SONY

3-757-561-22(1)

Videocassette Recorder

Model:

UVW-1800/1800P

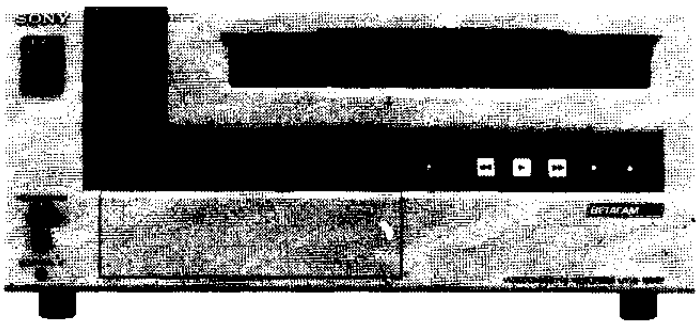
Operating Instructions page 1(E)

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 apparail, prière de lire attentivement ce mode d'emloi que l'on conservera pour toute référence ultérieure.

BETACAM SP



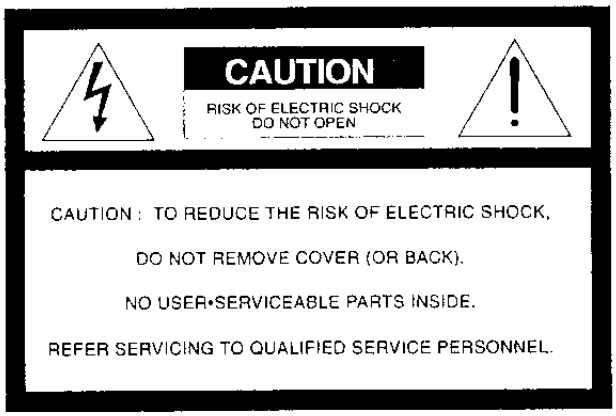
Owner's Record

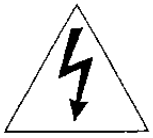
The model and serial numbers are located at the rear. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. UVW-1800 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 the customers in USA

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 Canada
This apparatus complies with the Class A limits for radio noise emissions set out in Radio Interference Regulations.

Pour les utilisateurs au Canada
Cet appareil est conforme aux normes Classe A pour bruits radioélectriques, spécifiés dans le Règlement sur le brouillage radioélectrique.

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 ⏚ 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.

Contents

Contents

Precautions

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 and editing, failure to input a reference video signal to the REF. VIDEO INPUT connector will prevent the built-in time base corrector (TBC) 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.

Input video signal type selection (see page 4-5(E))
For recording, it is important that the VIDEO IN switch on the subsidiary control panel is correctly set to match the type of video signal input. In particular, when inputting a component signal, set this switch to the "Y-R.B" position, and set the component signal input connector selection switch on the rear panel to the appropriate position. If these switches are not set correctly, not only will recording not be possible, but the input signal will also not appear on the monitor.

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 7-3(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 the UVW-1800/1800P.

The UVW-1800/1800P is a Betacam SP videocassette recorder, capable of recording and playing back composite video, component video and analog audio signals. With an external control unit connected, jog and shuttle functions are available, and the unit can be used as the recorder in an editing system.

Betacam SP format

Excellent video and audio characteristics

Compared with a conventional format, Betacam SP format provides better video and audio performance, with improved signal-to-noise ratio, frequency characteristics, and detail reproduction, and greatly enhanced overall 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 VTRs.[1] Again, metal tape cassettes recorded on other Betacam SP VTRs can be played back on the UVW-1800/1800P. The cassette size is detected automatically.

Full range of recording and playback functions

Built-in time code generator and reader

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

Built-in time base corrector (TBC)

The built-in time base corrector 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 reduction[2] 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.

Other features

Compact, power-saving design
The unit is light and simple, and very energy-efficient.

Menu-based set-up 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 remote control unit through the RS-422A 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) 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-diagnosis functions
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 an erroneous operation or connection is 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
Identification of Parts and Controls

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

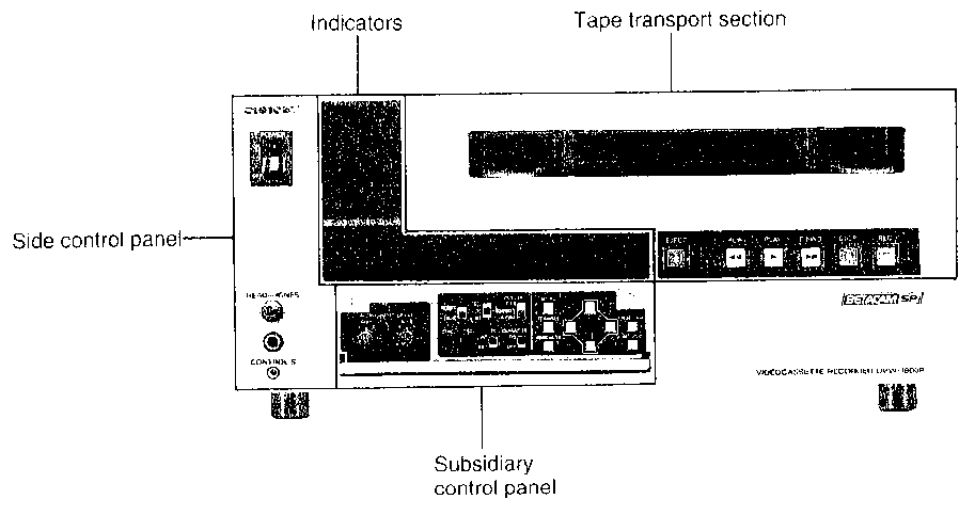
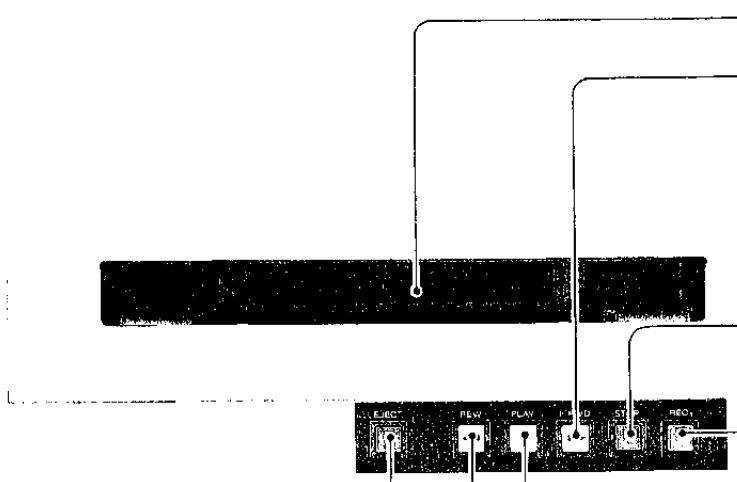


Photo: UVW-1800P

Front Panel

Tape transport section



1 Cassette insertion aperture

2 F FWD (fast forward) button
Pressing this button lights the indicator and fast forwards the tape. In fast forward, the picture does not appear on the monitor. Holding down this button provides a monochrome search function at 16 times normal speed in the forward direction.[a)]

3 STOP button
Pressing this button stops the tape transport.

4 REC (record) button
Holding down this button while pressing the PLAY button lights the indicator and starts recording.

5 PLAY button
Pressing this button lights the indicator and starts playback. Pressing the PLAY button during recording or editing ends the recording or editing mode, and starts playback.

6 REW (rewind) button
Pressing this button lights the indicator and rewinds the tape. During rewind, the picture does not appear on the monitor. Holding down this button provides a monochrome search function at 16 times normal speed in the reverse direction.[a)]

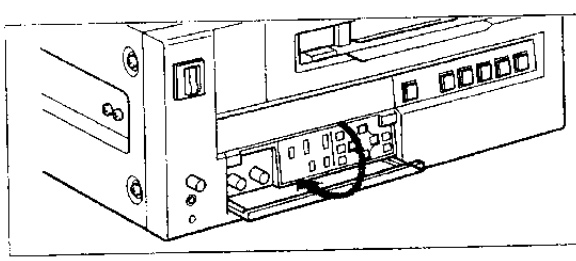
7 EJECT button
Pressing this button lights the indicator, and a few seconds later the cassette is ejected.

a) The F.FWD/REW item under the AUTO EE SELECT menu item must be set to PB *(see page 7-3(E))*.

Tape transport section

Subsidiary control panel

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

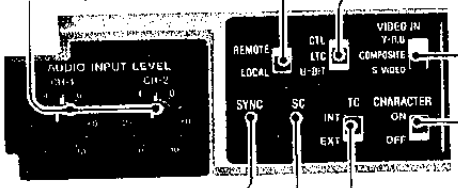


Pull the flap forward and down, then push into the panel.

Accessing the subsidiary control panel

● Switches, Controls and Adjusters

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 bits) displayed.

Note
When the REMOTE/LOCAL switch is set to REMOTE, this switch is ignored, and the selection is made from the external device connected.

22 VIDEO IN selector switch
Selects the type of video input signal for recording or playing back a component signal (the "Y-R,B" position), a composite signal (COMPOSITE position), or an S-VIDEO signal (S-VIDEO position).

26 SC (subcarrier) adjuster
Adjust this when necessary to accurately adjust the subcarrier phase of the output signal (composite) of the unit with respect to the reference video signal.

23 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.

27 SYNC adjuster
Adjust this when necessary to accurately adjust the sync phase of the output signal (composite) of the unit with respect to the reference video signal.

24 TC (time code) IN selector switch
Selects whether the time code from the internal time code generator is used (INT position) or the time code input from an external source (EXT position).

● Menu,control, Time code, Digital Hours Meter Button

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

For details of how to set time code values, see the section "Settings for Longitudinal Time Code and User Bits" (page 6-3(E)).

28 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.

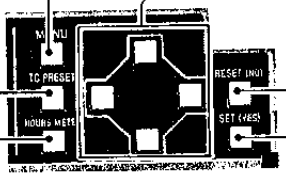
For details of menu operations, see the section "Menu Operations" (page 7-8(E)).

29 Arrow direction (↑ ↓ ← →) buttons
Use these buttons to move around the menu settings, and also for setting time code values.

For details of how to set time code values, see the section "Settings for Longitudinal Time Code and User Bits" (page 6-3(E)).

33 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 also shows the hours meter information at the same time. Pressing the button again returns to the normal indications.

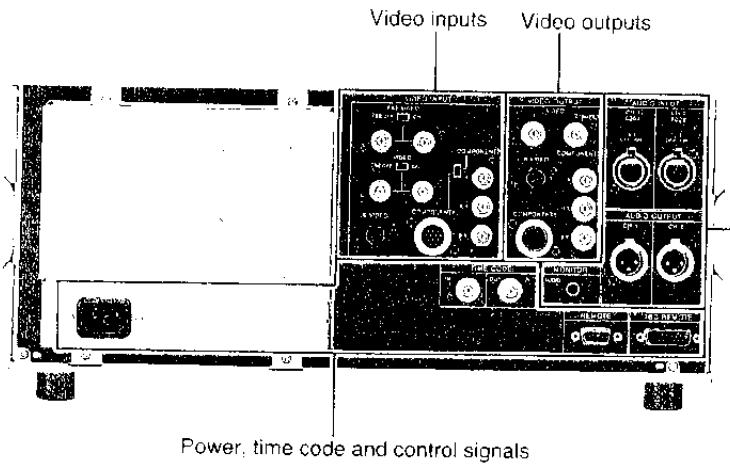
For details of the digital hours meter, see the section "Digital Hours Meter" (page 8-4(E)).



30 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.

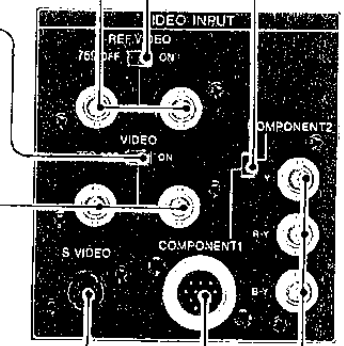
31 SET (YES) button
This button confirms new menu or time code settings. It is also used for a positive response to a menu question.

Subsidiary control panel



Rear Panel

Video inputs



1 REF. VIDEO 75 Ω termination switch
Set this switch to the OFF position when using both REF. VIDEO INPUT connectors for a loop-through connection, and to the ON position when not.

2 REF. VIDEO INPUT connectors (BNC)
Input a reference video signal. The two connectors can be used for a loop-through connection.

3 VIDEO 75 Ω termination switch
Set this switch to the OFF position when using both VIDEO INPUT connectors for a loop-through connection, and to the ON position when not.

4 VIDEO INPUT connectors (BNC)
Input a composite video signal. The two connectors can be used for a loop-through connection.

5 S-VIDEO INPUT connector (4-pin)
Input an S-VIDEO signal (separated video: luminance and chrominance (UVW-1800: 3.58 MHz, UVW-1800P: 4.43 MHz) signals).

6 COMPONENT 1 INPUT connector (12-pin)
Use the optional VDC-C5 12-pin dubbing cable to connect a component video signal.

7 Component input connector selection switch
Selects the component video input connector: COMPONENT 1 INPUT connector (lower switch position) or COMPONENT 2 INPUT connector (upper switch position).

8 COMPONENT 2 INPUT connectors (BNC)
Connect separate component video input signals (Y, R–Y and B–Y).

Video inputs

Side control panel

8 POWER switch
Pressing this switch on the side marked "ON" powers on the unit. The audio level meters and time counter display light.

9 HEADPHONES level control
Adjusts the headphone volume.

10 HEADPHONES connector (standard stereo jack)
Connect headphones (8 Ω) to monitor recording, playback and editing audio on the unit.

11 CONTROL S connector
Connect an optional remote control unit such the SVRM-100 to this connector to allow remote control of the unit.

Note
Unless the LOCAL ENABLE menu item is set to ALL ENABLE, the tape transport buttons are disabled whenever the REMOTE indicator is lit.

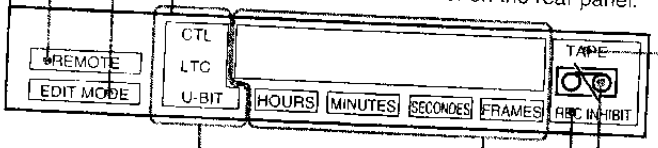
Side control panel

Indicators

12 Audio level meters
In recording or EE mode these indicate the recording audio level, while during playback they indicate the playback audio level.

13 REMOTE indicator
This lights when the REMOTE/LOCAL switch on the subsidiary control panel is in the REMOTE position.

14 EDIT MODE indicator
This lights in editing mode when there is an editor connected to the REMOTE connector on the rear panel.



15 Time data indicators
These indicate the type of time data shown in the time counter display.

16 Time counter display
This shows a CTL signal count value (hours:minutes:seconds:frames), longitudinal time code (LTC), or user-bit data. In combination with the HOURS METER button on the subsidiary control panel, it is also used to display the hours meter data selected from the menu.

If an error code indication in the form "Errorxx-xxx" appears in the time counter display, consult your Sony service representative.

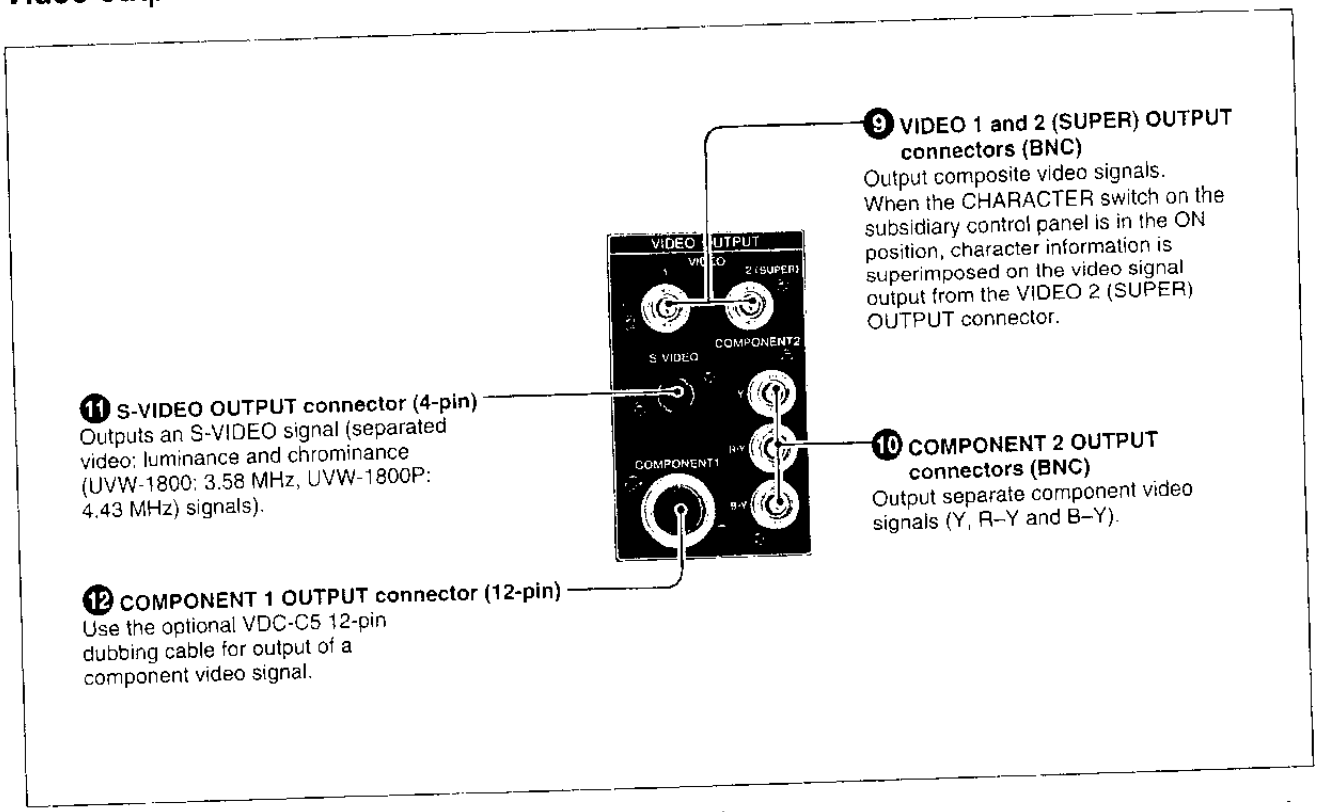
17 TAPE indicator
If you insert an oxide tape cassette, this indicator flashes. Press the EJECT button, and remove the cassette.
The UVW-1800P automatically ejects oxide tapes.

18 Tape end indicator
When there is only about 2 minutes of tape remaining, this indicator flashes.

19 REC INHIBIT indicator
This indicator lights when the cassette loaded has the record inhibit plug set to inhibit recording.

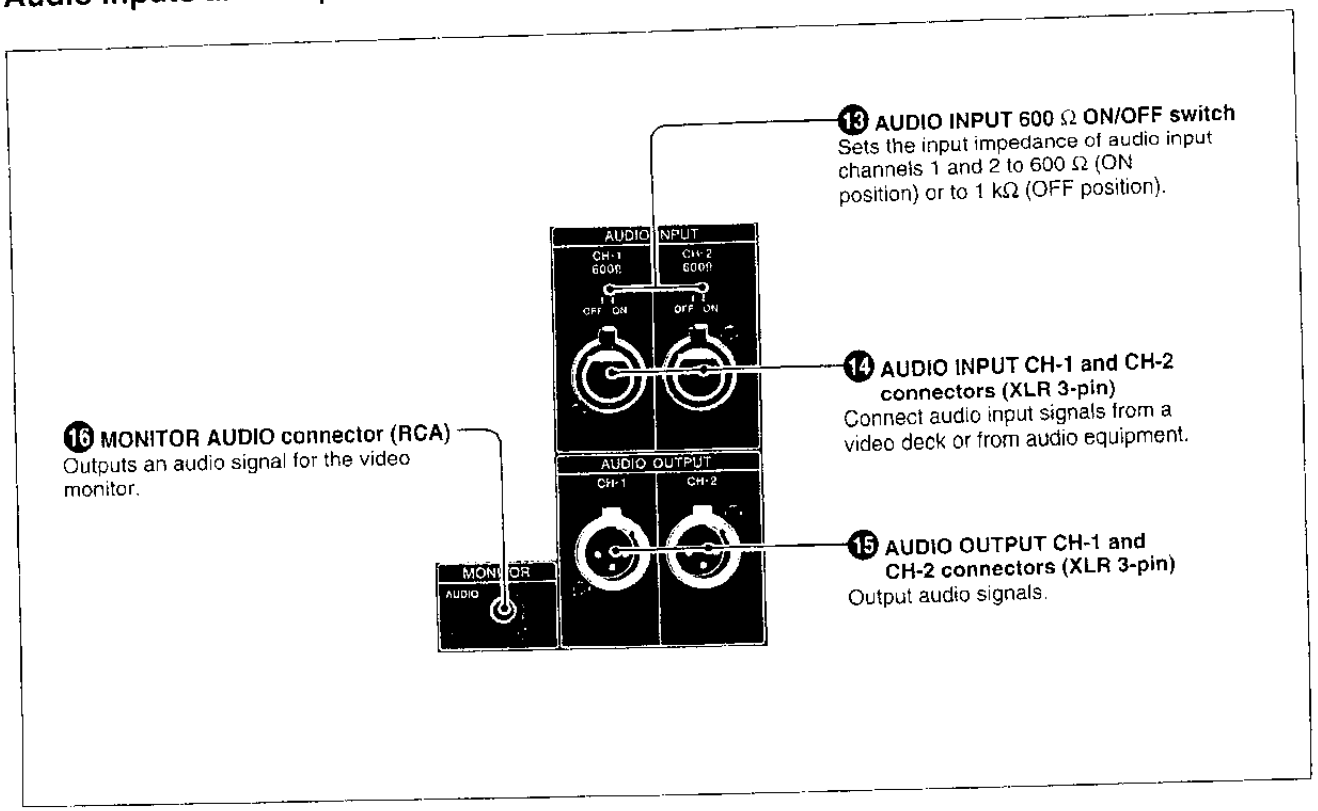
Indicators

Video outputs



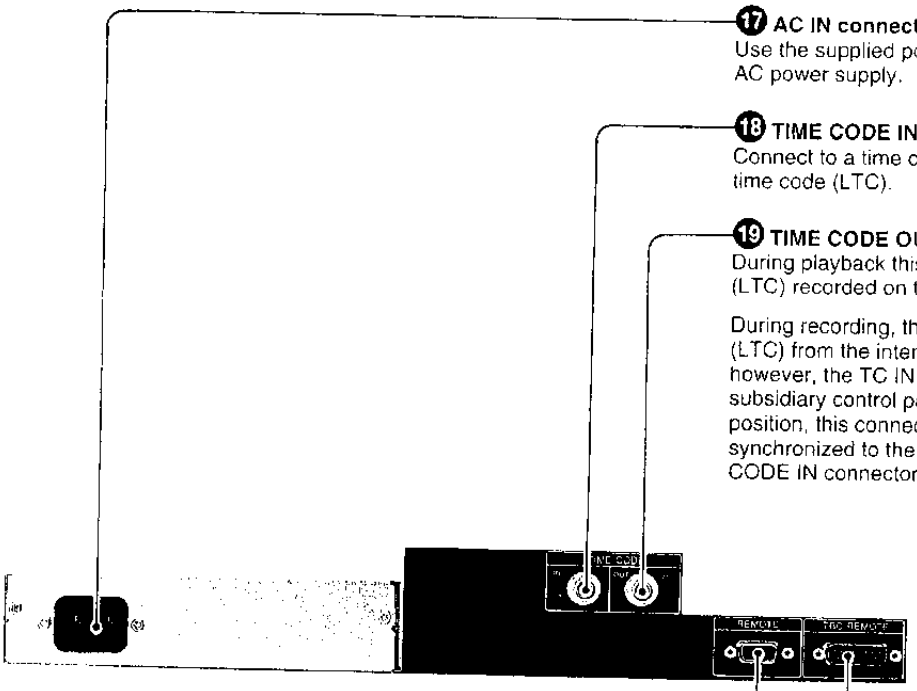
Video outputs

Audio inputs and outputs



Audio inputs and outputs

Power, time code and control signals



17 AC IN connector
Use the supplied power cord to connect to an AC power supply.

18 TIME CODE IN connector (BNC)
Connect to a time code generator and input a time code (LTC).

19 TIME CODE OUT connector (BNC)
During playback this outputs the time code (LTC) recorded on the tape.

During recording, this outputs the time code (LTC) from the internal time code generator. If, however, the TC IN selector switch on the subsidiary control panel is set to the EXT position, this connector outputs a time code synchronized to the time code input to the TIME CODE IN connector.

20 REMOTE connector (9-pin)
Using a 9-pin remote control cable, connect an editor such as a PVE-500, BVE-600/800/910/2000/9100, RM-450.

21 TBC REMOTE connector (15-pin)
For remote control of the internal time base corrector, connect an optional remote control unit such as a BK-2006/2007 or BVR-50/50P.

Note

Always power off the UVW-1800/1800P before connecting a remote control unit to the TBC REMOTE connector.
(Load current: Max. 300mA)

Power, time code and control signals

Chapter 3
Preparations

This chapter describes various preparatory aspects of operation of the UVW-1800/1800P.

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 dismantle 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.

Cassettes Which Can Be Used

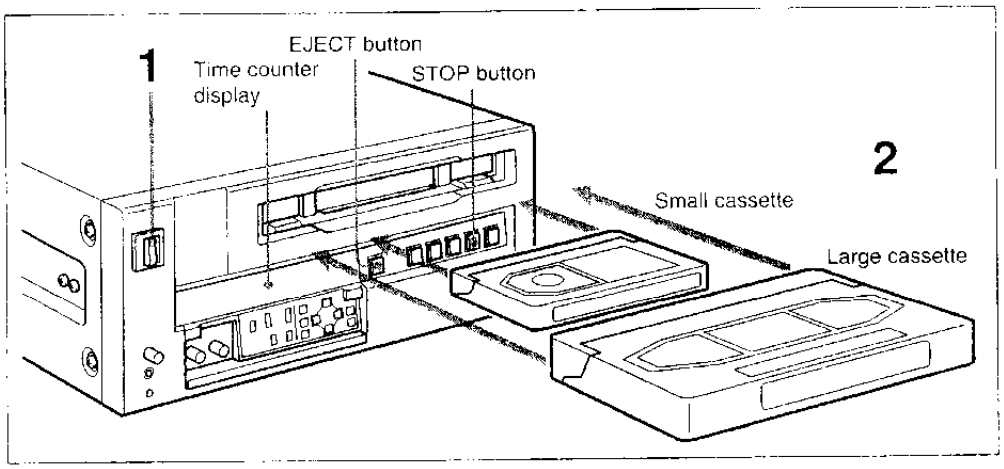
This unit only accepts metal tapes.
Use the following 1/2-inch Betacam SP cassettes.

	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.

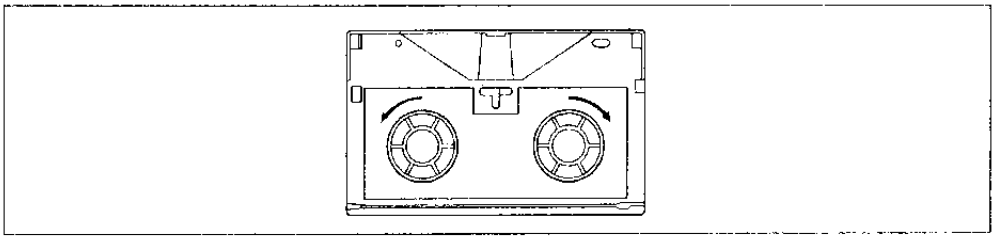
For details of how to remove slack in the tape, see the section "Removing slack in the tape" (on the next page).
If the message "HUMID !" appears in the time counter display, see Section "Condensation" (page 8-3(E)).

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 retote 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

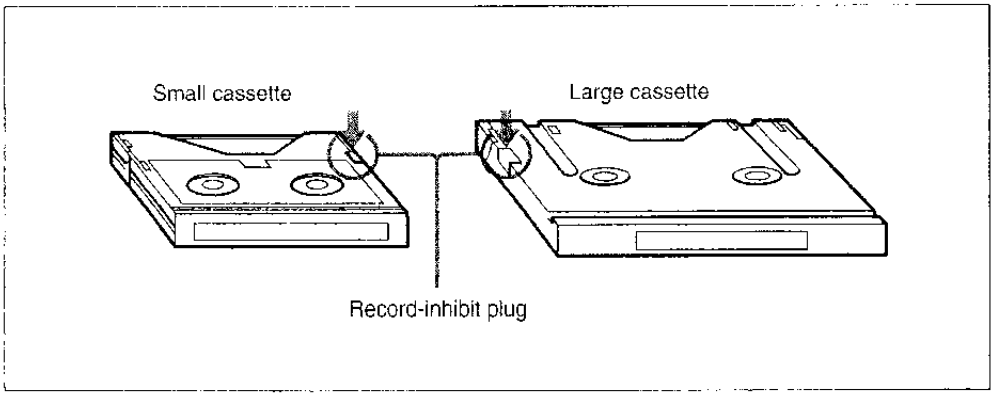
When you insert a cassette, the orange lock-out plate appears in the cassette compartment to prevent double insertion.

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.



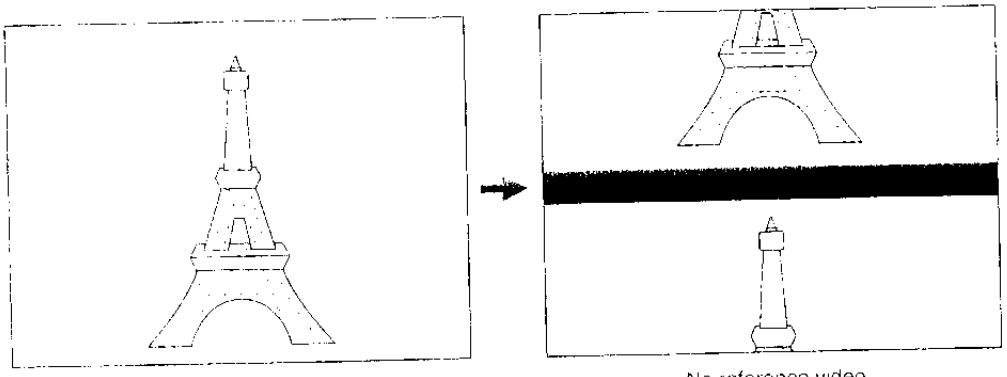
Record-inhibit plug

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.

When this unit is being used, a composite video signal, synchronized to the signal being used must be input to the REF. VIDEO INPUT connector to enable the time base corrector (TBC) to operate correctly, and ensure stable operation.

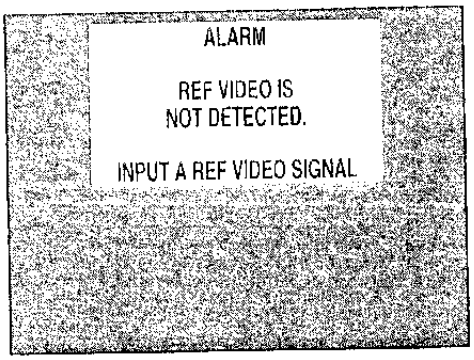
If no reference video signal is input, then during recording or editing, or in EE mode the monitor screen will tend to drift vertically, as shown in the figure below.



With reference video

No reference video

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.)



Monitor screen

Time counter display

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 7-8(E)).

Chapter 4
Recording and Playback

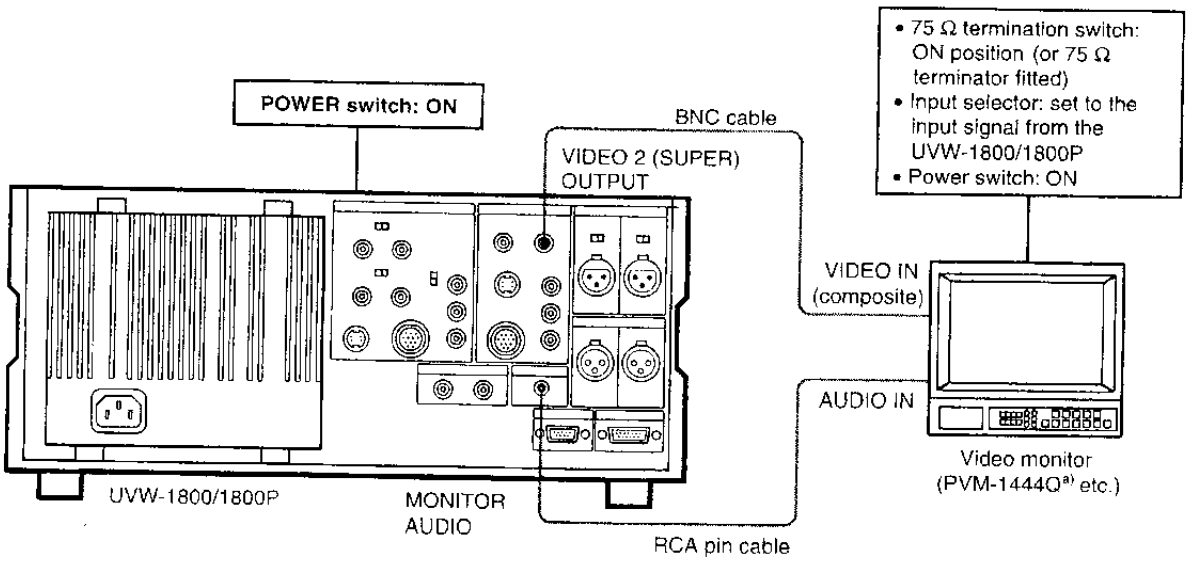
This chapter describes the preparation necessary before using the unit for recording or playback, including connections and switch settings, and basic operating procedures. It also describes the text information which can be superimposed on the monitor screen.

Playback Operation

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

Preparation for Playback

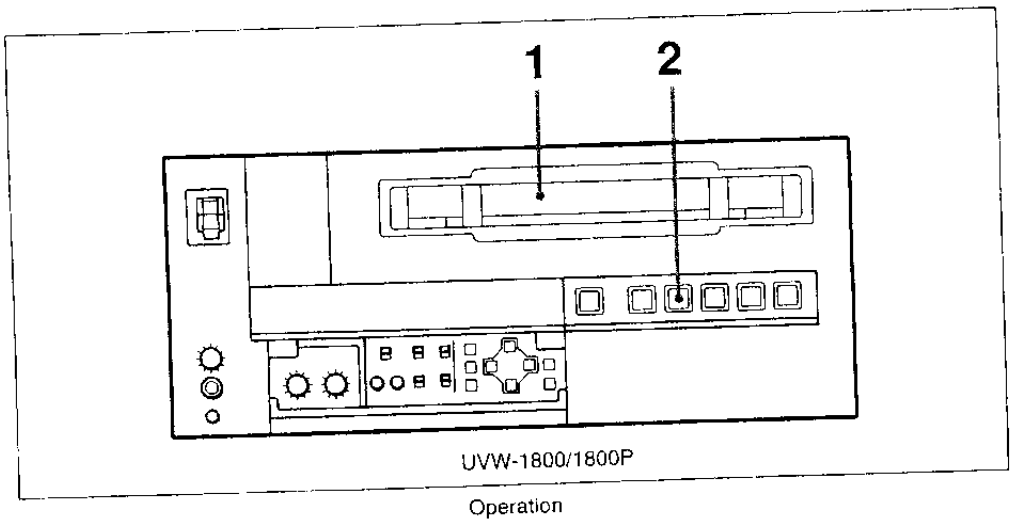
Connect the unit to the monitor and make the switch settings as shown in the following figure.



a) The VIDEO IN connectors of the PVM-1444Q are provided with automatic termination function.

Connections and switch settings

Playback Operation



Operation

1 Insert a 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-1800/1800P 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 7-6(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 7-3(E)).

Adjusting the audio playback volume

Carry this out on the monitor.

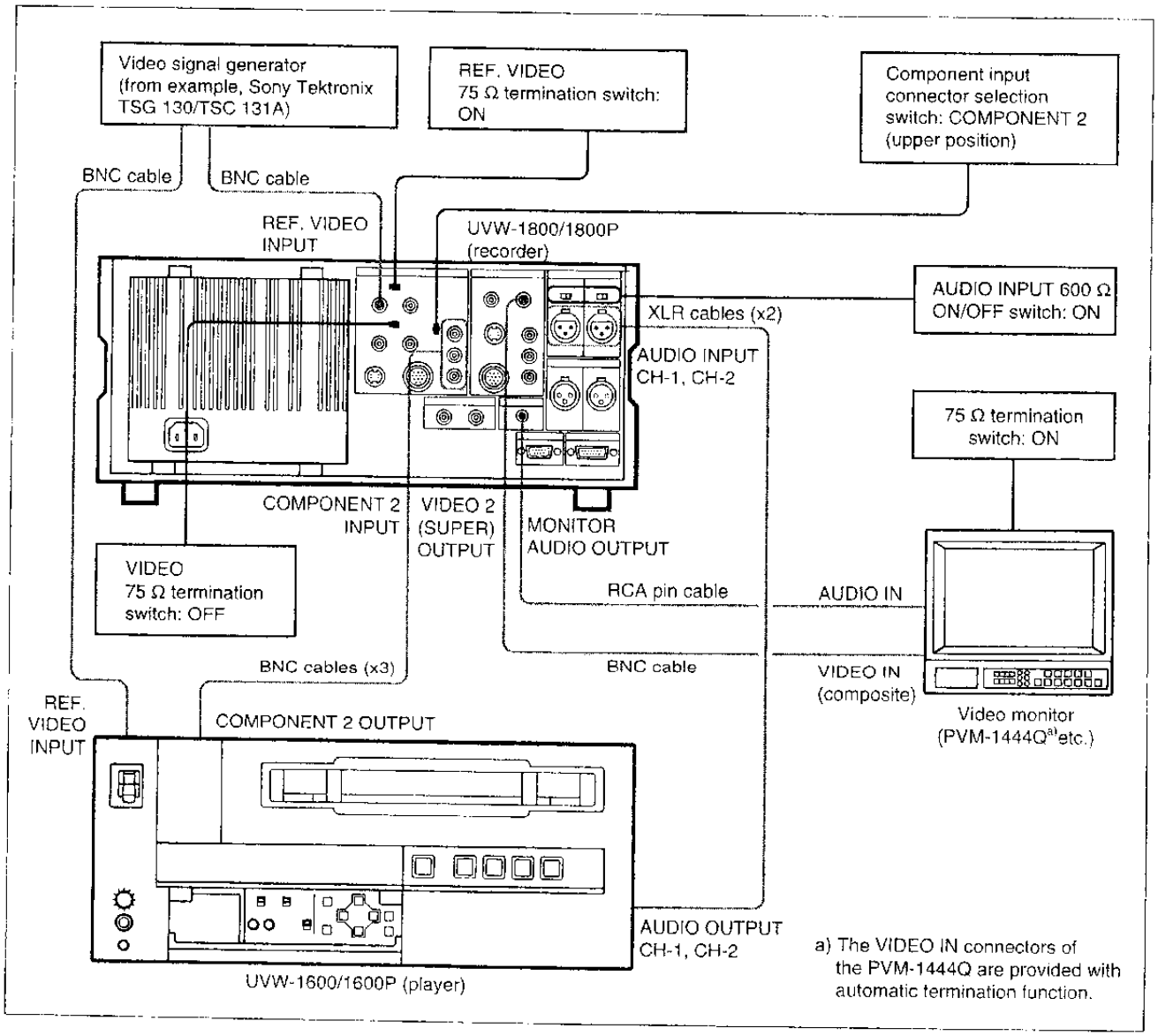
Simple search function

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 foward or reverse direction respectively. Press the PLAY button again to return to normal playback.

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

Preparation for Recording

Connect this unit as the recorder and a UVW-1600/1600P as the player as shown in the following figure. To check the video and audio signals being recorded, connect the UVW-1800/1800P to a monitor as described in the Section "Playback Operation" (page 4-2(E)).



Connections

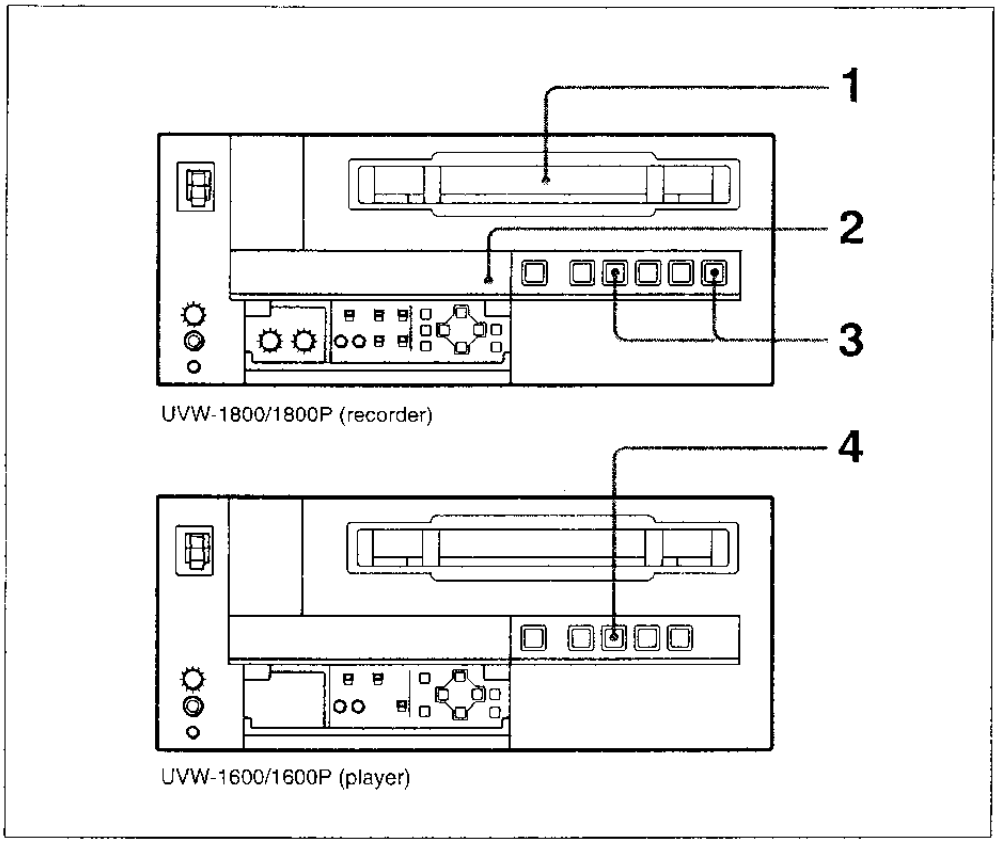
Note

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)).

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.



Operation

1 Insert a cassette in the UVW-1800/1800P.

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.

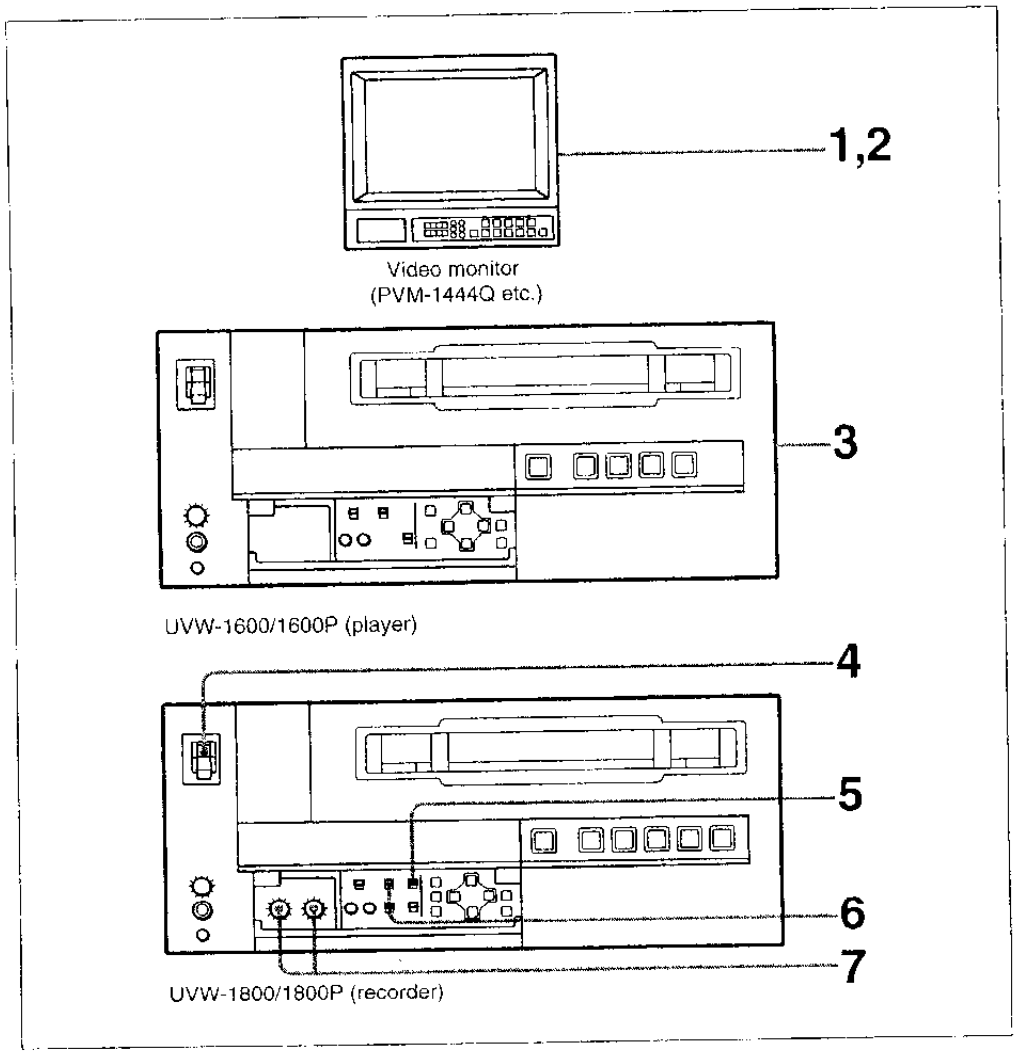
Playback starts.

To stop recording

Press the STOP button.

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-1800/1800P.

3 Following the instructions in the appropriate operation manual, and prepare the player for playback.

4 Power on the UVW-1800/1800P.

5 Set the VIDEO IN selector switch to Y-R,B.

6 Set the time counter display selector 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.

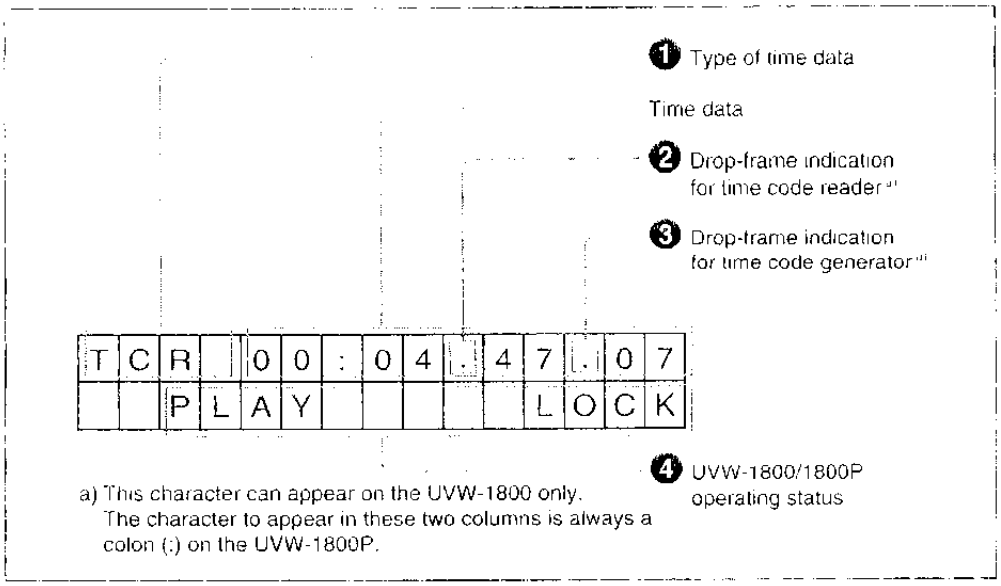
When the subsidiary control panel CHARACTER switch is in the ON position, the video signal output from the VIDEO 2 (SUPER) OUTPUT connector includes superimposed indications of time data and the operating state of this unit.

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 time counter display selection 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 7-4(E)).



Displayed information (factory default)

❶ Type of time data

This indicates the type of time data as follows.

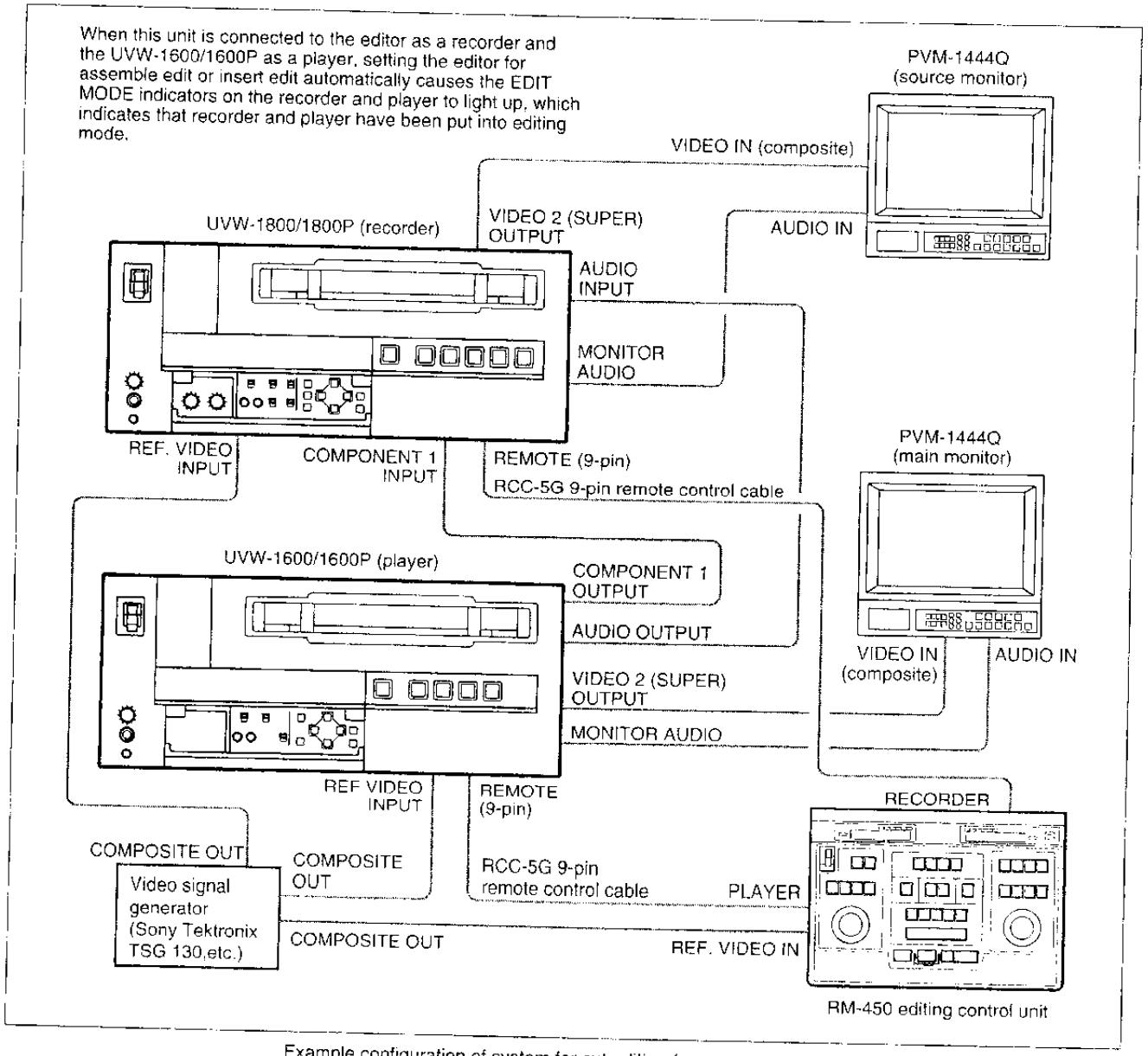
Indication	Meaning
CTL	CTL counter data
TCR	LTC reader data
UBR	LTC reader user bit data
TCG	Time code data from time code generator
UBG	User bit data from time code generator
T*R	Time code data from time code reader. Interpolated by the time code reader to make up for the time code data not correctly read from the tape.
U*R	User 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.

Chapter 5
Editing

By connecting two or more UVW-1800/1800P units or using UVW-1600/1600P units as players, and connecting an editing control unit such as a PVE-500 it is possible to assemble an editing system; the UVW-1800/1800P can be used as the recorder in such an editing system. This section describes the connections required for cut editing and for A/B roll editing, and the phase adjustments required for editing.

The figure below illustrates a system for cut editing using the UVW-1800/1800P with a UVW-1600/1600P.

For details of editing operations, refer to the operation manual for the editor being used. For details of the connections and settings on each of the other pieces of equipment, refer to the respective operation manuals.



Example configuration of system for cut editing (component signals)

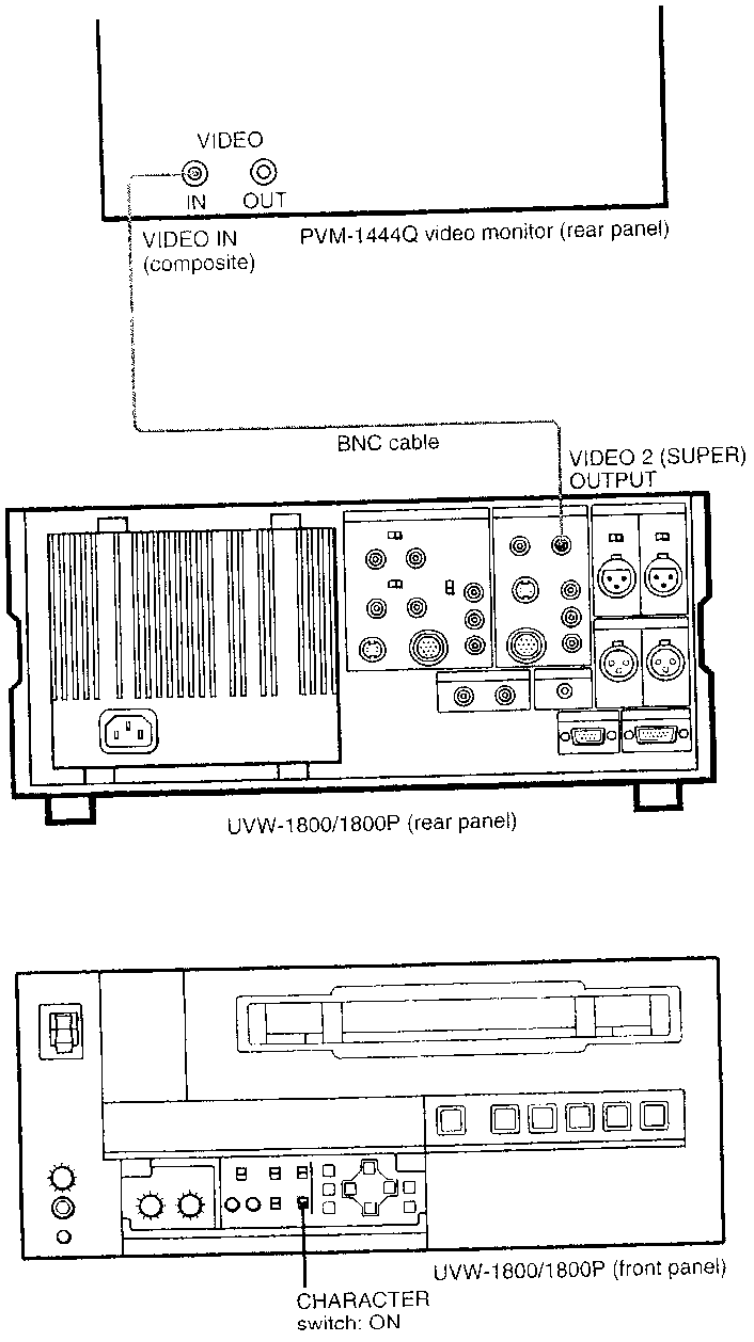
Switch settings on the UVW-1800/1800P (recorder) and UVW-1600 /1600P (player)

Switches	UVW-1800/1800P	UVW-1600/1600P
REMOTE/LOCAL switch	REMOTE	REMOTE
VIDEO IN selector switch	Y-R, B	–
Component input connector selection switch	1	–
AUDIO INPUT 600 Ω ON/OFF switch	ON	–
REF. VIDEO 75 Ω termination switch	ON	OFF

Monitoring the video signals

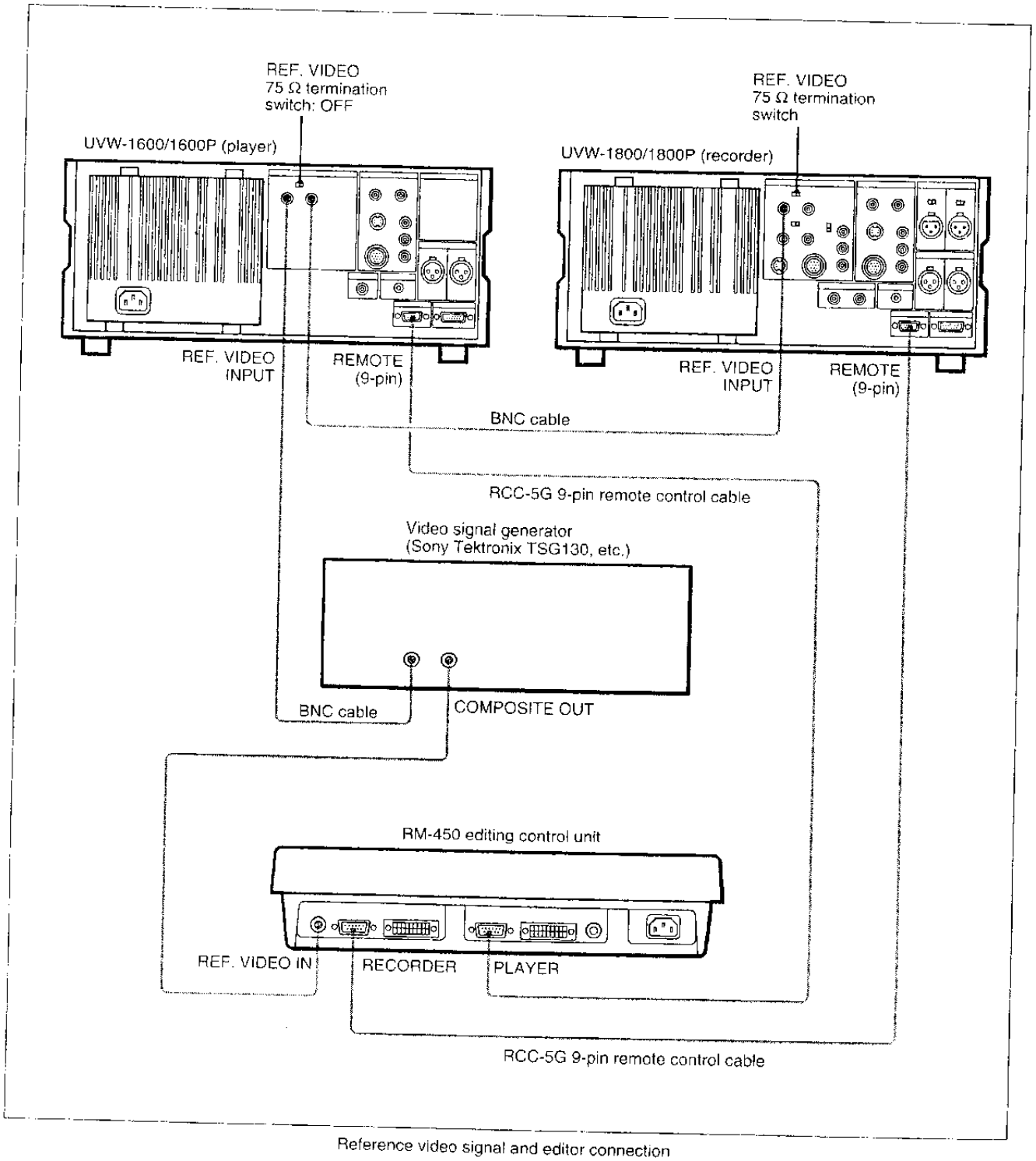
To monitor the video signals, connect monitors as shown in the figure below. The connections are the same for the recorder and player.

To obtain superimposed information on the monitor screen, set the CHARACTER switch to the ON position.



Connecting a video monitor

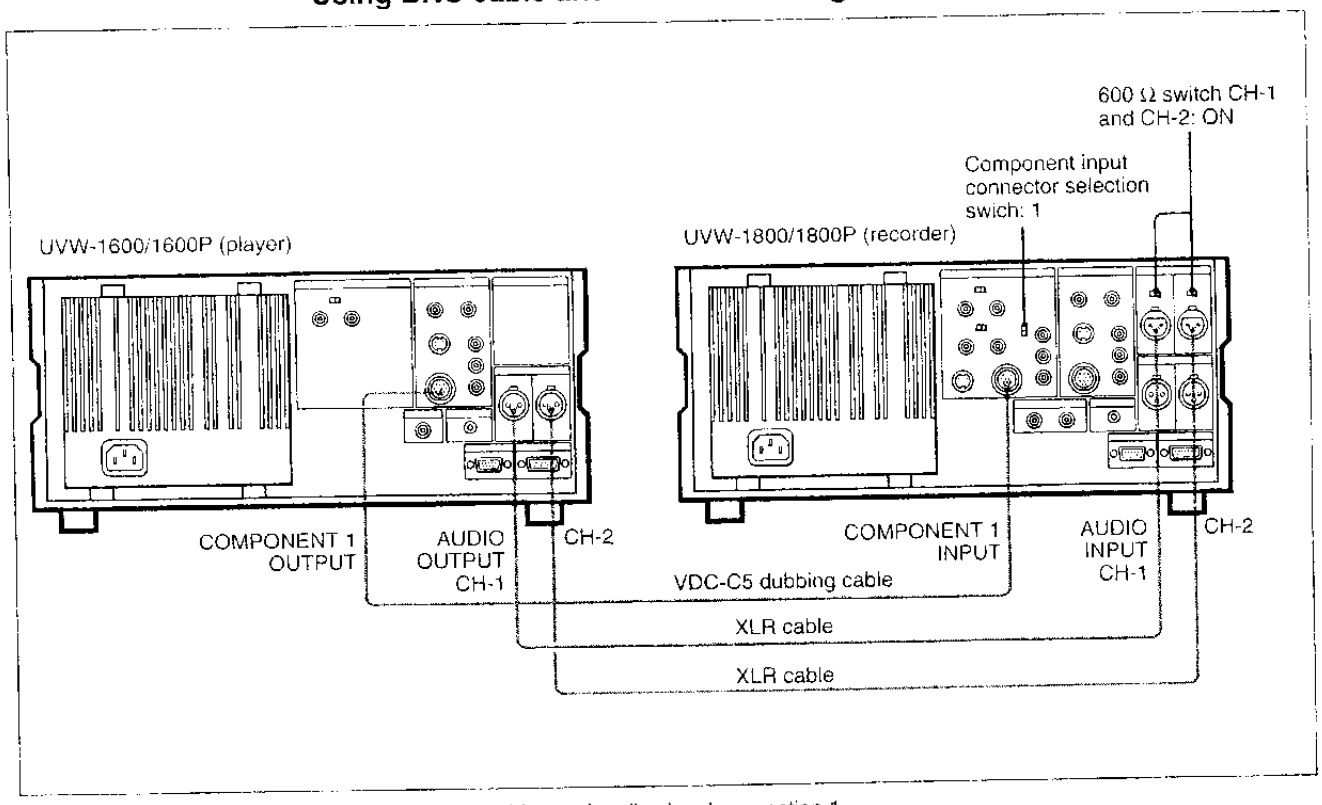
Reference video signal and editor connections



Reference video signal and editor connection

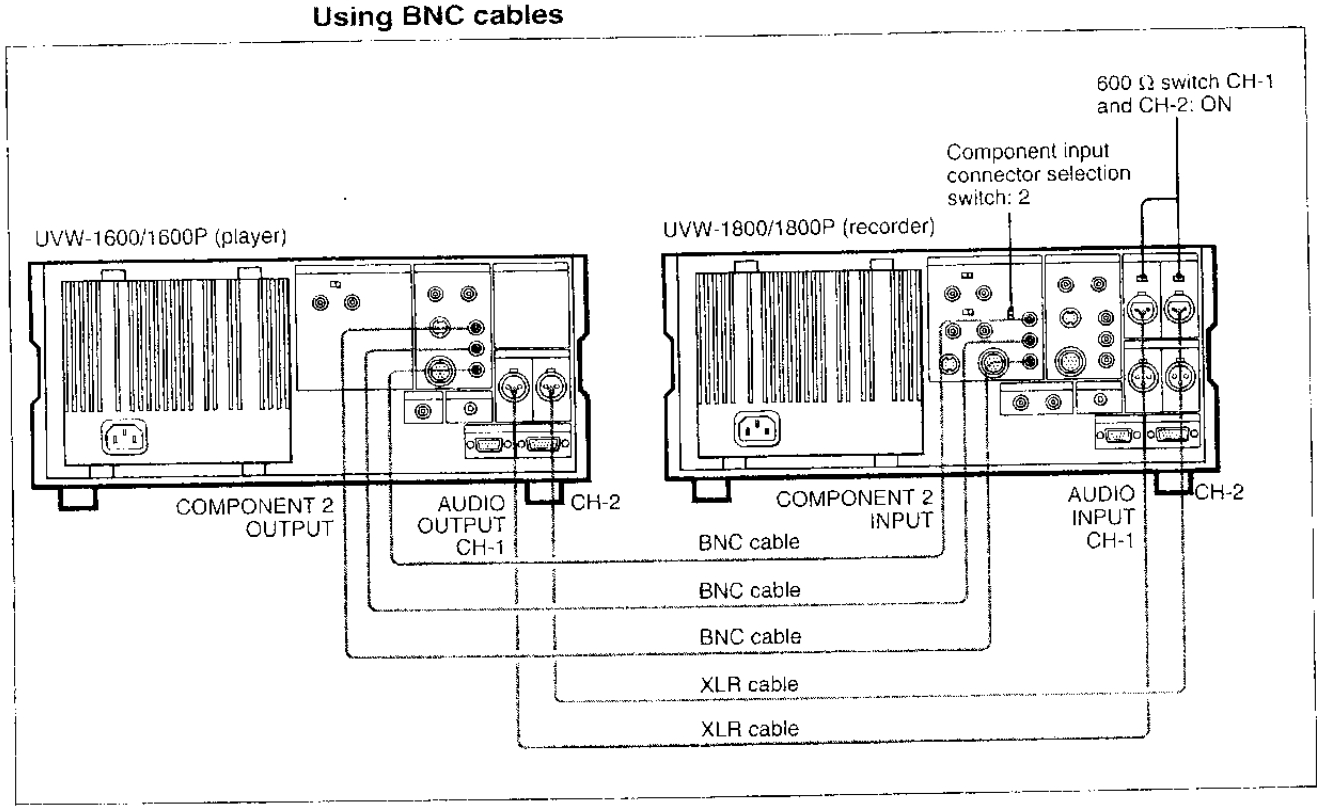
Video and audio signal connections

Using BNC cable and VDC-C5 dubbing cable



Video and audio signal connection 1

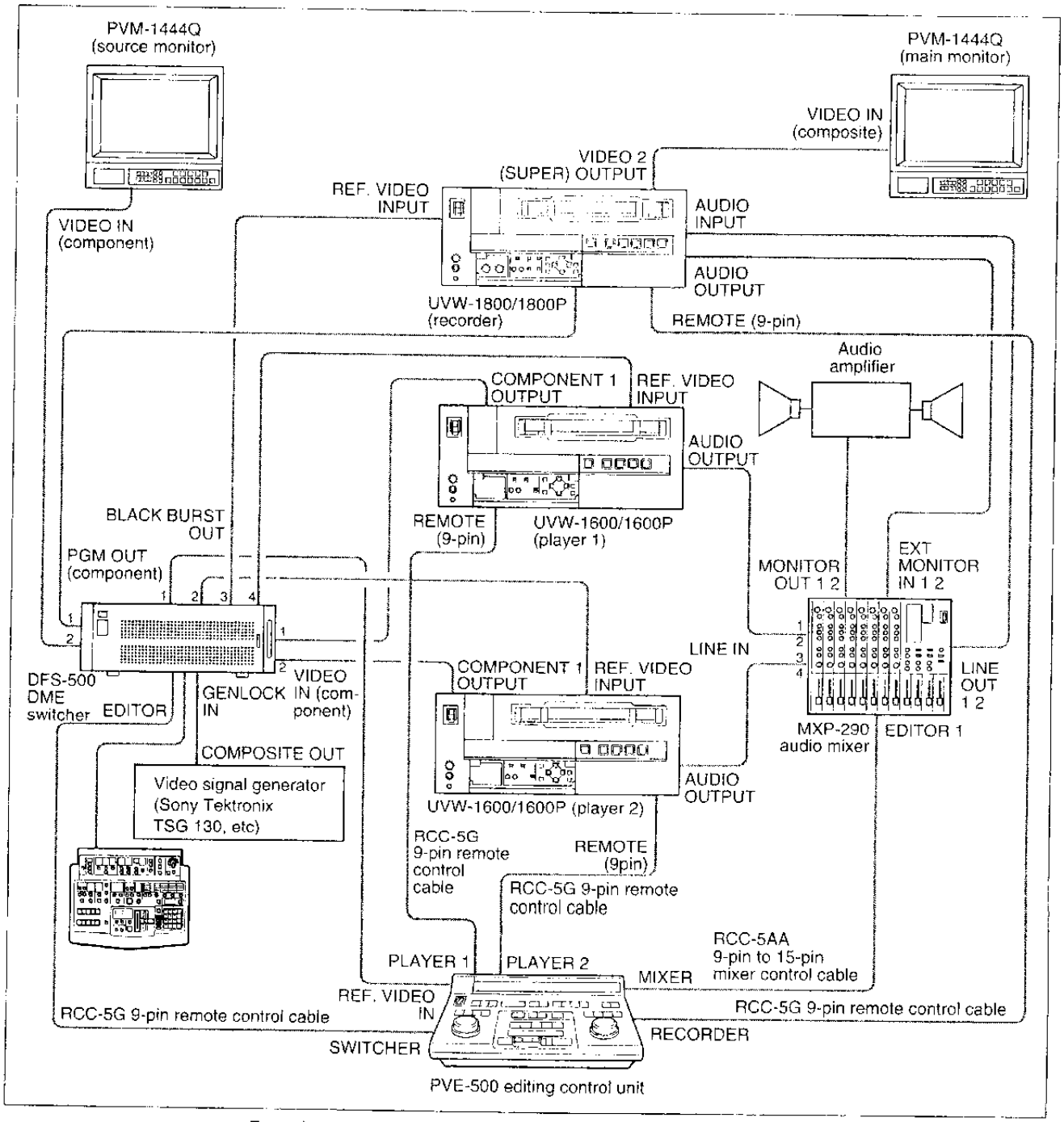
Using BNC cables



Video and audio signal connection 2

A/B Roll Editing

The figure below illustrates a system for A/B roll editing using the UVW-1800/1800P with two UVW-1600/1600P units.



Example configuration of system for A/B roll editing (component signals)

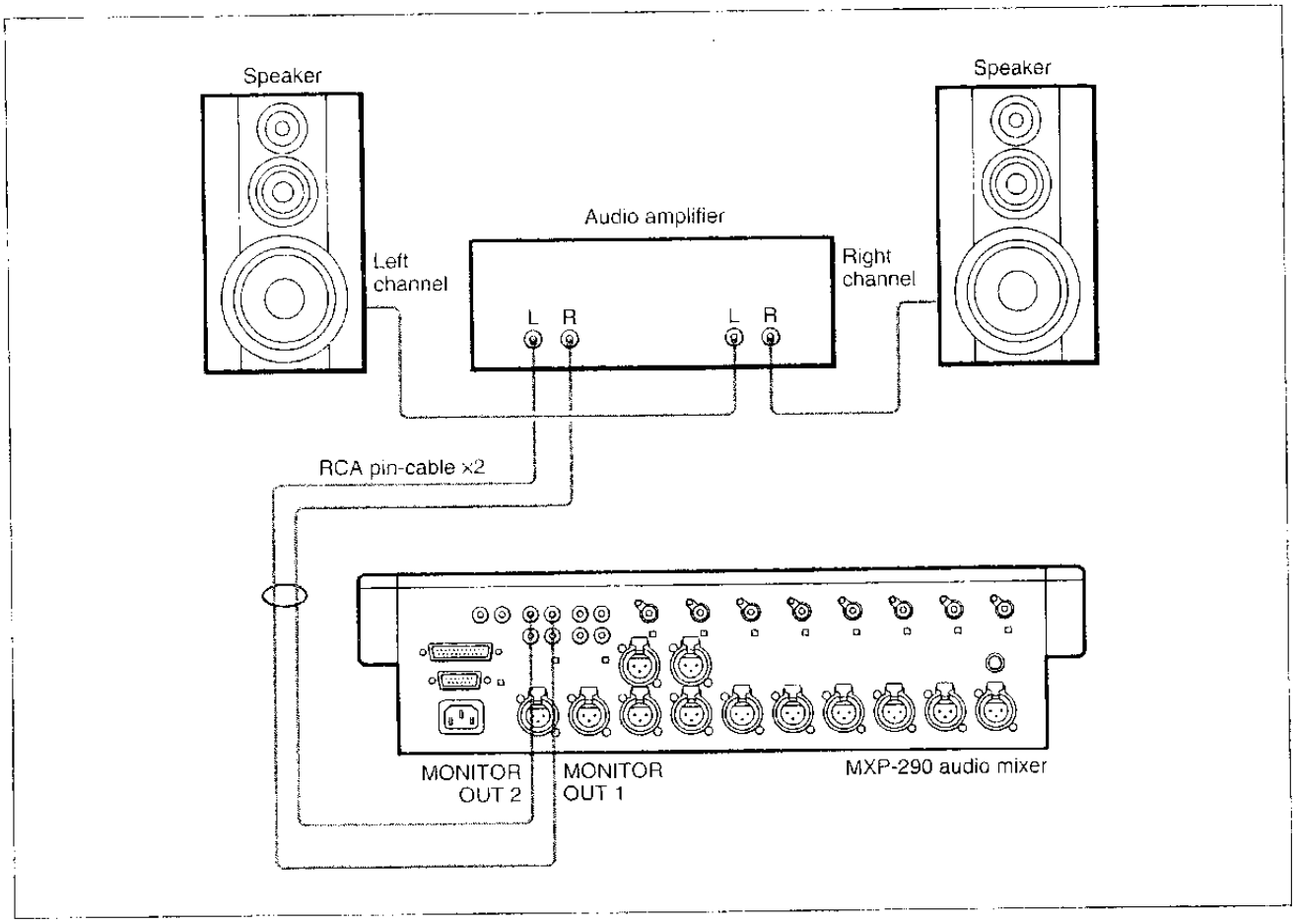
Switch settings on the UVW-1800/1800P (recorder) and UVW-1600/1600P (player)

Switches	UVW-1800/1800P	UVW-1600/1600P
REMOTE/LOCAL switch	REMOTE	REMOTE
VIDEO IN selector switch	Y-R, B	–
Component input connector selection switch	1	–
AUDIO INPUT 600 Ω ON/OFF switch	ON	–
REF. VIDEO 75 Ω termination switch	ON	ON

Monitoring the audio and video signals

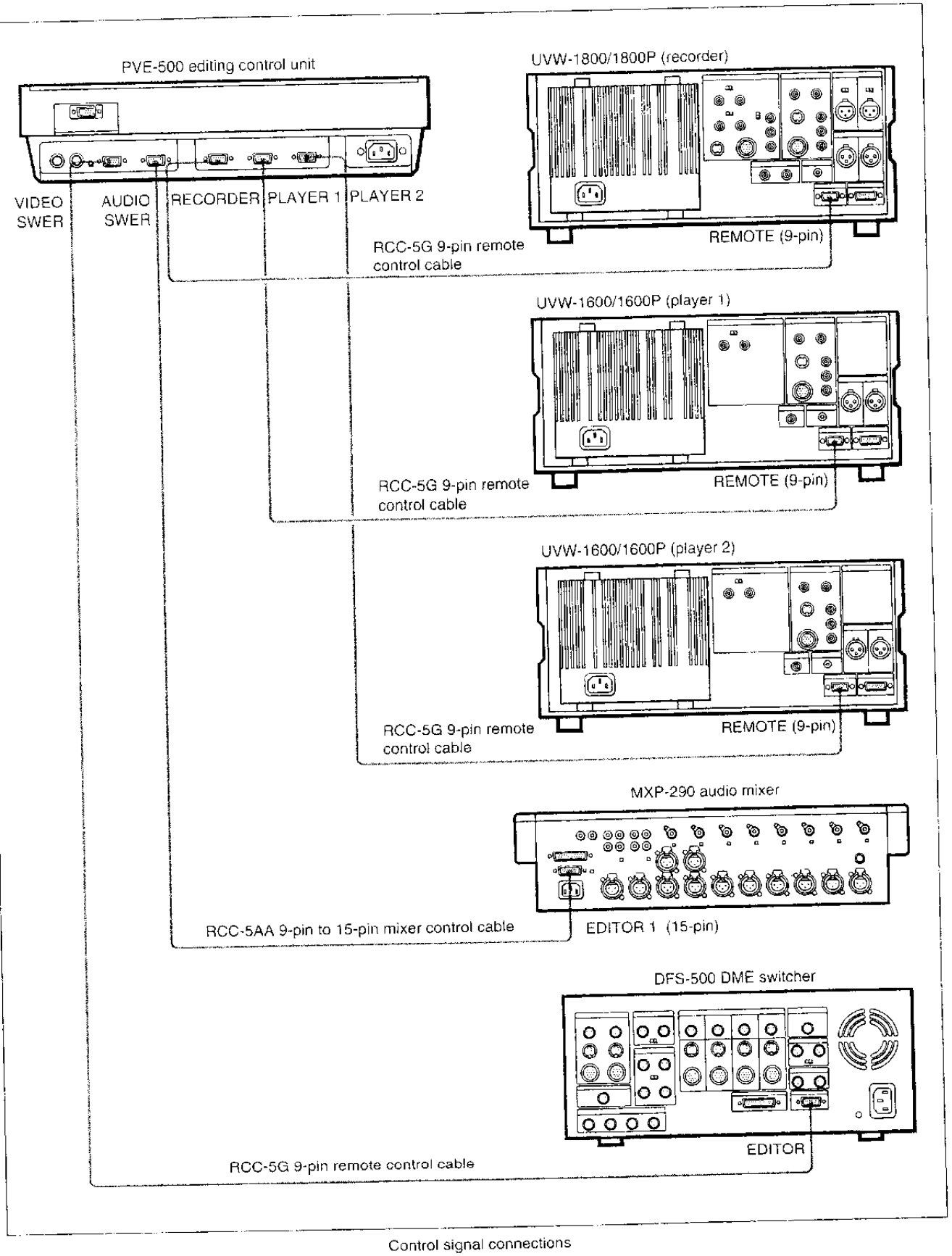
To monitor the audio signals, connect speakers as shown in the figure below.

For details of video monitor connections, see the section "Monitoring the video signals" under "Cut Editing" above (page 5-3(E)).



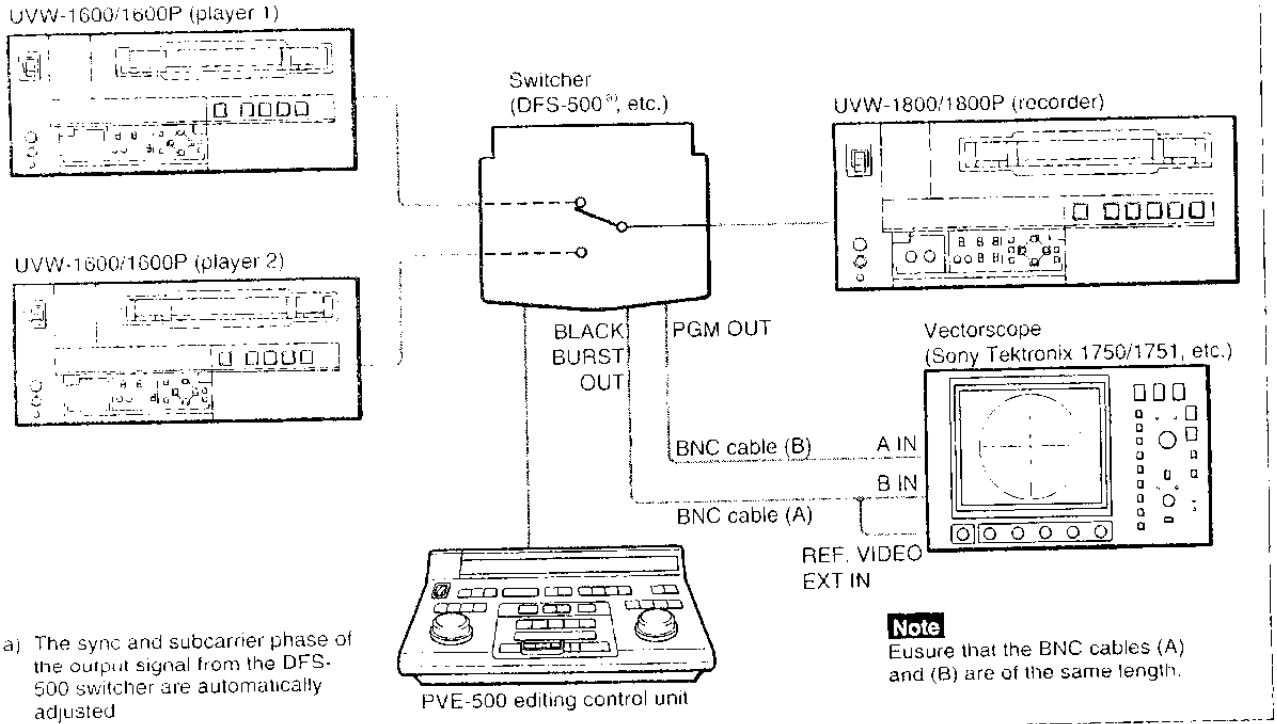
Connecting spekers

Control signal connections



Control signal connections

When using two or more players, as in an A/B roll editing system, phase synchronization of the signals (i.e. system sync) is necessary and for composite signals only, the subcarrier phase must also be in sync. If not, picture instabilities or color break-up may occur at edit points. After configuring the editing system, use a Vectorscope to adjust the sync and subcarrier phase of the recorder and players. Subcarrier phase adjustment is necessary only when using composite signals.



Connections for phase adjustment

Phase adjustment procedure

1 Press the SCH button on the Vectorscope.

The Vectorscope switches to "SCH" mode.

2 Press the B channel button on the Vectorscope.

This displays the black burst signal from the switcher.

3 Press the EXT button on the Vectorscope.

This switches the Vectorscope to external synchronization mode.

(Continued)

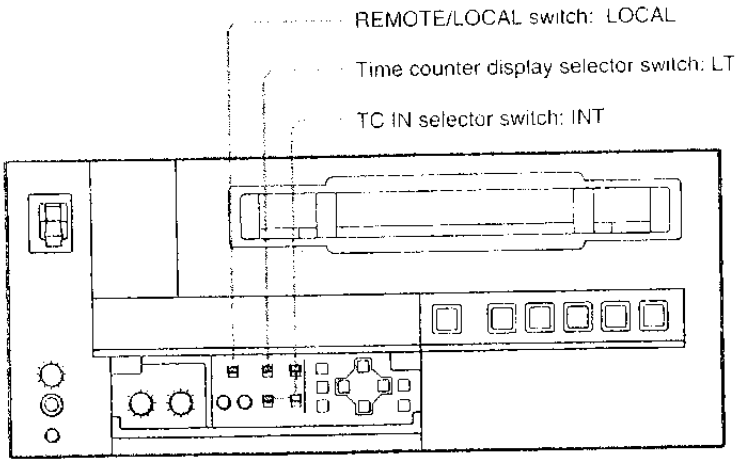
Chapter 6
Time Data

The time data used by the UVW-1800/1800P for both recording and display include CTL signal count values, longitudinal time codes (LTC), and user bit data. This chapter describes how to display time data, and how to set LTC and user bit values.

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 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-1800 only)	Normally "DF"

For details of the RUN MODE and DF MODE settings, see under "TIME CODE" (page 7-5(E)).

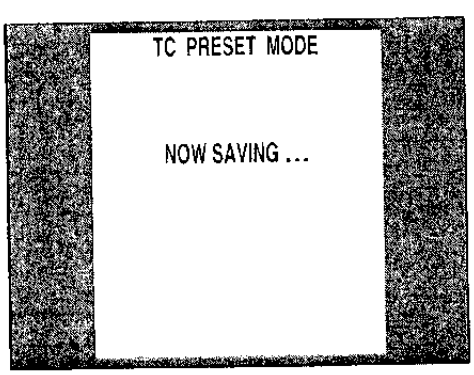
3 Use the ⇦ and ⇨ buttons to select the digit in the value which is flashing.

4 Use the ⇩ and ⇧ buttons to adjust the value of the flashing digit.
Note that user bit data values are in hexadecimal (digits 0-9 and A-F).

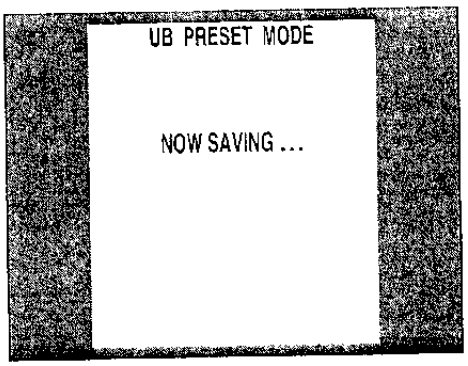
5 Repeat steps 3 and 4 as required to set the required value.
To set the value to 00:00:00:00, press the RESET (NO) button.

6 Press the SET (YES) button.

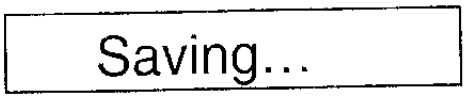
Either of the two displays shown immediately below appears on the monitor screen and the third display shown below in the time counter display.



Monitor screen



Monitor screen



Time counter display

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

Note

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.

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 7
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 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

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. When this unit is used as the recorder for cut editing, it is possible to output the input audio and video signals to the monitor. The term "EE" mode is used to refer to this feature, which enables the entire editing operation to be carried out with a single monitor.	**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 a) **(>> F. FWD/REW)** Operations when in fast forward or rewind mode	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.
MAX SRCH SPEED (> Max SRCH) Maximum search speed		×35 (>> ×35) (for UVW-1800) or ×42 (>> ×42) (for UVW-1800P): Allow searching at up to the maximum tape transport speed of 35 or 42 times normal. The picture cannot be seen on the monitor at this speed. * ×16 (>> ×16): Restrict the search speed to the maximum 16 times normal for which the picture can be seen on the monitor. Use this setting when using search mode for cuing.
AUTO REW (> AUTO REW) Whether to rewind automatically when playback reaches the end of a tape		* ENABLE (>> ENABLE): Rewind automatically. DISABLE (>> DISABLE): Do not rewind automatically.
PREROLL TIME (> Preroll)		Set the preroll time in seconds, from 0 to 15. If a PVE-500 or other editing control unit is connected, this setting is ignored, and the editing control unit setting takes precedence. 0 SEC (>> 0 sec) – * 5 SEC (>> 5 sec) – 15 SEC (>> 15 sec)

(Continued)

a) **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.

Menu selections (continued)

DISPLAY CONTROL: Settings related to indications (Display) on the monitor and the unit	Description of settings
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, editing and EE mode. OFF (>> OFF): Alarms are not issued.

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. **Note** Set to "FREE RUN" when carrying out editing with an editor. With the "REC RUN" setting, assemble editing and other opertations will not be carried out correctly.	* 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-1800) **(> 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. (> UB BINARY Gp) (for UVW-1800) Select the user bit binary group flag of the time code generator. **Note** When the TC IN switch is set to EXT, the user-bit binary group flag setting follows the setting in the time code input to the TIME CODE IN connector.	* 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-1800P) **Note** When the TC IN switch is set to EXT, the user-bit binary group flag setting follows the setting in the time code input to the TIME CODE IN connector.	* 00 (>> 00): Not specified 01 (>> 01): ISO character 10 (>> 10): Unassigned-1 11 (>> 11): Unassigned-2

(Continued)

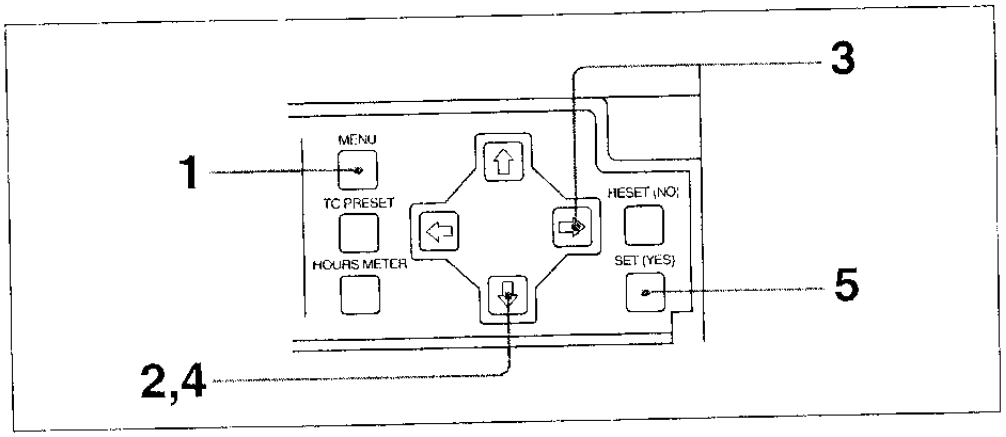
Menu selections (continued)

VIDEO CONTROL: Settings related to video (Video) control	Description of settings	
TBC DELAY (> TBC delay) Time base corrector delay in video EE mode or editing mode **Note** When used as the recorder of an editing system, select SYNC DELAY; when 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 TBC, 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.	
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-1800, and between line 9 and 23 for UVW-1800P.	UVW-1800: 12 LINE (>> 12 line) –20 LINE (>> 20 line) UVW-1800P: 9 LINE (>> 9 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-1800, and only for line 23 on UVW-1800P) 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-1800, and between line 9 and 22 for UVW-1800P.	UVW-1800: 12 LINE (>> 12 line) –19 LINE (>> 19 line) UVW-1800P: 9 LINE (>> 9 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 GRADE: Menu screen selection (Menu grade)	Description of settings
—	* BASIC (> Basic): Display basic menu screens. ENHANCED (> Enhanced): Display extended menu screens.

Operation Sequence

Displaying the extended menus

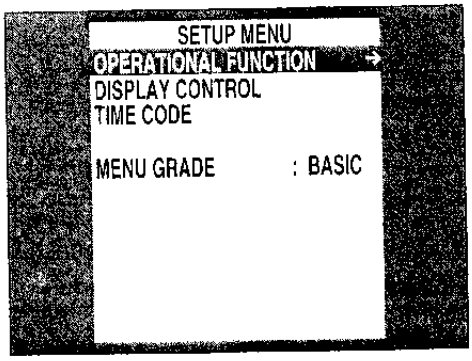


Displaying the extended menus

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

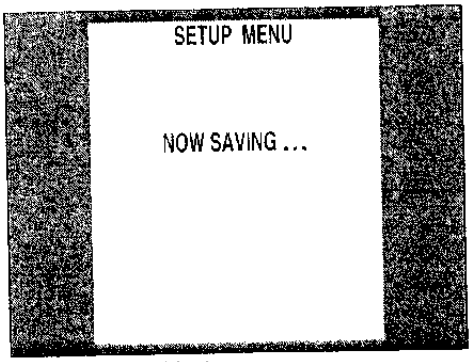
The "MENU GRADE" setting has no associated submenus. In such a case, the current setting also appears in abbreviated form to the right of the screen. When the factory default setting is currently selected, the ":" indication precedes that setting. In this case the setting does not appear on the time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

(Continued)

5 Press the SET (YES) 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

Saving...

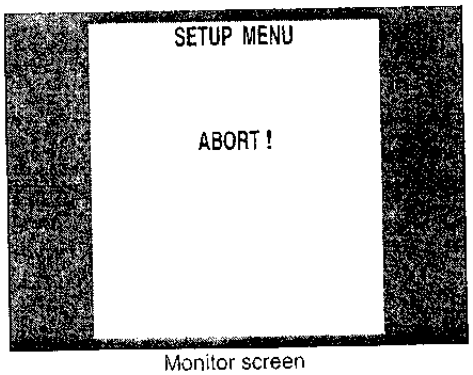
Time counter display

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) 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) button after finishing all the desired settings.

Forcibly aborting the menus



Monitor screen

ABORT !

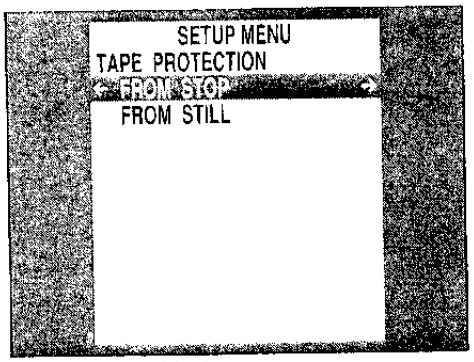
Time counter display

3 Press the ⊡ 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

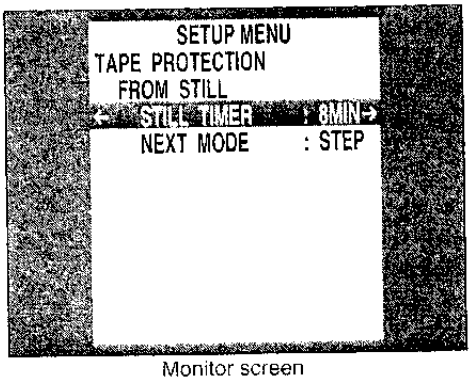
Time counter display

5 Press the ⊡ 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

>> STILL timer

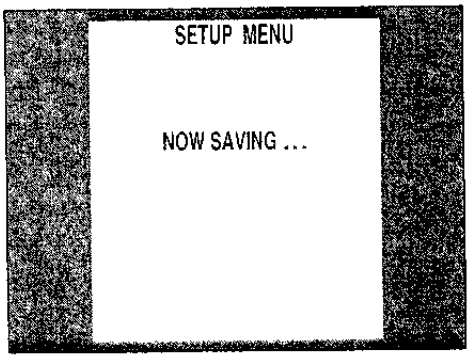
Time counter display

(Continued)

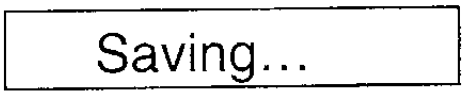
9 Press the SET (YES) button.

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

Messages when saving settings



Monitor screen



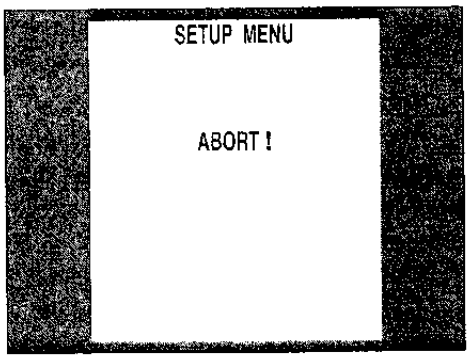
Time counter display

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) 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) button before moving to the next item.

Forcibly aborting the menus



Monitor screen

Time counter display

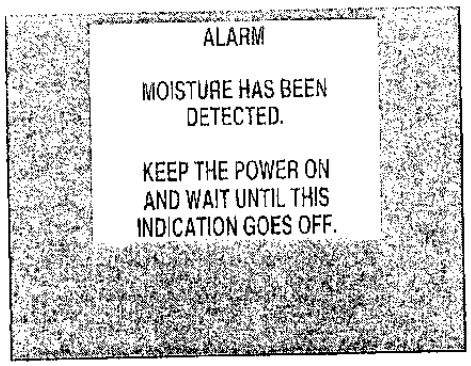
Chapter 8
Maintenance

This chapter describes the self-diagnosis functions with which the UVW-1800/1800P 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.

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

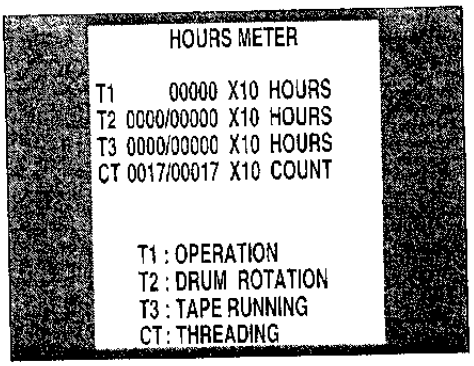
Leave the unit powered on and wait until the indication disappears. While the indication is present, it is not possible to insert a cassette.
Once the warning indication disappears, the unit is ready for use.

Time counter display

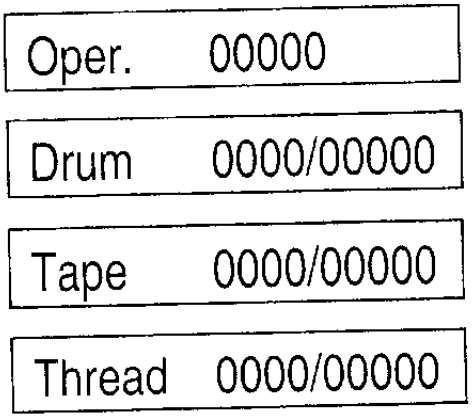
One of the four indications appears. Use the ↑ and ↓ buttons to change the item displayed.

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

Digital hours meter



Monitor screen



Time counter display

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 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 9
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.

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 !
TC EXTERNAL IS SELECTED.	SET TC INT/EXT SWITCH TO TC INT.	TC EXT !
TCG RUN MODE IS SET TO REC RUN.	SET TCG RUN MODE (SETUP MENU) TO FREE RUN.	REC RUN !
REF VIDEO IS NOT DETECTED.	INPUT A REF VIDEO SIGNAL.	No REF !
A BLACK/WHITE SIGNAL IS BEING USED FOR REF VIDEO.	USE A COLOR SIGNAL.	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.	SUPPLY A VIDEO SIGNAL TO VIDEO INPUT.	No INPUT !

Monitor problems		
Symptom	**Cause**	**Remedy**
A "V" appears on the screen.	The TBC DELAY menu item is set to "VIDEO DELAY".	Set TBC DELAY to "SYNC DELAY". (The UVW-series has a built-in time base corrector. Therefore, in editing mode or video EE mode, the output video signal is delayed exactly 8 lines behind the reference signal. This means that when the TBC DELAY setting is "VIDEO DELAY", the video appears 8 lines lower on the monitor, and a "V" appears. However, even if the TBC 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 [a].	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 editing 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 corrector 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 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 diaplayed 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 setting of the VIDEO IN selector switch.	Make the setting of the VIDEO IN selector switch match the connector to which the video signal is input. When inputting a component signal, also set the component input connector selection switch correctly.
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 Ω termination switch is in the OFF position, or there is no terminating device.	Set the monitor INPUT connector 75 Ω termination switch to the ON position, or connect a terminating device.
The monitor screen is too dark.	The 75 Ω termination of the video signal input is duplicated. For example, when using the REF. VIDEO INPUT connector for a loop-through connection, the 75 Ω termination switches of the REF. VIDEO INPUT connector and the VIDEO INPUT connector are both set to the ON position.	Set the 75 Ω termination switch of the connector being used for a loop-through connection to the OFF position.
The video image is too dark when editing a composite video signal.		

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

Appendixes

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

Processor adjustment range

Main unit (UVW-1800/1800P)

System subcarrier phase 360° pp
System sync phase ±300 ns

With BVR-50/50P TBC remote control unit connected

Video level ±3 dB
Chrominance level ±3 dB
Set-up level UVW-1800: 0 to +15 IRE
UVW-1800P: 0 to +100 mV
Chrominance phase ±15°
System subcarrier phase 360° pp
System sync phase –1 to +3 µs (fine adjustment range 300 ns pp)
Y/C delay ±100 ns

Input connectors

Video input

REF. VIDEO BNC × 2 (loop-through connection)
Black burst or 1.0 Vp-p ±0.3 V, 75 Ω,
sync negative (286 mV for UVW-1800, 300 mV for UVW-1800P)

VIDEO BNC × 2 (loop-through connection)
Composite video, 1.0 Vp-p, 75 Ω, sync negative

COMPONENT 1 12-pin connector (male)
Luminance: 1.0 Vp-p, 75 Ω, sync negative
Chrominance: R–Y: 0.7 Vp-p, 75 Ω
B–Y: 0.7 Vp-p, 75 Ω

COMPONENT 2 BNC × 3
Y: 1.0 Vp-p, 75 Ω, sync negative
R–Y: 0.7 Vp-p, 75 Ω
B–Y: 0.7 Vp-p, 75 Ω

S-VIDEO DIN 4-pin × 1

HEADPHONES	Standard stereo jack Maximum –14 dBu, 8 Ω (0 dBu = 0.775 Vrms)

Remote connectors

TBC REMOTE: 15-pin multi × 1
REMOTE: 9-pin multi × 1
CONTROL S: stereo minijack × 1

Supplied accessories

Power cord × 1
9-pin remote control cable × 1
Operating Instructions × 1

Optional accessories

RMM-130 Rack Mount Adaptor
BCT-5CLN Cleaning Cassette
BK-2006/2007 TBC Remote Control Unit
BVR-50/50P TBC Remote Control Unit
VDC-C5 12-pin Dubbing Cable
SVRM-100 Remote Control Unit

Design and specifications are subject to change without notice.

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.

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

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

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.

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 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.

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