Set the CTL/LTC/U-BIT switch according to the time data to be used.
- 7** Adjust the AUDIO INPUT LEVEL controls so that the audio level meters indicate around 0 VU when the audio signal is at its maximum.

Recording Operation

In order to carry out recording of the video and audio signals, check that you have made the connections and carried out the switch setting procedure correctly, then use the following procedure.



Recording

- 1** Insert a cassette in the UVW-1400A/1400AP.
Always be sure to use a **metal tape**.
Before inserting the cassette, check that it is not record-inhibited.
For details see the section "Record Inhibit Function" (page 3-4(E)).
- 2** Check that the REC INHIBIT indicator is not lit.
- 3** Hold down the REC button, and press the PLAY button.
Recording starts.
- 4** Press the PLAY button on the player.
Playback starts.

To stop recording
Press the STOP button.

Backspace Edit

This unit has a backspace edit function, similar to function provided by the PAUSE button on video camera recorders. It allows you to pause and resume recording with no breakup in the picture.

You can use two kinds of backspace edit recording when controlling this unit from the optional SVRM-100/100A remote control unit or a computer connected to the REMOTE connector on the rear panel.

- Continuous assembly during recording
- Insertion of new shots at any point on the tape

Notes about inserting new shots

- When you press the REC button, the unit requires a moment before entering REC PAUSE mode.
- Continuity of video, audio, time code and color framing information is guaranteed at the beginning of insertion. However, in the portion immediately after insertion, low-frequency range noise in the video signals increases, and the audio signals of the new and old shots are mixed.

This section will explain how to use the SVRM-100/100A Remote Control Unit to carry out backspace edit recording. If you are controlling the unit from a computer, replace each step in the operating procedures with the corresponding remote control command.

Note

When you use a computer, set the REMOTE/LOCAL switch on this unit to REMOTE.

Continuous assembly during recording

This procedure uses the buttons on the SVRM-100/100A remote control unit.

- 1** Press the PLAY and REC buttons simultaneously.

Recording begins. Continue recording for at least two seconds before proceeding to the next step.

- 2** Press the PAUSE button.

The tape is rewound 15 frames, and the unit enters REC PAUSE mode.

- 3** Press the PAUSE button again.

The tape is run in EE mode up to the point where recording was interrupted, and then recording resumes. Continuity of video, audio and time code is maintained, and video and audio quality is not impaired at the beginning of the recording.

Note that recording cannot be interrupted again until it has continued for at least 15 frames, even if you press the PAUSE button again.

Insertion of new shots at any point on the tape

This procedure uses the buttons on the SVRM-100/100A remote control unit.

- 1** Rotate the search dial to cue up the insertion point.
- 2** Press the PLAY and PAUSE buttons simultaneously.
The unit enters PLAY PAUSE mode.
- 3** Press the REC button.

The tape is rewound for about 2 seconds, and then the unit enters playback mode and runs the tape to a point 15 frames before the insertion point, and enters REC PAUSE mode.

- 4** Press the PAUSE button.

The tape is run in EE mode up to the point cued up in step 1, and recording starts.

In the portion immediately after insertion, low-frequency range noise in the video signals increases, and the audio signals of the new and old shots are mixed.

Note that recording cannot be interrupted until it has continued for at least 15 frames, even if you press the PAUSE button again.

Notes about using the backspace edit function

- In order to protect the tape, REC PAUSE mode is canceled automatically if it continues for longer than the time selected with the STILL TIMER menu item.
- There must be at least two seconds of recorded material on the tape before the backspace edit starting point. If there is not, the unit will not enter REC PAUSE mode.

Using a Foot Switch for Recording Control

By connecting a Sony RS-20 or other foot switch to the REMOTE 2 connector on the rear panel, you can start and pause recording by foot control.

It is necessary to make a menu selection according to the type of foot switch you are using.

For details of the menu setting, see the item "FOOT SWITCH" (page 6-9(E)) in Chapter 6 "Menus."



Superimposed Text Information

When the subsidiary control panel CHARACTER switch is in the ON position, the video signal output from the VIDEO 2 (SUPER) OUTPUT connector includes superimposed indications of time data and the operating state of this unit.

Selecting the information displayed and the character type and position of the indications

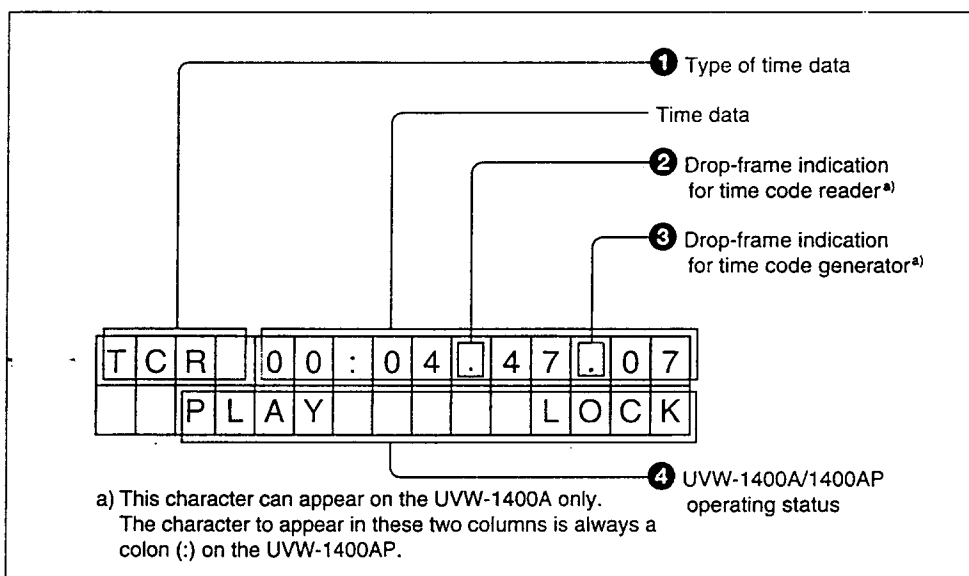
The information displayed and the character type and position of the indications can be selected by using the menu item "DISPLAY CONTROL." The factory default settings are as follows.

Information displayed : Time data selected by the CTL/LTC/U-BIT switch, and the operating status of the unit

Character type : White characters on a black background

Character position : Bottom center of the screen

For details of the setting method, see under "DISPLAY CONTROL" (page 6-5(E)).



Displayed information (factory default)

① Type of time data

This indicates the type of time data as follows.

| Indication | Meaning |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| CTL | CTL counter data |
| TCR | LTC reader data |
| UBR | LTC reader user's bit data |
| TCG | Time code data from time code generator |
| UBG | User's bit data from time code generator |
| T*R | Time code data from time code reader. Interpolated by the time code reader to make up for the time code data not correctly read from the tape. |
| U*R | User's bit data from time code reader. Last data is retained by the time code reader, as the new data has not been read correctly from the tape. |

② Drop-frame indication for time code reader (on UVW-1400A only)

“ . ” : A single dot indicates drop-frame mode.

“ : ” : Two dots (i.e. a colon) indicate non-drop-frame mode.

③ Drop-frame indication for time code generator (on UVW-1400A only)

“ . ” : A single dot indicates drop-frame mode.

“ : ” : Two dots (i.e. a colon) indicate non-drop-frame mode.

④ UVW-1400A/1400AP operating status

| Indication | | Operating status |
|--------------|---------|----------------------------------------------------|
| THREADING | | Cassette is inserted, and tape is being threaded. |
| UNTHREADING | | Tape is being unthreaded to eject cassette. |
| CASSETTE OUT | | No cassette is inserted. |
| STANDBY OFF | | Tape is not on standby. |
| T.RELEASE | | Tape tension is released. |
| STOP | | Tape is stopped. |
| F.FWD | | Fast forward |
| REW | | Rewind |
| PREROLL | | Preroll |
| PLAY | | Play (servo not locked) |
| PLAY | LOCK | Play (servo locked) |
| PLAY | PAUSE | Playback pause |
| REC | | Recording (servo not locked) |
| REC | LOCK | Recording (servo locked) |
| REC | PAUSE | Recording pause |
| JOG | STILL | Still picture in jog mode |
| JOG | FWD | Jog mode in forward direction (▶ indicator lights) |
| JOG | REV | Jog mode in reverse direction (◀ indicator lights) |
| SHUTTLE | (speed) | Shuttle mode (playback speed) |
| PAUSE | | Shuttle mode playback pause |



Chapter 5

Time Data

The time data used by this unit for both recording and display include CTL signal count values, longitudinal time code (LTC), and user's bit data. This chapter describes how to display time data, and how to set LTC and user's bit values.

Displaying Time Data5-2 (E)

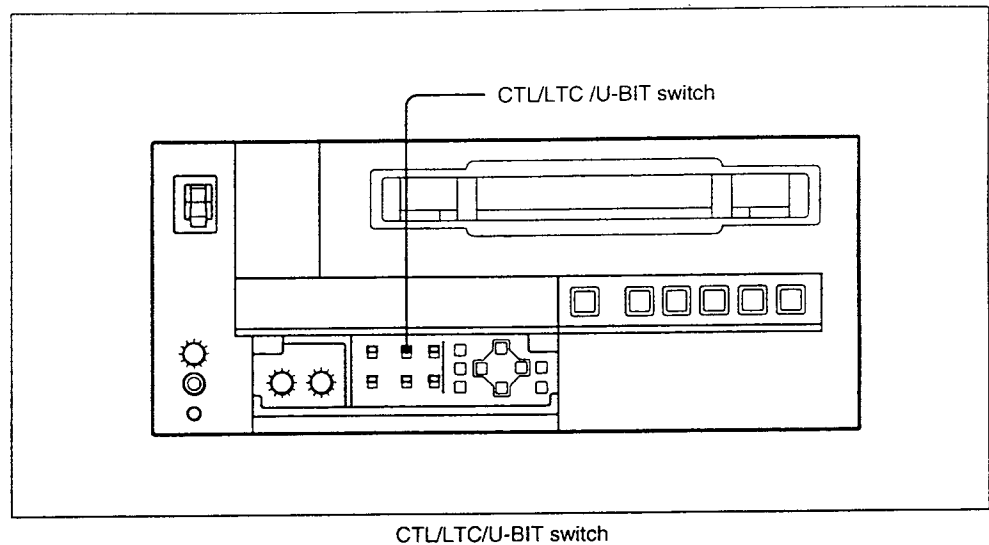
Setting Longitudinal Time Code and User's Bits5-3 (E)

Displaying Time Data

During recording or playback, you can display the time data selected on this unit on the monitor and on the time counter display.

On the time counter display

Use the CTL/LTC/U-BIT switch to select the data to be displayed on the time counter display.



Resetting the CTL data displayed

Press the RESET (NO) button.

The indication in the time counter display is reset to "0:00:00:00".

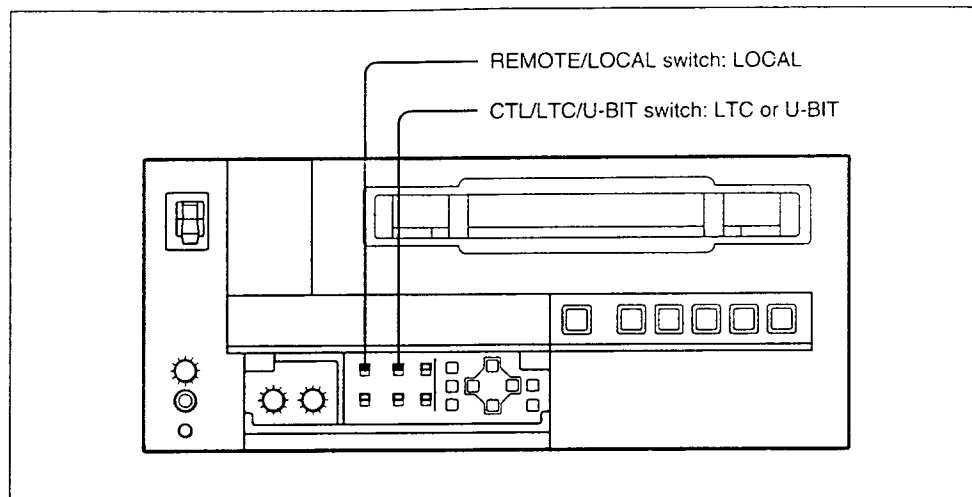
On the monitor screen

See the section "Superimposed Text Information" (page 4-15(E)).

Using the internal time code generator it is possible to preset the longitudinal time code (LTC) value to be recorded on the tape to any desired initial value. This section describes how to preset the LTC value, and also how to preset the user's bit data which is also written on the same track.

Switch and menu settings

Carry out the following switch and menu settings.



Switch settings

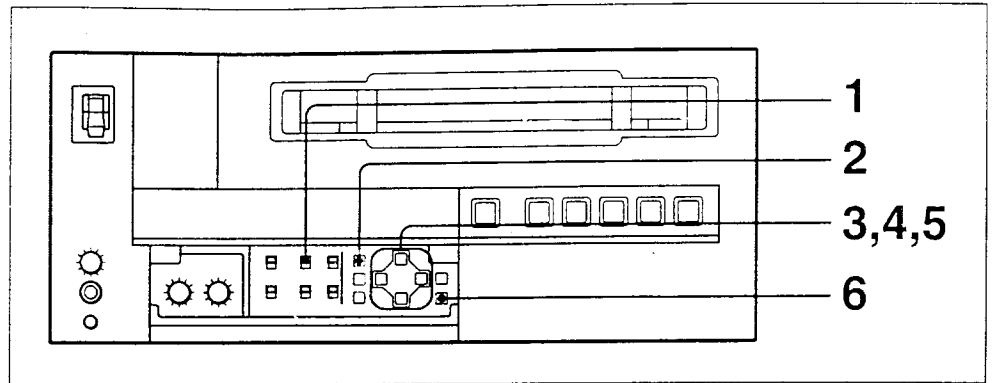
Menu settings

| Mode | Setting |
|------------------------------|-------------------------|
| RUN MODE | "FREE RUN" or "REC RUN" |
| DF MODE (for UVW-1400A only) | Normally "DF" |

For details of the *RUN MODE* and *DF MODE* settings, see under "TIME CODE" (page 6-6(E)).

Setting Longitudinal Time Code and User's Bits

Setting procedure



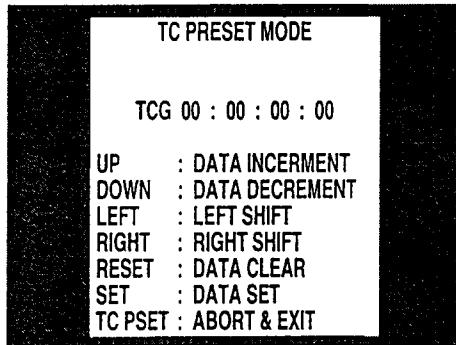
Setting the initial value for time code or user's bits

1 Set the CTL/LTC/U-BIT switch to LTC or U-BIT, to display the required time data on the monitor and time counter display.

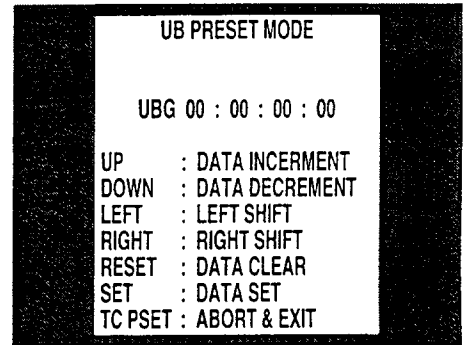
2 Press the TC PRESET button.

The current setting is displayed on the monitor screen and the time counter display. At this point the leftmost digit flashes.

One of the following displays appears on the monitor screen.



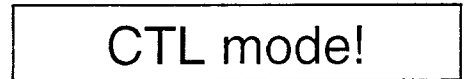
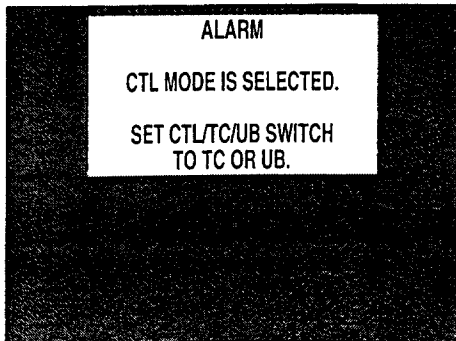
Time code presetting







User's bit presetting

Note

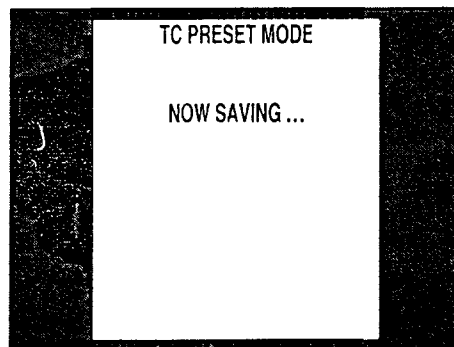
If you press the TC PRESET button while CTL value is displayed, the following alarm messages appear on the monitor screen and the time counter display.



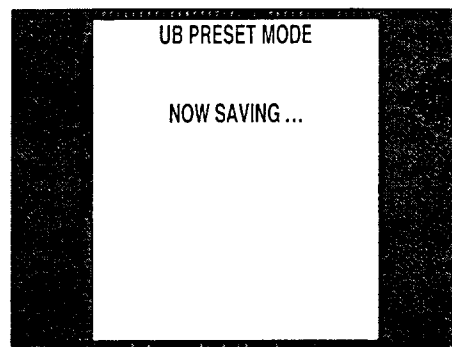
Set the CTL/LTC/U-BIT switch to LTC or U-BIT.

- 3 Use the  (A) and  (B) buttons to select the digit in the value which is flashing.
- 4 Use the  and  buttons to adjust the value of the flashing digit.
Note that user's bit data values are in hexadecimal (digits 0-9 and A-F).
- 5 Repeat steps 3 and 4 as required to set the required value.
To set the value to 00:00:00:00, press the RESET (NO) button.
- 6 Press the SET (YES) (MARK) button.

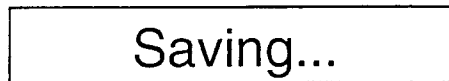
Either of the two displays shown immediately below appears on the monitor screen and the third display shown below in the time counter display.



Monitor screen



Monitor screen



Time counter display

Once the setting is saved, the monitor screen and time counter display return to normal.

Notes

- If you power off this unit while it is in the process of saving the settings, settings may be lost. Wait until saving is completed before powering the unit off.
- LTC and users bits cannot be set while the unit is in REC PAUSE mode. Exit the REC PAUSE mode before making these settings.

Internal time code generator running modes

There are two different modes of operation for the internal time code generator, selected by the RUN MODE setting as follows.

“FREE RUN”: The time code generator begins to run from the instant the preset value is saved.

“REC RUN”: The time code generator runs only during recording.

Presetting the time data value to reflect real time

In the menu, set RUN MODE to “FREE RUN”, and set the time data value to the current time.



Chapter 6

Menus

This chapter describes the organization of the principal set-up menus (selecting the superimposed information on the monitor screen, time code, run mode, etc.) and how to use them.

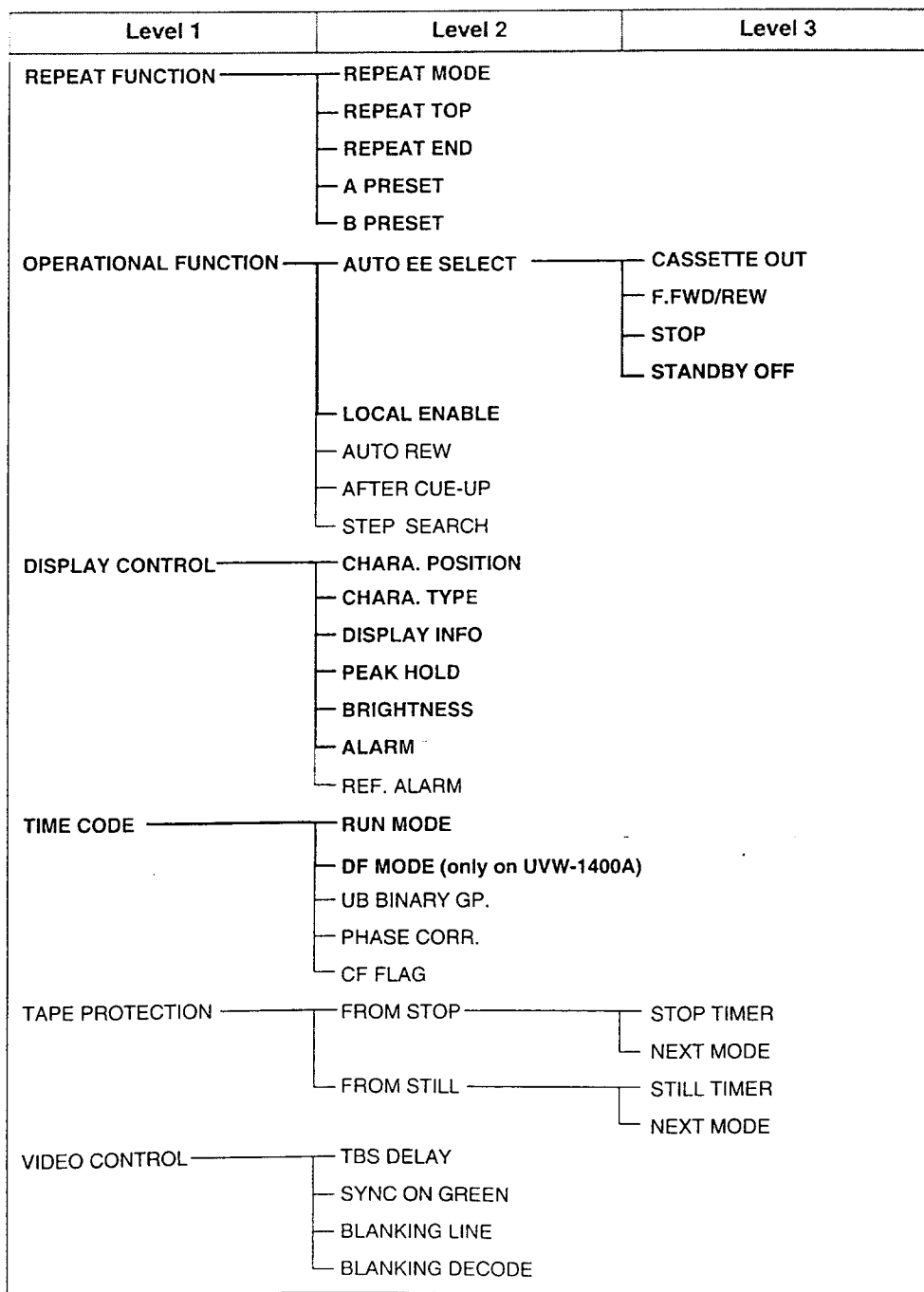
| | |
|------------------------------------------|-----------------|
| Menu Organization..... | 6-2 (E) |
| Hierarchical Structure | 6-2 (E) |
| Menu Screens | 6-3 (E) |
| Menu Operations | 6-10 (E) |
| Buttons Used to Change the Setting | 6-10 (E) |
| Operation Sequence | 6-11 (E) |

Hierarchical Structure

The menu screens are arranged in a three-level tree structure, as shown in the figure below. The top-level selections (level 1) access the main divisions of the settings, and except for the MENU GRADE item, the settings themselves are made on levels 2 and 3. The screens are divided into two groups: the basic settings, to which frequent access is normally required, and extended settings, which are less frequently used.

In the following figure, bold lines indicate the basic menu screens, and thin lines the extended menu screens.

Menu organization



Menu organization (continued)

| Level 1 | Level 2 | Level 3 |
|-------------------|---------------|---------|
| INTERFACE CONTROL | RS-232C BPS | |
| | FOOT SWITCH | |
| | VIDEO PRINTER | |
| MENU GRADE | | |

Menu Screens

The table below lists the menu screens and explains the meaning of each setting.

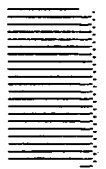
In the table the following conventions are used:

- Factory default settings are preceded by an asterisk (*).
- Each indication appears twice: the upper version is what appears on the monitor screen, and the lower version in parentheses appears on the time counter display.
- The time counter display indications are preceded by a number of angle brackets: '>' indicates an item in a level 2 menu, and '>>' and '>>>' indicate an item or a parameter in a lower level menu.

Menu selections

| REPEAT FUNCTION: Repeat playback settings (REPEAT FUNC) | Description of settings |
|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| REPEAT MODE (>REPEAT MD) Whether to execute repeat playback when PLAY button is pressed. | * OFF(>>OFF): Do not execute repeat playback. ON(>>ON): Execute repeat playback. |
| REPEAT TOP (>REPEAT TOP) Select the repeat top point. | * TAPE TOP(>>Tape top): The top of the tape is the repeat top point. A POINT(>>A point): The user-selected A point (see page 4-4(E)) is the repeat top point. |
| REPEAT END (>REPEAT END) Select the repeat end point. | * VIDEO END(>>VD end): The end of the recorded portion of the tape is the repeat end point. TAPE END(>>Tape end): The tape end is the repeat end point. B POINT(>>B point): The user-selected B point (see page 4-4(E)) is the repeat end point. |
| A PRESET (>A preset) Change the repeat A point. | For details about operations, see page 4-4(E). ⊞ (A), ⊞ (B) buttons: Select a digit to be modified. ⬆, ⬇ buttons: Increment or decrement the value. SET (YES) (MARK) button: Set the displayed value. RESET (NO) button: Clear the A point to 00:00:00:00. MENU button: Return to the menu screen. |
| B PRESET (>B preset) Change the repeat B point. | For details about operations, see page 4-4(E). ⊞ (A), ⊞ (B) buttons: Select a digit to be modified. ⬆, ⬇ buttons: Increment or decrement the value. SET (YES) (MARK) button: Set the displayed value. RESET (NO) button: Clear the B point to 00:00:00:00. MENU button: Return to the menu screen. |

(Continued)



Chapter 6

Menu Organization

Menu selections (continued)

| OPERATIONAL FUNCTION: Operation settings (Operational) | | Description of settings |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AUTO EE SELECT (> Auto EE) Determine whether the unit enters EE mode or PB mode when audio and video signals from other equipment are input. | CASSETTE OUT (>> Cass. out) When the cassette has been ejected | * EE (>>> EE): Output audio and video signal input from other equipment * PB (>>> PB): Mute audio and video signal input |
| | F. FWD/REW (>> F. FWD/REW) Operations when in fast forward or rewind mode Note Set this item to PB when you want to use the F FWD and REW buttons to view playback at 16 times normal speed. If this item is set to EE, holding down the F FWD and REW buttons produces EE pictures. | EE (>>> EE): Output audio and video signal input from other equipment * PB (>>> PB): Mute audio and video signal input |
| | STOP (>> STOP) Operations when in stop mode | EE (>>> EE): Output audio and video signal input from other equipment * PB (>>> PB): Output audio and video signal recorded on a tape |
| | STANDBY OFF (>> STBY OFF) Operations when in standby off mode | EE (>>> EE): Output audio and video signal input from other equipment * PB (>>> PB): Mute audio and video signal input |
| LOCAL ENABLE (> Local ENA) Select which of the tape transport control buttons (EJECT, REW, PLAY, F FWD, STOP and REC) operate when the REMOTE/LOCAL switch is set to REMOTE. | | ALL DISABLE (>> ALL DIS): All of the tape transport control buttons are disabled. * STOP & EJECT (>> STOP&EJ): Only the STOP and EJECT buttons are enabled. ALL ENABLE (>> ALL ENA): All of the tape transport control buttons are enabled, and settings such as preroll time change or time data display selection are effective. |
| AUTO REW (> Auto REW) Whether to rewind automatically when playback reaches the end of tape | | * ENABLE (>> ENABLE): Rewind automatically. DISABLE (>> DISABLE): Do not rewind automatically. |
| AFTER CUE-UP (> After CUE) Operating mode after cue-up | | STOP (>> STOP): Stop mode * STILL (>> STILL): Search mode still |
| STEP SEARCH (> Step SRCH) Determine whether or not the tape is transported in units of fields during jog/shuttle playback. | | OFF (>> OFF): Transport the tape regardless of fields. In a still picture in jog/shuttle mode or when normal playback is paused, guard bands (noise bars) appear at any location in the picture. * ON (>> ON): Transport the tape in units of fields. In a still picture in jog/shuttle mode or when normal playback is paused, guard bands (noise bars) appear at the top and bottom of the picture. |

Menu selections (continued)

| DISPLAY CONTROL: Settings related to indications (Display) | Description of settings |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CHARA. POSITION (> Chara pos) Position of text superimposed on output from VIDEO 2 (SUPER) OUTPUT connector to monitor Note If time code values which appear superimposed on the monitor screen are to be recorded on another VTR, position them in the lower two-thirds of the screen. Time code values displayed in the top one-third of the monitor screen may appear to be delayed by one frame. | Default is bottom center of screen. Use the arrow direction keys to adjust the indication position while watching the monitor. Press the MENU button to confirm the setting and return to the level 1 menu. |
| CHARA. TYPE (> Chara type) Type of characters in text superimposed on output from VIDEO 2 (SUPER) OUTPUT connector to monitor | * WHITE (WITH BKGD) (>> White): White characters on black background BLACK (WITH BKGD) (>> Black): Black characters on white background WHITE (OUTLINE) (>> W/outline): White characters with black outline BLACK (OUTLINE) (>> B/outline): Black characters with white outline Press the MENU button to confirm the setting and return to the level 1 menu. |
| DISPLAY INFO (> DISP info) Information superimposed on output from VIDEO 2 (SUPER) OUTPUT connector to monitor Note When the TIME DATA & UB or TIME DATA & CTL setting is selected, the lower time data may appear to be delayed by one frame from the upper value. | * TIME DATA & STATUS (>> Time & STA): Time data and operating status TIME DATA & UB (>> Time & UB): Time data selected using the CTL/LTC/U-BIT switch and user's bit value (when user's bit is selected with the CTL/LTC/U-BIT switch, user's bit and LTC value) TIME DATA & CTL (>> Time & CTL): Time data selected using the CTL/LTC/U-BIT switch and CTL value (when CTL is selected with the CTL/LTC/U-BIT switch, CTL and user's bit value) TIME DATA (>> Time): Time data only |
| PEAK HOLD (> Peak hold) Peak hold time for audio level meters | Set the time from zero (OFF) to 1.5 seconds in steps of 0.1 second. 1.5 SEC (>> 1.5 sec) – * OFF (>> OFF) |
| BRIGHTNESS (> Brightness) Brightness of front panel indicators | Set brightness as a percentage of the maximum. * 100% (>> 100%) 66% (>> 66%) 33% (>> 33%) |
| ALARM (> ALARM) Determine whether alarms are issued or not. | * ON (>> ON): Alarms are issued. OFF (>> OFF): Alarms are not issued. |
| REF ALARM (> REF ALARM) Determine whether alarms related to reference video signal are issued or not. | ON (>> ON): Alarms are issued. * ON (LIMITED) (>> ON (Limit)): Alarms are issued in recording and EE mode. OFF (>> OFF): Alarms are not issued. |

(Continued)

Menu Organization

Menu selections (continued)

| TIME CODE: Settings related to the time code (Time code) generator | Description of settings |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RUN MODE (> RUN mode) Run mode of the time code generator. | * FREE RUN (>> FREE RUN): Time code generator keeps running. REC RUN (>> REC RUN): Time code generator only runs while recording. |
| DF MODE (only on UVW-1400A) (> DF mode) Select whether the time code generator and CTL counter operate in drop-frame or non-drop-frame mode. Normally select drop-frame mode, to keep in sync with real time. The non-drop-frame mode is useful for example when using computer graphics, and working on a frame count basis. | * ON (DF) (>> ON DF): Drop-frame mode OFF (NDF) (>> OFF NDF): Non-drop-frame mode |
| UB BINARY GP. (> Binary Gp.) (for UVW-1400A) Select the user's bit binary group flag of the time code generator. | * 000 (>> 000): Character set not specified 001 (>> 001): 8-bit characters conforming to ISO646 and ISO2022 010 (>> 010): Undefined 011 (>> 011): Undefined 100 (>> 100): Multi-cassette 101 (>> 101): Multiplex 110 (>> 110): Alternate 111 (>> 111): Undefined |
| UB BINARY GP. (> Binary Gp.) (for UVW-1400AP) | * 00 (>> 00): Not specified 01 (>> 01): ISO character 10 (>> 10): Unassigned-1 11 (>> 11): Unassigned-2 |
| PHASE CORR. (> Phase corr) Time code generator phase correction | * OFF (>> OFF): Phase is not corrected. ON (>> ON): Phase is corrected. |
| CF FLAG (> CF flag) Set color framing flag on or off in a unused bit of time code data Note This setting relates only to the control of the CF flag bit in the internal time code generator of this unit. It has no effect on normal color framing. | * OFF (>> OFF): Set color framing flag off. ON (>> ON): Set color framing flag on. |

Menu selections (continued)

| TAPE PROTECTION: Settings related to tape protection (Tape protct) | | Description of settings |
|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FROM STOP (> From STOP) Protected mode and time to switch from stop mode for protection of the tape and head drum | STOP TIMER (>> STP Timer) Time to switch to protected mode from stop mode | Select time from 15 settings from 0.5 seconds to 30 minutes. 30 MIN (>>> 30 min) – * 8 MIN (>>> 8 min) – 0.5 SEC (>>> 0.5 sec) |
| | NEXT MODE (>> Next mode) Tape protection mode when time set in STOP TIMER setting elapses Note When this unit is in tension release mode, the drum is still rotating, so the picture can be monitored. In tension release mode, though the unit is also in “standby on” mode (i.e. is on standby), so if the distinction between “standby on” and “standby off” is important (for example when broadcasting), care should be taken over the setting. | * STANDBY OFF (>>> STANDBY): Standby off mode TENSION RELEASE (>>> T. RLSE): The tape tension is released, but the picture can still be seen on the monitor. |
| FROM STILL (> From STILL) Protected mode and time to switch from search mode still or pause for protection of the tape and head drum | STILL TIMER (>> STL timer) Time to switch to protected mode from search mode still or pause | Select time from 15 settings from 0.5 seconds to 30 minutes. 30 MIN (>>> 30 min) – * 8 MIN (>>> 8 min) – 0.5 SEC (>>> 0.5 sec) |
| | NEXT MODE (>> Next mode) Tape protection mode when time set in STILL TIMER setting elapses Note When this unit is in tension release mode, the drum is still rotating, so the picture can be monitored. For both the STEP FWD and TENSION RELEASE settings, the unit is also in “standby on” mode (i.e. is on standby), so if the distinction between “standby on” and “standby off” is important (for example when broadcasting), care should be taken over the setting. | * STEP FWD (>>> Step): The tape is advanced at x1/30 speed for 2 seconds. STANDBY OFF (>>> STANDBY): Standby off mode TENSION RELEASE (>>> T. RLSE): The tape tension is released, but the picture can still be seen on the monitor. |

(Continued)

Menu Organization

Menu selections (continued)

| VIDEO CONTROL: Settings related to video control (Video) | Description of settings | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TBS DELAY (> TBS delay) Time base stabilizer delay in video EE mode Note When used for broadcasting, select VIDEO DELAY. | * SYNC DELAY (>> Sync): The synchronization signal included in the output video signal is delayed from the reference signal by the operating time of the TBS, and output synchronized to the video signal. VIDEO DELAY (>> Video): The synchronization signal included in the output video signal is synchronized to the reference signal, and only the video signal output is delayed. | |
| SYNC ON GREEN (> Sync Green) Select whether or not to add a sync signal to the green signal of the RGB output signal. | * ON (>> ON): Add a sync signal. OFF (>> OFF): Do not add a sync signal. | |
| BLANKING LINE (> BLK line) Determine whether or not to output video signals during blanking. Settings can be made for each of the lines between line 12 and 20 for UVW-1400A, and between line 9 and 23 for UVW-1400AP. | UVW-1400A: 12 LINE (>> 12 line) –20 LINE (>> 20 line) UVW-1400AP: 9 LINE (>> 09 line) –23 LINE (>> 23 line) | * MASK(>>> Mask): Video signal is not output. HALF(>>> Half): Only a half of video signal (only for line 20 on UVW-1400A, and only for line 23 on UVW-1400AP) is output. OUTPUT(>>> Output): Video signal is output. |
| BLANKING DECODE (> BLK decode) Determine a method of separating input composite video signals into a luminance signal and chrominance signal during blanking. Settings can be made for each of the lines between line 12 and 19 for UVW-1400A, and between line 9 and 22 for UVW-1400AP. | UVW-1400A: 12 LINE (>> 12 line) –19 LINE (>> 19 line) UVW-1400AP: 9 LINE (>> 09 line) –22 LINE (>> 22 line) | * BLACK & WHITE (>>> B&W): Input signals are processed as black and white signals. BPF(>>> BPF): Input signals are processed with a band-pass filter. |



Menu selections (continued)

| INTERFACE CONTROL: Remote interface setting (Interface) | Description of settings |
|-------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RS-232C BPS (> RS232C bps) Set the baud rate for communications with equipment connected to the REMOTE connector on the rear panel. | 38400 BPS (>> 38400 bps) 19200 BPS (>> 19200 bps) * 9600 BPS (>> 9600 bps) 4800 BPS (>> 4800 bps) 2400 BPS (>> 2400 bps) 1200 BPS (>> 1200 bps) |
| FOOT SWITCH (> Foot SW) Select the foot switch type. | OFF (>> OFF): Foot switch is not used. * DOWN EDGE TRIGGER (>> Down Edge): Falling edge trigger type. (Switch pressed once to start recording and again to pause; pressing switch produces a falling edge.) UP EDGE TRIGGER (>> Up Edge): Rising edge trigger type. (Switch pressed once to start recording and again to pause; pressing switch produces a rising edge.) LOW LEVEL TRIGGER (>> Low Level): Low level trigger type. (Switch pressed to start recording and released to pause.) |
| VIDEO PRINTER (> Printer) Set the timing for trigger output to a video printer. | 16 FIELD DELAY (>> 16 Field): Start trigger output 16 fields before the frame to be output. 15 FIELD DELAY (>> 15 Field): Start trigger output 15 fields before the frame to be output. 14 FIELD DELAY (>> 14 Field): Start trigger output 14 fields before the frame to be output. : * 4 FIELD DELAY (>> 4 Field): Start trigger output 4 fields before the frame to be output. 3 FIELD DELAY (>> 3 Field): Start trigger output 3 fields before the frame to be output. 2 FIELD DELAY (>> 2 Field): Start trigger output 2 fields before the frame to be output. 1 FIELD DELAY (>> 1 Field): Start trigger output 1 field before the frame to be output. |

| MENU GRADE: Menu screen selection (Menu grade) | Description of settings |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| — | * BASIC (> Basic): Display basic menu screens. ENHANCED (> Enhanced): Display extended menu screens. |



Menu Operations







Although the menu screens are divided into basic and extended categories, the method of operation is the same.

This section describes as an example the procedure required to change the setting for the tape protection mode used when the deck is stopped. Check the location of this setting in the menu tree, by referring to the previous section; it is in the level 2 menu screen "TAPE PROTECTION", which is an extended menu screen.

Buttons Used to Change the Setting

This operation uses the following buttons on the subsidiary control panel.

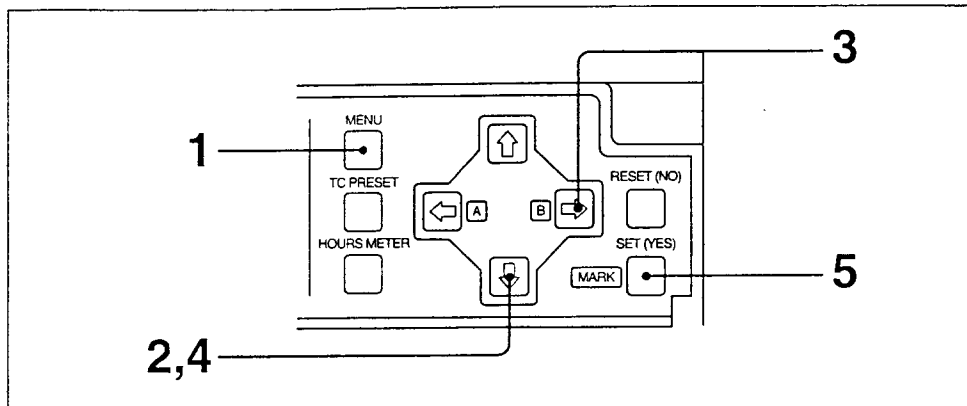
Buttons used to change the menu setting and their functions

| | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MENU button | <ul style="list-style-type: none">• Entering menu mode• Leaving menu mode |
|   buttons | Moving the reverse video cursor up and down to change the selection within a menu screen; if held down, the reverse video cursor continues to move. |
|  (A)  (B) buttons | <ul style="list-style-type: none">• The  (A) button moves to the menu at the next higher level.• The  (B) button moves to the menu at the next lower level. If either button is held down, the reverse video cursor continues to move. |
| RESET (NO) button | <ul style="list-style-type: none">• Returns a setting to its factory default.• Answers 'no' to a question on the monitor screen. |
| SET (YES) (MARK) button | <ul style="list-style-type: none">• Confirms a changed setting.• Answers 'yes' to a question on the monitor screen. |



Operation Sequence

Displaying the extended menus



Displaying the extended menus

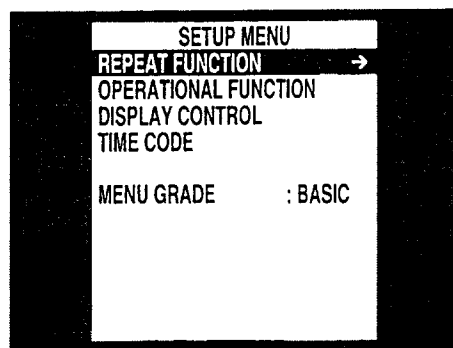
1 Press the MENU button.

The level 1 menu appears on the monitor screen. The factory default setting is basic menu screens only.

The reverse video cursor shows the current selection; in the figure below, this is "OPERATIONAL FUNCTION." The → mark indicates this item has an associated submenu.

The time counter display shows the selected item only, often in abbreviated form.

Level 1 menu display (basic menu screen)



Monitor screen



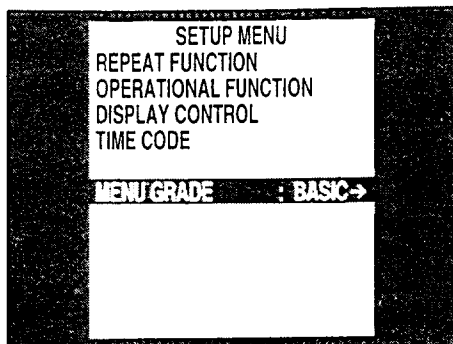
Time counter display

The "MENU GRADE" setting has no associated submenus. In such a case, the current setting also appears in abbreviated form to the right of the screen. When the factory default setting is currently selected, the ":" indication precedes that setting. In this case the setting does not appear on the time counter display.

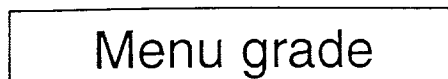
(Continued)

- Press the  button to select "MENU GRADE :BASIC".


Selecting MENU GRADE :BASIC



Monitor screen

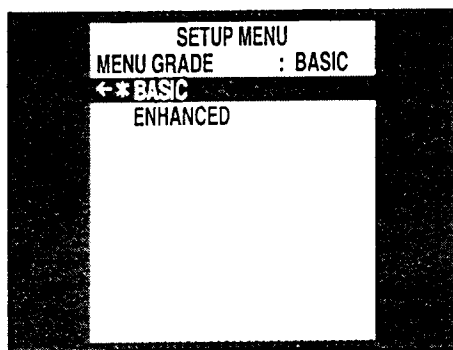


Time counter display

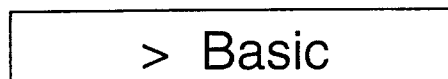
- Press the  (B) button.

This displays all of the settings, and the current selection appears on the monitor screen in reverse video. The ← mark indicates the "BASIC" has an associated menu at the next higher level. The "*" indication precedes the factory default setting.


Displaying the settings



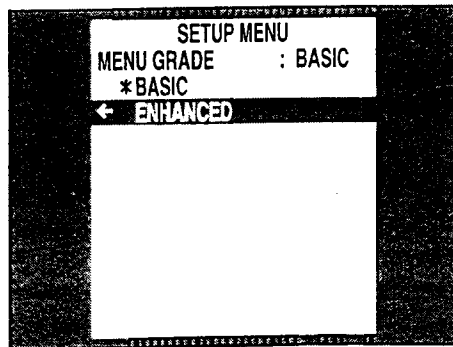
Monitor screen



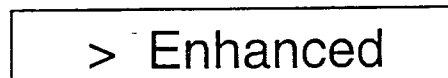
Time counter display

- Press the  button to select "ENHANCED".

Selecting ENHANCED



Monitor screen



Time counter display

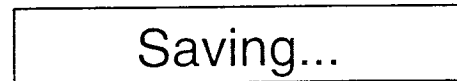
5 Press the SET (YES) (MARK) button.

The messages shown below appear in the monitor screen and the time counter display, and the new setting is saved in memory.

Messages when saving settings



Monitor screen



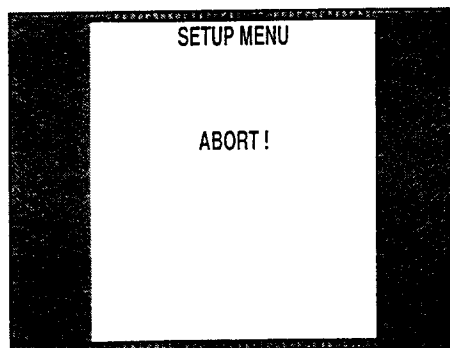
Time counter display

Once the saving operation is completed, both the monitor screen and time counter display return to the normal state.

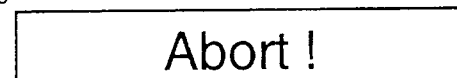
Notes

- If you power off this unit while it is in the process of saving the settings, settings may be lost. Wait until saving is completed before powering the unit off.
- If you do not press the SET (YES) (MARK) button, and press the MENU button, the settings are not saved; the displays shown below appear for 0.5 seconds, and the menu system is forcibly exited. If making more than one setting, be sure to press the SET (YES) (MARK) button after finishing all the desired settings.

Forcibly aborting the menus



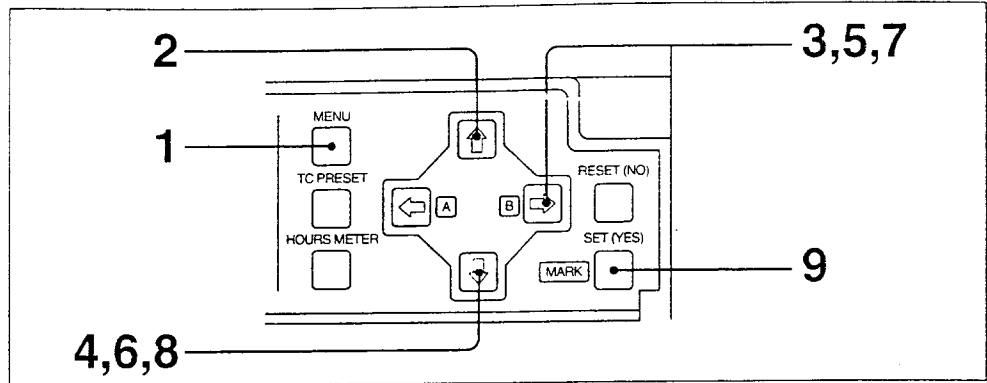
Monitor screen



Time counter display

Menu Operations

Changing the “NEXT MODE” setting



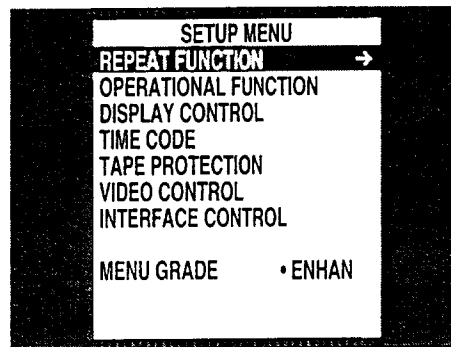
Changing the NEXT MODE setting

- 1 Press the MENU button.

The level 1 extended menu appears on the monitor screen.

When the currently selected setting is not the factory default setting, the “•” indication instead of the “:” indication precedes that setting.

Level 1 menu display (extended menu screen)



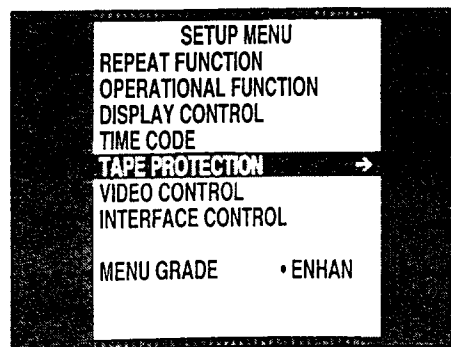
Monitor screen



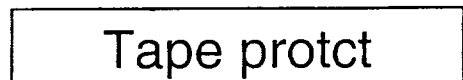
Time counter display

- 2 Press the button to select “TAPE PROTECTION”.

Selecting TAPE PROTECTION




Monitor screen



Time counter display

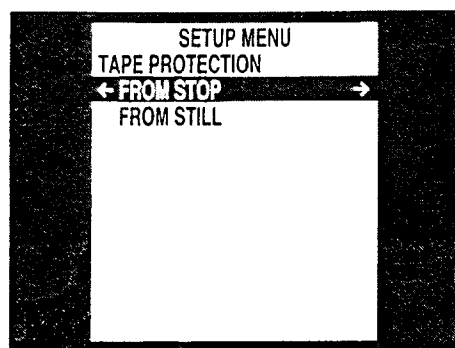


- 3 Press the  (B) button.

The level 2 menu screen appears.

When this menu appears for the first time, "FROM STOP" is selected.


Level 2 menu screen (TAPE PROTECTION)



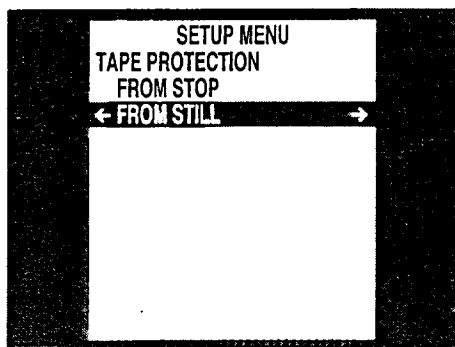
Monitor screen

> From STOP

Time counter display

- 4 Press the  button to select "FROM STILL".


Selecting FROM STILL



Monitor screen

> From STILL

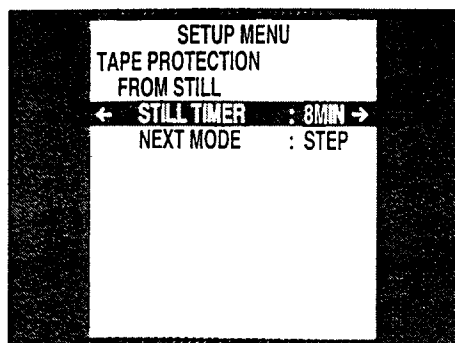
Time counter display

- 5 Press the  (B) button.

The level 3 menu screen appears.

When this menu appears for the first time, "STILL TIMER" is selected.

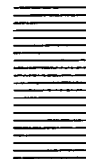
Level 3 menu screen (FROM STILL)




Monitor screen

>> STL timer

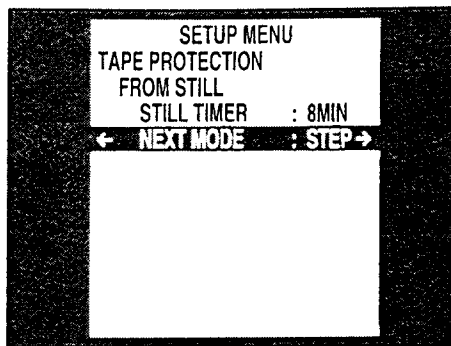
Time counter display



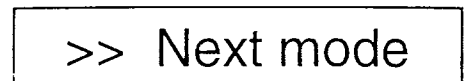
(Continued)

- 6 Press the  button to select "NEXT MODE".


Selecting NEXT MODE



Monitor screen



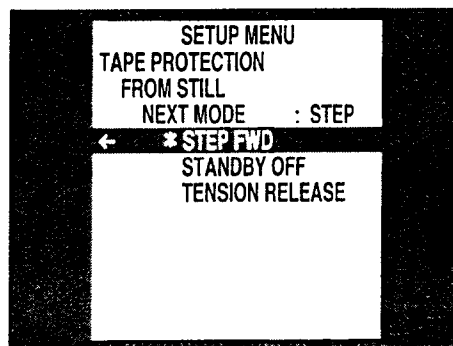
Time counter display

- 7 Press the  (B) button.

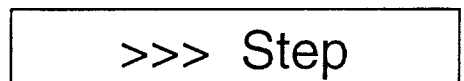
The settings for "NEXT MODE" appear.

When this menu screen appears for the first time, "STEP FWD" is selected.


Setting screen display



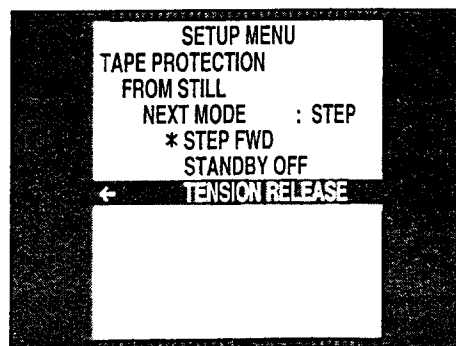
Monitor screen



Time counter display

- 8 Press the  button to select "TENSION RELEASE".

Selecting TENSION RELEASE



Monitor screen



Time counter display



9 Press the SET (YES) (MARK) button.

The "Saving" message appears on the monitor (as shown below), and the new setting is saved in memory.

Messages when saving settings



Monitor screen



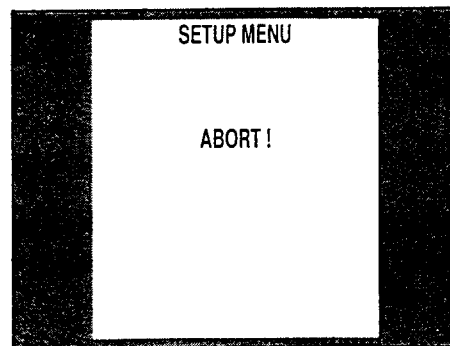
Time counter display

Once the saving operation is completed, both the monitor screen and time counter display return to the normal state.

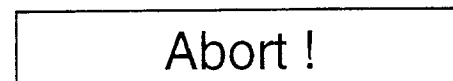
Notes

- If you power off this unit while it is in the process of saving the settings, settings may be lost. Wait until saving is completed before powering the unit off.
- If you do not press the SET (YES) (MARK) button, and press the MENU button, the settings are not saved; the displays shown below appear for 0.5 seconds, and the menu system is forcibly exited. If making more than one setting, be sure to press the SET (YES) (MARK) button before moving to the next item.

Forcibly aborting the menus



Monitor screen



Time counter display



Chapter 6

Returning menu settings to the factory default

Returning a specific menu setting to its factory default

In the screen for making the setting, press the RESET (NO) button.

In the example above of the “NEXT MODE” setting, press the RESET (NO) button in step 8 to return to the factory default of “STANDBY OFF”.

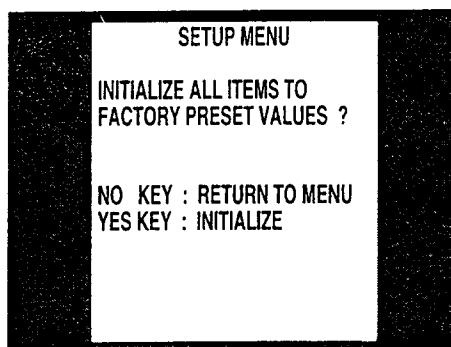
Returning all menu settings to the factory default

1 Press the MENU button to display the level 1 menu.

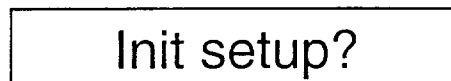
2 Press the RESET (NO) button.

The following message appears on the monitor screen, which is intended to ask the user to confirm the reinitialization.

Request for confirmation of reinitialization



Monitor screen



Time counter display

3 Press the SET (YES) (MARK) button.

This returns all menu settings to their factory defaults. The “Saving” message appears on the monitor, and the new setting is saved in memory.

Notes

- If you power off this unit while it is in the process of saving the settings, the reinitialization can not be ensured. Wait until saving is completed before powering the unit off.
- If instead of pressing the SET (YES) (MARK) button, you press the RESET (NO) button, the reinitialization is not carried out, and the display returns to the level 1 menu screen.



Chapter 7

Maintenance

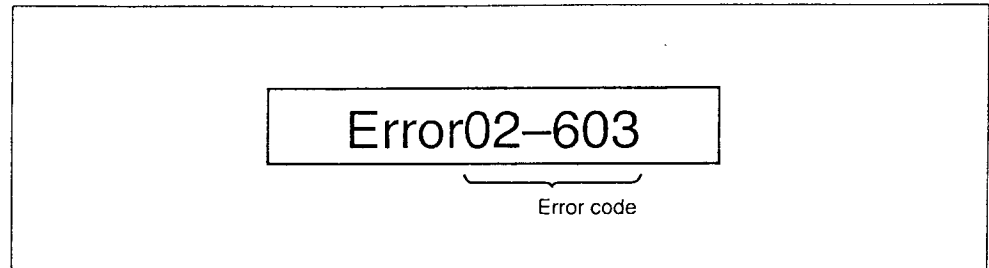
This chapter describes the self-diagnosis function with which this unit is provided, the action to be taken in the event of condensation on the head drum, the digital hours meter, and the head-cleaning process needed to ensure high video and audio reproduction quality.

| | |
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| Self-Diagnostics | 7-2 (E) |
| Condensation | 7-3 (E) |
| Regular Checks | 7-4 (E) |
| Digital Hours Meter | 7-4 (E) |
| Head Cleaning | 7-5 (E) |

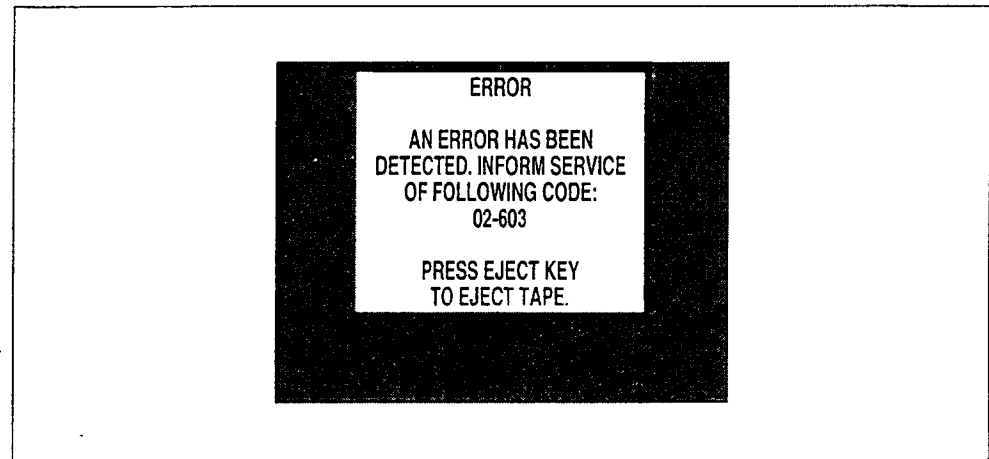
Self-Diagnostics

This unit is provided with a self-diagnosis function which detects internal faults. If a fault is detected, this unit displays an error code in the time counter display and an error message on the monitor screen.

To display error messages on the monitor screen, the monitor must be connected to the VIDEO 2 (SUPER) OUTPUT connector, and the CHARACTER switch on the subsidiary control panel must be in the ON position.



Example error code displayed on the time counter display



Monitor screen error message

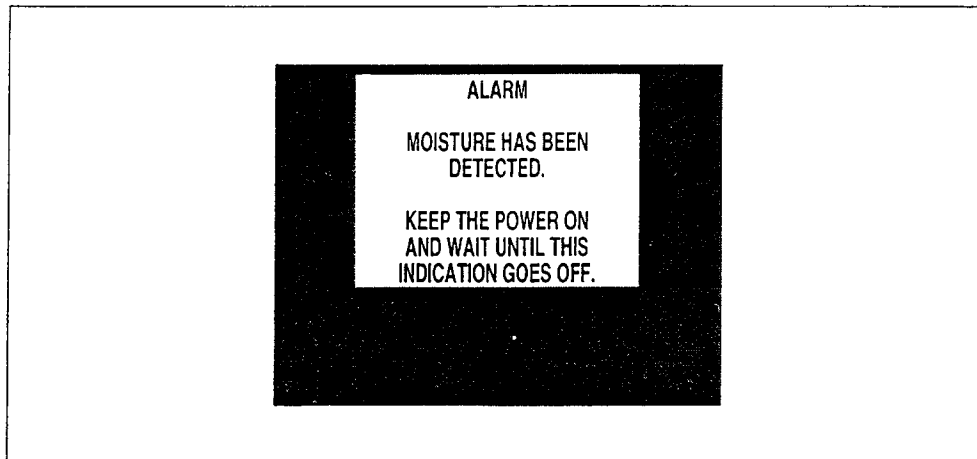
When an error message appears on the monitor screen, follow the direction displayed.



If the unit is suddenly moved from a cold to a warm location, or used in a very humid place, moisture from the air can condense on the head-drum. If the tape is run in this state, the tape may stick to the drum, in which case **it is highly likely to be damaged**. To lessen the risk of this occurring, this unit is fitted with a condensation detection system.

If moisture condenses on the head-drum while the unit is operating

The indication "HUMID !" appears in the time counter display. The following indication also appears on the monitor.



Condensation warning indication

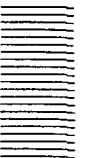
If this happens, the cassette is ejected automatically.

Before resuming the operation, wait until the alarm message disappears, without turning the unit off.

If the condensation warning appears immediately after powering on

Leave the unit powered on and wait until the indication disappears. While the indication is present, it is not possible to insert a cassette.

Once the warning indication disappears, the unit is ready for use.



Digital Hours Meter

The digital hours meter keeps a cumulative count of the total operating time, the drum rotation time, the tape transport operating time, and the number of threading and unthreading operations. These counts can be displayed on the monitor and time counter display; use them as guidelines for scheduling maintenance. Consult your Sony service representative about necessary periodic maintenance checks.

Digital hours meter indications

The digital hours meter provides the following four display items.

T1: OPERATION

Cumulative total of hours unit is powered on, **in units of 10 hours**

T2: DRUM ROTATION

Cumulative total of hours of drum rotation with tape threaded, **in units of 10 hours**

T3: TAPE RUNNING

Cumulative total of hours of tape transport operation, **in units of 10 hours**

CT: THREADING

Cumulative number of tape threading/unthreading operation pairs, **in units of 10 operation pairs**

Except for the total operation time, there are two counts for each item: the cumulative total from manufacture, and a 'trip' count resettable.

Displaying the digital hours meter



Press the HOURS METER button.


Monitor display

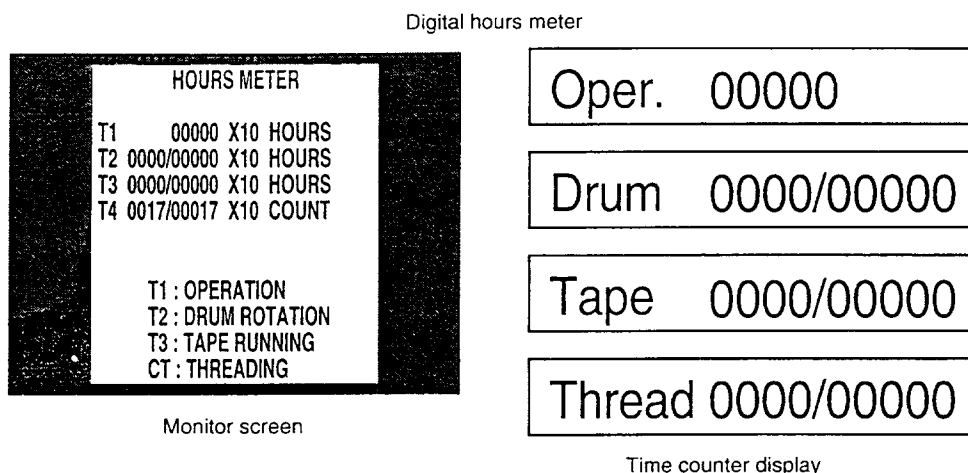
All four counts appear.

The four-digit value to the left of the slash is the resettable trip count, and the right value is the cumulative total from manufacture.

Time counter display

One of the four indications appears. Use the  and  buttons to change the item displayed.

Initially, only the trip value appears. Press the  (B) button to display the cumulative total to the right of the slash, as long as the button is held down.



Ending the digital hours meter display

Press the HOURS METER button.

Resetting the trip values

Consult your Sony service representative.

Head Cleaning

Clean both the video and audio heads using the special BCT-5CLN cleaning cassette. Follow the instructions for the cleaning cassette carefully, as improper use can damage the heads.

Cleaning procedure

Insert the cleaning cassette, hold down the PLAY button and press the EJECT button. This carries out a five-second cleaning operation. The EJECT indicator flashes during this period, and all tape transport buttons other than the EJECT button are disabled.

Notes

- Up to three consecutive five-second cleaning operations are possible. Cleaning above this level may damage the heads.
- Be sure the unit is not left with the cleaning cassette in place, as this can cause damage to the heads.

Chapter 8

Operational Problems

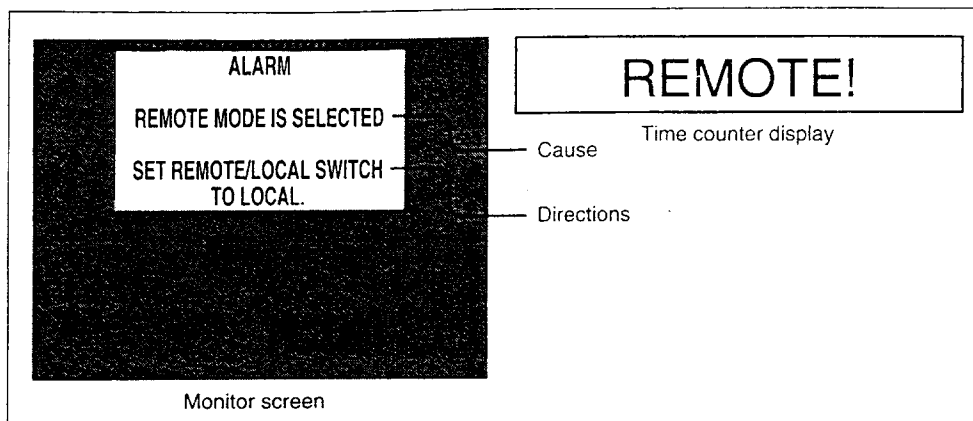
If an alarm message appears on the screen, or the unit appears to be malfunctioning, check this chapter before consulting your Sony service representative.

| | |
|-----------------------------|---------|
| Alarm Messages | 8-2 (E) |
| Troubleshooting Guide | 8-4 (E) |

Alarm Messages



There are a number of messages which may appear on the monitor screen during operation. (A message also appears in the time counter display.)



Alarm messages

These alarm messages indicate misoperations or problems with the unit such as condensation on the drum.

To display these messages on the monitor screen, the monitor must be connected to the VIDEO 2 (SUPER) OUTPUT connector, and the CHARACTER switch on the subsidiary control panel must be in the ON position. It is possible to disable the display of warning indications in the menu system, by setting the ALARM and REF. ALARM items to OFF.

For details of the menu settings see the section "Menu Operations" (page 6-10(E)).

If an alarm message is indicated, take appropriate action according to its contents.

The alarm messages indications are listed below.

Alarm messages

| Alarm messages on the monitor screen | | Alarm messages in the time counter display |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| Cause | Direction | |
| ABNORMAL SETTINGS SELECTED IN SETUP MENU. | SET ITEMS IN THE SETUP MENU TO THE APPROPRIATE VALUES. CONTACT YOUR DEALER IF THIS ALARM APPEARS AGAIN DESPITE THE ABOVE PROCEDURE. | Irr. SETUP ! |
| MOISTURE HAS BEEN DETECTED. | KEEP THE POWER ON AND WAIT UNTIL THIS INDICATION GOES OFF. | HUMID ! |
| REMOTE MODE IS SELECTED. | SET REMOTE/LOCAL SWITCH TO LOCAL. | REMOTE ! |
| KEY IS JAMMED. CHECK THE FOLLOWING KEYS: (EJECT) (STOP) (F. FWD) (REW) (PLAY) (REC) (UP) (DOWN) (RIGHT) (LEFT) (SET) (H. M.) (TC SET) (MENU) (RESET) | | Key short ! |
| NO CASSETTE IN VTR. | — | No Casse ! |
| RECORD INHIBIT PLUG ON THE CASSETTE IS SET TO INHIBIT. | — | REC INH.! |
| CTL MODE IS SELECTED. | SET CTL/TC/UB SWITCH TO TC OR UB. | CTL mode ! |
| REC-PAUSE MODE IS SELECTED. | TC/UB PRESET IS IMPOSSIBLE IN REC-PAUSE MODE. | REC-PAUSE ! |
| REF VIDEO IS NOT DETECTED. | INPUT A REF VIDEO SIGNAL. | No REF ! |
| A BLACK/WHITE SIGNAL IS BEING USED FOR REF VIDEO. | SUPPLY A COLOR SIGNAL WHEN USING THE COMPOSITE OUT OR S-VIDEO OUT. | B&W REF ! |
| A NON-STANDARD SIGNAL IS BEING USED FOR REF VIDEO. | USE A STANDARD SIGNAL. | REF NON-STD |
| INPUT VIDEO IS NOT DETECTED. | CHECK THE VIDEO IN SWITCH AND SUPPLY A VIDEO SIGNAL TO VIDEO INPUT. | No INPUT ! |
| VIDEO PRINTER IS NOT CONNECTED. | — | No Printer ! |
| FOOT SWITCH CANNOT BE USED. | SET THE MENU OF 'FOOT SWITCH' TO OTHER VALUE | Foot SW OFF |

| Tape problems | | |
|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Symptom | Cause | Remedy |
| Recording is not possible. | The record-inhibit plug on the cassette is pressed in ^{a)} . | Pull out the plug, or use a different tape. |
| The tape transport controls (PLAY, F FWD, REW buttons etc.) do not operate. | The REMOTE/LOCAL switch is in the REMOTE position, and the LOCAL ENABLE menu setting is "STOP & EJECT" or "ALL DISABLE" ^{a)} . | Set the REMOTE/LOCAL switch to LOCAL, or change the menu setting to "ALL ENABLE". |
| | No cassette is loaded ^{a)} . | Insert a cassette. |
| Pressing the PLAY button does not enter playback mode. | The unit is in REPEAT mode. | Set the REPEAT MODE menu item to OFF. When REPEAT MODE is set to ON, pressing the PLAY button cues up the repeat start point instead of entering playback mode. |

| Audio problems | | |
|----------------------------------------------------------|-------|------------------------------------------------------------------------|
| Symptom | Cause | Remedy |
| It is not possible to disable the Dolby noise reduction. | — | On this unit, it is not possible to disable the Dolby noise reduction. |

| Time code problems | | |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Symptom | Cause | Remedy |
| It is not possible to preset the time counter display to an arbitrary value. | The CTL/LTC/U-BIT switch is in the CTL position. | Set the CTL/LTC/U-BIT switch to the LTC or U-BIT position. (It is not possible to preset time counter values.) |
| | The REMOTE/LOCAL switch is in the REMOTE position, and the LOCAL ENABLE menu setting is "STOP & EJECT" or "ALL DISABLE" ^{a)} . | Set the REMOTE/LOCAL switch to LOCAL, or change the menu setting to "ALL ENABLE". |
| Although the tape transport is operating, the time counter value does not change. | The MENU button, TC PRESET button or HOURS METER button has been pressed. | Press the button again, to exit from menu setting mode, time code presetting mode or hours meter mode, as the case may be. (In either of these modes, the time counter display does not show time counter information.) |
| | The time counter display is showing user's bit data. | Set the CTL/LTC/U-BIT switch to the LTC or CTL position. |

a) In these states an alarm message appears both on the monitor screen and time counter display.

| Monitor problems | | |
|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Symptom | Cause | Remedy |
| A "V" ^{a)} appears on the screen. | The TBS DELAY menu item is set to "VIDEO DELAY". | Set TBS DELAY to "SYNC DELAY". (The UVW-series has a built-in time base stabilizer. Therefore, in recording mode or video EE mode, the output video signal is delayed exactly 8 lines behind the reference signal. This means that when the TBS DELAY setting is "VIDEO DELAY", the video appears 8 lines lower on the monitor, and a "V" appears. However, even if the TBS DELAY item is set to "SYNC DELAY", if the monitor is synchronized to an external reference, a "V" also appears. This is not a malfunction.) |
| | A reference video signal is not being input. Alternatively, the input video signal is not synchronized to the reference signal ^{b)} . | Input a reference signal which is synchronized to the input video signal. Alternatively, use the REF. VIDEO INPUT connector on this unit in loop-through mode, and connect to the player REF. VIDEO INPUT. (In recording mode, the servo synchronizes to the input video signal. Therefore, if the input video signal and reference video signal are not synchronized, the time base stabilizer and servo will not synchronize, and therefore the picture will break up. Recording in this condition, however, will not affect the quality of the recording.) |
| The time code (or other time counter indication) superimposed on the monitor is one frame behind. | The time code is being displayed in the top third of the screen. | Move the display position down. (When using a superimposed time code, and recording on another VTR avoid the top third of the screen. In the UVW-series, the time code is superimposed as soon as read, and therefore even discontinuous time information such as user's bit data can be displayed with the minimum of delay. However, since the new data value is still being processed while the beam is scanning the top third of the screen, the data from the previous frame appears if the time code is displayed within this area.) |
| The picture does not appear in video EE mode. | The connector to which the video signal is input does not match the settings of the VIDEO IN selector switches. ^{b)} | Make the settings of the VIDEO IN selector switches match the connector to which the video signal is input. |
| No superimposed information appears on the monitor screen. | The CHARACTER switch is in the OFF position. | Set the CHARACTER switch to the ON position. |
| | The monitor is not connected to the VIDEO 2 (SUPER) OUTPUT connector. | Connect the monitor to the VIDEO 2 (SUPER) OUTPUT connector. (To display superimposed information, the monitor must be connected to the VIDEO 2 (SUPER) OUTPUT connector.) |
| The monitor screen is too bright. | The monitor INPUT connector 75 termination switch is in the OFF position, or there is no terminating device. | Set the monitor INPUT connector 75 termination switch to the ON position, or connect a terminating device. |
| The monitor screen is too dark. | When using the monitor INPUT connectors of two or more monitors for a loop-through connection, more than one 75 termination switch is set to the ON position. | Set the 75 termination switch of the monitor INPUT connector being used for a loop-through connection to the OFF position. |
| The video image is too dark when recording a composite video signal. | | |

a) V-blanking (see page A-7(E))

b) In this state an alarm message appears on the monitor screen and time counter display.

Appendixes

| | |
|----------------------|---------|
| Specifications | A-2 (E) |
| Glossary | A-5 (E) |

General

| | |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power requirements | UVW-1400A: 100 to 120 V AC, 50/60 Hz UVW-1400AP: 200 to 240 V AC, 50/60 Hz |
| Power consumption | 85 W |
| Operating temperature | +5°C to +40°C (+41°F to +104°F) |
| Storage temperature | −20°C to +60°C (−4°F to +140°F) |
| Humidity | Less than 80% |
| Mass | 19 kg (41 lb 12 oz) |
| External dimensions | 427 mm (W) × 193 mm (H) × 474 mm (D) (16 ³ / ₄ " × 7 ⁵ / ₈ " × 18 ⁵ / ₈ "), excluding external projections |

Tape transport system

| | |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tape speed | UVW-1400A: 118.6 mm/s UVW-1400AP: 101.5 mm/s |
| Maximum recording/playback time | UVW-1400A: 90 minutes or longer (for BCT-90MLA) UVW-1400AP: 100 minutes or longer (for BCT-90MLA) |
| Fast forward/rewind time | 180 s or less (for BCT-90MLA) |
| Recommended cassettes | Betacam SP 1/2-inch cassette Metal tapes: BCT-5MA/10MA/20MA/30MA, UVWT-10MA/ 20MA/30MA BCT-5MLA/10MLA/20MLA/30MLA/60MLA/ 90MLA, UVWT-60MLA/90MLA or equivalent |

Video system

| | |
|------------------|--------------------------------------------------------------------------------------------------------------------|
| Recording method | Luminance: frequency modulation Chrominance: Time division/time compression chrominance frequency modulation |
|------------------|--------------------------------------------------------------------------------------------------------------------|

| Metal tape | | | |
|---------------------|------------------------------|----------------------|---------------------------------------------------------------------------------|
| Bandwidth | Luminance | | NTSC: 30 Hz to 4 MHz +1.0 dB/−4.0 dB PAL: 25 Hz to 5 MHz +1.0 dB/−4.0 dB |
| | Color difference (R−Y/B−Y) | | NTSC: 30 Hz to 1.5 MHz +1.0 dB/−4.0 dB PAL: 25 Hz to 1.5 MHz +1.0 dB/−4.0 dB |
| S/N ratio | Luminance (component IN/OUT) | | NTSC: 49 dB or more, PAL: 46 dB or more |
| | Chrominance | Amplitude modulation | NTSC: 52 dB or more, PAL: 48 dB or more |
| | | Phase modulation | NTSC: 52 dB or more, PAL: 48 dB or more |
| K factor (2T pulse) | | | 3% or less |
| Y/C delay | | | 30 ns or less |

Audio System

Recording method Bias

| Metal tape | |
|----------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| Frequency characteristics | 50 Hz to 15 kHz +2.0 dB/-3.0 dB |
| S/N ratio (at 3% distortion level for NTSC) (Referred to peak level ^{a)} Weighted CCIR 468-3 for PAL) | NTSC: 70 dB or more PAL: 66 dB or more |
| Distortion (THD) (at 1 kHz reference level) | 1.5% or less |
| Wow and flutter | 0.15% rms or less |

a) Peak level= +8 dB above operational level

Input connectors

Video input

REF. VIDEO BNC × 2 (loop-through connection)
 Composite video: 1.0 V_{p-p} ±0.3 V, 75 Ω, sync negative
 (286 mV for UVW-1400A, 300 mV for UVW-1400AP)
 Composite sync: 0.2 to 5.0 V_{p-p}, 75 Ω, negative
 (when using component signals)

VIDEO BNC × 2 (loop-through connection)
 Composite video: 1.0 V_{p-p}, 75 Ω, sync negative

RGB/COMPONENT BNC × 3
 G plus sync/Y: 1.0 V_{p-p}, 75 Ω, sync negative
 or G: 0.7 V_{p-p}, 75 Ω
 R/R-Y: 0.7 V_{p-p}, 75 Ω
 B/B-Y: 0.7 V_{p-p}, 75 Ω

S-VIDEO DIN 4-pin × 1

Audio input

AUDIO CH-1/2 XLR 3-pin × 2 (female)
 ON: +4 dBu, 600 Ω, balanced
 OFF: +4 dBu, 10 kΩ, balanced
 (0 dBu = 0.775 V_{rms})

Specifications

Output connectors

Video output

VIDEO 1/2 (SUPER) BNC \times 2
Composite video, 1.0 Vp-p, 75 Ω , sync negative (286 mV for UVW-1400A, 300 mV for UVW-1400AP)
Switch selection on the subsidiary control panel controls whether time codes and other superimposed information are output from VIDEO 2 (SUPER) OUTPUT.

RGB/COMPONENT BNC \times 3
G plus sync/Y: 1.0 Vp-p, 75 Ω , sync negative
or G: 0.7 Vp-p, 75 Ω
R/R-Y: 0.7 Vp-p, 75 Ω
B/B-Y: 0.7 Vp-p, 75 Ω

RGB SYNC BNC \times 1
Composite sync (no burst): 2.0 Vp-p, 75 Ω , negative

S-VIDEO DIN 4-pin \times 1

Audio output

AUDIO CH-1/2 XLR 3-pin \times 2 (male)
+4 dBu (600 Ω load), low impedance, balanced

MONITOR AUDIO RCA phono jack \times 1

HEADPHONES Stereo phone jack
Maximum -14 dBu, 8 Ω
(0 dBu = 0.775 Vrms)

Remote connectors

REMOTE: 25-pin multi \times 1
REMOTE OUT: Stereo mini-jack \times 1
REMOTE 2: Stereo mini-jack \times 1
CONTROL S: Stereo mini-jack \times 1

Supplied accessories

AC power cord (1)
Operating Instructions (1)

Optional accessories

RMM-130 Rack Mount Adaptor
BCT-5CLN Cleaning Cassette
SVRM-100/100A Remote Control Unit

Design and specifications are subject to change without notice.



A/B roll edit

An edit in which two or more players are used to create special effects such as dissolve and wipe, and one recorder is used to record the results of the edit. Using an editing controller allows efficient control of the VTRs and very precise editing.

B-Y signal

A chrominance signal determined by subtracting the Y (luminance) signal from the B (blue) signal. One of the component signals.

Bridging connection

A connection which allows a signal input to an input terminal to pass through the unit and exit from an output terminal as input to external equipment. Also called loop-through connection.

Capstan

A drive mechanism that moves the tape at a specified speed. Its rotation normally synchronizes with a reference sync signal.

Chrominance signal

Color signal containing color information such as hue and saturation. Also called C signal.

Color frame

The color subcarrier phase, whose one cycle consists of two frames (four fields) in NTSC format and four frames (eight fields) in PAL format.

Color framing

Maintenance of continuity in the color subcarrier phase between one frame and the next, for the purpose of avoiding noise on the picture.

Component video signal

A video signal consisting of a luminance signal (Y) and two chrominance signals (R-Y, B-Y).

Composite video signal

A composite video signal containing video, burst and sync signals.

CTL

Abbreviation of control signal. A pulse signal recorded on a longitudinal track of the tape in units of fields. Counting this signal allows the number of frames to be used to display the tape running time. It is also used as a control signal to adjust the relationship between the scanning position of the video heads and tape movement during playback to match that during recording.

Drop frame mode

In NTSC format, the actual number of frames per second is approximately 29.97, while that for the time code is specified as 30. Drop frame mode is a mode in which the time code is advanced in such a way that the difference in frame value between real time and the time codes is corrected. In this mode, two frames are skipped at the beginning of each minute, except for every tenth minute, so that the frame value for time codes matches that for real time.

EE mode

Abbreviation of Electric to Electric mode. Video and audio signals are supplied to the VTRs internal circuits, but not to the recording heads.

External synchronization

Synchronization of the signals and tape transport of a VTR with those of a reference VTR.

Guard bands

These are unrecorded regions between adjacent tracks on a tape which prevent crosstalk between the signals on the two tracks. In jog/shuttle mode, since the path of the heads crosses the tracks, the guard bands can appear as horizontal bars (noise bars) on the monitor screen. The same problem can occur during normal playback if the tracking of the heads is not adjusted correctly.

IRE

A unit for expressing video level as determined by the Institute of Radio Engineers (now called the Institute of Electrical and Electronic Engineers).

LNG recording

Abbreviation of longitudinal recording. A method of recording audio signals by radio frequency bias method on the longitudinal track of the tape using the fixed head.

LTC

Abbreviation of Longitudinal Time Code. A time code recorded in a separate track at the edge of the tape.

Luminance signal

The signal that determines the brightness of the picture. Also called Y signal. One of the component signals.

Metal tape

Magnetic tape coated with microscopic particles of metal dispersed in a liquid binder. It allows high-density recording.

Moisture condensation

Condensation of moisture on the tape transport mechanisms. If moisture condenses on the head-drum, the tape adheres to the drum and causes malfunction.

Non-drop-frame mode

A mode of advancing the time code in such a way that the difference in frame values between real time and the time code is neglected. 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.

Oxide tape

Magnetic tape coated with microscopic particles of ferric oxide dispersed in a liquid binder.

Reference video signal

A video signal consisting of a sync signal or sync and burst signals, used as a reference.

RGB signals

Red, green and blue signals, representing the primary colors. Color television is displayed by mixing red, green and blue components.

R-Y signal

A chrominance signal determined by subtracting the Y (luminance) signal from the R (red) signal. One of the component signals.

SMPTE

Society of Motion Picture and Television Engineers.

S/N ratio

Abbreviation of Signal-to-Noise ratio. The higher the S/N ratio, the less noise and higher the picture quality.

Search mode

A VTR mode used when searching for specific scenes, by viewing the video output or time codes while playing back the tape at various speeds in forward or reverse direction.

Servo lock

Synchronizing the drum rotation phase and tape transport phase with a reference signal during playback and recording so that the video heads scan the tape in the same pattern during playback and recording.

Superimpose

To put a picture (or a set of characters) onto another so that both can be seen at the same time.

S-video input connector

A connector that inputs Y (luminance) and C (chrominance) signals separately to reduce interference between Y and C signals, and to help reproduce noiseless images.

Sync signal

A reference signal consisting of vertical and horizontal sync signals used for synchronizing the scanning patterns of the video camera and the monitor.



TBC

Abbreviation of Time Base Corrector. Electronic circuits to electrically stabilize the playback signals by removing color variation and roll in the playback picture caused by irregularity in drum rotation and tape movement. Time base correction reduces deterioration of picture quality when transmitting or copying playback signals.

The TBC is designed for user adjustment of sync phase and subcarrier phase with reference to the reference video signal, or user adjustment of signal levels including video and chroma signal level.

TBS

Abbreviation of Time Base Stabilizer. Similar to TBC circuits, although not designed for user adjustment of sync phase and subcarrier phase with reference to the reference video signal, or user adjustment of signal levels including video and chroma signal level.

Time code

Signals recorded on the tape to supply information on tape position such as the hour, minute, second and frame, to assist in setting edit points or searching for particular scenes. There are two types of time code: LTC and VITC.

Tracking

Electrically controlling the video head so that the playback phase matches the recording phase of the tape. Especially when playing back the tape with a VTR other than the one used for recording, adjusting the tracking prevents noise from appearing on the picture.

User's bits

Sections of the time code consisting of a total of 32 bits used for recording information such as the year, month and day, tape ID number or a program ID number.

V-blanking

The portion of the video signal that occurs between the end of one field and the beginning of the next. During this time, the electron beams in the cameras and monitors are turned off so that they can return from the bottom of the screen to the top without showing traces of movement on the screen. When the position of V-blanking is not adjusted correctly, a horizontal black bar appears on the screen.

VBS

Abbreviation of Video, Burst and Sync. A composite signal consisting of video signal, burst signal and sync signal.

VITC

Abbreviation of Vertical Interval Time Code. Time code recorded on a video signal track during V-blanking interval. It can be read correctly even during slow or still picture playback.

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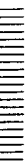
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