

Panasonic

DVCPRO 50

ENGLISH

Digital Video Cassette Recorder

AJ-D960^E_{EG}

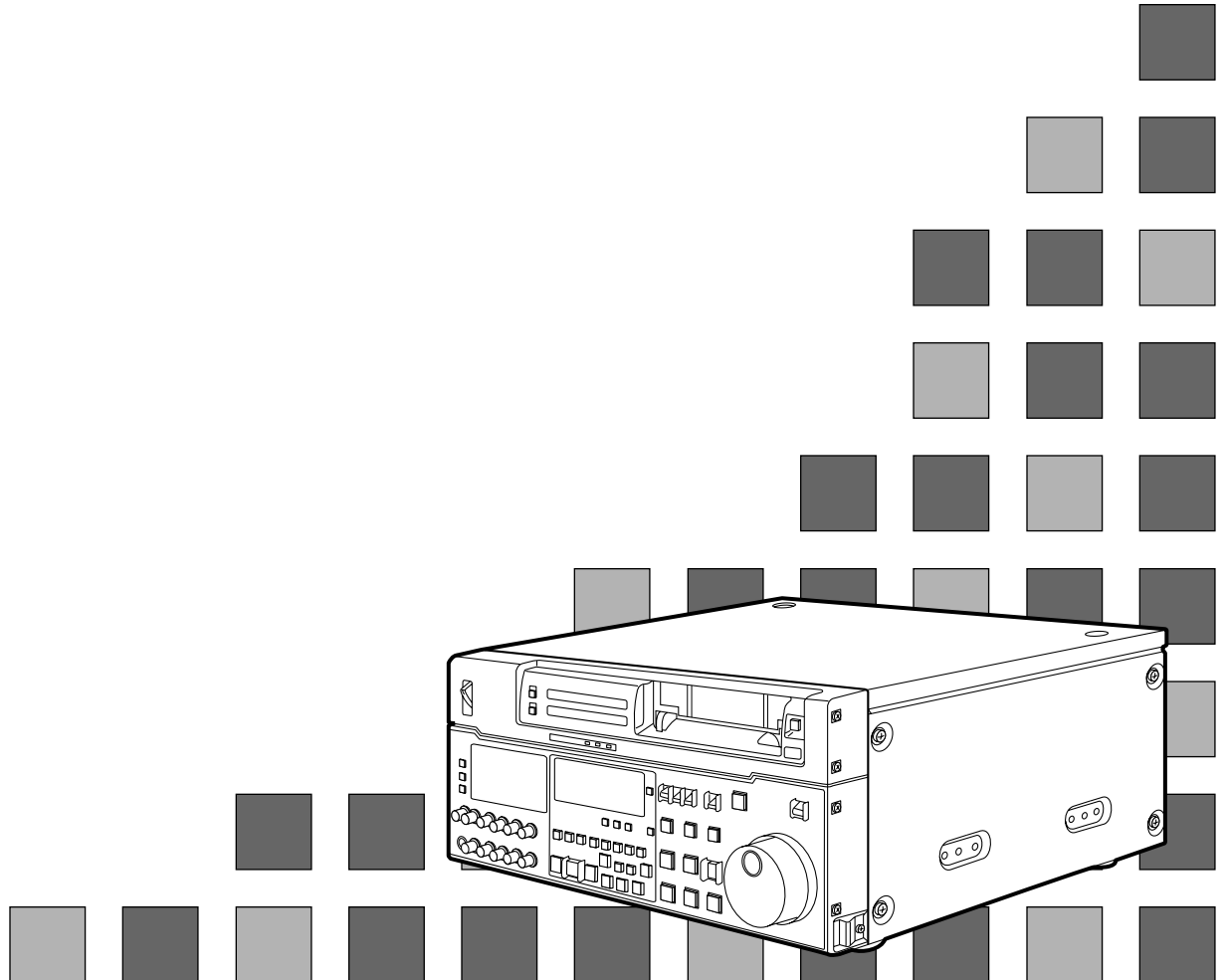
DEUTSCH

Operating Instructions

FRANÇAIS

ITALIANO

ESPAÑOL



Caution for AC Mains Lead

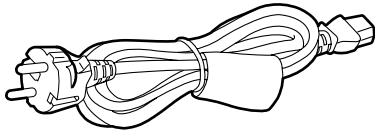
FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY.

This product is equipped with 2 types of AC mains cable. One is for continental Europe, etc. and the other one is only for U.K.

Appropriate mains cable must be used in each local area, since the other type of mains cable is not suitable.

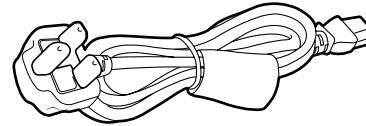
FOR CONTINENTAL EUROPE, ETC.

Not to be used in the U.K.



FOR U.K. ONLY

If the plug supplied is not suitable for your socket outlet, it should be cut off and appropriate one fitted.



FOR U.K. ONLY

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 13 amp fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 13 amps and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local Panasonic Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.

If in any doubt please consult a qualified electrician.

WARNING: THIS APPLIANCE MUST BE EARTHED.

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

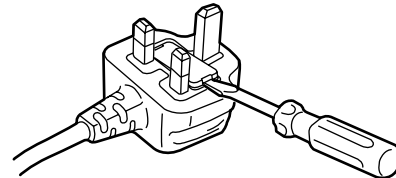
Green-and-Yellow:	Earth
Blue:	Neutral
Brown:	Live

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

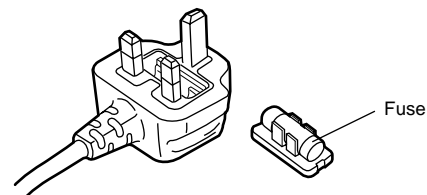
- The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked with the letter E or by the Earth symbol \perp or coloured GREEN or GREEN-AND-YELLOW.
- The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.
- The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

How to replace the fuse

1. Open the fuse compartment with a screwdriver.



2. Replace the fuse.



IMPORTANT

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

■ **THIS APPARATUS MUST BE EARTHED**

To ensure safe operation the three-pin plug must be inserted only into a standard three-pin power point which is effectively earthed through the normal house-hold wiring.

Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth. Wrongly wired extension cords are a major cause of fatalities.

The fact that the equipment operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe. For your safety, if in any doubt about the effective earthing of the power point, consult a qualified electrician.

■ **DO NOT REMOVE PANEL COVER BY UNSCREWING**

To reduce the risk of electric shock, do not remove cover. No user serviceable parts inside. And do not insert fingers or any other objects into the video cassette holder.

CAUTION:

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

WARNING:

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

CAUTION:

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

CAUTION:

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

Operating precaution

Operation near any appliance which generates strong magnetic fields may give rise to noise in the video and audio signals. If this should be the case, deal with the situation by, for instance, moving the source of the magnetic fields away from the unit before operation.

is the safety information.

- Do not insert fingers or any objects into the video cassette holder.
- Avoid operating or leaving the unit near strong magnetic fields. Be especially careful of large audio speakers.
- Avoid operating or storing the unit in an excessively hot, cold, or damp environment as this may result in damage both to the recorder and to the tape.
- Do not spray any cleaner or wax directly on the unit.
- If the unit is not going to be used for a length of time, protect it from dirt and dust.
- Do not leave a cassette in the recorder when not in use.
- Do not block the ventilation slots of the unit.
- Use this unit horizontally and do not place anything on the top panel.

- Cassette tape can be used only for one-side, one direction recording. Two-way or two-track recordings cannot be made.
- Cassette tape can be used for either Colour or Black & White recording.
- Do not attempt to disassemble the recorder. There are no user serviceable parts inside.
- If any liquid spills inside the recorder, have the recorder examined for possible damage.
- Do not use alcohol, benzine, paint thinners or any other inflammable solvents to clean the unit's external parts. Contact by any of these solvents with the electrical components inside the unit may cause a fire or electric shock.
- Refer any needed servicing to authorized service personnel.

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Before operating this unit, check that all of its accessories are present and accounted for.

Power cord....1 pc

Option

- Rack mounting adaptor AJ-MA75P
- Analog video input board AJ-YA955, AJ-YA956, AJ-YA957, AJ-YA958
- AJ-YAC960P SDTI interface board
- Audio memory unit AJ-YA752

This unit is a multi-purpose studio-use digital VTR which employs 1/4-inch wide compact cassette tapes to enable recording, playback and editing with a high picture quality at the 50 Mbps video recording rate, and it is also capable of recording, playback and editing in the existing DVCPRO (25 Mbps) format. Its 625/525 switching function makes this a studio video cassette recorder which can be used anywhere in the world. In addition, it incorporates digital compression technology so that the deterioration in picture quality and sound quality resulting from dubbing is significantly minimized.

The compact, lightweight 4U size makes carrying easier, even when mounted in a 19-inch rack. The settings for the unit's setup can be performed interactively while viewing the screen menus on the TV monitor, and editing functions include both assemble and insert editing.

Features

Compact size and light weight

This is a 4U-size digital VTR. It can be mounted in a 19-inch rack with ease using the optional rack-mounting adaptors (AJ-MA75P).

Up to 92 minutes of recording

Two sizes of cassette tapes can be used with this unit: M cassette (max. 33 minutes) and L cassettes (max. 92 minutes). The width of the tapes measures 1/4 inch to achieve a compact design.

Superior Picture quality

Superior picture quality is delivered in the component signal recording mode.

Switchable 625i/525i

The video input signal switch (settings: 625i/525i) can be set to accommodate the recording and playback of each type of signal.

SDI interface

This product's standard features include 4:2:2 serial digital interface.

Compatibility with DVCPRO

This unit is capable of recording, playback and editing in the existing DVCPRO (25 Mbps) format.

Compatibility with general consumer video equipment

Cassette tapes designed for general consumer applications containing material shot by a consumer digital camera can be played back on this unit if the cassette adapter (optional accessory, AJ-CS750P) is used.

<Note>

Tapes recorded in the LP consumer mode cannot be played back.

Digital slow motion/jog dial functions

Using Panasonic's very own digital slow-motion technology, pictures played back in slow motion at the following speeds can be reproduced clearly.

DVCPRO50 (50 Mbps): -1× to +2× speed

DVCPRO (25 Mbps): -1× to +2× speed

DV: -1× to +1× speed

DVCAM: -1× to +1× speed

General and Features

Features

(continued)

Dial shuttle

Shuttle operations enable the tape to be played back with colour images at a speed of up to 32 times the forward and reverse direction.

Time codes

This unit comes with a built-in time code generator (TCG)/time code reader (TCR). In addition to the internal time code, an external code input or input signal VITC can be recorded on this VTR as the LTC time code.

Multifunctional interface

- **Serial digital input/output**

The component serial interface, a standard feature, allows for interfacing with component signals in serial digital (SMPTE 259M-C/272M-A/EBU Tech.3267-E).

- **Analogue video input/output**

Composite and component signal outputs are provided as a standard feature, and component (Y, P_B, P_R) and composite signal input interfacing is enabled by the use of an analogue video input board (optional accessory).

- **AES/EBU audio input/output**

Digital audio input/output connectors are featured.

- **SDTI input/output (option)**

Use of the SDTI board (optional accessory) enables interfacing with component signals still in their compressed form. (SMPTE 305M/321M)

- **9-pin (RS-422A)/(RS-232C) remote**

In addition to the standard 9-pin serial remote (RS-422A), RS-232C and 25-pin parallel remote connectors are also featured.

The RS-422A connector enables another VTR to be operated in parallel with the unit if a looping connection is used for the two units.

4-channel high-sound-quality digital audio

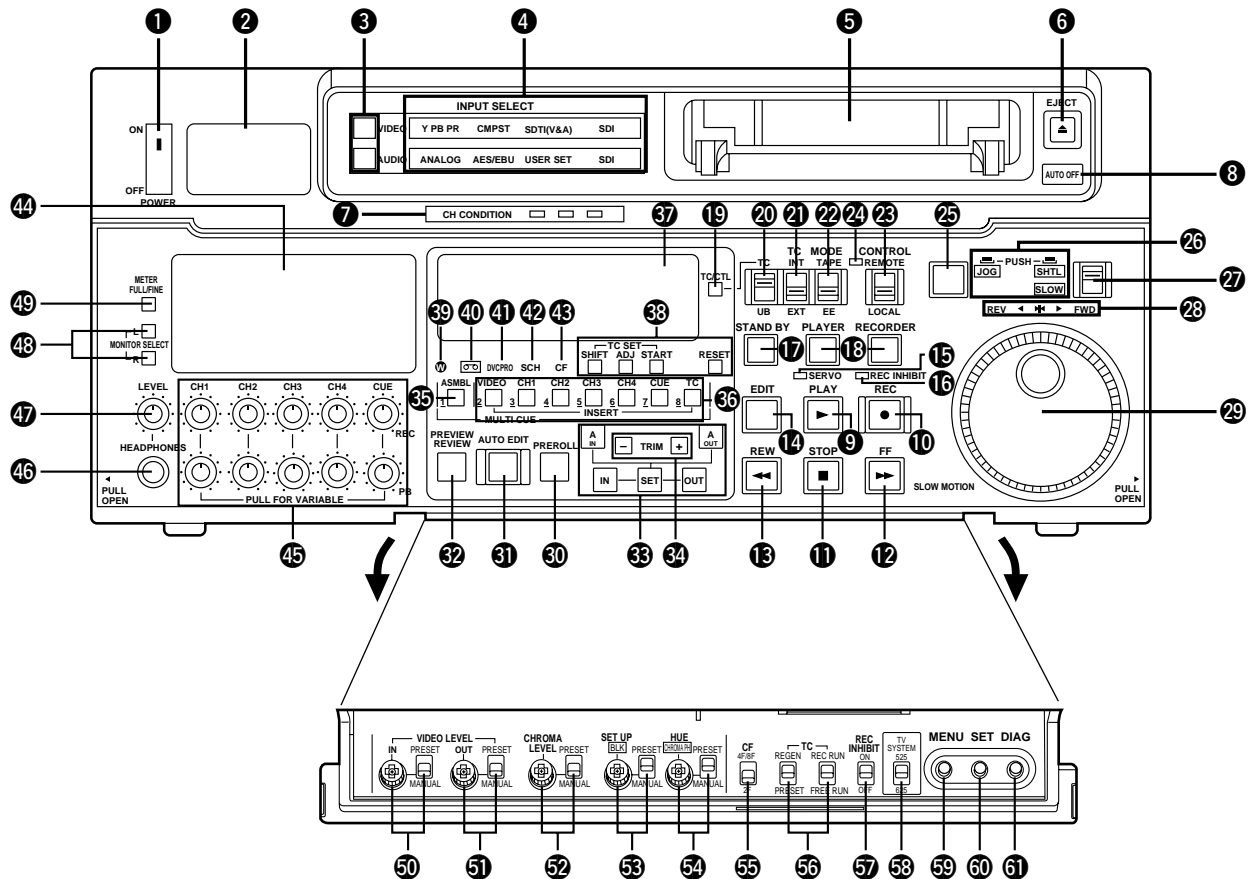
The 4-channel PCM audio allows for not only independent editing and mixing on all four channels. One channel is provided for the analogue CUE track.

Menu-driven setup

The setup settings, which are conducted prior to operating the unit are performed while viewing the setup menus either on the unit's display or a TV monitor.

Controls and their functions

Front panel



<Front Panel Top Section>

❶ POWER switch

❷ TV system/format displays

These displays indicate the type of TV system selected and tape format.

<625/525>

625: This lights when a 625 interlaced TV system is selected.

525: This lights when the 525 interlaced TV system has been selected.

<25Mbps/50Mbps>

25Mbps: This indicates the DVCPRO (25 Mbps) recording and playback mode. It also indicates the DV and DVCAM playback mode.

In the DVCPRO (25 Mbps) recording and playback mode, this indicator lights in tandem with the ❹ DVCPRO (25 Mbps) cassette display lamp in the centre of the front panel.

50Mbps: This indicates that the tape is recorded or played back in the DVCPRO50 (50 Mbps).

Controls and their functions

③ INPUT SELECT switches

These are used to select the video and audio input signals.

<Video>

Each time the VIDEO button is pressed, the input video signal selection is switched in the order of Y/PB/PR, COMPOSITE, SDTI (V&A), SDI and then back to Y/PB/PR. When SDTI (V&A) is selected, both video input and audio input are switched to SDTI.

<Audio>

Each time the AUDIO button is pressed, the input audio signal selection is switched in the order of ANALOG, AES/EBU, USER SET, SDI and then back to ANALOG. USER SET is a feature for independently selecting the input signals to record on PCM audio signal channels 1 through 4, and is used together with the setup menu. However, when video input is set to SDTI, audio input is also forcibly set to SDTI. For instance, if USER SET is selected by INPUT SELECT and the channel selections are CH1=ANALOG on setup menu No. 715, CH2=DIGITAL on No. 716, CH2=AES on No. 719, CH3=DIGITAL on No. 717, CH3=SIF on No. 720, and CH4=ANALOG on No. 718, then analogue input signals are recorded on PCM audio signal CH1 on the tape, AES/EBU digital signals on CH2, SDI input digital signals on CH3, and analogue input signals on CH4.

<Note>

The video or audio input selection mode established using the INPUT SELECT switch can be selected using setup menu No. 112 (V IN SEL INH) or No. 113 (A IN SEL INH) setting.

④ INPUT SELECT display

The characters corresponding to the selected input signal light up.

With the exception of analogue audio signals, the display flashes to alert the user when the selected input signal is not supplied.

<Video>

Y PB PR: Analogue component video signal (option)

CMPST: Analogue composite video signal (option)

SDTI (V&A): Serial digital compressed video/audio signal (option)

SDI: Serial digital video signal (SMPTE 259M-C/EBU Tech.3267-E)

[The entire display lights when signal generation using the internal signal generator has been selected for setup menu No. 600 (INT SG).]

<Audio>

ANALOG: Analogue audio signal

AES/EBU: Digital audio signal

USER SET: Selection of the audio signal to record

SDI: Serial digital audio signal (SMPTE 259M-C/272M-A)

[The entire display lights when signal generation using the internal signal generator has been selected for setup menu No. 700 (INT SG).]

⑤ Cassette insertion slot

⑥ EJECT button

When this is pressed, the tape is unloaded and several seconds later the cassette is automatically ejected. When the counter display indicates "CTL", the display is reset.

Whether the EJECT button operation is to be enabled or disabled can be selected by setting setup menu No. 115 (EJECT SW INH).

⑦ Channel condition lamps

One of these lamps lights in accordance with the error rate status. (Green→Amber→Red)

Green: This lights when the error rates for the video and audio playback signals are both acceptable.

Amber: This lights when the error rate for the video or audio playback signals has deteriorated.

Red: The playback picture will remain normal even when this lamp lights.

This lights when the video or audio signals are subject to rectification or interpolation.

⑧ AUTO OFF lamp

This lights when trouble has arisen in the deck's operation.

<Front Panel Centre Section>

9 PLAY button

Playback commences when this button is pressed.

Recording commences when the button is pressed together with the REC button; manual editing commences when it is pressed together with the EDIT button during playback. However, manual editing will not be initiated if the servo is not locked.

Pressing only the PLAY button during manual editing will cut out the editing and establish the playback mode.

10 REC button

Recording commences when this button is pressed together with the PLAY button.

When it is pressed during playback, search, fast forward or rewind, EE mode images and audio signals can be monitored for as long as it is kept depressed.

When it is pressed in the stop mode, EE mode images and sound can be monitored.

When the STOP button is pressed, the original picture and sound are restored.

11 STOP button

When this is pressed, the tape stops travelling, and if the TAPE/EE selector switch is at TAPE, still pictures can be monitored.

The drum continues to rotate even in the stop mode, and the tape remains in close contact with the drum.

If the stop mode continues for more than a certain period of time, either STANDBY OFF mode or STEP FWD mode is automatically established to protect the tape. (Which mode is to be established is set in setup menu items No. 400 through 403.)

The stop mode is established immediately after a cassette has been inserted into the unit.

12 FF button*1

The tape is fast forwarded when this is pressed.

13 REW button*1

The tape is rewound when this is pressed.

14 EDIT button

For manual editing, press both this button and the PLAY button together during playback.

When the button is pressed during playback, search*2, fast forward or rewind, the input signals of the mode selected by the ASMBL or INSERT button can be monitored in the EE mode for as long as the button is held down.

When the button is pressed in the stop mode, the input mode signals selected by the ASMBL or INSERT button can be monitored in the EE mode.

The original picture and sound are restored when the STOP button is pressed.

15 SERVO lamp

This lights when the drum servo and capstan servo have locked.

16 REC INHIBIT lamp

This lights when the REC INHIBIT switch in the front panel bottom section is at ON or when the accidental erasure prevention mode has been set for the cassette.

In this state, neither recording nor editing is possible.

Whether the REC INHIBIT lamp is to remain lit or flash when recording has been inhibited by the accidental erasure prevention tab on the cassette tape can be selected by setting setup menu No. 114 (REC INH LAMP).

*1 The FF/REW speed can be selected on the setup menu No. 102 (FF. REW MAX), and it is set to the same speed.

*2 No guarantees are given for the audio playback sound in the search mode.

Controls and their functions

<Front Panel Centre Section>

17 STAND BY button

When this is pressed, the same tension as in the regular stop mode is applied to the tape, and while the head drum continues to rotate, the button's lamp lights to indicate that the standby ON mode is established.

In the standby OFF mode, the half-loading mode is established.

When this button is pressed in the stop mode, the standby OFF mode is established, the half-loading mode is established. The lamp in the button now goes off. When the unit remains in the stop mode for longer than a predetermined period, the standby OFF mode is automatically established in order to protect the tape.

When this button or the STOP button is pressed in the standby OFF mode, the standby ON mode is established.

When a button other than the STOP button is pressed, the mode corresponding to the button pressed is established.

On-screen settings are available for the transfer time to the standby OFF mode.

18 PLAYER/RECORDER buttons

These buttons are operated when editing operations are conducted using the unit as the recorder and a VTR equipped with an RS-422A serial interface remote control connector (9 pins). Neither button functions when the unit is used on its own.

PLAYER button: When this button is pressed, its lamp lights, and the player connected to the unit can be operated by remote control. The unit's editing and tape transport buttons now control the player's functions.

RECORDER button: When this button is pressed, its lamp lights, and the editing and tape transport buttons control the recorder's (= the unit's) functions.

Both lamps light, and the recorder functions as the master unit for Parallel Run operations if the PLAYER or RECORDER button is pressed while "ENA" has been selected for setup menu No. 200 (PARA RUN). [However, external control can no longer be exercised from the REMOTE connector (9-pin) when this setting has been made.]

19 TC/CTL switch

By pressing this switch, what appears on the counter display is changed between TC and CTL.

When TC is selected, either the TC or UB value is displayed depending on the position selected by the TC/UB switch.

20 TC/UB switch

This selector switch determines whether the value of TC or UB appears on the counter display when the TC/CTL switch has been set to TC.

21 INT/EXT switch

INT: For using the built-in time code generator.

EXT: For using the time external code which is input from the time code input connector or the video signal VITC. The selection is set at the setup menu No. 505 (EXT TC SEL).

22 TAPE/EE switch

<In the stop mode>

TAPE: For outputting the signals played back from the tape.

EE: For outputting the input signals selected by the INPUT SELECT switch.

<In the editing*/recording mode>

TAPE: For outputting the simultaneous playback signals.

EE: For outputting the input signals selected by the INPUT SELECT switch.

* The SETUP menu No. 310 (CONFI EDIT) setting is required.

<Front Panel Centre Section>

23 REMOTE/LOCAL switch

This switch is set when the unit is to be controlled from an external source using the REMOTE connector, RS-232C connector or parallel connector.

REMOTE: Set to this position when controlling the unit by a device connected using the 9-pin REMOTE connector or RS-232C/parallel connector.

LOCAL: Set to this position when controlling the unit using the controls on its own operation panel.

Setup menu No. 211 (LOCAL 25P) can be used to make the selection when the unit is to be controlled by the connected device using the PARALLEL REMOTE connector with the switch at this position.

24 REMOTE lamp

This lights when the REMOTE/LOCAL switch has been set to the REMOTE position.

25 Search button

This button is pressed to establish the search mode.

When the search dial is set to the shuttle mode and turned to a particular position, and this button is pressed, playback commences at the speed set by the search dial.

26 JOG/SHTL/SLOW lamps

These indicate the present status of the search dial and SHTL/SLOW switch.

JOG: This lights when the unit is in the JOG mode.

SHTL: This lights when the unit is in the SHTL mode.

SLOW: This lights when the unit is in the VAR (variable) mode.

27 SHTL/SLOW switch

This selector switch is set when the search dial is used for SHTL or SLOW applications.

28 REV/STILL/FWD lamps

One of these lamps lights depending on the operation of the search dial.

REV: This lights when the dial is turned counterclockwise and the tape travels in the REV direction provided that the lamp in the search button has lit.

STILL: This lights in the JOG mode while the dial is kept stationary, and the tape stops travelling provided that the lamp in the search button has lit.

It lights in the SHTL mode provided that the dial is at the STILL position.

FWD: This lights when the dial is turned clockwise, and the tape travels in the FWD direction provided that the lamp in the search button has lit.

29 Search dial

This is used to search for the edit points.

Each time it is pressed, the mode is alternately set to shuttle or jog, and one of the JOG, SHTL and SLOW lamps lights. When the power has been turned on, the dial will not function until it has first returned to the STILL position.

Shuttle mode: When the dial is turned and stopped at a particular position while the SHTL/SLOW switch is at SHTL, the tape can be played back at the speed corresponding to the dial's rotary angle position. A still picture appears at the dial's centre position.

SLOW mode: When the dial is turned all the way counterclockwise with the SHTL/SLOW switch at SLOW, the tape speed is set to $-4.1\times$ normal speed, when it is set to the centre position, a still picture is produced, and when it is turned all the way clockwise, the tape speed is set to $+4.1\times$ normal speed. The speed for SLOW can be set using setup menu No. 320 (VAR FWD MAX) and No. 321 (VAR REV MAX).

Jog mode: The dial's clickstop positions are cleared, and the tape is played back at the speed (see *1) that corresponds to the speed with which the dial is rotated.

*1 Speed for each format

DVCPRO50 (50 Mbps): $-1\times$ to $+2\times$ speed

DVCPRO (25 Mbps): $-1\times$ to $+2\times$ speed

DV: $-1\times$ to $+1\times$ speed

DVCAM: $-1\times$ to $+1\times$ speed

<Front Panel Centre Section>

30 PREROLL button

This is used for feeding and cueing the tape for manual editing.

When it is pressed, the tape travels to the preroll point where it stops.

The preroll time can be set on the setup menu No. 000 (P-ROLL TIME).

When the PREROLL button is pressed while holding down the IN (A IN) or OUT (A OUT) button, the tape can be cued up to the IN (A IN) or OUT (A OUT) point which has been entered.

When the AUTO ENTRY on the setup menu No. 313 is set to "ENA", IN point has been entered at the point where the PREROLL button is pressed even if the IN point has not been entered.

31 AUTO EDIT button

Automatic editing is executed when this is pressed after an edit point has been entered.

When the AUTO EDIT button is pressed though the IN point has not been entered, automatic editing is executed using the point at which the button was pressed as the IN point.

32 PREVIEW/REVIEW buttons

PREVIEW: When this is pressed after an edit point has been entered, the tape travels, editing is not performed, and the preview can be activated on the screen connected to the recorder.

If it is pressed when the IN point has not been entered, the point at which the button was pressed is entered as the IN point, and preview is executed accordingly.

REVIEW: If this is pressed after a block has been edited, the now edited block can be played back and monitored on the screen connected to the recorder.

33 IN (A IN)/SET/OUT (A OUT) buttons

When the SET button is pressed while holding down the IN (A IN) or OUT (A OUT) button, the IN (A IN) or OUT (A OUT) point is entered.

A IN and A OUT are used during audio split editing to enter an audio IN or OUT point that differs from the video In or OUT point.

While an IN (A IN) or OUT (A OUT) point is selected, the IN (A IN) or OUT (A OUT) button corresponding to the point entered lights. When this button is pressed after a point has been entered, the IN (A IN) /OUT (A OUT) point value appears on the counter display. When the IN (A IN) or OUT (A OUT) button is pressed together with the RESET button, the IN (A IN) or OUT (A OUT) point is cleared.

34 TRIM buttons

These buttons are used to trim IN (A IN) or OUT (A OUT) point finely.

When the "+" or "-" button is pressed while the IN (A IN) or OUT (A OUT) button is held down, the entered edit point can be trimmed in 1-frame increments. When the "+" button is pressed, the tape is advanced by one frame; when the "-" button is pressed, it is rewound by one frame.

35 ASMBL button

This is pressed for assemble editing.

The button is self-illuminating, and it is set ON (lamp lights) when it is pressed once and OFF (lamp goes off) when it is pressed again.

36 INSERT buttons

Press one of these seven buttons to select the input signals to be edited during insert editing.

The buttons are self-illuminating, and they are set ON (lamp lights) when they are pressed once and OFF (lamp goes off) when they are pressed again.

37 Counter display

This displays the TC and CTL count values, on-screen information and other messages.

<Front Panel Centre Section>

38 Time code buttons

These are used to set the TC or UB value.

SHIFT: When setting the TC or UB value, first press this button to stop the data running. Change the digit now flashing on the display.

Each time the button is pressed, the flashing moves to the right by one digit, and when it reaches the right-most digit, it returns to the left-most digit.

When it is kept depressed, the flashing moves consecutively.

ADJ: This is used to change the numeral of the digit now flashing on the display.

When the button is pressed once, the number is incremented by 1, and when it is kept depressed, the number is incremented consecutively.

START: This enters the data which has been changed by the SHIFT and ADJ buttons.

Also, Pressing this button when the TC or UB value are not set enables the TCG or UBG setting values to be confirmed.

RESET: When this button is pressed in the CTL mode, the display is reset to "00:00:00:00". In the CTL mode, the entered edit points are cleared.

In the TC/UB mode, the generator is reset when the button is pressed together with the SHIFT button.

39 Warning lamp

This lights to warn the operator of a particular item.

40 Cassette insertion display lamp

This lights when a cassette has been inserted into the unit.

41 DVCPRO (25 Mbps) cassette playback display lamp

This lights when a cassette recorded in the DVCPRO (25 Mbps) is being played back.

42 SCH lamp

This lights when the SCH phase of the external sync signal (REF VIDEO) or composite input signal is within the designated range if the signal selected by the external synchronization of the video output signals is an external sync signal or composite input signal. In the case of any other signal, it goes off.

43 CF lamp

This lights when the colour framing is locked.

44 Level meters

These indicate the respective levels of the PCM audio signals (CH1/CH2/CH3/CH4), CUE track signal or the video signal*. The audio signal indicates the input signal levels during recording and E-E selection, and the output signal levels during playback.

For video signal, the meters indicate the input signal levels only.

* CUE track signal or video signal is to be selected on setup menu No. 005 (METER SELECT).

45 Audio input/output level controls

These controls are used to adjust the recording and playback levels of the PCM audio signals (CH1/CH2/CH3/CH4) and the CUE track signal. The upper controls are for adjusting the recording levels. The lower controls are for adjusting the playback levels. Each control is a "pull for variable" control, meaning that the level can be adjusted only when the control has been pulled up. The signal levels are set to the unity value (preset value) when the controls have been pushed down.

46 Headphones jack

The sound being recorded, played back or edited can be monitored on stereo headphones when they are connected to this jack.

<Front Panel Centre Section>

47 Volume control

This is used to adjust the headphones volume and the monitor output volume.

Whether the headphones output and monitor output volumes are to be linked or kept separate can be set on the setup menu No. 713 (MONI OUT). (Note that the headphones output volume is normally linked.)

When the volumes are kept separate, the monitor output is set to the unity value (preset value).

48 MONITOR SELECT switches

These are used to select the audio signals output to the monitor L/R channels.

Each time the "L" button is pressed, the signals output to the monitor L channel are selected in turn in the following order: CH1, CH2, CH3, CH4, CUE and back to CH1.

[However, this switching is disabled when CH1+2, CH3+4, CH1+3 or CH2+4 has been selected for setup menu No. 729 (MONI MIX L).]

Each time the "R" button is pressed, the signals output to the monitor R channel are selected in turn in the following order: CH1, CH2, CH3, CH4, CUE and back to CH1.

[However, this switching is disabled when CH1+2, CH3+4, CH1+3 or CH2+4 has been selected for setup menu No. 730 (MONI MIX R).]

The L or R lamp on the level meter display lights to indicate which signal is now being selected. [When the unit is set to "AUTO" in No. 721 (MONI CH SEL) on the setup menu, then the display will change according to the monitor output.]

49 METER (FULL/FINE) selector switch

This is used to change the scale display (graduations) of the audio level meters.

FULL mode: Standard scale (from $-\infty$ to 0 dB)

FINE mode: The scale changes every 0.5 dB

<Front Panel Bottom Section>

50 VIDEO IN LEVEL control and switch

These are used to adjust the video input level.

PRESET: When the switch is set to "PRESET", the video input level is set to the unity value (0 dB).

MANUAL: When the switch is set to "MANUAL", the video input level can be adjusted using this control.

51 VIDEO OUT LEVEL control and switch

When setup menu No. 10 (ENCODER SEL) is set to "LOCAL", the video output level can be adjusted.

When the switch is set to "PRESET", the video output level is set to the unity value (0 dB).

When the switch is set to "MANUAL", the video output level can be adjusted using this control.

52 CHROMA LEVEL control and switch

When setup menu No. 10 (ENCODER SEL) is set to "LOCAL", the chroma level can be adjusted.

When the switch is set to "PRESET", the chroma level is set to the unity value (0 dB).

When the switch is set to "MANUAL", the chroma level can be adjusted using this control.

53 BLACK LEVEL control and switch

When setup menu No. 10 (ENCODER SEL) is set to "LOCAL", the black level can be adjusted.

When the switch is set to "PRESET", the black level is set to the unity value (0 IRE).

When the switch is set to "MANUAL", the black level can be adjusted using this control.

54 CHROMA PHASE control and switch

When setup menu No. 10 (ENCODER SEL) is set to "LOCAL", the chroma phase can be adjusted.

When the switch is set to "PRESET", the chroma phase is the unity value (0°).

When the switch is set to "MANUAL", the chroma phase can be adjusted using this control.

55 CF switch

This selects whether the playback framing is to be locked in 4-field or 8-field increments or 2-field increments.

4F/8F: 625 mode: The framing is locked in 4- or 8-field increments. The framing can be selected in either 4- or 8-field increments using setup menu No. 108 (CAP. LOCK).

525 mode: The framing is locked in 4-field increments.

2F: The framing is locked in 2-field increments.

56 TC generator switch

REGEN: When the REGEN/PRESET switch is at REGEN, the internal time code generator is synchronized with the time code which the time code reader read from the tape. Whether to set TC or UB to REGEN can be selected at the setup menu No. 503 (TCG REGEN).

PRESET: When the REGEN/PRESET switch is at PRESET, presetting is enabled by the controls on the operation panel or by remote control.

REC RUN: The time code runs only during recording when the RUN MODE switch has been set to REC. The time code runs constantly when the REGEN/PRESET switch is set to REGEN.

FREE RUN: The time code runs regardless of the operation mode as long as the power is being supplied when the RUN MODE switch has been set to FREE.

Controls and their functions

<Front Panel Bottom Section>

57 REC INHIBIT switch

This is used to inhibit or allow recordings on the video cassette tape.

ON: Recording on the tape is inhibited. At this setting, the REC INHIBIT lamp in the front panel lights.

OFF: Recording on the tape is allowed provided that the accidental erasure prevention tab on the video cassette tape enables recording to be conducted.

58 TV SYSTEM selector switch

This selects the type of television system. The setting of this switch takes effect when the power is turned off and then turned back on again.

625: 625 interlaced/50 Hz television system selection.

525: 525 interlaced/59.94 Hz television selection.

During recording, choose a signal input that corresponds to the 625i/525i selection.

During playback, choose a video cassette tape that corresponds to the 625i/525i selection.

59 MENU button

When this is pressed, the setup menu appears on the TV monitor using VIDEO OUT 3 connector or SERIAL OUT 3 connector, and the setup menu No. appears on the display.

When it is pressed again, the menu setting mode is exited and the original operating mode is restored.

60 SET button

When this is pressed, the data which has been set on the setup menu is entered. After data entry, the setup menu setting mode is exited and the original operating mode is restored.

61 DIAG button

When this is pressed, VTR information is displayed. When it is pressed again, the original display is restored.

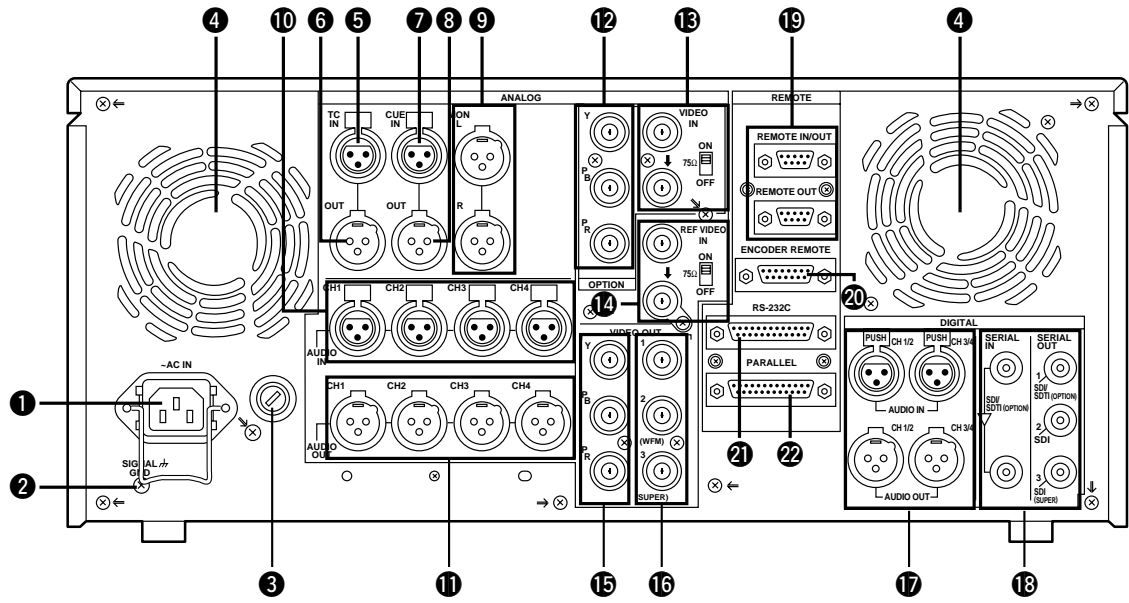
There are two types of VTR information: "HOURS METER" information and "WARNING" information. Switching between these types is enabled by pressing the search button.

Indicated on the "HOURS METER" screen are serial number of the unit, the power-on time, drum rotation time, tape travel time, loading count and power ON/OFF time, etc.

Indicated on the "WARNING" screen are the warnings.

Controls and their functions

Connector area



ENGLISH

Controls and their functions

<Connector area>

① AC IN connector

This is for connecting the unit to the power outlet using the power cord provided.

② SIGNAL GND terminal

This terminal is connected to the signal ground terminal of the connected unit in order to reduce noise. It is not connected to ground for safety purposes.

③ Fuse holder

This contains a fuse.

④ Fan motor

This is for cooling the unit.

The **W** lamp lights when trouble has caused the fan motor to stop. If the unit is still operated in the warning status, the temperature inside the deck will rise, and when it exceeds the safety temperature, all the unit's operations will be shut down.

⑤ TIME CODE IN connector

This is the connector for recording the external time code on the tape.

⑥ TIME CODE OUT connector

The playback time code is output from this connector during playback.

During recording, the time code generated by the internal time code generator is output.

⑦ CUE IN connector

The analogue signal to be recorded on the CUE track is supplied to this connector. The audio signals from a microphone can also be recorded by selecting the -60 dB input mode on the setup menu No. 705 (CUE IN LV).

⑧ CUE OUT connector

The analogue signal recorded on the CUE track is output from this connector.

⑨ MONITOR OUT connector

During playback, the playback signals from the CUE track or PCM audio signal CH1/CH2/CH3/CH4 are output from this connector.

⑩ ANALOG AUDIO IN connectors

These are the analogue audio input connectors.

⑪ ANALOG AUDIO OUT connectors

The analogue audio signals are output from these connectors.

⑫ ANALOG COMPONENT VIDEO IN connector (option)

The analogue component video signal is supplied to this connector.

⑬ ANALOG COMPOSITE VIDEO IN connectors and 75Ω termination switch (option)

The analogue composite video signal is supplied to these two connectors which are connected in a loop-through configuration. When the termination is required, set the switch to ON.

⑭ REF VIDEO IN connectors and 75Ω termination switch

These are the input connectors for the reference video signals. Supply signals with colour burst. When the termination is required, set the switch to ON.

<Connector area>

15 ANALOG COMPONENT VIDEO OUT connector (option)

The analogue component video signal is output from this connector.

16 ANALOG COMPOSITE VIDEO OUT connectors

The analogue composite video signals are output from these connectors.

The video signal with signals superimposed on it can be output from the VIDEO OUT 3 connector.

The superimpose function can be set ON or OFF on the setup menu No. 007 (SUPER).

17 DIGITAL AUDIO IN/OUT connector

This I/O connector is for digital audio signals which comply with the AES/EBU standard.

18 SERIAL DIGITAL COMPONENT AUDIO/VIDEO IN/OUT connector

This I/O connector is for digital component audio and video signals which comply with the SMPTE 259M-C/272M-A/EBU Tech.3267-E standard.

The SERIAL OUT 3 connector can output the video signal containing superimposed data.

The superimposed data can be set ON/OFF using setup menu No. 007 (SUPER).

<Note>

When the SDTI board (optional accessory) is used, SERIAL IN is used for the SDTI/SDI common input signal while SERIAL OUT1 is used for the SDTI/SDI common output signal.

For further details, refer to the operating instructions accompanying the model AJ-YAC960P SDTI interface board.

19 Remote control connectors

The unit can be controlled from an external source by connecting the unit with another unit or an external controller.

There are two remote control connectors, one for IN/OUT uses and the other for OUT uses.

IN/OUT: For connection with an external controller.

For connection with deck-to-deck operation.

OUT: For connection with parallel running operations.

For use in a loop-through configuration.

<Note>

To connect the unit to the OUT connector when performing deck-to-deck operations where this unit is used as the recorder, selection can be made using setup menu No. 212 (MASTER PORT).

20 ENCODER REMOTE connector

The external encoder/controller is hooked up to this connector when the video output signal and other settings are to be adjusted from an external source.

21 RS-232C connector

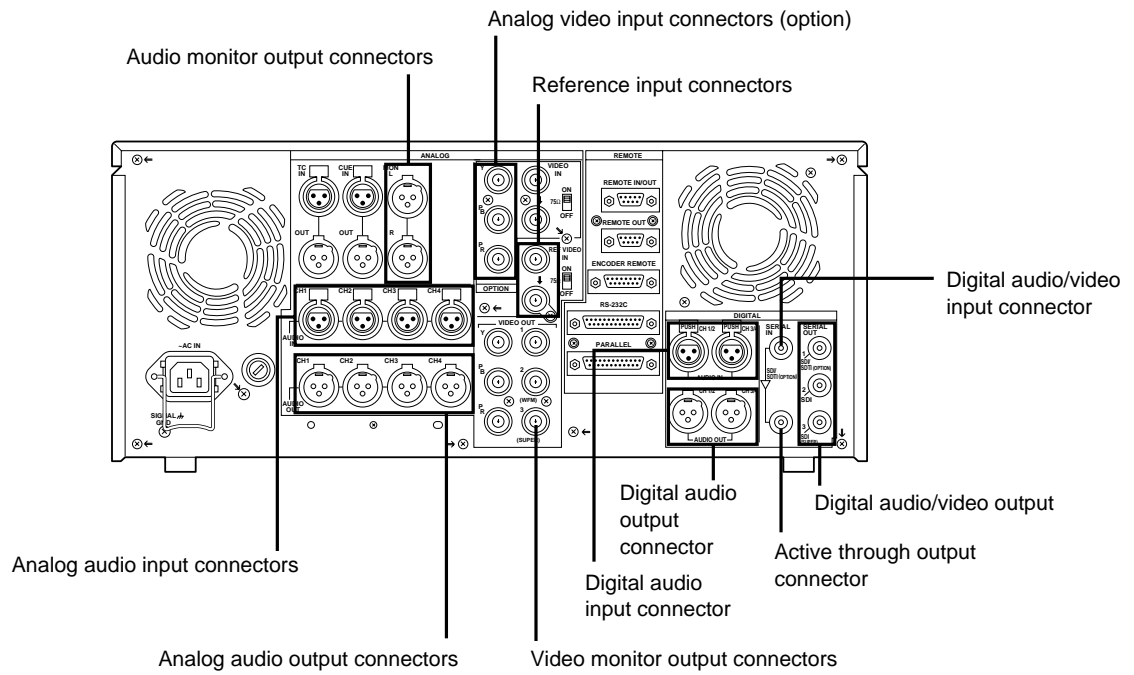
22 PARALLEL REMOTE connector

This is used when operating the unit from an external source.

Connections

Connections when one unit is used

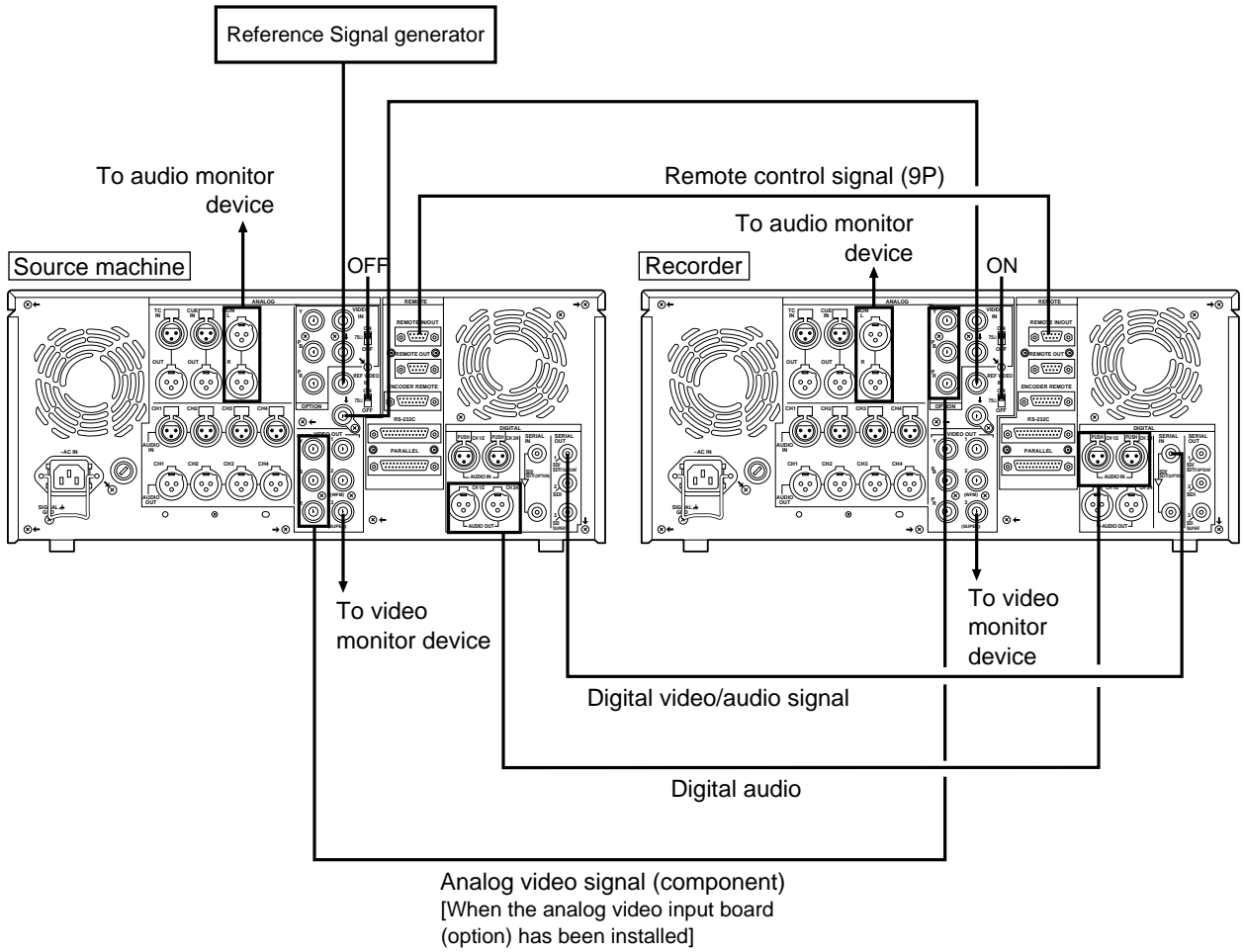
Set the CONTROL switch on the front panel to LOCAL.



Connections

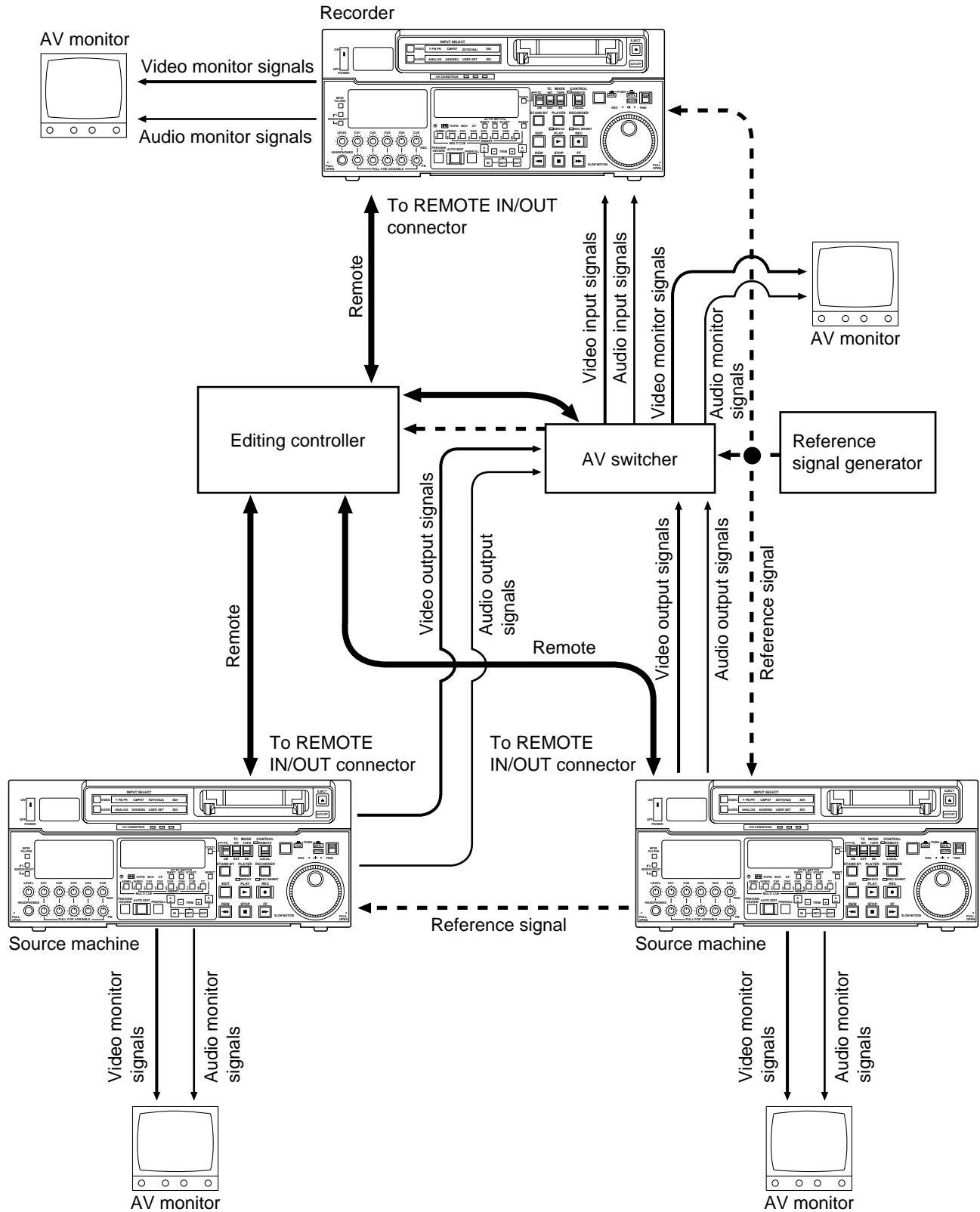
Connections when 2 units are used (deck to deck)

Source machine: Set the CONTROL switch on the front panel to REMOTE.
Recorder: Set the CONTROL switch on the front panel to LOCAL.



Connections

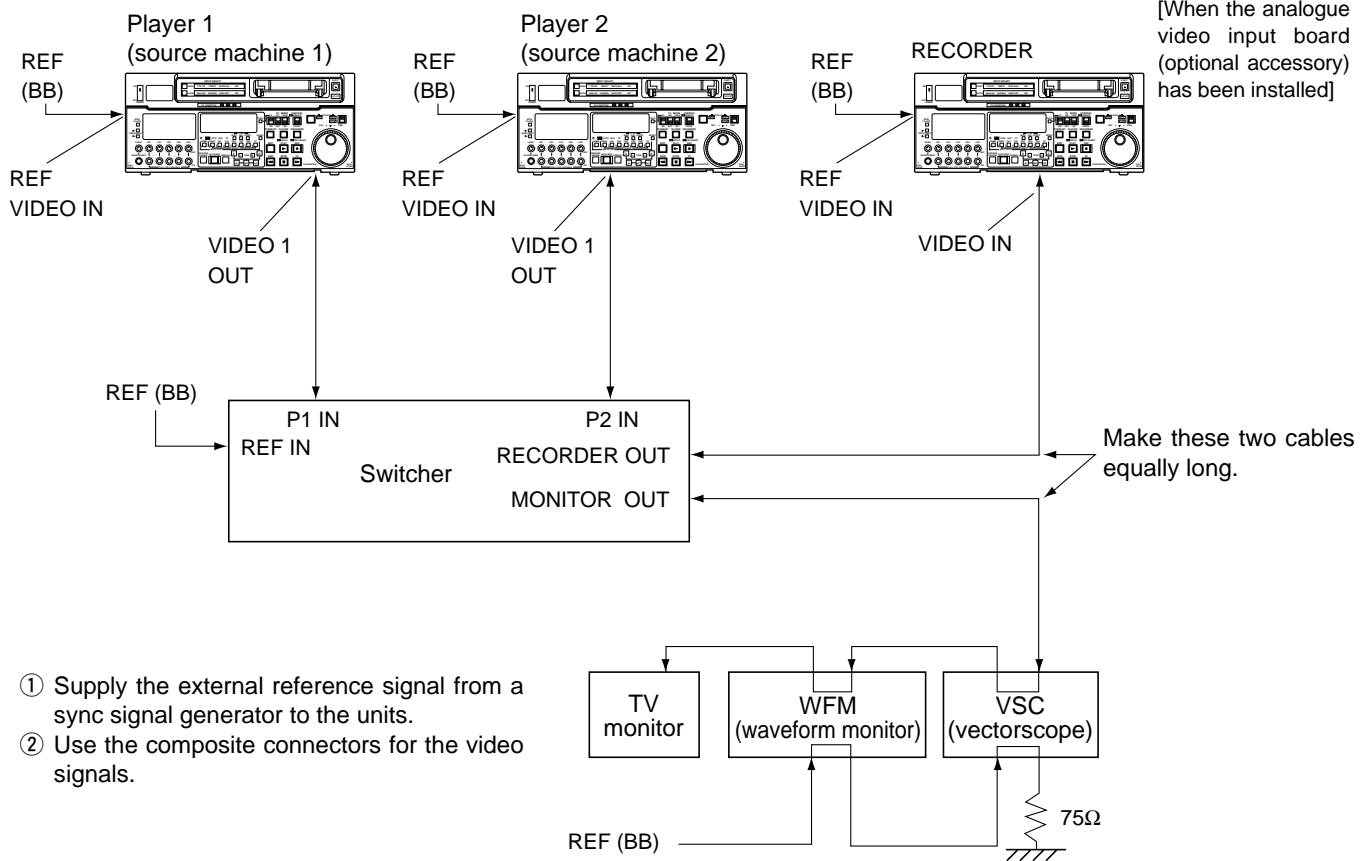
Connections with editing controller



<Note>
When an editing controller made by CMX is used, support must be provided at the editing controller side.

Connections

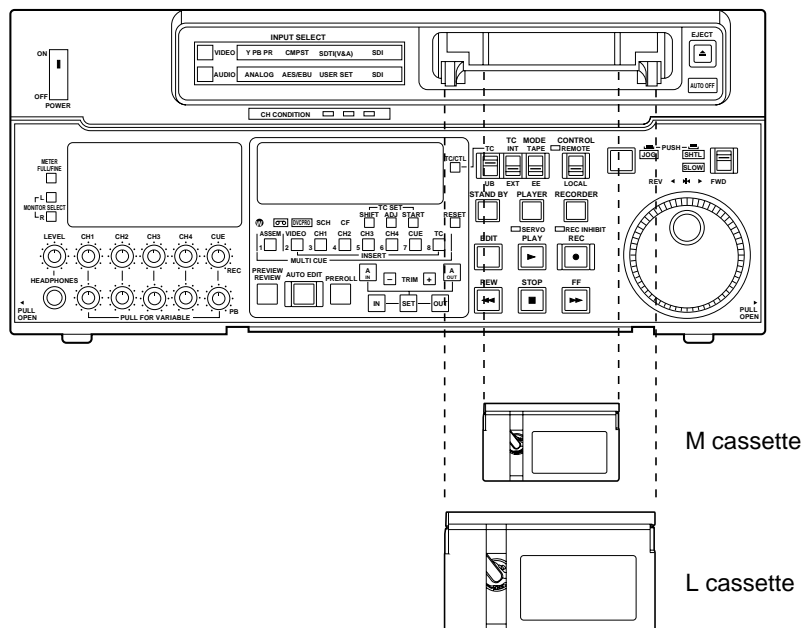
Connections for adjusting video output (encoder output) signals



Tapes

Type		Description
Consumer DV/DVCAM S size cassette		These tapes are exclusively used with general consumer DV/DVCAM camera/recorders. They can be played back on the unit if a cassette adapter AJ-CS750P (available as an optional accessory) is used. However, bear in mind that long-playing consumer cassette tapes (80 minutes in the standard mode; 120 minutes in the LP mode) cannot be used. It is recommended that Panasonic's DV tapes for general consumer DV applications be used. Bear in mind that inserting one of these cassette tapes without first installing the cassette adapter will cause malfunctioning.
M size cassette		Tapes with a maximum recording/playback time of 33 minutes. (AJ-P66MP)
L cassette	DVCPRO (50 Mbps)	Tapes with a maximum recording/playback time of 92 minutes. (AJ-5P92LP)
	For consumer DV/DVCAM use	Standard playback cassette tapes for consumer DV/DVCAM use. For playback, select DV or DVCAM as the setup menu item No. 014 (FORMAT SEL) setting. Use of Panasonic's consumer-use DV tapes is recommended.

Align the cassette with the centre of the insertion slot and push it in gently. The cassette tape is loaded automatically.



<Note>

For AJ-5P92LP cassette tapes recorded using the DVCPRO (25 Mbps) mode, use a VTR supporting DVCPRO (25 Mbps) 184 minute tapes.

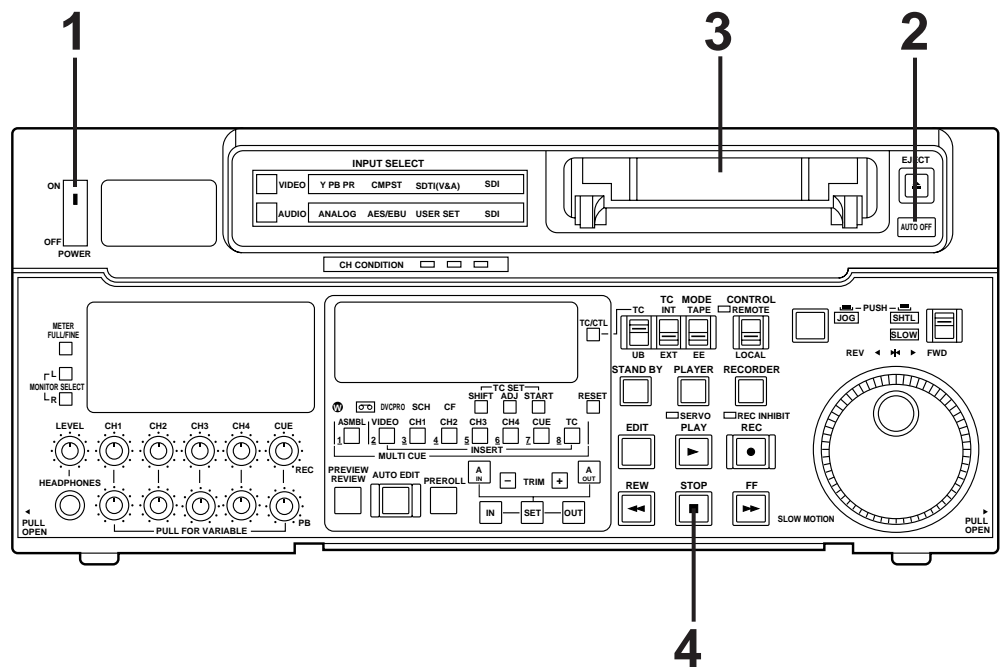
<Precautions when playing back general consumer DV/DVCAM tapes>

- General consumer tapes recorded in the LP mode cannot be played back.
- When material recorded on a general consumer DV/DVCAM tape is to be edited, either use a DVCPRO50 (50 Mbps) or DVCPRO (25 Mbps) tape or record the material on another VTR used for broadcast applications.
- The maximum speed at which general consumer DV/DVCAM tapes can be advanced is 32 times the normal tape speed.
- The maximum time for STILL TIMER when a general consumer DV/DVCAM tape is used is set to 10 seconds, and the total time during which such a tape may be left standing in the STILL mode is set to 1 minute.
- Cueing up a general consumer DV/DVCAM tape at the same position should be kept to the minimum in order to protect the tape from damage.
- Noise may be generated on rare occasions during slow playback using a consumer-use DV/DVCAM tape.

Switching on the power/inserting the cassette

Before starting to operate the unit, check whether the equipment has been connected properly.

- 1** Turn on the power.
- 2** Check that the AUTO OFF lamp is off.
When condensation has formed or some other trouble has occurred, the AUTO OFF lamp lights, and all operations are disabled.
- 3** Insert the cassette tape.
Insert the tape at its proper position without force.
- 4** Check that the STOP lamp is on.
When the tape is inserted, the cylinder rotates automatically, the tape is loaded and the unit goes into the stop mode. The EJECT lamp goes off.

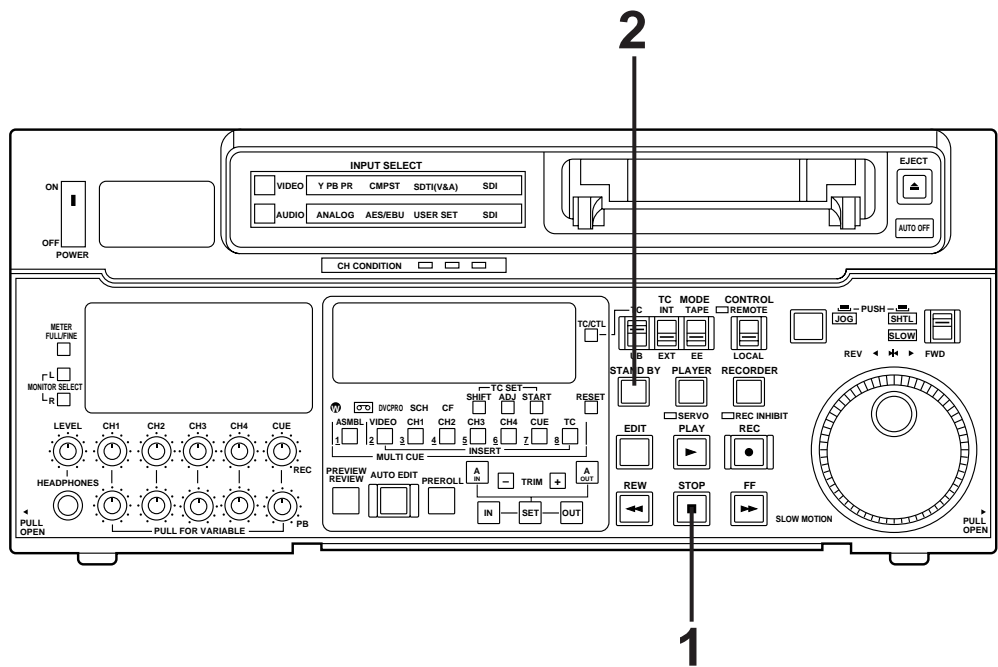


STOP/STAND BY mode

- 1** When the STOP button is pressed, the unit goes into the stop mode. The STOP lamp lights and the tape stops travelling.
 - In order to protect the tape, the unit goes into the standby OFF mode after the time set by setup menu No. 400 (STILL TIMER) has elapsed. When the STOP, REW, FF or PLAY button is pressed, the unit will go into the appropriate mode.
- 2** When the STAND BY button is pressed, the unit goes into the standby ON/OFF mode. When the button's lamp is lit, the unit is in the standby ON mode. When the button is pressed during the stop mode, the unit goes into the standby OFF mode and half-loading mode and the lamp goes off. When the button is pressed during the standby OFF mode, the unit goes to the standby ON mode.

Still Timer Setting

Page 74 indicates the settings for menu item 400-Still Timer set. Still Timer settings 4 and below will best protect the tape.



- 1** Set the accidental erasure prevention tab on the cassette tape to the “recording” position and insert the tape.
- 2** Press the STOP button to place the unit in the stop mode.
- 3** Set the TAPE/EE switch to EE.
EE images now appear on the TV monitor.
- 4** Check that the REC INHIBIT lamp is off.
If this lamp is lit, set the REC INHIBIT switch to OFF.
- 5** Select the video and audio input signals and adjust their levels.
 - 5-1 Selecting video/audio input signals**
 - 1** Connect the signals to be recorded.
 - 2** Select the input signals using the INPUT SELECT switches on the front panel.
The input signals corresponding to the lit lamps have been selected.
 - 5-2 Adjusting the video level**

[When the analogue video input board (optional accessory) has been installed]

 - 1** Normally, the VIDEO IN LEVEL control/switch **50** is left at the “PRESET” setting (unity value).
 - 2** To adjust the recording level, set the VIDEO IN LEVEL control/switch **50** to “MANUAL” and use it to adjust the level to a setting between +3 dB and –3 dB.
 - 5-3 Adjusting the audio level**
 - 1** Adjust the audio input signal levels of the analogue audio CH1/CH2, CH3/CH4 signals and analogue cue signal. Keep the audio input/output level controls **45** pushed in (unity value).
The audio signals will be recorded at the proper level.
 - 2** To adjust the recording level, pull out the controls **45** and adjust them. With the CUE signal, adjust the control in such a way that –20 dB will not be exceeded.
- 6** Press the PLAY button while holding down the REC button. The REC and PLAY lamps light, and recording commences.
- 7** To end the recording, press the STOP button.
Recording is ended, and the unit goes into the stop mode.

<Notes>

- Check that the SERVO lamp is lit during recording. If it flashes or if it is off, the images played back will be disturbed.
- Only the analogue composite video input signals can be adjusted. (The digital video and analogue component input signals cannot be adjusted.)

Playback

- 1** Insert the cassette tape, and place the unit in the stop mode.
- 2** Press the PLAY button.
Regular playback is now commenced.
- 3** Adjust the audio playback level.
Pull out the audio level controls and turn them clockwise or counterclockwise to adjust the levels. Normally, they are kept in the pushed-in state (unity value).
- 4** To end playback, press the STOP button.
The VTR now goes into the stop mode.

<Note>

Check that the SERVO lamp is lit during playback. If it flashes or if it is off, the images played back will be disturbed.

Jog mode

- 1** Push the search dial to the “in” position.
Be sure that the JOG lamp lights.
- 2** Rotate the search dial.
The dial's clickstops are cleared, and the tape is played back at the speed ($-1\times$ to $+2\times$ normal speed*) corresponding to the speed at which the dial is turned. When the dial rotation is stopped, a still picture appears. The playback picture is noise-free.
* The jog speed ranges from $-1\times$ to $+1\times$ with DV and DVCAM tapes.
- 3** To transfer from the jog mode to another mode, press the appropriate button.

Shuttle mode

- 1** Push the search dial to release it from the “in” position. The SHTL lamp lights, and the unit goes into the shuttle mode.
 - Immediately after the power has been turned on, rotate the search dial and set it to the centre position.
- 2** Set the SHTL/SLOW switch to SHTL or SLOW.
- 3** Rotate the search dial.
When the SHTL/SLOW switch has been set to SHTL, the playback picture speed is varied from 0 to $\pm 32\times$ normal speed depending on the position of the dial. The playback picture speed can be switched to $\pm 8.4\times$, $\pm 16\times$ and $\pm 32\times$ normal speed with setting menu No. 101 (SHTL MAX).
The dial's centre position is a clickstop where a still picture appears as the playback image. When the SHTL/SLOW switch has been set to SLOW, the playback picture speed is varied from -4.1 to $+4.1\times$ normal speed depending on the position of the dial. The maximum speed can be selected using the setup menu No. 320 (VAR FWD MAX) and No. 321 (VAR REV MAX). However, noise appears at speeds other than -1 to $+2\times$ normal speed*.
The dial's centre position is a clickstop where a still picture appears as the playback image. The playback picture is noise-free.
* Noise will be generated outside the shuttle speed range of $-1\times$ to $+1\times$ with DV and DVCAM tapes.
- 4** To transfer from the shuttle mode to another mode, press the STOP button or other button.

<Note>

When the unit leaves the factory, its operation is set up so that it will be transferred to the shuttle or jog mode when the search dial is rotated. If it is inconvenient for operation to be transferred to the variable-speed mode directly, it can also be transferred through the search button.

Set setup menu No. 100 (SEARCH ENA) to KEY.

Manual editing

- 1** Select the editing mode.
ASSEMBLE: For assemble editing.
INSERT: For insert editing.
- 2** Select the editing channel.
In the case of insert editing, press the channel button corresponding to the signals to be edited, and check that its lamp is on.
- 3** Press the PLAY button.
- 4** Search for the position where the editing is to be commenced (IN point) while viewing the TV monitor, and press the PLAY and EDIT buttons together at the IN point.
- 5** Press the STOP or PLAY button at the position where editing is to be completed (OUT point) while viewing the TV monitor. The unit goes into the stop mode, and editing is completed.

- 1** Press the PREROLL button.
The VTR now performs the preroll operation.
 - When the edit IN point has been entered, the tape is rewound from the edit IN point for the duration set by setup menu “000,” and the unit then goes into the stop mode.
 - When the edit IN point has not been entered, the tape is rewound for the duration set by setup menu “000” from the position where the button was pressed, and the unit then goes into the stop mode.

<Notes>

- The time code or CTL signal must be continuously recorded between the edit IN point and preroll point.
- When the IN point has not been entered, whether to enter the IN point and perform preroll or to perform preroll without entering the IN point can be selected at setup menu No. 313 (AUTO ENTRY).

Automatic editing (Deck to Deck)

Editing refers to the job of using a prerecorded tape to produce a complete recording by joining together separate cuts and deleting unnecessary parts.

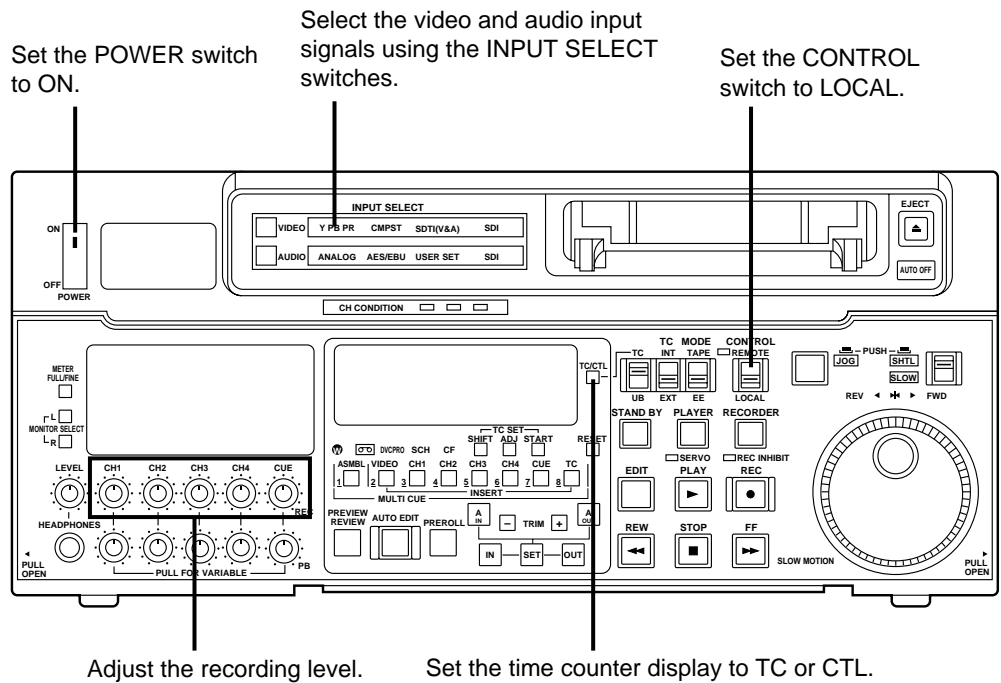
The basic steps taken for editing are as follows.

- 1** Set the CONTROL switch to REMOTE on the player and to LOCAL on the recorder.
- 2** Select the editing mode.
- 3** Enter the edit points of the recorder and player.
- 4** Check and modify the edit points.
- 5** Check (Preview) before proceeding with the editing.
- 6** Proceed with the editing.
- 7** Check (Review) the recording that has resulted from the editing.

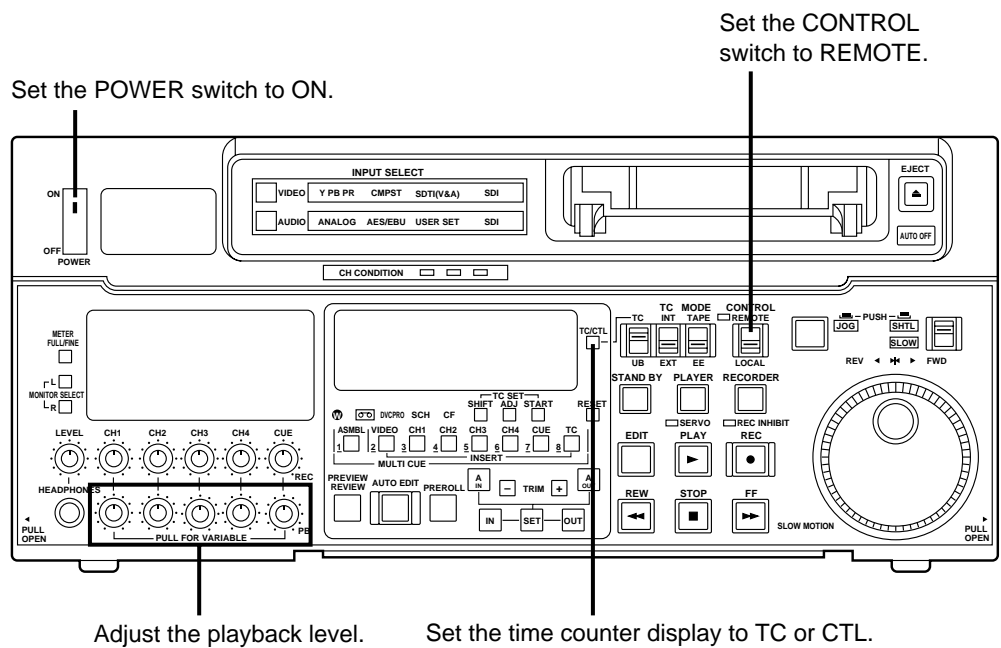
Automatic editing

Switch settings and adjustments

When the unit is used as the recorder:



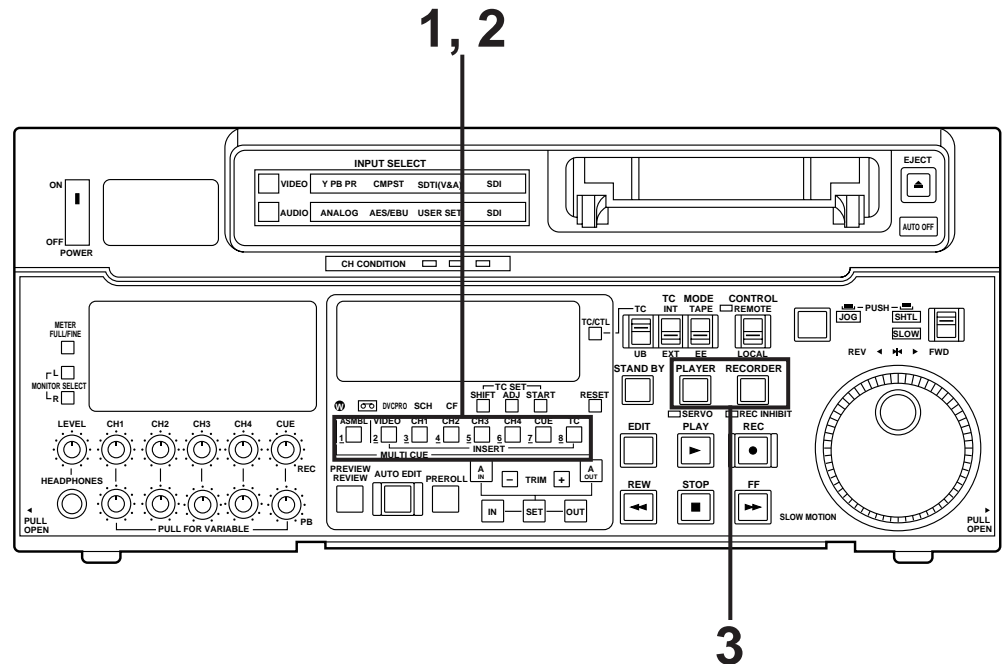
When the unit is used as the player:



Automatic editing

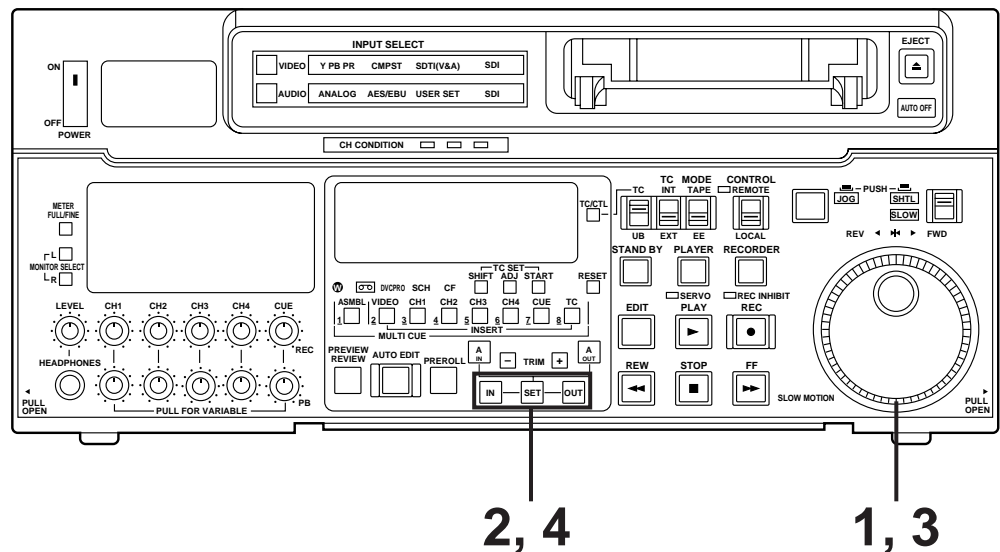
Select the editing mode

- 1** Select the editing mode.
For assemble editing, press the ASSEMBLE button.
For insert editing, press the INSERT button.
ASSEMBLE: The assemble editing mode (in which cuts are joined together) is established.
INSERT: The insert editing mode (in which cuts are inserted) is established.
- 2** Select the editing channel.
With assemble editing, the ASSEMBLE lamp lights.
With insert editing, press the button of the channel whose signals are to be edited and light its lamp.
- 3** Select the VTR to be operated (this setting is performed when editing with 2 VTRs).
Press the PLAYER or RECORDER button to select the VTR.
PLAYER: Press this button to operate the player VTR and enter the edit points.
RECORDER: Press this button to operate the recorder VTR (this unit) and enter the edit points.



Entering the edit points

- 1** Search for the edit IN point by performing the jog or shuttle operation. Establish the still picture mode at the desired position. Refer to page 29 for details on the jog/shuttle operations.
- 2** Press the SET button while holding down the IN button. The edit IN point is now entered. The edit IN point value now appears on the display.
- 3** Search for the edit OUT point by performing the jog or shuttle operation. Establish the still picture mode at the desired position. Refer to page 29 for details on the jog/shuttle operations.
- 4** Press the SET button while holding down the OUT button. The edit OUT point is now entered. The edit OUT point value now appears on the display.



Match frame processing function

When using two VTRs for editing, a total of four edit points—namely, the player's IN and OUT points and the recorder's IN and OUT points—need to be entered. However, since the last edit point is calculated automatically, only three of these edit points must be entered.

Negative duration function

This function is used by combining setup menu No. 301 (IN/OUT DEL) and No. 302 (NEGA FLASH).

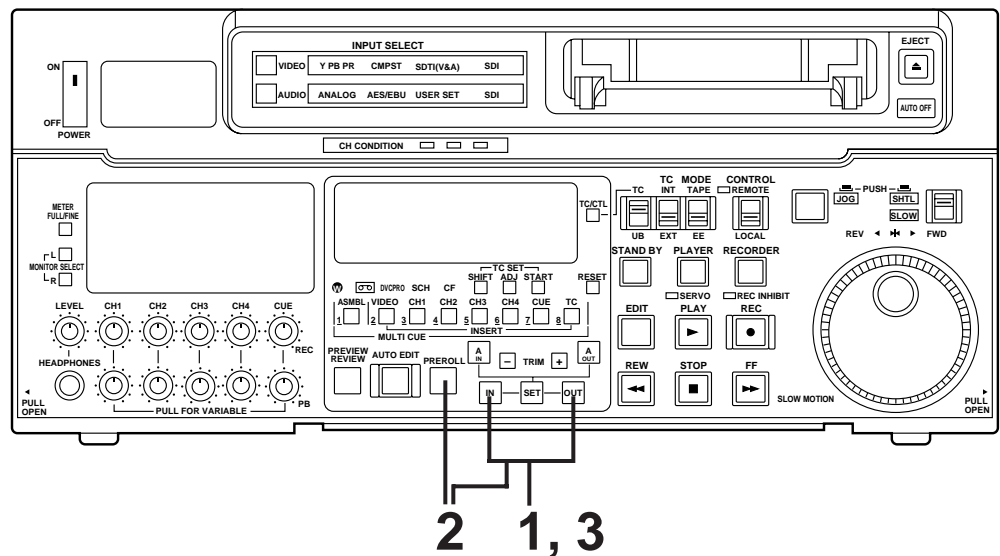
Automatic editing

Checking the edit points

- 1** Press the IN (or OUT) button to check the edit point.
The value of the entered edit point appears on the display.
- 2** Press the PREROLL button while holding down the IN (or OUT) button to check the image at the edit point.
The tape is cued at the edit IN (or OUT) point, and the still picture mode at that point is displayed.
 - The EE mode is established if the TAPE/EE switch has been set to the “EE” position when “STOP” has been selected for the setup menu No. 315 (AFTER CUE-UP).
- 3** Continue to hold the IN and OUT buttons down together, and check the edit section (duration time).
The duration time appears on the display.

Calculating the duration

- When both edit points have been set, the duration between the two edit points.
- When only one edit point has been set, the duration between the set data and the current tape address.
- When neither edit point has been set, the duration of the previously edited interval.

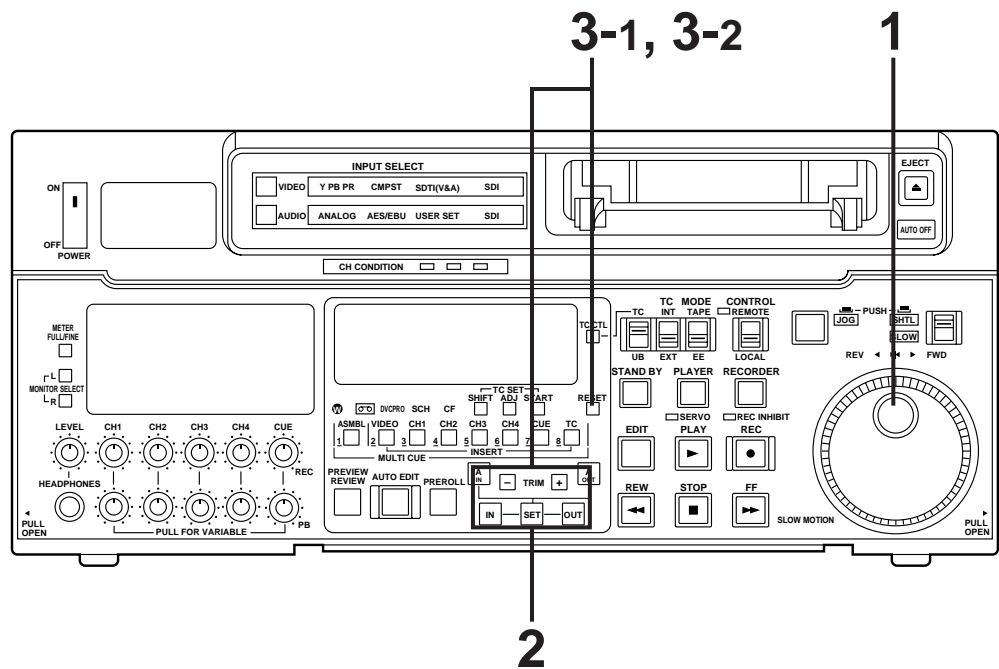


Modifying the edit points

- 1** Re-entering the edit points
Search for the new edit point by performing the jog or shuttle operation, and press the IN (or OUT) and SET buttons together to re-enter the edit point.
- 2** Modifying the edit point in frame units (trim function)
Press the TRIM button while holding down the IN (or OUT) button.
The edit point is put ahead by 1 frame each time the + button is pressed.
The edit point is put back by 1 frame each time the – button is pressed.
- 3** Resetting the edit points
 - 3-1** Resetting both the edit IN and OUT points
 - Press the RESET button.
 - 3-2** Resetting either the edit IN or OUT point
 - Press the RESET button while holding down the IN (or OUT) button.

<Notes>

- Edit points can be reset only in the CTL mode.
- An edit OUT point can be reset even while editing is in progress.
- The IN and OUT points are automatically reset during the eject mode.



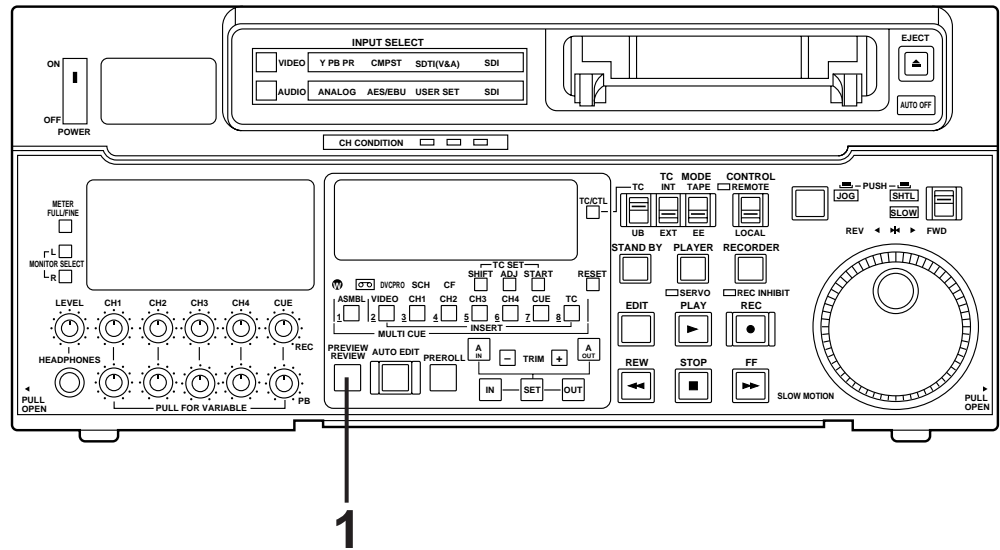
Automatic editing

Preview

- 1 After the edit points have been entered, press the PREVIEW button. Normal preview is now performed.

<Notes>

- If the edit IN point has not been entered, the position where the PREVIEW button was pressed will be entered at the edit IN point.
- To stop the preview at any time, press the STOP button.
- If the PREVIEW button is pressed again while preview is in progress after the IN point, preview will start again from the beginning.
- When the edit OUT point is reached, the unit automatically goes into the stop mode.



Executing automatic editing

- 1 Press the AUTO EDIT button.
Automatic editing is now performed.
 - To stop the editing at any time, press the STOP button.
 - When the edit OUT point is reached, the unit goes into the stop mode after postrolling*.

* The postroll time can be set using setup menu No. 325 (POSTROLL TM).

Postroll

With assemble editing, editing continues for approx. 2 seconds even after the edit OUT point has been passed, the tape is rewound to the OUT point, and the unit goes into the stop mode.

With insert editing, the unit goes into the play mode after the edit OUT point has been passed, the tape is rewound to the OUT point, and the unit goes into the stop mode.

Retry function

If the AUTO EDIT button is pressed again after the STOP button has been pressed to stop the editing, editing will start again from the beginning.

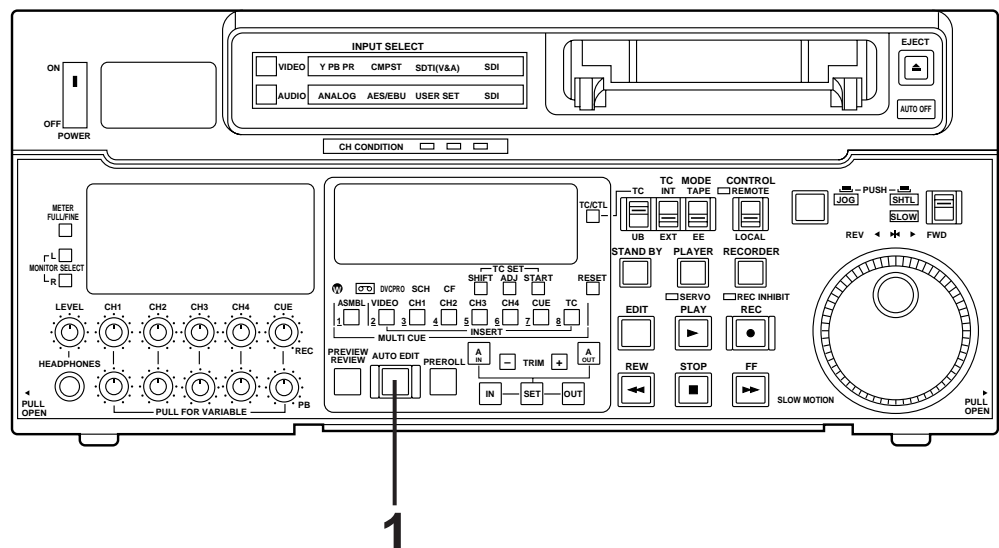
Auto tag editing

If the AUTO EDIT button is pressed when the next edit point has not yet been entered upon completion of editing, the previous edit OUT point will be entered as the IN point, and editing is performed accordingly.

To release the auto tag mode, press one of the tape transport buttons (PLAY, etc.).

<Note>

The entered points are automatically cleared after editing is executed. However, the previous editing points can be recalled by pressing the TRIM+ (or TRIM-) and SET buttons together.

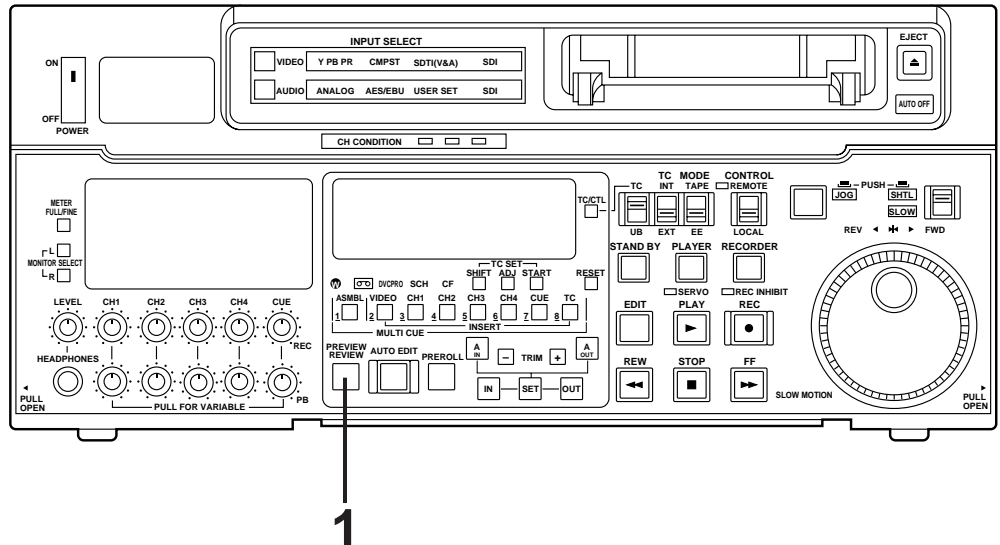


Automatic editing

Review

- 1 Upon completion of the editing, press the REVIEW button.
The review is started in the recorder.
 - To stop the review at any time, press the STOP button.
 - When the edit OUT point is reached, the unit goes into the stop mode after postrolling*.

* The postroll time can be set using setup menu No. 325 (POSTROLL TM).



Audio split editing

The video edit points and audio edit points can be entered separately, and they can be offset from each other and edited.

The audio edit points cannot be entered when the assemble editing mode has been selected. After the edit points have been entered, follow the same operating procedure as that for insert editing.

■ Entering the edit points

- Video IN point:** Press the SET button while holding down the IN button.
- Video OUT point:** Press the SET button while holding down the OUT button.
- Audio IN point:** Press the SET button while holding down the A-IN button.
- Audio OUT point:** Press the SET button while holding down the A-OUT button.

■ Deleting the edit points

- Video IN point:** Press the RESET button while holding down the IN button.
- Video OUT point:** Press the RESET button while holding down the OUT button.
- Audio IN point:** Press the RESET button while holding down the A-IN button.
- Audio OUT point:** Press the RESET button while holding down the A-OUT button.

■ Modifying the edit points

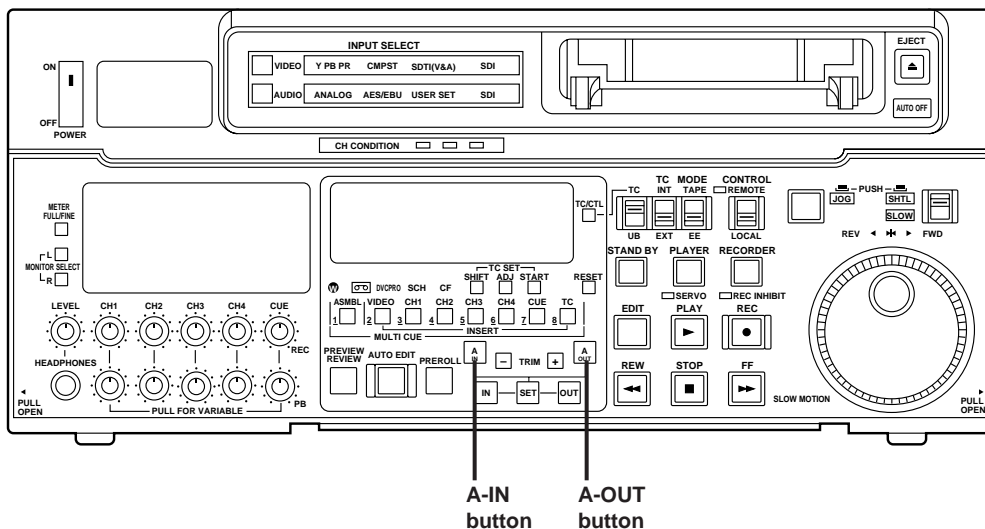
- Video IN point:** Press the TRIM+ or TRIM- button while holding down the IN button.
- Video OUT point:** Press the TRIM+ or TRIM- button while holding down the OUT button.
- Audio IN point:** Press the TRIM+ or TRIM- button while holding down the A-IN button.
- Audio OUT point:** Press the TRIM+ or TRIM- button while holding down the A-OUT button.

■ Indicating audio split editing

When the audio edit points are entered, “ ” appears superimposed on the front panel and TV monitor to denote audio split editing.

TCR 00:00:00:00
AUTO EDIT

This denotes audio split editing.



Audio split editing

■ Displaying the audio split edit points

The edit points are displayed on the front panel as shown below. (The figure shows an audio IN point.)

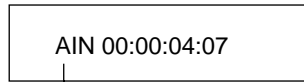
Operations

Video IN point: Press the IN button.

Video OUT point: Press the OUT button.

Audio IN point: Press the A-IN button.

Audio OUT point: Press the A-OUT button.



IN, OUT, AIN (audio IN point), AOUT (audio OUT point)

<Note>

If the editing mode is switched to assemble editing after audio edit points have entered, these points will be deleted.

■ Cueing up the tape to the edit points

Cue-up to video IN point: Press the PREROLL button while holding down the IN button.

Cue-up to video OUT point: Press the PREROLL button while holding down the OUT button.

Cue-up to audio IN point: Press the PREROLL button while holding down the A-IN button.

Cue-up to audio OUT point: Press the PREROLL button while holding down the A-OUT button.

■ Duration display

The duration can be displayed on the front panel only.

Duration from video IN point to OUT point: Press the IN and OUT buttons simultaneously.

Duration from audio IN point to OUT point: Press the A-IN and A-OUT buttons simultaneously.

Match frame processing mechanism

When two VTRs are used for audio split editing operations, there will be a total of eight edit points: two pairs of video IN and OUT points, one for the player and the other for the recorder, and two pairs of audio IN and OUT points, one for the player and the other for the recorder. Since the remaining three points are automatically calculated when five of these eight edit points are entered, up to five edit points can be entered.

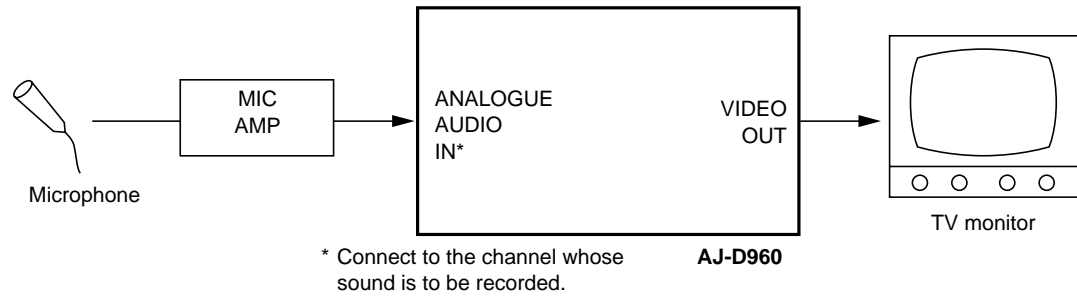
■ When a VTR without a split editing function is to be used as the player

When a VTR which does not have the ability to set the video and audio edit points separately is used as the player, split editing can still be performed by setting the audio IN and OUT points using the recorder and setting the data of three points as the video edit points.

<Note>

If, during audio split editing, only the video OUT point (or audio OUT point) is entered and automatic editing is executed without the audio OUT point (or video OUT point) having been entered, editing will continue until the audio OUT point (or video OUT point) is entered or the STOP button is pressed to suspend operation.

Operating procedure 1



- 1** Select INT_VO as the setup menu No. 317 (AUD MEM MODE) setting.
- 2** Select the same setting for the channel (any channel from CH1 to CH4) on which the sound is to be recorded and for the setup menu No. 318 (AUD MEM CH) channel.
- 3** Insert the cassette tape for which the voice-over editing is to be performed.
- 4** Press the insert button for the channel (channel selected in step 2) on which the sound is to be recorded and ensure that its lamp lights.
- 5** Press the PLAY button.
- 6** Search the position (IN point) where voice-over editing is to start while watching the TV monitor.
- 7** Press the IN and SET buttons simultaneously at the IN point.
- 8** Input the audio signals to be recorded to the channel which was selected in step 2.
- 9** Search the position (OUT point) where voice-over editing is to end while watching the TV monitor.
- 10** Press the OUT and SET buttons simultaneously at the OUT point. The audio signals to be recorded are stored in the memory.
- 11** Press the STOP button.
- 12** Press the AUTO EDIT button to proceed with editing. The audio signals stored in the memory are recorded from the memory onto the cassette tape.

<Note>

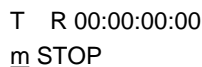
The audio signals can be previewed prior to editing by pressing the PREVIEW button while the SET button is held down before the AUTO EDIT button is pressed.

Operating procedure 2

- 1** Select INT_VO as the setup menu No. 317 (AUD MEM MODE) setting.
- 2** Select the same setting for the channel (any channel from CH1 to CH4) on which the sound is to be recorded and for the setup menu No. 318 (AUD MEM CH) channel.
- 3** Insert the cassette tape for which the voice-over editing is to be performed.
- 4** Press the insert button for the channel (channel selected in step 2) on which the sound is to be recorded and ensure that its lamp lights.
- 5** Enter the IN and OUT points of the positions where voice-over editing is to be performed.
- 6** Press the PREVIEW button.
- 7** While watching the TV monitor, input the audio signals to be recorded between the IN point and OUT point into the channel which was selected in step 2. The audio signals to be recorded are stored in the memory.
- 8** Press the AUTO EDIT button to proceed with editing. The audio signals stored in the memory are recorded from the memory onto the cassette tape.

<Note>

The audio signals can be previewed prior to editing by pressing the PREVIEW button while the SET button is held down before the AUTO EDIT button is pressed.



T R 00:00:00:00
m STOP

“m” indicates the edit mode in which the internal memory is used.

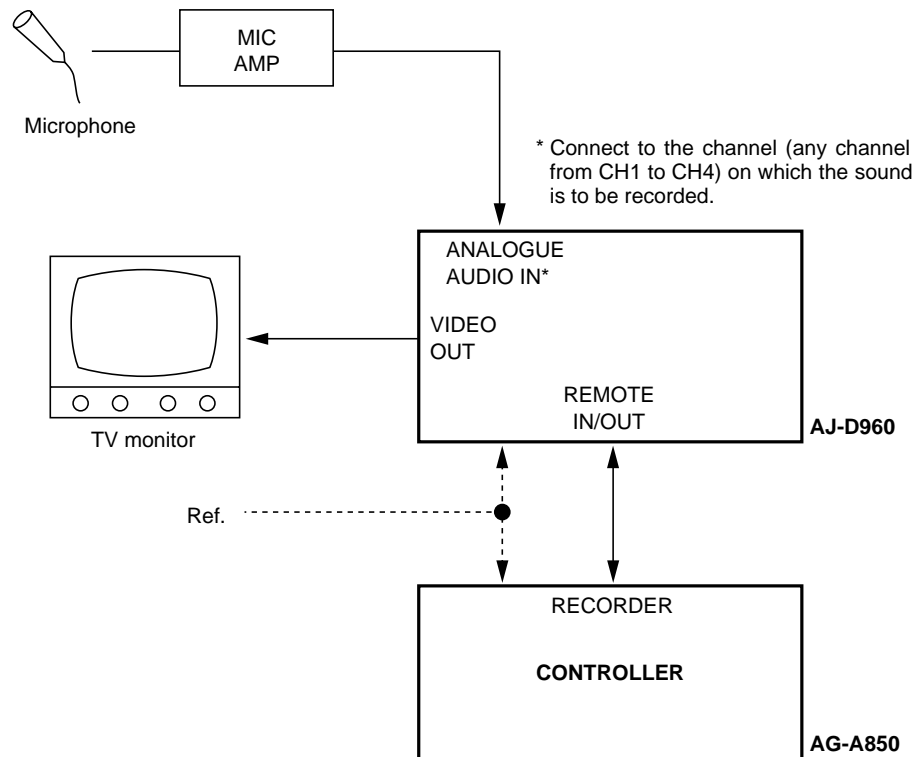
<Notes>

Memory capacity

- Up to 20 seconds of sound can be stored in the unit's internal memory. It should be borne in mind that even if an attempt is made to store more than 20 seconds of sound in the memory, all the audio signals in excess of the memory's 20-second capacity will fail to be stored.
- When INT_VO or INT_X, which is performed using the internal memory in the setup menu No. 317 (AUD MEM MODE) setting, “m” appears on the front panel and is superimposed onto the TV monitor display to indicate that the editing mode using the internal memory is now being used.

Voice-over facility (internal)

For operation with an editing controller (AG-A850)



- 1** Select INT_VO as the setup menu No. 317 (AUD MEM MODE) setting.
- 2** Select the same setting for the channel (any channel from CH1 to CH4) on which the sound is to be recorded and for the setup menu No. 318 (AUD MEM CH) channel.
- 3** Insert the cassette tape for which the voice-over editing is to be performed into the VTR.
- 4** Set the CONTROL switch on the VTR to the REMOTE position.
- 5** Set the controller's SOURCE selector to AUX1.
- 6** Press the insert button for the channel (channel selected in step 2) on which the sound is to be recorded.
- 7** Enter the IN and OUT points of the positions where voice-over editing is to be performed.
- 8** Press the PREVIEW button.
- 9** While watching the TV monitor, input the audio signals to be recorded between the IN point and OUT point into the channel that was selected in step 6. The audio signals to be recorded are stored in memory.
- 10** Press the AUTO EDIT button to proceed with editing. The audio signals stored in the memory are recorded from the memory onto the cassette tape.

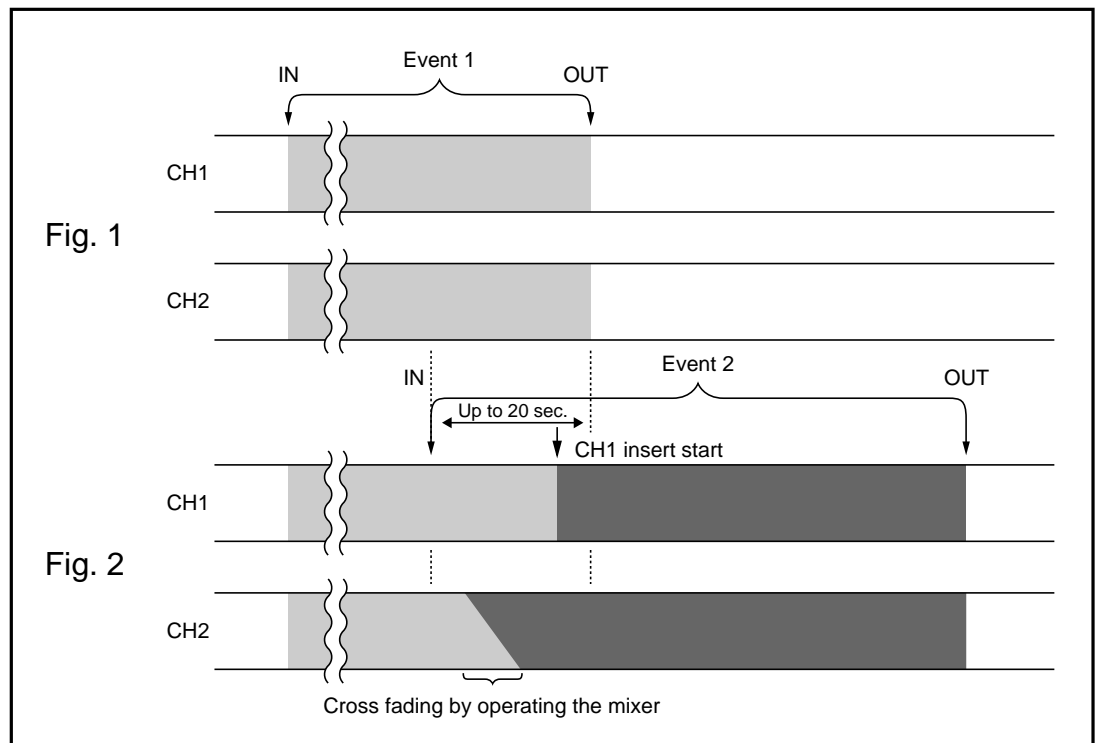
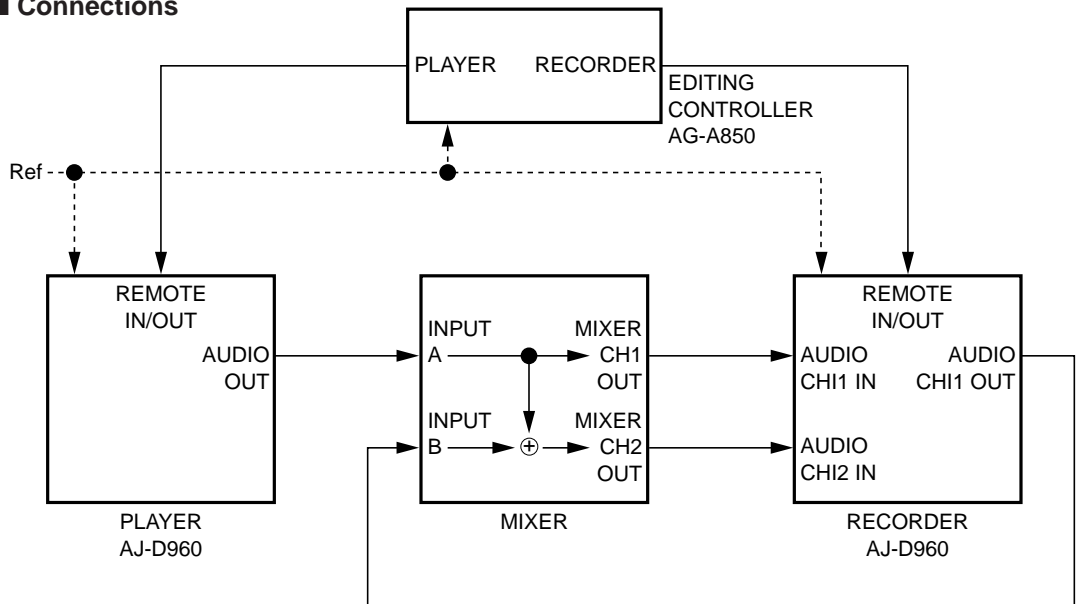
<Note>

For further details on the AG-A850, refer to the operating instructions of the AG-A850.

Audio cross channel editing (internal)

Example: To record cross-faded audio signals onto CH2

■ Connections



- 1 Select INT_X as the setup menu No. 317 (AUD MEM MODE) setting.
 - 2 Select CH2 as the setup menu No. 318 (AUD MEM CH) setting.
 - 3 Select the audio CH1 and CH2 in the insert editing.
- <Note>**
Select the video as well if the video signals are also going to be edited.

- 4** Enter the edit points of the first event on the player's tape.
- 5** Enter the edit points of the first event on the recorder's tape.
- 6** Operate the mixer in such a way that the player's audio output signals are output from the mixer's CH1 OUT and CH2 OUT connectors. (The same audio signals will be delivered through CH1 and CH2 of the mixer.)
- 7** Press the AUTO EDIT button. The first event is now recorded on the recorder's tape. (See Fig. 1.)
The last 20 seconds (which is the capacity of the memory) of the audio signals before the OUT point are now saved in the memory.
- 8** Release the insert button for CH1 so that only the insert button for CH2 is engaged.
<Note>
Select the video as well if the video signals are also going to be edited.
- 9** Enter the edit point of the next event on the player's tape.
- 10** Enter the edit point of the next event on the recorder's tape.
<Note>
The IN point must be set up to 20 seconds (more than the cross fading duration) before the previous edit OUT point.
- 11** Operate the mixer in such a way that the player's audio output signals are output from the mixer's CH1 OUT connectors and that the recorder's (this unit) CH1 OUT audio signals are output from the mixer's CH2 OUT connectors. [The recorder's (this unit) CH1 OUT signals are the audio signals supplied from the internal memory.]
- 12** Press the AUTO EDIT button.
- 13** Operate the mixer starting at the IN point, and change the mixer's CH2 OUT signals gradually from the recorder's CH1 OUT audio signals into the player's audio output signals for the mixer's CH2 OUT connectors. (Cross fading)
- 14** Press the CH1 insert button after the mixer's CH2 output signals have been changed into the player's audio output signals. The STOP mode is established at the OUT point, and the last 20 seconds (which is the capacity of the memory) of the audio signals before the OUT point are now saved in the memory. (See Fig. 2.)
- 15** To continue editing, repeat steps 8 to 14.

Audio cross channel editing is possible only between CH1 and CH2 or between CH3 and CH4.

<Notes>

Before attempting to perform voice-over editing or audio cross channel editing using the audio memory unit (AJ-YA752, option), proceed with the following settings for the unit (AJ-D960).

1. Select either AMU_X or AMU_VO as the setup menu No. 317 (AUD MEM MODE) setting.
2. For audio cross channel editing, set the channel on which the signals are to be recorded on setup menu No. 318 (AUD MEM CH).
3. Proceed with operation, using the AJ-YA752 operating instructions as a reference.

Multi cue

- Select the MULTI CUE mode using setup menu No. 130 (MULTI CUE).
- The edit channel selector buttons (ASMBL, VIDEO, CH1/2/3/4, CUE, TC) can be used as the CUE 1 through CUE 8 buttons.

↑↑
A B

CUEAB A: Denotes the page (pages 0 through 9).
B: Denotes the cue point (points 1 through 8).

- A total of 80 cue points can be entered on up to 10 pages.
Using setup menu No. 131 (PAGE MODE), either of the following operation modes can be selected for entering the cue points:
 - Mode for performing operation on the selected page on which 8 cue points can be entered.
 - Mode for automatically moving entry forward onto the next page when the page on which cue points are being entered has been filled, and continuing the entry onto successive pages, thereby enabling a total of 80 cue points to be entered on up to 10 pages

Furthermore, using setup menu No. 132 (ROTA MODE), either of the following operation modes can be selected when all the cue points have been entered.

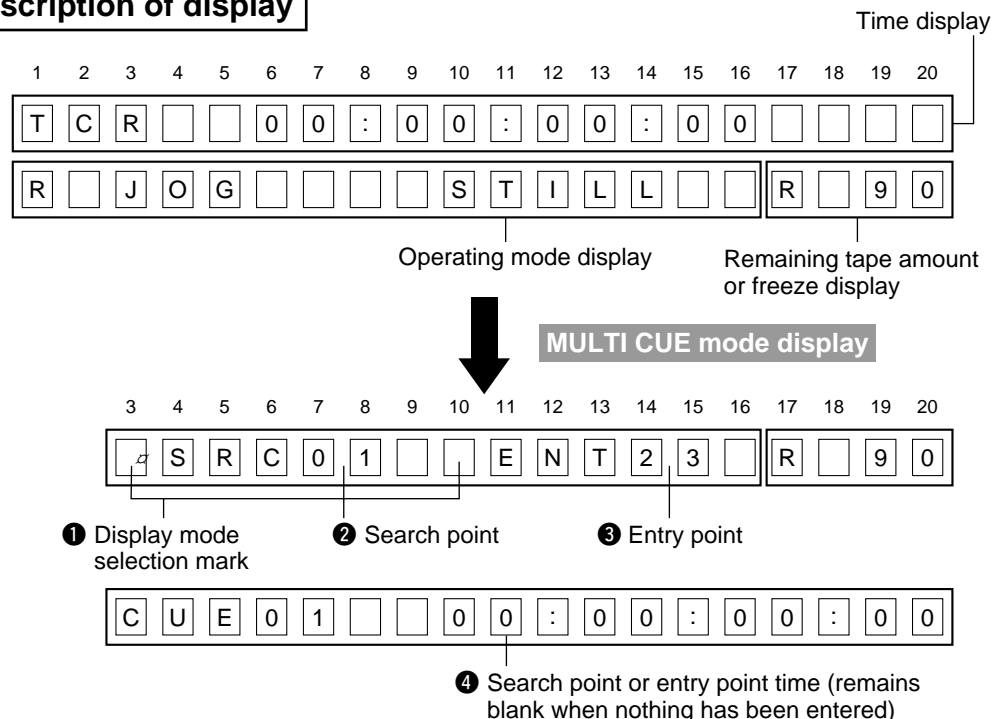
- Mode in which the entry operation is not performed
- Mode in which the entry operation is performed (the first cue point is entered in CUE 1 on the existing page when "MANU" has been selected as the setup menu No. 131 (PAGE MODE) setting or it is entered in CUE01 on page 0 when "AUTO" has been selected)

The following functions are provided when MULTI CUE has been selected:

- Editing is disabled in the MULTI CUE mode.
- The editing channel selector buttons (ASMBL, VIDEO, CH1/2/3/4, CUE, TC) are automatically released when the unit has been transferred to the MULTI CUE mode in the editing mode selection status.
- Deck-to-deck operations cannot be used in the MULTI CUE mode.
- The mode display will not appear on the front panel counter display in the MULTI CUE mode.

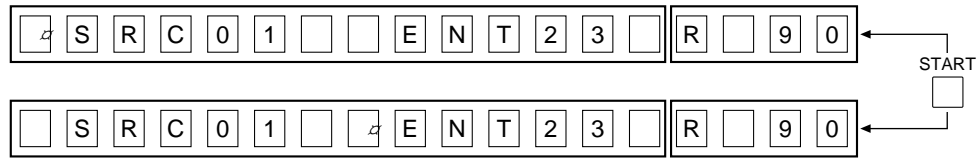
Further, messages and other information are forcibly displayed when AUTO-OFF has occurred.

Description of display



1 Display mode selection mark

This mark indicates whether the current cue point LED display (and time data displayed by the operation) is to indicate the search point or entry point. (The display is switched using the START button on the front panel as shown in the figure below.)



2 Search point

This displays the currently selected search point. ("SCR01" denotes CUE1 on page 0.)

3 Entry point

This displays the point to be entered when the SET button is pressed next. ("ENT23" denotes CUE3 on page 2.)

4 Search point and entry point display

This displays the search point or entry point time when the CUE button and SET buttons have been pressed. (The display remains blank when there is no time data.)

Page operations

Pages can be scrolled up or down by simultaneously pressing the front panel ADJ button and TRIM +/- button.

- Page up scrolling is set as follows using setup menu No. 132 (ROTE MODE).

When OFF is set: Scrolling is not possible from page 9 to page 0.

When ON is set: Scrolling is possible from page 9 to page 0.

- Page down scrolling from page 0 to page 9 is not possible.

Search point or entry point operations

Each time the START button is pressed, the search point display mode and entry point display mode are switched alternately.

Perform the operations for the search point or entry point in the respective mode.

- When the power is on, both the search and entry pointers point to CUE01 (page 0/cue point 1), and the entry point display mode serves as the display mode.
- When the setup menu No. 131 (PAGE MODE) or No. 132 (ROTA MODE) setting has been changed, both the search and entry pointers will point to CUE01 (page 0/cue point 1).

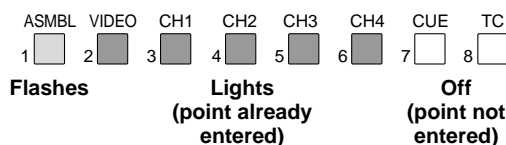
Search point operations

Search pointer operations can be performed when the display below has appeared on the operation panel. The selected search point LED flashes, and its number is indicated on the panel.

Example of panel display



Example of LED display



- The search pointer position is changed directly by pressing one of the buttons from CUE 1 to CUE 8 (ASMBL-TC) on the same page.
- When the page has been changed by simultaneously pressing the ADJ button and TRIM +/- button, the following steps are performed depending on the setup menu No. 131 (PAGE MODE) setting:
 - When “MANU” is set:** The search and entry pointers move to CUE 1 on the changed page.
 - When “AUTO” is set:** Only the search pointer moves to CUE 1 on the changed page; the entry pointer does not move.

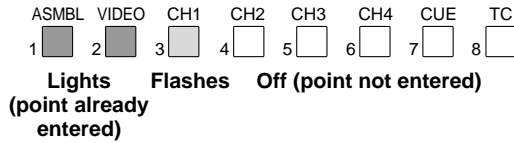
Entry point operations

The entry pointer operations can be performed while the following is displayed on the front panel. The point which is entered flashes when the SET button is pressed.

Example of panel display



Example of LED display

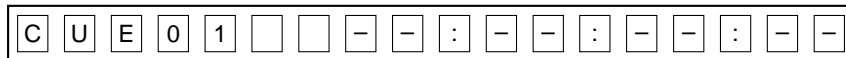


- The entry pointer position is changed directly by pressing one of the buttons from CUE 1 to CUE 8 (ASMBL-TC) on the same page. If “AUTO” has been selected as the setup menu No. 131 (PAGE MODE) setting when the page on which the cue points are being entered by the SET button has been filled, the entry pointer will automatically move to CUE*1 on the next page. The search pointer does not move.
- When the page has been changed by simultaneously pressing the ADJ button and TRIM +/- button, the following steps are performed depending on the setup menu No. 131 (PAGE MODE) setting:
 - When “MANU” is set:** The search and entry pointers both move to CUE 1 on the changed page.
 - When “AUTO” is set:** Only the entry pointer moves to CUE 1 on the changed page; the search pointer does not move.

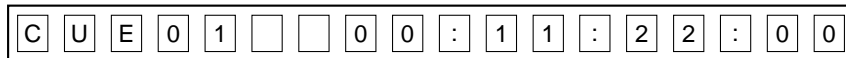
Search point and entry display operations

One of two kinds of displays will appear when the CUE button has been pressed or when an entry point has been entered by pressing the SET button in the entry point display mode.

When the point is not entered



When the point has already been entered



Entering cue points

The following operations are performed by selecting the setup menu No. 131 (PAGE MODE) setting.

■ Operations on the selected page (PAGE MODE=MANU)

- The operation is performed on the selected page.
- The page is selected by pressing the ADJ button and the TRIM+ or TRIM- button together.
- By pressing the SET button on its own, the cue points are entered in the following sequence on the selected page:

CUE 1 ▢ CUE 2 ▢ ... ▢ CUE 7 ▢ CUE 8
(Points already entered are overwritten.)

- When CUE 8 point is entered on the page, the entry operation is automatically ended*. When the next cue point is to be entered, the entry pointer must be changed. Check that the entry point display mode is established, and change the page so that the entry pointer is automatically changed. In this case, the search pointer will also move automatically to the top (CUE 1) of the changed page. To change the pointer on the same page, press the CUE button directly.

* A rotation operation is performed on the same page in the following sequence when "ON" has been selected as the setup menu No. 132 (ROTA MODE) setting:

▢ CUE 1 ▢ CUE 2 ▢ ... ▢ CUE 7 ▢ G

■ Operation for automatically continuing entry onto the next page when the page on which the cue points are being entered has been filled (PAGE MODE=AUTO)

- When the page on which the cue points are being entered has been filled, entry automatically continues on the next page. Entry is automatically concluded when CUE98 is entered on the last page.

When the next cue point is to be entered, the entry pointer must be changed. Check that the entry point display mode is established, and change the page so that the entry pointer is automatically changed. In this case, the search pointer is not changed. To change the pointer on the same page, press the CUE button directly.

* If "ON" has been selected as the setup menu No. 132 (ROTA MODE) setting, the rotation operation moves the page from page 9 (CUE98) to page 0 (CUE01).

When it is no longer possible to enter in either of the above operation modes:

- " " appears on the entry pointer display, and the "ENT " display flashes.
- In the entry point display mode, the FULL MEMORY message appears when the entry point display operation is performed (by pressing the SET button).
- None of the LEDs will flash.

(Operation will be the same as the ones described above even when some of the points in between have not been entered.)

▢ S R C 0 1 ▢ ▢ ENT ▢ ▢ ▢ R 9 0

This display flashes.

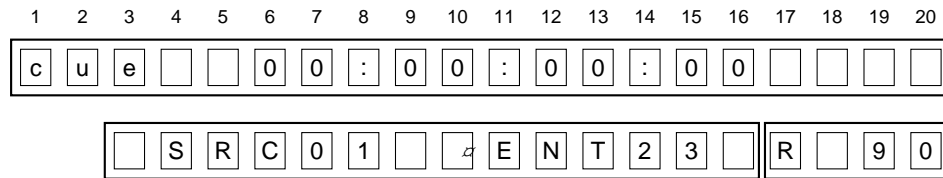
F U L L M E M O R Y ▢ ▢ ▢ R 9 0

<Note>

If "ON" has been selected as the setup menu No. 132 (ROTA MODE) setting, entry will not be disabled.

When entering a cue point as a number

Press the SHIFT button while holding down the front panel ADJ button to establish the cue entry mode. After setting the time to be entered using the SHIFT button and ADJ button (same operation as the TCG entry operation), cue points can be entered by pressing the SET button.



Clearing entered points

■ Clearing all the entered points together

- By pressing the RESET button while holding down the SET button, all the button LEDs in which cue points have been entered go off and the entered points are cleared.
- The search and entry pointers behave as follows depending on the setup menu No. 131 (PAGE MODE) setting:
 - When "MANU" is set:** Both pointers move to the top (CUE 1) of the same page.
 - When "AUTO" is set:** Both pointers automatically return to the top (CUE01) of the top page.
- These operations are acknowledged regardless of whether search point or entry point display mode is established.

■ Individual entered point resetting

- By pressing the RESET button while holding down any of the CUE1 to CUE8 buttons with the point to be cleared, the button LED with the entered point goes off, and the entered point is cleared.
- This operation is enabled only in the entry point display mode.
(In the search point display mode, entered points are not reset even if this operation is performed.)

<Notes>

- Operation is as follows in the CTL mode.
When the RESET button is pressed while the SET (CUE) button is held down, all the cue points which have been entered are reset (one by one) but CTL is not reset.
Conversely, when the SET (CUE) button is pressed while the RESET button is held down, all the cue points which have been entered are reset (one by one) and CTL is reset as well.
- The entered cue points are not reset even by ejecting the tape. In the CTL mode, only CTL will be reset.

Search operations

By pressing the PREROLL button, the tape prerolls to the cue point which flashes in the search point display mode.

When no CUE points have been entered, the tape is not prerolled.

Further, with entry point display mode, preroll will not be performed even if the PREROLL button is pushed, therefore always check that it is on search point display mode.

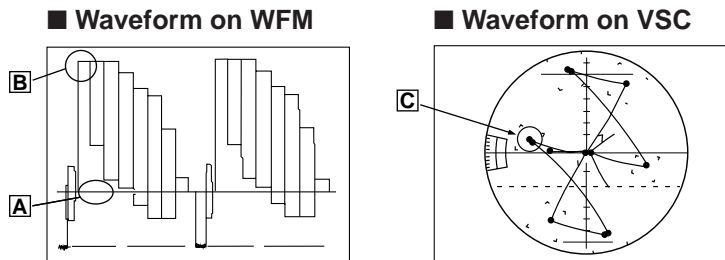
(The time set by setup menu No. 016 (CU-ROLL TIME), not the normal preroll time setting, serves as the preroll time in this mode.)

Video output (encoder output) signal adjustments

After this system has been connected, the video output signal (ENCODER OUT) must be adjusted if AB roll editing (editing using two source machines) using an editor, for instance, is to be error-free and accurate. (This adjustment must be repeated when one of the connecting cables has been replaced and whenever the connections are changed.)

The adjustment procedure using this unit is outlined below.

- 1** Check the connections. (see page 23.)
- 2** Set setup menu No. 10 (ENCODER SEL) to "LOCAL".
REMOTE: For adjusting the video output signals using an external encoder remote controller.
LOCAL: For adjusting the video output signals using this unit.
- 3** Adjust the source machine independently.
 - 3-1** When using the preset values
Set the PRESET/MANUAL switches of the VIDEO OUT LEVEL, CHROMA LEVEL, BLACK LEVEL and CHROMA PHASE controls to PRESET.
 - 3-2** When adjusting the video output signals without using the preset values
 - 1** Play back a cassette tape on which standard colour bar signals have been recorded.
 - 2** Adjust the controls in such a way that the waveforms on the waveform monitor (WFM) and vectorscope (VSC) resemble those shown in the figures below.
 - A** **Black level**
Adjust the control to eliminate deviation.
 - B** **Video level**
Adjust this level to 700 mV.
 - C** **Chroma level and chroma phase**
Adjust the two controls in such a way that the light spot of the vector waveforms comes inside the rectangular grid mark.



- 4** Perform the same adjustments on the source machine connected to the unit.

Setup (default settings)

The unit's major settings are performed by making selections on menus.

The setting menus appear on the TV monitor when the TV monitor and VIDEO OUT 3/SERIAL OUT 3 connector in the unit's connector area are hooked up.

Changing the settings

- 1** Press the MENU button.
The setup menu appears on the TV monitor and setup menu No. appears on the counter display. (If the setup has already been performed, the screen showing the changes made last will appear.)
- 2** Rotate the search dial and select the item to be set.
The cursor () on the menu screen moves and the item No. on the display flashes.
 - When the dial is rotated clockwise, the item No. is incremented from 001→002→003→004 and so on; when it is rotated counterclockwise, the item No. is decremented.
 - The search dial should be used in jog mode if at all possible.
 - Hold down the PLAY button and press the FF (next major item) or REW (previous major item) buttons to select the menu by major item.
- 3** While holding down the search button, rotate the search dial at the position where the change is to be made.
The setting No. now flashes.
When the dial is rotated clockwise, the setting value is incremented; when it is rotated counterclockwise, it is decremented.
- 4** Release the search button when the setting is completed.
The setting value on the menu screen and display flashes.
 - During the SHTL mode, the item moves if the search dial is not at the STILL position.
- 5** Repeat steps 2 through 4 to change another item.
- 6** Press the SET button.
The changes are now stored in the memory.
 - To return the items to the settings established before the changes were made, press the MENU button.

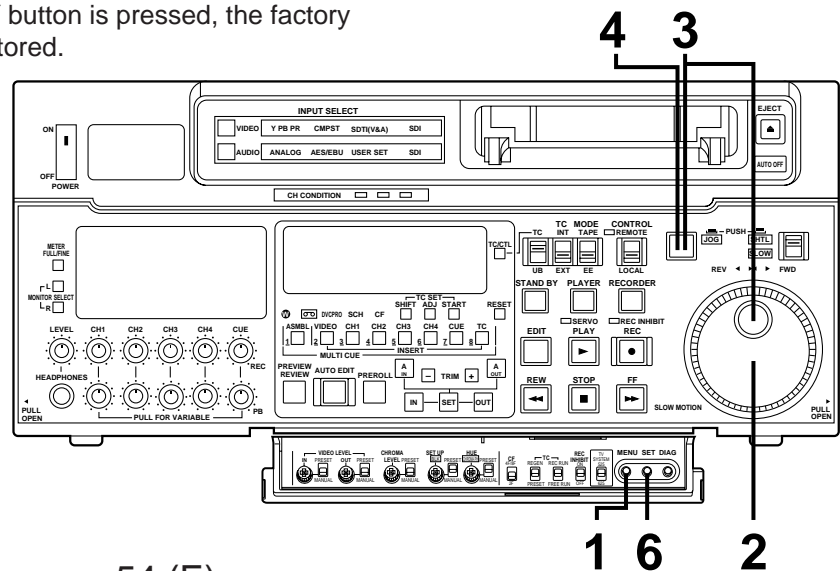
To return the setup settings to the factory (default) settings, press the RESET button while the menu is displayed. **The following message will now appear:**

SETUP-MENU INIT SET
YES<PLAY>/NO<STOP>

When the PLAY button is pressed, the factory settings are restored.

<Notes>

- When the RESET button is pressed to return to the factory settings, the factory settings are restored only for the user file currently being used and other user files are not affected.
- The changed SYSTEM menu contents are recorded even if the MENU button is pressed.

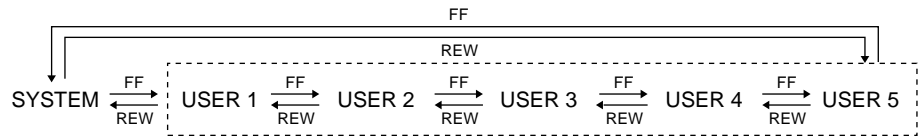


Setup (setting) menus

This unit can store up to 5 user files (user 1 to user 5) containing different menu settings, and these files can be selected and used.

Changing the file

- 1** Press the MENU button.
- 2** Hold down the STAND BY button and press the FF button to switch to the next user file. Hold down the STAND BY button and press the REW button to switch to the previous user file.



USER FILE

Each user file contains the following items.

- BASIC
- OPERATION
- INTERFACE
- EDIT
- TAPE PROTECT
- TIME CODE
- VIDEO
- AUDIO
- V BLANK
- MENU

- 3** Repeat the operation in step 2 to select the user file to be used and press the SET button. The user file is changed and stored in the memory.

<Note>

SYSTEM menu items are not included in user files 1 to 5.

Therefore, after selecting the user file, switch to the SYSTEM file and set the SYSTEM menu items.

Setup menus

Lock mode can be set to protect the settings in the system files and user files (USER2 – USER5). Settings can no longer be changed when this mode is set.

To set and release the lock mode for the system files and user files use setup item No. 30 (MENU LOCK) and setup menu item No. A03 (MENU LOCK), respectively.

Setting and releasing the lock mode.

- 1** Press the MENU button.
- 2** While holding down the STAND BY button, press the REW or FF button, and select the file for which the lock mode is to be set or released.
- 3** Turn the search dial and move the cursor () on the menu screen to setup item No. 30 (MENU LOCK) or setup menu item No. A03 (MENU LOCK) for the system or user file.
- 4** While holding down the search button, turn the search dial and select lock mode setting or release.
To set the lock: Select the 0001 (ON) setting.
To release the lock: Select the 0000 (OFF) setting.

When the lock has been set, "LOCKED" flashes on the menu screen. In addition, the counter display stops flashing and lights.

SETUP-MENU	LOCKED
<USER2>	No.800 - 0005
000 P-ROLL TIME	5s
001 LOCAL ENA	ST&EJ
002 TAPE TIMER	±12h
003 REMAIN SEL	OFF
004 SETUP NUMBER	OFF
005 METER SELECT	CUE
006 SYNCHRONIZE	OFF
007 SUPER	ON
008 DISPLAY SEL	T&STA

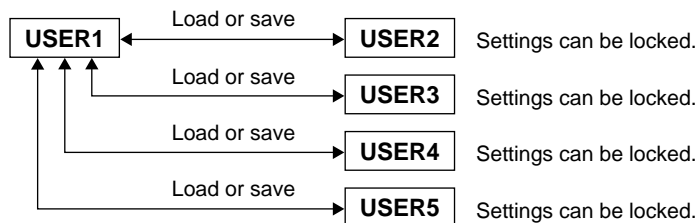
- 5** Press the SET button. The setting is now stored in the memory.

<Notes>

- The lock mode cannot be set for the USER1 file settings.
- Even if the RESET button is pressed, the files which has been set to the lock mode cannot be reset to the factory settings.

Setup menus

The contents of the USER2 – USER5 files can be copied (loaded) into the USER1 file. In addition, the contents of the USER1 file can be copied (saved) to the USER2 – USER5 files.



Loading a user file

- 1** Press the MENU button.
- 2** While holding down the STANDBY button, press the REW or FF button, and select USER1.
- 3** Turn the search dial and move the cursor () on the menu screen to setup item No. A00 (LOAD).

```

SETUP-MENU  MENU
<USER1>    NO.A00 - 0000
804 BLANK LINE      BLANK
A00 LOAD           USER2
A01 SAVE           USER2
A02 P.ON LOAD      OFF
END
  
```

- 4** While holding down the search button, turn the search dial and select the user file whose contents are to be loaded into USER1.
- 5** Press the SET button. The following messages appear on the menu screen and counter display.

Menu screen

```

SETUP-MENU LOAD

  USER2 → USER1 OK?
  YES<PLAY>/NO<STOP>
  
```

Counter display

```

TCR 00:00:00:00
SETUP LOAD U-2 → U-1
  
```

The user file number selected in step 4 is displayed in the shaded area.

- 6** Press the PLAY button. The settings of the user file selected in step 4 are loaded, and the USER1 menu display appears. When the STOP button is pressed, the USER1 menu display appears while the settings remain unchanged.
- 7** Turn the search dial and move the cursor () on the menu screen to any setup item except No. A00 (LOAD) and No. A01 (SAVE).
- 8** Press the SET button. The USER1 settings are now stored in the memory. If the USER1 settings are not going to be stored in the memory, do not press the SET button but press the MENU button.

Setup menus

Saving a user file

- 1** Press the MENU button.
- 2** While holding down the STAND BY button, press the REW or FF button, and select USER1.
- 3** Turn the search dial and move the cursor () on the menu screen to setup item No. A01 (SAVE).

```
SETUP-MENU  MENU
<USER1>     NO.A00 - 0000
804 BLANK LINE   BLANK
A00 LOAD                USER2
A01 SAVE                USER2
A02 P.ON LOAD        OFF
END
```

- 4** While holding down the search button, turn the search dial and select the user file into which the USER1 contents are to be saved. User files which have been set to the lock mode are not displayed. When all the user files have been set to the lock mode, the "LOCKED" display appears and the contents cannot be saved.
- 5** Press the SET button. The following messages appear on the menu screen and counter display.

Menu screen

```
SETUP-MENU SAVE

USER1 → USER2 OK?
YES<PLAY>/NO<STOP>
```

Counter display

```
TCR 00:00:00:00
SETUP SAVE U-1 → U-2
```

The user file number selected in step 4 is displayed in the shaded area.

- 6** Press the PLAY button. The contents of the USER1 file are saved in the user file which was selected in step 4 and stored in the memory. When the STOP button is pressed, the USER1 menu display appears while the settings remain unchanged.
- 7** Turn the search dial and move the cursor () on the menu screen to any setup item except No. A00 (LOAD) and No. A01 (SAVE).
- 8** Press the SET button. The USER1 settings are now stored in the memory. If the USER1 settings are not going to be stored in the memory, do not press the SET button but press the MENU button.

Automatic loading of user file when the power is turned on

When the user file to be loaded is selected in advance using setup menu item No. A02 (P.ON LOAD), it can be automatically loaded into USER1 when the power is turned on.

Setup (setting) menus

SYSTEM menu

<SYSTEM>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
00	WFM SEL	0000 0001 <u>0002</u> 0003 0004 0005	CTL TC <u>VIDEO</u> SYNC RF ENV	This selects the signal to output from the VIDEO OUT 2 connector. 0: The CTL signal is output. 1: The TIME CODE signal is output. 2: The VIDEO OUT signal is output. 3: The SYNC signal is output. 4: The PB L1R 3ch RF signal is output. 5: The PB L1R 3ch ENV signal is output. <Notes> 1. The settings can be changed at any time regardless of the setup menu item No. 30 (MENU LOCK) setting. 2. During normal playback, the output signals have levels which are virtually identical to the values given below under a 75Ω termination. CTL: 0.1 to 0.3 Vp-p TC: 0.6 Vp-p VIDEO: 1.0 Vp-p SYNC: 0.25 Vp-p
10	ENCODER SEL	0000 <u>0001</u>	REMOTE <u>LOCAL</u>	This selects whether the video output signal is to be adjusted on the VTR or with the external encoder remote control. 0: Video output signals are adjusted with the external encoder remote control. 1: Video output signals are adjusted on the VTR.
11	SYS SC	0000 ⋮ <u>0127</u> ⋮ 0255	-127 ⋮ <u>0</u> ⋮ 128	System phase adjustment: Total variable range: ±180° or more -: Advanced +: Delayed <Note> If setting operation is performed, the setting value does not return to factory (default) setting.
12	SYS H	0000 ⋮ <u>0108</u> ⋮ 0216	-108 ⋮ <u>0</u> ⋮ 108	System phase adjustment: 74 ns steps -: Advanced +: Delayed <Note> If setting operation is performed, the setting value does not return to factory (default) setting.
13	VIDEO PHASE	0000 ⋮ <u>0032</u> ⋮ 0064	-32 ⋮ <u>0</u> ⋮ 32	Video phase adjustment: 148 ns steps -: Advanced +: Delayed
14	SCH COARSE	<u>0000</u> 0001 0002 0003	<u>0</u> 90 180 270	SCH phase adjustment: 90° units -: Advanced +: Delayed (The S and C phases change but the H phase does not change.)
15	SCH FINE	0000 ⋮ <u>0032</u> ⋮ 0064	-32 ⋮ <u>0</u> ⋮ 32	SCH phase adjustment: Total variable range: ±45° or more -: Advanced +: Delayed (The S and C phases change but the H phase does not change.)
16	AV PHASE	0000 ⋮ <u>0100</u> ⋮ 0200	-100 ⋮ <u>0</u> ⋮ 100	This adjusts the audio output phase with respect to the video output: 20.8 μs steps -: The audio output phase is advanced with respect to the video output. +: The audio output phase is delayed with respect to the video output.

The underline on the setting item denotes the initial setting.

Setup (setting) menus

SYSTEM menu

<SYSTEM> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
17	SYS H RANGE	0000 <u>0001</u>	FULL FINE	This selects the adjustable range for SYSTEM H during when the ENCODER REMOTE is connected. 0: ±8 μsec 1: -2.0 to +2.7 μsec <Notes> • If setting operation is performed, the setting value does not return to factory (default) setting. • FULL operation results regardless of this item's setting if SYSTEM H is varied using this unit instead of the encoder remote controller.
18	SYS H OFFSET	0000 0001 0002 <u>0003</u> 0004 0005 0006	-3 -2 -1 0 1 2 3	System phase adjustment: 0: -13.4 μsec 1: -8.96 μsec 2: -4.52 μsec 3: 0 sec 4: +4.52 μsec 5: +8.96 μsec 6: +13.4 μsec <Note> Factory settings will remain unchanged even if an attempt is made to perform a setting operation.
19	SYS SC/H	<u>0000</u> 0001	REMOTE LOCAL	This sets whether the system phase is to be adjusted by the unit or from the external encoder remote controller. 0: The system phase is adjusted from the external encoder remote controller. 1: The system phase is adjusted by the unit. <Note> This setting does not take effect when LOCAL has been selected as the SYSTEM menu item No. 10 (ENCODER SEL) setting.
30	MENU LOCK	<u>0000</u> 0001	OFF ON	This selects whether the system file lock mode is to be engaged or released. 0: The lock is released (file data can be changed). 1: The lock is engaged (file data cannot be changed). <Note> Setup menu No. 00 (WFM SEL) can be changed at any time regardless of the setting selected for this menu item.

The underline on the setting item denotes the initial setting.

Video output signal adjustments

The video output signal adjustments are made by selecting the SYSTEM menu item No. 10 (ENCODER SEL) and No. 19 (SYS SC/H) settings. A control matrix of the adjustments is shown below.

Setting		Item adjusted		
SYSTEM menu item 10: ENCODER SEL	SYSTEM menu item 19: SYS SC/H	SYSTEM menu item 11: SYS SC 12: SYS H	SYSTEM menu item 17: SYS H RANGE	VIDEO LEVEL CHROMA LEVEL BLACK LEVEL CHROMA PHASE
LOCAL	LOCAL REMOTE	Unit	Always FULL regardless of setting	Unit
REMOTE	LOCAL REMOTE	Unit External encoder remote controller		FULL/FINE

Setup menus

USER menu

<BASIC>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
000	P-ROLL TIME	0000 ⋮ <u>0005</u> ⋮ 0015	0S ⋮ <u>5S</u> ⋮ 15S	This sets the preroll time which can be set from 0 to 15 seconds in 1-second increments. <Note> When the unit is set to automatic editing [PREVIEW, AUTO EDIT], the unit will not operate if the preroll time is set to 0 seconds.
001	LOCAL ENA	0000 <u>0001</u> 0002	DIS <u>ST&EJ</u> ENA	This selects the buttons which can be operated on the front panel when the REMOTE/LOCAL switch has been set to REMOTE. 0: No buttons can be operated. 1: Only the STOP and EJECT buttons can be operated. 2: All buttons except for the RECORDER and PLAYER buttons can be operated.
002	TAPE TIMER	<u>0000</u> 0001	<u>±12h</u> 24h	This selects the 12 or 24 hour display for the CTL counter. 0: 12 hour display 1: 24 hour display
003	REMAIN SEL	0000 <u>0001</u>	OFF <u>ON</u>	This selects whether to indicate the remaining tape time (REMAIN) on the front panel display and the superimposed display at the VIDEO OUT 3/SERIAL OUT 3 connectors. 0: Remaining tape time is not displayed. 1: Remaining tape time is displayed. <Note> • The remaining tape time is indicated at the far right of the second line on the front panel display and superimposed display. • Even when 1 (ON) has been selected, the remaining tape time is not displayed while it is being calculated after the cassette has been ejected or inserted. • When TIME has been selected as the setup menu item No. 008 (DISPLAY SEL) setting, the time is not indicated on the superimposed display. • No display appears if the freeze mark (F) is indicated by the setup menu item No. 111 (FRZ MODE SEL) setting. • No display appears if the tape start or end has been detected and BOT or EOT is displayed.
004	SETUP NUMBER	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether the SETUP-MENU user file No. is displayed on-screen. 0: The SETUP-MENU No. is not displayed. 1: The SETUP-MENU No. is displayed.
005	METER SELECT	<u>0000</u> 0001	<u>CUE</u> VIDEO	This selects whether the level meters are to display the CUE track signal level or the video signal level. 0: The CUE track signal levels are displayed. 1: The video signal levels are displayed.
006	SYNCHRO-NIZE	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether or not to synchronize between two VTRs. 0: No synchronization. The editing points deviate several frames, but editing can be started quickly. 1: Synchronization. Allows for error-free editing.
007	SUPER	0000 <u>0001</u> 0002	OFF <u>ON</u> SW	This selects whether the time code and other super display which are output to the VIDEO OUT 3/SERIAL OUT 3 connector is to shown. 0: Not shown. 1: Shown. 2: ON or OFF for the superimposed display is selected by pressing the PLAY button while holding down the SET button on the lower section of the front panel. <Note> The regular playback operation is performed if the PLAY button is pressed first.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<BASIC> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
008	DISPLAY SEL	0000 0001 0002 0003 0004 0005 0006	TIME T&STA T&S&M T&RT T&YMD T&MDY T&DMY	This selects what information is to be provided by the time code and other super displays output to the VIDEO OUT 3/SERIAL OUT 3 connector. 0: Time only. 1: Time and status. 2: Time, status and mode. 3: Time and REC TIME 4: Time and REC DATE (year/month/day) 5: Time and REC DATE (month/day/year) 6: Time and REC DATE (day/month/year) <Notes> 1. Displayed as the mode is DVCPRO_50 for the DVCPRO50 (50 Mbps), DVCPRO for the DVCPRO (25 Mbps), DV for the DV or DVCAM for the DVCAM. 2. An error message appears if a warning or error has occurred when 2 (T&S&M) has been selected as this setting. 3. REC TIME and REC DATE are displayed during DV/DVCAM, playback only. With the DVCPRO50 (50 Mbps) or DVCPRO (25 Mbps) format, the operating mode is displayed.
009	CHARA H-POS	0000 : 0004 : 0015	0 : 4 : 15	This sets the position of the characters on the horizontal plane for the time code and other super displays output to the VIDEO OUT 3/SERIAL OUT 3 connector. <Note> When setting this item, the DISPLAY SEL status is output to VIDEO OUT 3/SERIAL OUT 3 even if SUPER OFF has been set. However, when the menu is exited, operation complies with the SUPER OFF/ON setting. Also, CHARA TYPE is output to VIDEO OUT 3/SERIAL OUT 3 according to the status set in the menu.
010	CHARA V-POS	625 mode 0000 : 0023 : 0028 525 mode 0000 : 0018 : 0022	0 : 23 : 28 0 : 18 : 22	This sets the position of the characters on the vertical plane for the time code and other super displays output to the VIDEO OUT 3/SERIAL OUT 3 connector. <Notes> 1. When setting this item, the DISPLAY SEL status is output to VIDEO OUT 3/SERIAL OUT 3 even if SUPER OFF has been set. However, when the menu is exited, operation complies with the SUPER OFF/ON setting. 2. When the DISPLAY SEL setting causes characters to extend beyond the edges of the screen, the setting value is changed so that the characters are automatically displayed in a position on the screen.
011	CHARA TYPE	0000 0001	WHITE W/OUT	This selects the display type for the super display output to the VIDEO OUT 3/SERIAL OUT 3 connector as well as for displays such as the setting menu, etc. 0: White characters against a black background. 1: White characters with a black border.
012	SYS FORMAT	0000 0001	50M 25M	This sets the VTR's recording and playback format. 0: DVCPRO50 (50 Mbps) is selected. 1: DVCPRO (25 Mbps) is selected.
013	PB FORMAT	0000 0001	MANUAL AUTO	Sets the format in which the tape is to be played back. 0: Compliance with the setup menu No. 012 (SYS FORMAT) setting. 1: The format complies with the format recorded on the tape when the DVCPRO mode has been selected as the setup menu item No. 014 (FORMAT SEL) setting. <Notes> • When an editing mode has been selected, the "MANUAL" setting is forcibly established for internal operations. • There is no automatic setting in the 525/625 mode.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<BASIC> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
014	FORMAT SEL	<u>0000</u> 0001 0002 0003	<u>DVCPRO</u> DV DVCAM SW	<p>Selects the format to be established with an "L" or "S" size cassette.</p> <p>0: The DVCPRO (50 Mbps or 25 Mbps) mode is established when an "L" cassette is used; the DV mode is established when an "S" cassette is used.</p> <p>1: The DV mode is established when an "L" or "S" cassette is used.</p> <p>2: The DVCAM mode is established when an "L" or "S" cassette is used.</p> <p>3: The format changes as below each time the STOP button and SET button on the lower section of the front panel are pressed simultaneously.</p> <p>"L" cassette: DVCPRO mode → DV mode → DVCAM mode → DVCPRO mode → ...</p> <p>"S" cassette: DV mode → DVCAM mode → DV mode → ...</p> <p>However, the format is switched only when the tape travel has been stopped by eject, stop, standby-off, etc.</p> <p>When the format is switched in the loading completion status, the REMAIN display may not appear accurately.</p> <p><Notes> Bear in mind that the following problems may arise over and above trouble with playback if a tape with a different format from the one selected is inserted.</p> <ol style="list-style-type: none"> When a DV or DVCAM tape is inserted while the DVCPRO mode is selected, the unit will proceed with recording but no guarantees are made for the resulting performance, etc. Conversely, when a DVCPRO tape is inserted while the DV or DVCAM mode is selected, the unit cannot perform recording. The remaining tape time will not be displayed accurately. The slow-down positions near the tape start and end will not be located accurately. In addition, no guarantees are given for performance, etc. if a tape with a different format from the one selected is inserted.
015	MONI CONTROL	<u>0000</u> 0001	<u>MANU</u> AUTO	<p>This sets whether the recorder is to be forcibly set to the EE mode and the player's playback signals are to be output to the monitor by pressing the recorder's PLAYER button when a monitor has been connected only to the recorder during deck-to-deck editing.</p> <p>0: The recorder is not forcibly set to the EE mode.</p> <p>1: The recorder is forcibly set to the EE mode, and the player's playback signals are output.</p>
016	CU-ROLL TIME	<u>0000</u> : 0015	<u>0s</u> : 15s	<p>Sets the preroll time using the PREROLL button when the multi-cue function has been set to ON. The time can be set in 1-second increments from 0 to 15 seconds.</p>

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<OPERATION>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
100	SEARCH ENA	<u>0000</u> 0001	<u> </u> DIAL KEY	This selects the direct search dial operation. 0: For direct search dial operations. 1: Operation is not transferred to the search mode unless the search button is pressed.
101	SHTL MAX	0000 <u>0001</u> 0002	×8.4 <u> </u> ×16 ×32	This sets the maximum speed for shuttle operations. 0: 8.4 (7.0)× normal speed 1: 16× normal speed 2: 32× normal speed <Note> The value for the DV/DVCAM format is shown in parenthesis ().
102	FF. REW MAX	0000 <u>0001</u> 0002	×16 <u> </u> ×32 ×50	This sets the maximum speed for FF and REW operations. 0: 16 (32)× normal speed 1: 32 (60)× normal speed 2: 50 (100)× normal speed <Notes> • The speeds given in the parentheses apply in the DVCPRO (25 Mbps) mode. • With the DV/DVCAM format, the maximum speed is set to 32× regardless of this item's settings.
103	AUDIO MUTE	<u>0000</u> 0001	<u> </u> OFF ON	This sets the status until the audio signal is output when operation switches from the stop or search modes to the play mode. 0: The time until the audio is output is shortened. 1: The audio is output after the status stabilizes. <Note> When set to 0 (OFF), the sound in the initially output part is incomplete. Therefore, this setting is not recommended for broadcasts.
104	REF ALARM	0000 <u>0001</u>	OFF <u> </u> ON	This selects whether to warn the operator when the REF.VIDEO signal has not been connected. 0: Warning is not given. 1: Warning is given by the flashing STOP lamp.
105	AUTO EE SEL	<u>0000</u> 0001 0002 0003 0004 0005	<u> </u> S/F/R STOP BLACK BLACK1 GRAY GRAY1	This selects the VTR mode in which the EE status is established when the TAPE/EE switch is set to EE. 0: EE status is established in the STOP, FF or REW mode. However, EE status is always established in EJECT mode regardless of the TAPE/EE switch setting. 1: EE status is established only in the STOP mode. However, EE status is always established in EJECT mode regardless of the TAPE/EE switch setting. 2: EE status is established only in the STOP mode. However, EJECT is set as follows depending on the setting of the TAPE/EE switch. At the EE setting; The EE status is established. At the TAPE setting; The picture turns black. The sound is muted. 3: EE status is established in the STOP, FF or REW mode. However, EJECT is set as follows depending on the setting of the TAPE/EE switch. At the EE setting; The EE status is established. At the TAPE setting; The picture turns black. The sound is muted. 4: EE status is established only in the STOP mode. However, EJECT is set as follows depending on the setting of the TAPE/EE switch. At the EE setting; The EE status is established. At the TAPE setting; The picture turns gray. The sound is muted. 5: EE status is established in the STOP, FF or REW mode. However, EJECT is set as follows depending on the setting of the TAPE/EE switch. At the EE setting; The EE status is established. At the TAPE setting; The picture turns gray. The sound is muted.

The underline on the setting item denotes the initial setting.

Setup menus

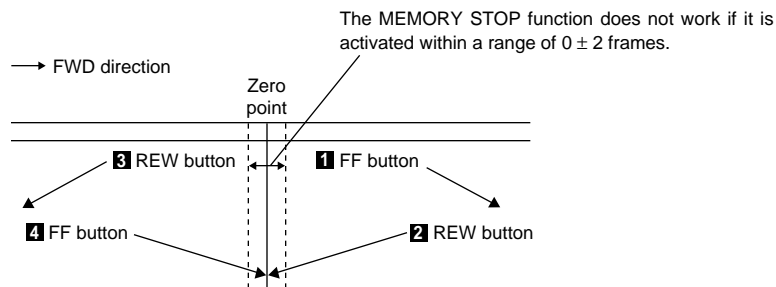
USER menu

<OPERATION> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
106	EE MODE SEL	<u>0000</u> 0001	<u>NORMAL</u> THRU	This selects the EE mode output signals. 0: Signals are output with a delay equivalent to the length of internal signal processing. 1: Signals are output directly, without internal processing, and so are output with no delay. <Note> When editing mode is selected, SDTI is selected as the video input signal, or INT SG is selected at either VIDEO or AUDIO, the internal operations are forcibly set to NORMAL.
107	PLAY DELAY	<u>0000</u> ⋮ 0015	_____0 ⋮ 15	This set the play delay time in frame increments.
108	CAP.LOCK	0000 <u>0001</u>	4F _____8F	This selects the CAPSTAN LOCK mode for the 4F and 8F settings of the CF switch. 0: 4F mode 1: 8F mode <Note> This setup menu is not displayed in the 525 mode.
109	AUTO REW	<u>0000</u> 0001	_____OFF ON	This selects whether to rewind the tape automatically to the tape start when the tape end is detected. 0: The tape stops at the tape end. 1: The tape is rewound to the tape start.
110	MEMORY STOP	<u>0000</u> 0001	_____OFF ON	This selects whether the VTR is to stop automatically when the counter value reaches "0" during a fast forwarding or rewinding operation in the CTL mode. 0: The VTR does not stop. 1: The VTR stops automatically. <Notes> 1. The stop mode concerned is either the stop or the still-picture (SHTL STILL) mode depending on the setup menu No. 315 (AFTER CUE-UP) setting. 2. When both the AUTO REW function and MEMORY function have been selected at the same time, the AUTO REW function takes precedence.

The underline on the setting item denotes the initial setting.

Memory stop function



- 1 When the FF button is pressed, the VTR performs the regular fast forward operation since the zero point is not located in the direction of operation.
- 2 When the REW button is pressed, the PREROLL lamp lights (the SHTL lamp lights as well), the VTR proceeds with the preroll operation, and it automatically stops when it reaches the position where the counter reads "0."
- 3 When the REW button is pressed, the VTR performs the regular rewinding operation since the zero point is not located in the direction of operation.
- 4 When the FF button is pressed, the PREROLL lamp lights (the SHTL lamp lights as well), the VTR proceeds with the preroll operation, and it automatically stops when it reaches the position where the counter reads "0."

Setup menus

USER menu

<OPERATION> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
111	FRZ MODE SEL	<u>0000</u> 0001 0002	<u>DIS</u> STBOFF SOF&EJ	<p>This selects the output picture in the STANDBY OFF (HALF LOADING) and EJECT modes.</p> <p>0: The video output is muted.</p> <p>1: When the STANDBY OFF (HALF LOADING) mode is established, the picture being played back at the time is frozen and output.</p> <p>2: When the STANDBY OFF (HALF LOADING) or EJECT mode is established, the picture being played back at the time is frozen and output.</p> <p><Notes></p> <ul style="list-style-type: none"> Field freeze is used for freezing the picture. In the EJECT mode, freeze frames are output only when 2 (BLACK), 3 (BLACK1), 4 (GRAY) or 5 (GRAY1) is selected as the setup menu item No. 105 (AUTO EE SEL) setting.
112	V IN SEL INH	<u>0000</u> 0001 0002	<u>OFF</u> ON REC	<p>This selects whether video input switching using the INPUT SELECT switch is to be enabled or disabled.</p> <p>0: Video input switching using the INPUT SELECT switch is enabled.</p> <p>1: Video input switching using the INPUT SELECT switch is disabled.</p> <p>2: Video input switching using the INPUT SELECT switch after the unit has been transferred to a recording (but not editing) mode is disabled.</p> <p><Note></p> <p>Even when the 1 (ON) or 2 (REC) setting is selected to disable video input switching using the INPUT SELECT switch, it is still possible to set the setup menu item No. 600 (INT SG).</p>
113	A IN SEL INH	<u>0000</u> 0001 0002	<u>OFF</u> ON REC	<p>This selects whether audio input switching using the INPUT SELECT switch is to be enabled or disabled.</p> <p>0: Audio input switching using the INPUT SELECT switch is enabled.</p> <p>1: Audio input switching using the INPUT SELECT switch is disabled.</p> <p>2: Audio input switching using the INPUT SELECT switch after the unit has been transferred to a recording (but not editing) mode is disabled.</p> <p><Note></p> <p>Even when the 1 (ON) or 2 (REC) setting is selected to disable audio input switching using the INPUT SELECT switch, it is still possible to set the setup menu items No. 700 (INT SG), No. 715 (CH1 IN SEL), No. 716 (CH2 IN SEL), No. 717 (CH3 IN SEL), No. 718 (CH4 IN SEL), No. 719 (DIGI IN SEL12) and No. 720 (DIGI IN SEL34).</p>
114	REC INH LAMP	<u>0000</u> 0001	<u>LIGHT</u> FLASH	<p>This selects whether to cause the REC INHIBIT lamp to flash or light up when the cassette has been set to the accidental erasure prevention status.</p> <p>0: The lamp lights up.</p> <p>1: The lamp flashes.</p> <p><Note></p> <p>When the REC INHIBIT switch is set to ON, the REC INHIBIT lamp always lights regardless of the general setting status.</p>
115	EJECT SW INH	<u>0000</u> 0001	<u>REC</u> OFF	<p>This selects whether to enable or disable the operation of the EJECT button on the front panel.</p> <p>0: Operation is disabled while the unit is in the recording mode.</p> <p>1: Operation is enabled in all modes.</p>

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<OPERATION> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
116	EJECT LAMP	<u>0000</u> 0001	<u>MODE1</u> MODE2	Selects whether the EJECT lamp is to remain lit or be turned off in the cassette out status. 0: The EJECT lamp remains lit. 1: The EJECT lamp goes off.
130	MULTI CUE	<u>0000</u> 0001	<u>OFF</u> ON	Selects ON or OFF for the multi-cue function. 0: Multi-cue function OFF 1: Multi-cue function ON <Notes> • Editing cannot be performed when ON has been selected as the multi-cue function setting. • When the multi-cue function is set to ON in the editing mode selection status, the editing channel selection buttons are automatically released. • When the multi-cue function has been set to ON, the deck-to-deck facility cannot be used. • When the multi-cue function has been set to ON, the mode cannot be indicated on the front panel counter display.
131	PAGE MODE	<u>0000</u> 0001	<u>MANU</u> AUTO	Selects the cue point registration operation when the multi-cue function has been set to ON. 0: Registration takes place on the selected page, and 8 cue points can be registered. 1: When the page on which cue points are being registered has been filled, registration automatically continues on the next page. A total of 80 cue points can be registered on up to 10 pages.
132	ROTA MODE	<u>0000</u> 0001	<u>OFF</u> ON	Selects the registration operation which is to be performed if all the cue points have already been registered when the multi-cue function has been set to ON. 0: The registration operation is not performed. 1: The registration operation is continued. If "MANU" has been selected as the setup menu No. 131 (PAGE MODE) setting, the cue point is registered in CUE 1 on the same page; if "AUTO" has been selected, it is registered in CUE01.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<INTERFACE>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
200	PARA RUN	<u>0000</u> 0001	<u>DIS</u> ENA	This selects whether two or more VTRs are to be operated in synchronization. 0: No operation in synchronization 1: Operation in synchronization <Note> When operating two or more VTRs in synchronization, set all the VTRs to 0001 (ENA).
201	9P SEL	0000 <u>0001</u>	OFF <u>ON</u>	This selects whether the 9P connector functions when the REMOTE/LOCAL switch has been set to REMOTE. 0: Do not function 1: Function
202	ID SEL	<u>0000</u> 0001	<u>OTHER</u> DVCPRO	This selects the ID information which is returned to the controller. 0: 20 25H = 525 mode; 21 25H = 625 mode 1: The DVCPRO's original ID (F0 33H = 525 mode; F1 33H = 625 mode) is returned.
203	25P SEL	0000 <u>0001</u>	OFF <u>ON</u>	This selects whether the PARALLEL (25P) connector functions when the REMOTE/LOCAL switch has been set to REMOTE. 0: Does not function 1: Functions
204	RS232C SEL	<u>0000</u> 0001	OFF <u>ON</u>	These settings are for selecting whether the RS-232C connector is to function when the REMOTE/LOCAL switch is set to REMOTE. 0: Connector does not function. 1: Connector functions.
205	BAUD RATE	0000 0001 0002 0003 0004 <u>0005</u>	300 600 1200 2400 4800 <u>9600</u>	These settings are for selecting the RS-232C communication speed (baud rate).
206	DATA LENGTH	0000 <u>0001</u>	7 <u>8</u>	These settings are for selecting the RS-232C data length. (Unit: bit)
207	STOP BIT	<u>0000</u> 0001	<u>1</u> 2	These settings are for selecting the RS-232C stop bit length. (Unit: bit)
208	PARITY	<u>0000</u> 0001 0002	<u>NON</u> ODD EVEN	These settings are for selecting the none, odd or even for the RS-232C parity bit. 0: Parity bit is not used. 1: An odd number of bits is used for the parity system. 2: An even number of bits is used for the parity system.
209	RETURN ACK	0000 <u>0001</u>	OFF <u>ON</u>	These settings are for selecting whether the ACK code is to be returned when a command is received from RS-232C. 0: ACK code is not returned. 1: ACK code is returned.
210	25P STBY CMD	<u>0000</u> 0001	<u>OFF/ON</u> ON	For selecting the method used to detect the STANDBY COMMAND signal input at the PARALLEL (25P) connector. 0: Each time active signals are detected, the STANDBY ON or STANDBY OFF mode is selected alternately. 1: When active signals are detected in the STANDBY OFF mode, the unit is transferred to the STANDBY ON mode. Nothing happens if they are detected during an operation in the STANDBY ON mode.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<INTERFACE> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
211	LOCAL 25P	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether the PARALLEL (25P) connector is to function when the REMOTE/LOCAL switch is at the LOCAL position. 0: The connector does not function. 1: The connector functions.
212	MASTER PORT	<u>0000</u> 0001	<u>IN/OUT</u> OUT	For selecting the remote control connector to control the slave when the unit is used as the master during deck-to-deck operations. 0: The IN/OUT connector is used. 1: The OUT connector is used. <Note> This menu item takes effect only when the REMOTE/LOCAL switch has been set to the LOCAL position.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<EDIT>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
301	IN/OUT DEL	<u>0000</u> 0001	MANU — AUTO	This selects the operation to be performed when an edit point has been set incorrectly (when the OUT point is before the IN point). 0: Editing is not executed unless the illegal edit point is cleared or set again properly. 1: The edit points already input are automatically cleared.
302	NEGA FLASH	<u>0000</u> 0001	— OFF ON	This selects whether to show a negative display when the IN point is greater than the OUT point. 0: No negative display. 1: Negative display.
303	STD/ NON-STD	<u>0000</u> 0001 0002	— AUTO STD N-STD	This selects STD or NON-STD in accordance with the composite input signal. 0: Standard/non-standard signals are automatically identified and processed. 1: Standard signals are processed. (Forced STD) 2: Non-standard signals are processed. (Forced NON-STD) <Note> Use the non-standard (N-STD) setting when video or audio trouble occurs with signals from laser discs or a satellite.
304	SERVO REF	<u>0000</u> 0001 0002	— AUTO EXT INPUT	This selects the video signal processing. 0: Servo is synchronized with the input signal during recording and editing, or with the REF signal during playback. 1: Servo is synchronized at all times with the REF signal. 2: The servo is synchronized with the input signal at all times.
305	EDIT RPLCE1	0000 <u>0001</u> 0002 0003	N-DEF — CH1 CH2 CH1+2	This sets the channel assignments for the controller's analogue audio preset when editing the digital audio of the VTR using a controller which does not have a digital audio edit preset control function. This selects the channel concerned when the VTR CH1 edit preset is set in compliance with the ON or OFF presetting for the analogue audio signals designated by the controller. 0: Not set. 1: Compliance with analogue CH1 edit preset. 2: Compliance with analogue CH2 edit preset. 3: Compliance with either analogue CH1 or CH2 edit preset.
306	EDIT RPLCE2	0000 0001 <u>0002</u> 0003	N-DEF CH1 — CH2 CH1+2	The same type of setting as setup menu No. 305. This selects the channel concerned when the CH2 edit preset is set in compliance with the ON or OFF presetting for the analogue audio signals designated by the controller. 0: Not set. 1: Compliance with analogue CH1 edit preset. 2: Compliance with analogue CH2 edit preset. 3: Compliance with either analogue CH1 or CH2 edit preset.
307	EDIT RPLCE3	<u>0000</u> 0001 0002 0003	— N-DEF CH1 CH2 CH1+CH2	The same type of setting as setup menu No. 305. This selects the channel concerned when the CH3 edit preset is set in compliance with the ON or OFF presetting for the analogue audio signals designated by the controller. 0: Not set. 1: Compliance with analogue CH1 edit preset. 2: Compliance with analogue CH2 edit preset. 3: Compliance with either analogue CH1 or CH2 edit preset.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<EDIT> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
308	EDIT RPLCE4	<u>0000</u> 0001 0002 0003	<u>N-DEF</u> CH1 CH2 CH1+CH2	The same type of setting as setup menu No. 305. This selects the channel concerned when the CH4 edit preset is set in compliance with the ON or OFF presetting for the analogue audio signals designated by the controller. 0: Not set. 1: Compliance with analogue CH1 edit preset. 2: Compliance with analogue CH2 edit preset. 3: Compliance with analogue CH1 or CH2 edit preset.
309	EDIT RPLCEC	<u>0000</u> 0001 0002 0003	<u>N-DEF</u> CH1 CH2 CH1+2	The same type of setting as setup menu No. 305. This selects the channel concerned when the CUE edit preset is set in compliance with the ON or OFF presetting for the analogue audio signals designated by the editor or controller. 0: Not set. 1: Compliance with analogue CH1 edit preset. 2: Compliance with analogue CH2 edit preset. 3: Compliance with either analogue CH1 or CH2 edit preset.
310	CONFI EDIT	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether to conduct simultaneous playback while editing is in progress. 0: No simultaneous playback 1: Simultaneous playback <Note> Simultaneous playback is valid when the TAPE/EE switch is set to TAPE.
311	AUD EDIT IN	0000 <u>0001</u>	CUT <u>FADE</u>	This selects the connection method for the digital audio edit IN point. 0: Cut processing 1: V Fade processing
312	AUD EDIT OUT	0000 <u>0001</u>	CUT <u>FADE</u>	This selects the connection method for the digital audio edit OUT point. 0: Cut processing 1: V Fade processing
313	AUTO ENTRY	<u>0000</u> 0001	<u>DIS</u> ENA	This selects whether the IN point is to be entered using the PREROLL button when it has not been entered. 0: IN point is not entered. 1: IN point is entered.
314	CF ADJ SEL	<u>0000</u> 0001	<u>PLAYER</u> RECORD	This selects the CF adjustment deck with deck-to-deck editing. 0: The player's edit IN/OUT points are adjusted. (reference as the RECORDER side) 1: The recorder's edit IN/OUT points are adjusted. (reference as the PLAYER side)
315	AFTER CUE-UP	<u>0000</u> 0001	<u>STOP</u> STILL	This selects the mode after cue-up operation is complete. 0: STOP mode 1: SHTL STILL mode

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<EDIT> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
317	AUD MEM MODE	<u>0000</u> 0001 0002 0003 0004	<u>OFF</u> AMU_X AMU_VO INT_X INT_VO	<p>Establishes the setting for voice-over and/or audio cross channel editing using the AJ-YA752 audio memory unit or built-in audio memory.</p> <p>0: Neither voice-over nor audio cross channel editing is performed.</p> <p>1: Audio cross channel editing is performed using the AJ-YA752 audio memory unit.</p> <p>2: Voice-over editing is performed using the AJ-YA752 audio memory unit.</p> <p>3: Audio cross channel editing is performed using the internal audio memory.</p> <p>4: Voice-over editing is performed using the internal audio memory.</p> <p><Notes></p> <ul style="list-style-type: none"> The RS-232C interface will not function with the 1 (AMU_X) or 2 (AMU_VO) setting. When the 2 (AMU_VO) or 4 (INT_VO) setting is selected, the channels selected by the setup menu item No. 318 (AUD MEM CH) setting are output to the monitor with any delay automatically eliminated internally using the CUE system. Consequently, CUE audio no longer functions, and the setup menu item No. 726 (REC CUE) also loses its function since this is now automatically switched internally. Up to 20 seconds of sound can be stored in the unit's internal memory. It should be borne in mind that even if an attempt is made to store more than 20 seconds of sound in the memory, all the audio signals in excess of the memory's 20-second capacity will fail to be stored. Refer to the instruction manual of the AJ-YA752 audio memory unit for details on how to use each mode using this unit.
318	AUD MEM CH	<u>0000</u> <u>0001</u> 0002 0003	CH1 <u>CH2</u> CH3 CH4	<p>This sets the channel for the voice-over or audio cross channel editing which is performed using the AJ-YA752 audio memory unit or internal audio memory.</p> <p>0: The signals are recorded onto CH1.</p> <p>1: The signals are recorded onto CH2.</p> <p>2: The signals are recorded onto CH3.</p> <p>3: The signals are recorded onto CH4.</p> <p><Note></p> <p>This setting has no effect when AMU_VO has been selected as the setup menu No. 317 (AUD MEM MODE) setting.</p>
320	VAR FWD MAX	<u>0000</u> 0001 0002	<u>+4.1</u> +2 +1	<p>This sets the maximum VAR FWD speed.</p> <p>0: +4.1 (+3.1)× speed</p> <p>1: +2 (+1.85)× speed</p> <p>2: +1× speed</p> <p><Notes></p> <ul style="list-style-type: none"> The value for the DV/DVCAM format is shown in parenthesis (). At any speed setting other than 0 (+4.1×), the phase cannot be synchronized from the editing controller.
321	VAR REV MAX	<u>0000</u> 0001 0002	<u>-4.1</u> -2 -1	<p>This sets the maximum VAR REV speed.</p> <p>0: -4.1 (-3.1)× speed</p> <p>1: -2 (-1.85)× speed</p> <p>2: -1× speed</p> <p><Note></p> <p>The value for the DV/DVCAM format is shown in parenthesis ().</p>

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<EDIT> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
323	JOG FWD MAX	0000 0001 <u>0002</u>	+4.1 +2 <u>+1</u>	This sets the maximum JOG FWD speed. 0: +4.1 (+3.1)× speed 1: +2 (+1.85)× speed 2: +1× speed <Notes> • The value for the DV/DVCAM format is shown in parenthesis (). • The maximum speed is set to +2 (+1)× when the dial on the front panel is operated. • At any speed setting other than 0 (+4.1×), the phase cannot be synchronized from an editing controller which synchronizes the phase using the JOG command.
324	JOG REV MAX	0000 0001 <u>0002</u>	-4.1 -2 <u>-1</u>	This sets the maximum JOG REV speed. 0: -4.1 (-3.1)× speed 1: -2 (-1.85)× speed 2: -1× speed <Notes> • The value for the DV/DVCAM format is shown in parenthesis (). • When the dial on the front panel is operated, the maximum speed is set to -1 (-1)×.
325	POSTROLL TM	0000 0001 <u>0002</u> 0003 0004 0005	0s 1s <u>2s</u> 3s 4s 5s	This sets the postroll time. Any time from 0 to 5 seconds can be set in 1-second units.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<TAPE PROTECT>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
400	STILL TIMER	0000 0001 0002 0003 0004 0005 0006 0007 <u>0008</u>	0.5s 5s 10s 20s 30s 40s 50s 1min <u>2min</u>	This selects the time to be taken until the unit goes into the tape protection mode when it is left standing in the stop or search still (JOG/VAR/SHTL) mode. (Unit: s = second, min = minute) <Notes> • When a DV/DVCAM tape is used, any setting above 10 seconds will be treated as 10 seconds. However, the selection screen will show operations up to 2 minutes. • STEP FWD and HALF LOADING are provided in the tape protection mode. Either of these can be set for STOP and SEARCH STILL.
401	SRC PROTECT	<u>0000</u> 0001	<u>STEP</u> HALF	When the time selected as the setup menu item No. 400 (STILL TIMER) setting elapses while the unit is in the search STILL (JOG/VAR/SHTL) mode, the unit automatically enters one of the tape protection modes. This menu item is for selecting which tape protection mode the unit is to enter. 0: STEP FWD. 1: HALF LOADING. <Note> When STEP FWD is selected, the unit automatically goes into the STANDBY OFF (HALF LOADING) mode when the total time for which the unit is left standing in the still status reaches 30 minutes (or 1 minute for a DV/DVCAM tape).
402	DRUM STDBY	0000 <u>0001</u>	OFF <u>ON</u>	This selects the drum operation in the STANDBY OFF (HALF LOADING) mode. 0: The drum stops rotating. 1: The drum continues rotating.
403	STOP PROTECT	0000 <u>0001</u>	STEP <u>HALF</u>	When the time selected as the setup menu item No. 400 (STILL TIMER) setting elapses while the unit is in the STOP mode, the unit automatically enters one of the tape protection modes. This menu item is for selecting which tape protection mode the unit is to enter. 0: STEP FWD 1: HALF LOADING <Note> When STEP FWD is selected, the unit is automatically transferred to the STANDBY OFF (HALF LOADING) mode when the total time during which it has been left standing in the STOP mode reaches 30 minutes (or 1 minute for a DV/DVCAM tape).

The underline on the setting item denotes the initial setting.

<Note>

The cumulative standby time at the same tape position increases when transmitting programmes or otherwise using identical materials repeatedly.

Setup menus

USER menu

<TIME CODE>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
500	VITC BLANK	<u>0000</u> <u>0001</u>	BLANK THRU	For selecting whether to output the VITC signal at the positions selected by setup menu items No. 501 (VITC POS-1) and No. 502 (VITC POS-2). 0: VITC signals are not output. 1: VITC signals are output.
501	VITC POS-1	625 mode		This sets the position where the VITC signal is to be inserted. <Note> The same line as the one used for the setup menu item No. 502 (VITC POS-2) setting cannot be set.
		<u>0000</u> ∴ <u>0004</u> ∴ 0015	7L ∴ 11L ∴ 22L	
		525 mode		
		<u>0000</u> ∴ <u>0006</u> ∴ 0010	10L ∴ 16L ∴ 20L	
502	VITC POS-2	625 mode		This sets the position where the VITC signal is to be inserted. <Note> The same line as the one used for the setup menu item No. 501 (VITC POS-1) setting cannot be set.
		<u>0000</u> ∴ <u>0006</u> ∴ 0015	7L ∴ 13L ∴ 22L	
		525 mode		
		<u>0000</u> ∴ <u>0008</u> ∴ 0010	10L ∴ 18L ∴ 20L	
503	TCG REGEN	<u>0000</u> 0001 0002	<u>TC&UB</u> TC UB	This selects the signal to be regenerated when the time code generator (TCG) in the REGEN mode. 0: Both the time code and user bit are regenerated. 1: Only the time code is regenerated. 2: Only the user bit is regenerated.
504	REGEN MODE	<u>0000</u> 0001 0002 0003	<u>AS&IN</u> ASSEM INSRT SW	This selects whether the time code is to be regenerated during automatic editing using the unit's control panel. 0: Time code is regenerated with assemble or insert editing. 1: Time code is regenerated with assemble editing. 2: Time code is regenerated with insert editing. 3: Setting complies with REGEN/PRESET switch setting.
505	EXT TC SEL	<u>0000</u> 0001	<u>LTC</u> VITC	This selects the time code to be used when an external time code is to be used. 0: The LTC of the TIME CODE IN connector is used. 1: The video signal VITC is used.
506	BINARY GP	<u>0000</u> 0001 0002 0003 0004 0005 0006 0007	<u>000</u> 001 010 011 100 101 110 111	This sets the usage status of the user bit of the time code generated by the TCG. 0: NOT SPECIFIED (character set not specified) 1: ISO CHARACTER (8 bits character set based on ISO646, ISO2022) 2: UNASSIGNED 1 (undefined) 3: UNASSIGNED 2 (undefined) 4: UNASSIGNED 3 (undefined) 5: PAGE/LINE 6: UNASSIGNED 4 (undefined) 7: UNASSIGNED 5 (undefined)

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<TIME CODE> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
507	PHASE CORR	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether to control the phase correction of the LTC generated by the TCG. 0: Phase correction control is not performed. 1: Phase correction control is performed.
508	TCG CF FLAG	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether the CF flag of the TCG is to ON. 0: CF flag is OFF. 1: CF flag is ON.
509	DF MODE	<u>0000</u> 0001	<u>DF</u> NDF	This selects the DF/NDF mode for CTL and TCG. 0: Drop frame mode. 1: Non-drop frame mode. <Notes> • DF mode is valid only when the LOCAL/REMOTE switch is set to LOCAL or the setup menu No. 001 (LOCAL ENA) is set to ENA. • This setup menu is not displayed in the 625 mode.
510	TC OUT REF	<u>0000</u> 0001	<u>V OUT</u> TC IN	This is used to switch the phase of the time code, which is output from the TIME CODE OUT connector, for the external LTC input when the TC INT/EXT switch is at the EXT position. 0: Time code is synchronized with output video signal. 1: Time code is synchronized with external time code input.
511	VITC OUT	<u>0000</u> 0001	<u>SBC</u> VAUX	This selects how the VITC which is to be superimposed onto the output video signal is to be output. 0: During recording: The input time code, which was selected by the setup menu No. 505 (EXT TC SEL) setting and TC INT/EXT switch, is output as the VITC. During playback: The time code recorded in the SBC area is output as the VITC. 1: During recording: The time code detected from the input video signal is output as the VITC. During playback: The time code recorded in the VAUX area is output as the VITC. <Note> The time code detected from the input video signal is automatically recorded in the VAUX area while pictures are being recorded.

The underline on the setting item denotes the initial setting.

SBC (sub code data) area:

This area is separate from the video and audio data area on the helical track. The time code complying with SMPTE/EBU standards is stored here. As with the conventional LTC (linear time code), the time code can be read even during rewinding or fast forwarding. It can also be read out when the tape has stopped.

VAUX (video auxiliary data) area:

This area is to be found in the video data area on the helical track. The additional information relating to the video data is stored here.

<Note>

The time code and user's bit are controlled during tape playback by the data which has been recorded in the SBC area. This means that all the data recorded in the SBC area alone is used as the data which is to be indicated on the counter display section in the middle of the front panel or in the superimposed display, or as the data which is to be transmitted to the editing controller or other unit.

Setup menus

USER menu

<VIDEO>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
600	INT SG	<u>0000</u> 0001 0002	<u>OFF</u> BB CB	This selects whether to generate the internal signal. 0: Signal is not generated. 1: The black burst is generated. 2: 100% colour bars are generated.
601	OUT VSYNC	<u>0000</u> 0001	<u>N-VF</u> VF	This selects whether to float the vertical sync position of the video output in order to align the video output phase with the input in the EE/record/edit modes. 0: Signals are not floated. 1: Signals are floated.
602	V-MUTE SEL	0000 <u>0001</u>	N-MUTE <u>LOW RF</u>	Selects whether to mute the video output signals when a blank on the tape has been detected during playback. 0: No muting. (Freeze) 1: Muting. (Set to gray.)
603	CC (F1) BLANK	0000 <u>0001</u>	BLANK <u>THRU</u>	This selects ON or OFF for the closed caption signal in the first field. 0: Forced blanking performed. 1: Blanking not performed. <Note> This setup menu is not displayed in the 625 mode.
604	CC (F2) BLANK	0000 <u>0001</u>	BLANK <u>THRU</u>	This selects ON or OFF for the closed caption signal in the second field. 0: Forced blanking performed. 1: Blanking not performed. <Note> This setup menu is not displayed in the 625 mode.
605	FREEZE SEL	<u>0000</u> 0001	<u>FIELD</u> FRAME	This selects the freeze mode for still pictures. 0: Field freeze. 1: Frame freeze. <Note> When frame freeze has been selected, the frame slow status is established with the slow setting.
606	OUT C KILL	0000 <u>0001</u>	B/W <u>COLOR</u>	This selects chroma colour killer processing for the video output signals. 0: The signals are forcibly processed as B/W signals. 1: The signals are automatically processed.
609	EDH	0000 <u>0001</u>	OFF <u>ON</u>	This selects whether to superimpose EDH onto the serial output signals. 0: EDH is not superimposed. 1: EDH is superimposed.
610	Pb/Pr IN LV	0000 <u>0001</u>	MII <u>B-CAM</u>	This selects the component input signal level. 0: MII level. 1: β cam level. <Note> This setup menu is not displayed in the 625 mode.
611	INPUT C KILL	0000 <u>0001</u>	B/W <u>AUTO</u>	This selects colour killer processing for the video input signals. 0: The signals are forcibly processed as B/W signals. 1: The signals are automatically processed.
614	Pb/Pr OUT LV	0000 <u>0001</u>	MII <u>B-CAM</u>	This selects the analogue component output level. 0: MII level 1: β-CAM level <Note> This setup menu is not displayed in the 625 mode.

<Note>

When no optional board (AJ-YA956 or AJ-YA957) has been installed, setup menus No. 610 and 611 are not displayed.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<VIDEO> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
618	INTERPOLATE	0000 <u>0001</u>	OFF <u>AUTO</u>	Vertical interpolation is conducted automatically during slow-motion playback to reduce the vertical movement of the playback pictures. However, this menu item enables the interpolation operation to be forcibly turned off. 0: Interpolation is forcibly turned off. 1: Interpolation is automatically turned on during slow-motion playback.
620	ESR MODE	0000 <u>0001</u>	OFF <u>AUTO</u>	This selects the operation mode for edge subcarrier reduction (ESR) in the playback circuit. 0: The mode is forcibly set to OFF. 1: The mode is automatically set to ON or OFF depending on the VTR operation.
621	CCR MODE	<u>0000</u> 0001	<u>OFF</u> ON	This selects the cross colour processing during playback. 0: The cross colour is output with no changes made. 1: The cross colour can be reduced. <Note> This setup menu is not displayed in the 625 mode.
640	SDI INDEX O	0000 <u>0001</u>	OFF <u>ON</u>	This selects the operation to the video index (CF and WIDE) for the serial output. 0: The video index is not added to serial output signal. 1: CF and WIDE information is added to the serial output signal as the video index.
650	SER IN MODE	<u>0000</u> 0001	<u>MANU</u> AUTO	For selecting the serial input mode. 0: The SDI signal or SDTI signal is automatically selected in accordance with the serial input signal. The input display on the front panel is automatically switched in accordance with the input signal. 1: The same mode is selected as the input mode selected on the front panel.
652	SER OUT1 SEL	<u>0000</u> 0001	<u>SDI</u> SDTI	For selecting the signal to be output to serial output 1. 0: The SDI signal is output. 1: The SDTI signal is output.
653	SDTI MODE	<u>0000</u> 0001	<u>1X_R</u> <u>2X_P</u>	Selects the VTR and SDTI input/output operation when a DVCPRO50 or DVCPRO tape has been inserted. 0: Normal mode is set. Recording, playback and SDTI input/output can be performed at 1× speed. 1: 2× transmission mode is set. Playback and SDTI output can be performed at 2× speed. <Notes> <ul style="list-style-type: none"> This setup menu's setting takes effect only when "SDTI" or "AUTO" has been selected as the setup menu No. 652 (SER OUT1 SEL) setting. If "SDI" has been selected, the tape will be recorded and played back at the 1× speed regardless of this setup menu's setting. When "2X_P" has been selected, the tape cannot be played back at the 1× speed. If a tape is inserted when "2X_P" has been selected, the REC INHIBIT lamp lights and recording operations are prohibited. In addition, the VV mode will be established at all times, and the EE pictures will not be output. When a DV or DVCAM tape has been inserted, it is played back at the 1× speed regardless of this setup menu's setting.

<Note>

If the optional SDTI interface board (model AJ-YAC960P) has not been installed, setup menus No. 650, 652 and 653 will not be displayed.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<AUDIO>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
700	INT SG	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether or not the internal signal is to be generated. 0: The signal is not generated. 1: The signal is generated.
701	CH1 IN LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio input (CH1) reference level switching.
702	CH2 IN LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio input (CH2) reference level switching.
703	CH3 IN LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio input (CH3) reference level switching.
704	CH4 IN LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio input (CH4) reference level switching.
705	CUE IN LV	0000 <u>0001</u> 0002 0003	4dB <u>0dB</u> -20dB -60dB	This selects the CUE input reference level switching.
706	CH1 OUT LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio output (CH1) reference level switching.
707	CH2 OUT LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio output (CH2) reference level switching.
708	CH3 OUT LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio output (CH3) reference level switching.
709	CH4 OUT LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio output (CH4) reference level switching.
710	CUE OUT LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the CUE output reference level switching.
711	MONIL OUT LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio monitor output (Lch) reference level switching.
712	MONIR OUT LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio monitor output (Rch) reference level switching.
713	MONI OUT	0000 <u>0001</u>	UNITY <u>VAR</u>	This selects the audio monitor output volume UNITY/ VARIABLE reference switching. 0: The volume is output at the preset value. 1: The volume is linked with the headphones volume control.
714	EMPHASIS	<u>0000</u> 0001	<u>OFF</u> ON	This sets the emphasis ON or OFF.
715	CH1 IN SEL	<u>0000</u> 0001	<u>ANA</u> DIGI	This selects the CH1 input when USER SET has been selected by pressing the unit's AUDIO input selector switch. 0: Analogue input. 1: Digital input.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<AUDIO> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
716	CH2 IN SEL	<u>0000</u> 0001	<u>ANA</u> DIGI	This selects the CH2 input when USER SET has been selected by pressing the unit's AUDIO input selector switch. 0: Analogue input. 1: Digital input.
717	CH3 IN SEL	<u>0000</u> 0001	<u>ANA</u> DIGI	This selects the CH3 input when USER SET has been selected with the unit's AUDIO input selector switch. 0: Analogue input 1: Digital input
718	CH4 IN SEL	<u>0000</u> 0001	<u>ANA</u> DIGI	This selects the CH4 input when USER SET has been selected by pressing the unit's AUDIO input selector switch. 0: Analogue input 1: Digital input
719	DI IN SEL12	<u>0000</u> 0001	<u>AES</u> SIF	This selects the CH1 and CH2 digital input when USER SET has been selected by pressing the unit's AUDIO input selector switch. 0: AES input 1: Serial input
720	DI IN SEL34	<u>0000</u> 0001	<u>AES</u> SIF	This selects the CH3 and CH4 digital input when USER SET has been selected by pressing the unit's AUDIO input selector switch. 0: AES input 1: Serial input
721	MONI CH SEL	0000 <u>0001</u> 0002 0003 0004	MANU <u>AUTO1</u> AUTO2 AUTO11 AUTO21	This selects the monitor output. 0: The output is as selected in MONITOR SELECT. 1: The cue signal is automatically output in all tape modes except that PCM AUDIO is output over the -1 to +2 range. 2: The cue signal is automatically output in all tape modes except in the play mode in which PCM AUDIO is output. 3: The cue input signal is automatically output when the unit is in the EE mode in addition to AUTO1. 4: The cue input signal is automatically output when the unit is in the EE mode in addition to AUTO2. <Note> This setup menu's setting takes effect when CH1, CH2, CH3 or CH4 has been selected by the L and R MONITOR SELECT switches on the front panel. (If CUE has been selected, the cue signal will be output at all the speeds regardless of the setup menu's setting.)
722	REC CH1	<u>0000</u> 0001 0002	<u>CH1</u> CH2 CH1+2	This selects the input signal to be recorded on the audio CH1 track. 0: Audio input CH1 signal. 1: Audio input CH2 signal. 2: Mixed audio input CH1 and CH2 signal.
723	REC CH2	0000 <u>0001</u> 0002	CH1 <u>CH2</u> CH1+2	This selects the input signal to be recorded on the audio CH2 track. 0: Audio input CH1 signal. 1: Audio input CH2 signal. 2: Mixed audio input CH1 and CH2 signal.
724	REC CH3	<u>0000</u> 0001 0002	<u>CH3</u> CH4 CH3+CH4	This selects the input signal to be recorded on the audio CH3 track. 0: Audio input CH3 signal 1: Audio input CH4 signal 2: Mixed audio input CH3 and CH4 signal
725	REC CH4	0000 <u>0001</u> 0002	CH3 <u>CH4</u> CH3+CH4	This selects the input signal to be recorded on the audio CH4 track. 0: Audio input CH3 signal 1: Audio input CH4 signal 2: Mixed audio input CH3 and CH4 signal

The underline on the setting item denotes the initial setting.

Setup menus

USER menu <AUDIO> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
726	REC CUE	<u>0000</u> 0001 0002 0003 0004 0005 0006 0007	— CUE CH1 CH2 CH1+2 CH3 CH4 CH3+4 CH1-4	This selects the input signal recorded in CUE. 0: CUE IN 1: Audio CH1 input 2: Audio CH2 input 3: Audio CH1 and CH2 MIX signal 4: Audio CH3 input 5: Audio CH4 input 6: Audio CH3 and CH4 MIX signal 7: Audio CH1, CH2, CH3 and CH4 mixed signals <Note> The input signal is fixed at cue at all times regardless of this setup menu's setting if "SDTI" has been selected by the INPUT SELECT switch.
727	PB FADE	<u>0000</u> 0001 0002	— AUTO CUT FADE	This selects the processing method for the audio edit points (IN point, OUT point) during playback. 0: According to the status during recording. 1: Forced CUT 2: Forced FADE
728	EMBEDDED AUD	<u>0000</u> <u>0001</u>	OFF — ON	This selects whether to superimpose the audio data onto the serial output. 0: Data is not superimposed. 1: Data is superimposed.
729	MONITOR MIX L	<u>0000</u> 0001 0002 0003 0004	— OFF CH1+2 CH3+4 CH1+3 CH2+4	This makes it possible to select mixed signals for the monitor output. 0: No mixing. 1: CH1 and CH2 are mixed and output to the left channel. 2: CH3 and CH4 are mixed and output to the left channel. 3: The CH1 and CH3 signals are mixed and output to the left channel. 4: The CH2 and CH4 signals are mixed and output to the left channel.
730	MONITOR MIX R	<u>0000</u> 0001 0002 0003 0004	— OFF CH1+2 CH3+4 CH1+3 CH2+4	This makes it possible to select mixed signals for the monitor output. 0: No mixing. 1: CH1 and CH2 are mixed and output to the right channel. 2: CH3 and CH4 are mixed and output to the right channel. 3: The CH1 and CH3 signals are mixed and output to the right channel. 4: The CH2 and CH4 signals are mixed and output to the right channel.
731	CUE OUT SEL	<u>0000</u> 0001	— OFF ON	This selects whether or not the cue signal is to be output to the main line output in the search mode. 0: CUE is not output. 1: CUE is output. (This applies only when setup menu No. 721 (MONI CH SEL) is not set to "MANU".) <Notes> 1. This function works only when a setting other than MANU has been selected by setup menu item No. 721 (MONI CH SEL). 2. The main signal system output channels used for the CUE output differ depending on the setting selected by setup menu item No. 735 (MON AUTO SEL). When L/R is selected: CUE is output to CH1 to CH4. When L is selected: CUE is output to CH1 and CH3. When R is selected: CUE is output to CH2 and CH4.
732	CUE SLOW	<u>0000</u> 0001	— STEP LINEAR	For selecting the tape travel status (cue track playback status) during slow-motion playback. 0: The output picture takes precedence, and the tape travels at the STEP speed. 1: The cue track playback takes precedence and the tape travels at the linear playback speed. <Notes> When "1" (LINEAR) has been selected: • Set the TC/CTL switch to the TC position because the CTL counter may not function properly. • The picture may not appear as clearly as in the STEP mode.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu <AUDIO> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
733	CUE OUT	<u>0000</u> 0001	<u>NORMAL</u> DIRECT	For selecting the output from the CUE OUT connector. 0: The timing is aligned with the output picture. 1: Whatever has been recorded on the tape is output with no delay. <Note> When "1" (DIRECT) has been selected, the timing of the output picture and that of the cue output are not aligned properly. However, this setting is effective only during DVCPRO (25 Mbps) mode playback.
734	MONI SEL INH	<u>0000</u> 0001 0002	<u>OFF</u> ON ON1	This selects whether the operation of the MONITOR SELECT button on the front panel is to be enabled or disabled. 0: Operation is enabled. 1: Operation is disabled. 2: Operation is disabled in the FULL display mode and enabled only in the FINE display mode.
735	MON AUTO SEL	<u>0000</u> 0001 0002	<u>L/R</u> L R	Although CUE is automatically output to the monitor output in accordance with the operation mode when a setting other than MANU has been selected by setup menu item No. 721 (MONI CH SEL), the MON AUTO SEL setup menu item is used to select the monitor channel which is to be automatically switched to CUE. 0: CUE is output to both the left and right channels. 1: CUE is output to the left channel only. 2: CUE is output to the right channel only.
736	AUDIO PB VR	<u>0000</u> 0001	<u>DIS</u> ENA	This selects whether the playback level controls are to function in the EE mode when INT SG has been selected as the setup menu item No. 700 (INT SG) setting. 0: The INT SG output level is fixed at UNITY. 1: The INT SG output level can be varied using the playback level controls.
737	JOG PROC	<u>0000</u> <u>0001</u>	<u>OFF</u> ON	Selects the digital audio output slow signal processing in the JOG/VAR/SHTL mode. 0: The sound from the digital audio without the slow signal processing is output even in the STILL mode. 1: The sound from the digital audio output after the slow signal processing is output.
750	DV PB ATT	<u>0000</u> <u>0001</u>	<u>OFF</u> ON	This selects the audio output level during DV playback. 0: The audio output level is not attenuated. 1: The audio output level is attenuated (reduced).
751	REC PT MUTE	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether to mute the sound where recordings are joined during DV/DVCAM playback. 0: The sound is not muted. 1: The sound is muted.

The underline on the setting item denotes the initial setting.

<Concerning the CUE output in the search mode>

The table below shows how the CUE output to the monitor and main signal system outputs differs according to how the setup menu item (No. 721, No. 731 and No. 735) settings are combined.

731 CUE OUT SEL	721 MONI CH SEL	735 MON AUTO SEL	Monitor output		Main signal system output						
			Lch	Rch	CH1	CH2	CH3	CH4			
OFF	MANU	L/R	PCM	PCM	PCM	PCM	PCM	PCM			
		L									
		R									
	AUTO1 AUTO21	L/R	CUE	CUE							
		L	CUE	PCM							
		R	PCM	CUE							
ON	MANU	L/R	PCM	PCM	PCM	PCM	PCM	PCM			
		L									
		R									
	AUTO1 AUTO21	L/R	CUE	CUE					CUE	CUE	CUE
		L	CUE	PCM					CUE	PCM	CUE
		R	PCM	CUE					PCM	CUE	PCM

<Notes>

- PCM audio signal output is muted when the VTR is played outside the -1 to +2.0 normal speed.
- When either AUTO1 or AUTO11 is selected, the PCM audio signal is output within -1 to +2.0 normal speed even in the automatic CUE output mode.

Setup menus

USER menu

<V BLANK>

Item		Setting		Description			
No.	Superimposed display	No.	Superimposed display				
800	ADD LINE 25	0000	OFF	For selecting the mode for recording signals on additional lines. 0: No signals are recorded on additional lines. 1: The 422 mode signals are recorded on 1 line. 2: The 411 mode signals are recorded on 1 line. 3: Only the Y signal is recorded on 1 line directly. 4: Only the Y signal is recorded on 1 line after it has been separated from the C signal. 5: Only the C signal is recorded on 1 line. 6: Only the Y signal is recorded on 2 lines directly. 7: Only the Y signal is recorded on 2 lines after it has been separated from the C signal. 8: Only the C signal is recorded on 2 lines. <Notes> • When a setting from "1" to "8" is selected and the STOP button is pressed, operation transfers to the sub-screen, and the recording line or lines can be selected. To return from the sub-screen, press the STOP button again. • The setting takes effect when the system format is 25 Mbps.			
		0001	YC422				
		<u>0002</u>	YC411				
		0003	Y1_B/W				
		0004	Y1_BPF				
		0005	C1				
		0006	Y2_B/W				
		0007	Y2_BPF				
		0008	C2				
Sub-screen (625 mode)							
00	REC LINE1	0000	7L	For selecting the additional line where the signals are to be recorded.			
		⋮	⋮				
		0015	22L				
		0016	320L				
		⋮	⋮				
		<u>0031</u>	335L				
01	REC LINE2	0000	7L	For selecting the additional line where the signals are to be recorded. <Note> This menu item is not displayed when additional line mode setting "1" through "5" has been selected.			
		⋮	⋮				
		0015	22L				
		0016	320L				
		⋮	⋮				
		<u>0018</u>	322L				
0031	⋮	0031	335L				
		⋮	⋮				
		<u>0032</u>	623L				
		⋮	⋮				
		0031	335L				
		0032	623L				
Sub-screen (525 mode)							
00	REC LINE1	0000	10L	For selecting the additional line where the signals are to be recorded.			
		⋮	⋮				
		0012	22L				
		0013	263L				
		0014	273L				
		⋮	⋮				
		0025	284L				
		<u>0026</u>	525L				
		01	REC LINE2		0000	10L	For selecting the additional line where the signals are to be recorded. <Note> This menu item is not displayed when additional line mode setting "1" through "5" has been selected.
					⋮	⋮	
0012	22L						
0013	263L						
0014	273L						
⋮	⋮						
<u>0016</u>	275L						
⋮	⋮						
0025	284L						
0026	525L						

• Number of lines which can be set for TELETEXT

When 25 Mbps is the recording/playback format.

ADD LINE 25 setting value	Number of lines which can be set	
	525 mode	625 mode
YC422	5	7
YC411	8	10
Y1_B/W	13	14
Y1_BPF	13	14
C1	13	14
Y2_B/W	5	7
Y2_BPF	5	7
C2	5	7

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<V BLANK> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
801	ADD LINE 50	0000 <u>0001</u> 0002 0003 0004	OFF <u>YC422</u> Y4_B/W Y4_BPF C4	For selecting the mode for recording signals on additional lines. 0: No signals are recorded on additional lines. 1: The 422 mode signals are recorded on 2 lines. 2: Only the Y signal is recorded on 4 lines directly. 3: Only the Y signal is recorded on 4 lines after it has been separated from the C signal. 4: Only the C signal is recorded on 4 lines. <Notes> • When a setting from "1" to "4" is selected and the STOP button is pressed, operation transfers to the sub-screen, and the recording lines can be selected. To return from the sub-screen, press the STOP button again. • The setting takes effect when the system format is 50 Mbps.
Sub-screen (625 mode)				
00	REC LINE1	0000 ⋮ 0015 0016 ⋮ 0031 <u>0032</u>	7L ⋮ 22L 320L ⋮ 335L <u>623L</u>	For selecting the additional line where the signals are to be recorded.
01	REC LINE2	0000 ⋮ 0015 0016 ⋮ <u>0018</u> ⋮ 0031 0032	7L ⋮ 22L 320L ⋮ <u>322L</u> ⋮ 335L 623L	For selecting the additional line where the signals are to be recorded.
02	REC LINE3	0000 ⋮ <u>0003</u> ⋮ 0015 0016 ⋮ 0031 0032	7L ⋮ <u>10L</u> ⋮ 22L 320L ⋮ 335L 623L	For selecting the additional line where the signals are to be recorded. <Note> This menu item is not displayed when setting "1" has been selected as the additional line mode.
03	REC LINE4	0000 ⋮ 0015 0016 ⋮ <u>0019</u> ⋮ 0031 0032	7L ⋮ 22L 320L ⋮ <u>323L</u> ⋮ 335L 623L	For selecting the additional line where the signals are to be recorded. <Note> This menu item is not displayed when setting "1" has been selected as the additional line mode.

• Number of lines which can be set for TELETEXT

When 50 Mbps is the recording/playback format.

ADD LINE 50 setting value	Number of lines which can be set	
	525 mode	625 mode
YC422	10	15
Y4_B/W		
Y4_BPF		
C4		

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<V BLANK> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
Sub-screen (525 mode)				
00	REC LINE1	0000 ⋮ 0012 0013 0014 ⋮ 0025 <u>0026</u>	10L ⋮ 22L 263L 273L ⋮ 284L <u>525L</u>	For selecting the additional line where the signals are to be recorded.
01	REC LINE2	0000 ⋮ 0012 0013 0014 ⋮ <u>0016</u> ⋮ 0025 0026	10L ⋮ 22L 263L 273L ⋮ <u>275L</u> ⋮ 284L 525L	For selecting the additional line where the signals are to be recorded.
02	REC LINE3	0000 ⋮ <u>0003</u> ⋮ 0012 0013 0014 ⋮ 0025 0026	10L ⋮ <u>13L</u> ⋮ 22L 263L 273L ⋮ 284L 525L	For selecting the additional line where the signals are to be recorded. <Note> This menu item is not displayed when setting "1" has been selected as the additional line mode.
03	REC LINE4	0000 ⋮ 0012 0013 0014 ⋮ <u>0017</u> ⋮ 0025 0026	10L ⋮ 22L 263L 273L ⋮ <u>276L</u> ⋮ 284L 525L	For selecting the additional line where the signals are to be recorded. <Note> This menu item is not displayed when setting "1" has been selected as the additional line mode.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<V BLANK> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
802	TELETEXT SEL	<u>0000</u> 0001	MOJI <u>NABTS</u>	For selecting the type of teletext signals to be recorded. 0: MOJI system 1: NABTS system <Note> This setup menu item is not displayed in the 625 mode.
803	TELETEXT DET	<u>0000</u> 0001 0002	<u>OFF</u> AUTO MANU	For selecting the method used to detect the lines in which the teletext signals are to be recorded. 0: The teletext signals are not recorded. 1: The teletext signals are automatically detected and recorded. 2: The lines in which the teletext signals are to be recorded are selected and set. <Notes> • The number of lines in which the teletext signals can be recorded depends on the number of recording lines which was entered as the setup menu No. 800 (ADD LINE 25) or No. 801 (ADD LINE 50) setting. [See "Number of lines which can be set for teletext."] • When setting "2 (MANU)" is selected and the STOP button is pressed, operation transfers to the sub-screen, and the number of recording lines can be selected. To return from the sub-screen, press the STOP button again.
Sub-screen (625 mode)				
00	REC LINE1	<u>0000</u>	<u>OFF</u>	For selecting the lines in which the teletext signals are to be recorded. Factory mode settings REC LINE1: OFF REC LINE2: OFF REC LINE3: OFF REC LINE4: OFF REC LINE5: OFF REC LINE6: OFF REC LINE7: OFF REC LINE8: OFF REC LINE9: OFF REC LINE10: OFF REC LINE11: OFF REC LINE12: OFF REC LINE13: OFF REC LINE14: OFF REC LINE15: OFF
:	:	0001	7&320	
:	:	0002	8&321	
:	:	0003	9&322	
:	:	0004	10&323	
:	:	0005	11&324	
:	:	0006	12&325	
:	:	0007	13&326	
:	:	0008	14&327	
:	:	0009	15&328	
:	:	0010	16&329	
:	:	0011	17&330	
:	:	0012	18&331	
:	:	0013	19&332	
:	:	0014	20&333	
14	REC LINE15	0015	21&334	
		0016	22	
Sub-screen (525 mode)				
00	REC LINE1	<u>0000</u>	<u>OFF</u>	For selecting the lines in which the teletext signals are to be recorded. Factory mode settings REC LINE1: OFF REC LINE2: OFF REC LINE3: OFF REC LINE4: OFF REC LINE5: OFF REC LINE6: OFF REC LINE7: OFF REC LINE8: OFF REC LINE9: OFF REC LINE10: OFF REC LINE11: OFF REC LINE12: OFF REC LINE13: OFF
:	:	0001	10&273	
:	:	0002	11&274	
:	:	0003	12&275	
:	:	0004	13&276	
:	:	0005	14&277	
:	:	0006	15&278	
:	:	0007	16&279	
:	:	0008	17&280	
:	:	0009	18&281	
:	:	0010	19&282	
:	:	0011	20&283	
12	REC LINE13	0012	21&284	
		0013	22	

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<V BLANK> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
804	BLANK LINE	<u>0000</u> 0001 0002	<u>BLANK</u> THRU MANU	This turns the blanking ON or OFF in the vertical blanking period of the video output signals. 0: Blanking is effected forcibly for all lines. 1: No blanking is effected for any of the lines. 2: Blanking ON or OFF is selected for each line. <Note> When setting "2 (MANU)" is selected and the STOP button is pressed, operation transfers to the sub-screen, and ON or OFF can be selected for each line. To return from the sub-screen, press the STOP button again.
Sub-screen (625 mode)				
00	LINE 7&320	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
01	LINE 8&321	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
02	LINE 9&322	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
03	LINE 10&323	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
04	LINE 11&324	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
05	LINE 12&325	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
06	LINE 13&326	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
07	LINE 14&327	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
08	LINE 15&328	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
09	LINE 16&329	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
10	LINE 17&330	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
11	LINE 18&331	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
12	LINE 19&332	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
13	LINE 20&333	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
14	LINE 21&334	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
15	LINE 22&335	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<V BLANK> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
Sub-screen (525 mode)				
00	LINE 10&273	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
01	LINE 11&274	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
02	LINE 12&275	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
03	LINE 13&276	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
04	LINE 14&277	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
05	LINE 15&278	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
06	LINE 16&279	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
07	LINE 17&280	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
08	LINE 18&281	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
09	LINE 19&282	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
10	LINE 20&283	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
11	LINE 21&284	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<MENU>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
A00	LOAD	<u>0000</u> 0001 0002 0003	<u>USER2</u> USER3 USER4 USER5	<p>This selects the user file whose contents will be loaded into USER1.</p> <p>0: The USER2 file contents are loaded. 1: The USER3 file contents are loaded. 2: The USER4 file contents are loaded. 3: The USER5 file contents are loaded.</p> <p><Note> When the SET button is pressed after loading, the setting will be stored in the memory. When the MENU button is pressed, the setting will not be changed.</p>
A01	SAVE	<u>0000</u> 0001 0002 0003 0004	<u>USER2</u> USER3 USER4 USER5 LOCKED	<p>This selects the user file into which the USER1 settings will be saved.</p> <p>0: The settings are saved in USER2. 1: The settings are saved in USER3. 2: The settings are saved in USER4. 3: The settings are saved in USER5. 4: This display appears when all the user files are in the change prohibit status.</p> <p><Notes></p> <ul style="list-style-type: none"> User files whose status have been set to change prohibit cannot be selected. When all the user files are in the change prohibit status, the "LOCKED" display appears and the contents cannot be saved.
A02	P.ON LOAD	<u>0000</u> 0001 0002 0003 0004	<u>OFF</u> USER2 USER3 USER4 USER5	<p>This loads the contents of the selected user file into USER1 and it starts operation with the USER1 settings when the power is turned on.</p> <p>0: Operation is started with the settings of the previously set user file. 1: The contents of USER2 are loaded into USER1 and operation is started with the USER1 settings. 2: The contents of USER3 are loaded into USER1 and operation is started with the USER1 settings. 3: The contents of USER4 are loaded into USER1 and operation is started with the USER1 settings. 4: The contents of USER5 are loaded into USER1 and operation is started with the USER1 settings.</p>
A03	MENU LOCK	<u>0000</u> 0001	<u>OFF</u> ON	<p>This selects whether to set or release the user file (USER2 – USER5) lock mode.</p> <p>0: The lock is released (changes can be made). 1: The lock is set (changes are prohibited).</p> <p><Note> The lock cannot be set for USER1.</p>

The underline on the setting item denotes the initial setting.

<Notes>

- No. A00 (LOAD), No. A01 (SAVE) and No. A02 (P.ON LOAD) are the menu items which can be set only for USER1. They are not displayed with the USER2 – USER5 files.
- No. A03 (MENU LOCK) is the menu item which can be set only for the USER2 – USER5 files. It is not displayed with USER1.

Time code/user bit

Time code

The time code is used when the time code signal generated by the time code generator (time code signal generator) is to be recorded on the tape, its values are to be read by the time code reader (time code signal reader), and the absolute position of the tape is to be displayed in increments of hours, minutes, seconds and frames.

The time code is written in the sub-code area (data area) of the helical track. This enables insert editing to be conducted independently using the time code alone. In addition, the VTR's playback speed can be read from the stop mode to slow-motion playback up to high-speed play (approx. 50× normal speed/approx. 100× when using DVCPRO tape).

The time code values are indicated using the display and superimpose functions.

TCR 00 : 07 : 04 : 24
↑ ↑ ↑ ↑
Hours | Minutes Seconds Frames

User bit

“User bit” refers to the 32-bit (8-digit) data frame among the time code signals which has been released to users. It enables operator numbers values to be recorded.

The alphanumeric characters which can be used for the user bit are the figures 0 to 9 and the letters A to F.

1. Setting the internal time code

- 1** Place the VTR in the stop mode.
- 2** Set the TC/CTL switch to TC.
- 3** Set the TC INT/EXT switch to INT. (Internal time code selected)
- 4** Set the REC RUN/FREE RUN switch position.
REC RUN: The time code runs at the same time as the recording proceeds.
FREE RUN: The time code runs in the same way as the time regardless of the VTR's operation.
- 5** Set the REGEN/PRESET switch position.
REGEN: Continuity is maintained with the recorded time code before editing. (Detailed settings are also possible using the menu settings. See the menu items below.)
Setup menu No. 503 (TCG REGEN)
Setup menu No. 504 (REGEN MODE)
PRESET: Recording starts from the value set with the TC SET button.
<Note>
During auto editing, REGEN will be selected by the setup menu No. 504 setting even if the switch has been set to the PRESET position.
- 6** Set the TC SET button.
Use the TC SET button to set the start number of the time code or user bit.
 - 1** Press the SHIFT button.
The leftmost digit flashes.
 - 2** Press the ADJ button to change the value.
Each time the button is pressed, the number changes. The setting range is given below.
 - **When using the time code and user bit in real time**
00:00:00:00 – 23:59:59:24
 - **User bit**
00 00 00 00 – FF FF FF FF
 - 3** Repeat steps 1 and 2 to change the value.
 - 4** When the setting of the start number is completed, press the START button. In the FREE RUN mode, the time code now starts running.
 - 5** Proceed with the recording or editing.

2. Setting the external time code (TC switch → EXT)

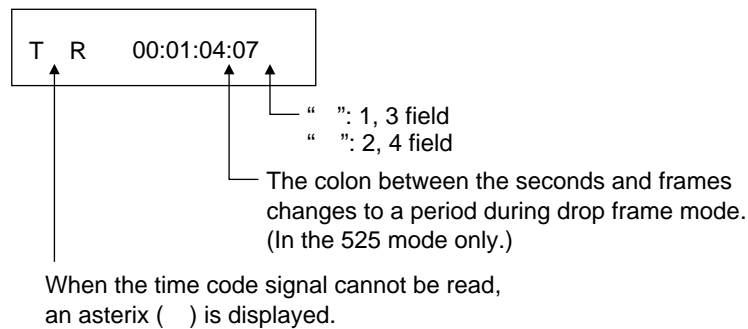
- 1** Place the VTR in the stop mode.
- 2** Set the TC/CTL switch to TC.
- 3** Set the TC INT/EXT switch to EXT. (External time code selected)
- 4** Setup menu No. 505 (EXT TC SEL) can be set as follows.
LTC: The LTC signal input to the TIME CODE IN connector (XLR) on the connector panel is recorded as the time code.
<Note> The LTC signal must be synchronized with the video signal.
VITC: The input video signal's VITC is recorded as the time code.

Reproducing the time code/user bit

- 1** Place the unit in the stop mode.
- 2** Set the TC/CTL switch to TC.
- 3** Set the TC/UB switch to TC or UB.
TC: The time code is displayed.
UB: The user bit is displayed.
 - When it is no longer possible to read the time code, it is interpolated using the CTL signal.
- 4** Press the PLAY button.
Playback now commences, and the time code appears on the display.
When setup menu No. 007 (SUPER) is ON, the time code value is superimposed onto the video signal from the VIDEO OUT 3/SERIAL OUT 3 connector.

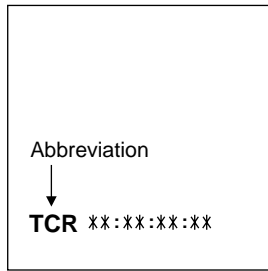
<Notes>

- The colon between the seconds and frames changes to a period when the drop frame time code is read. (In the 525 mode only.)
- When the time code signal cannot be read, the time code is automatically interpolated by the CTL signal.
The display appears as shown below.



Superimpose screen

The control signals, time code, etc. are displayed using abbreviations.

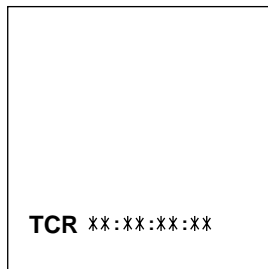


TV monitor

CTL = control signal
TCR = TC time code reading
UBR = TC user bit reading

Characters displayed

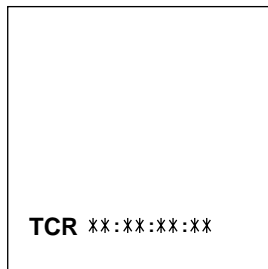
The background of characters superimposed on the display can be changed using setup menu No. 011 (CHARA TYPE).



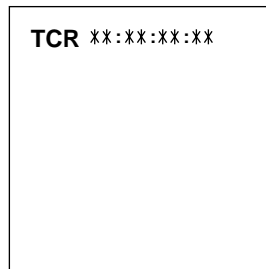
TV monitor

Display position

The position of the characters superimposed on the display can be changed using setup menus No. 009 (CHARA H-POS) and No. 010 (CHARA V-POS).



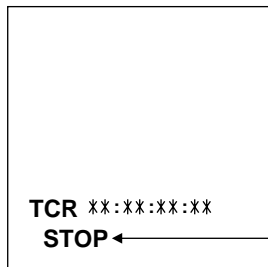
TV monitor



TV monitor

Operation mode

The VTR's operation mode can also be displayed using setup menu No. 008 (DISPLAY SEL).



TV monitor

VTR operation mode

Video output signals and servo reference signal

This section explains how the output signals and servo reference signal are selected.

External synchronization of video output signals

The video output signals are output in synchronization with the REF VIDEO input signal or video input signal.

As shown in the figure below, this signal is selected in accordance with the setup menu settings, VTR mode and availability of the video input signal.



<Notes>

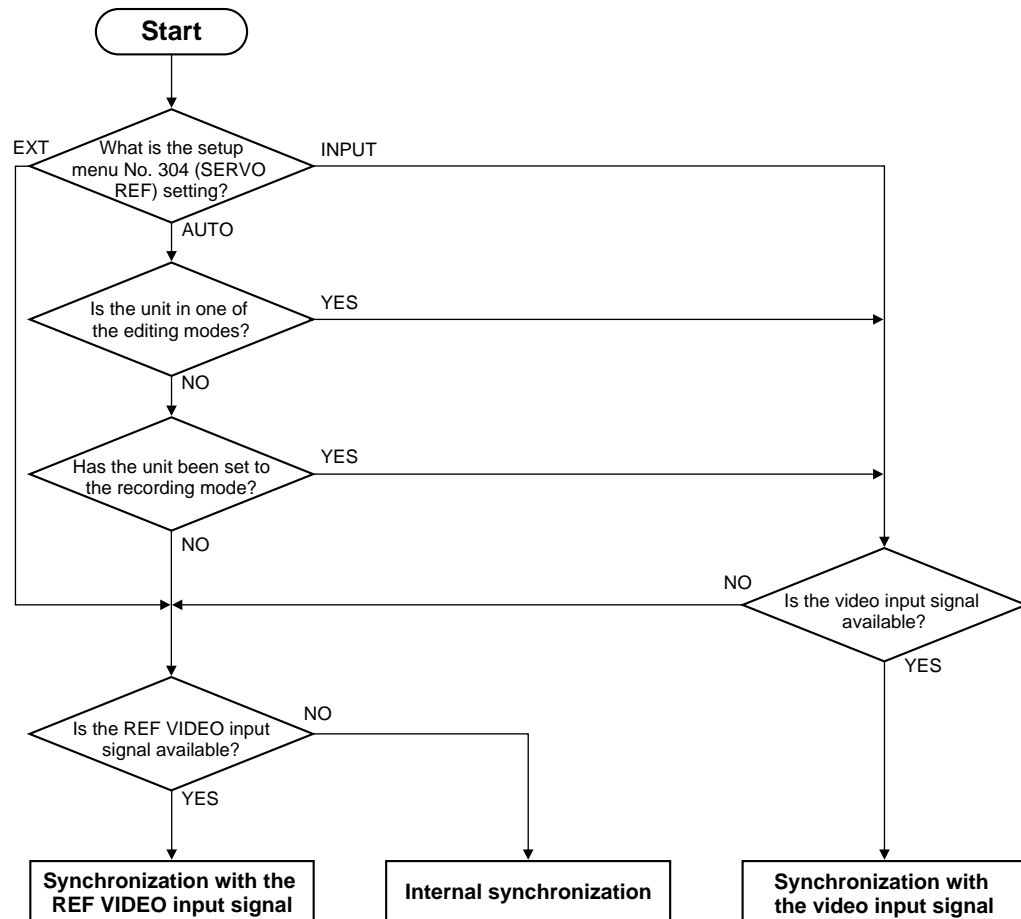
Synchronization is determined as follows depending on the availability of the REF VIDEO input signal when "BB" or "CB" has been selected as the setup menu No. 600 (INT SG) setting.

- When the REF VIDEO input signal is available: Synchronization with the REF VIDEO input signal
- When the REF VIDEO input signal is not available: Internal synchronization

Video output signals and servo reference signal

Servo reference signal

The REF VIDEO input signal or video input signal is selected as the servo reference signal. As shown in the figure below, the signal is selected in accordance with the setup menu settings, VTR mode and availability of the video input signal.



<Notes>

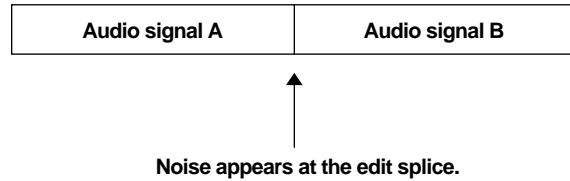
Synchronization is determined as follows depending on the availability of the REF VIDEO input signal when "BB" or "CB" has been selected as the setup menu No. 600 (INT SG) setting.

- When the REF VIDEO input signal is available: Synchronization with the REF VIDEO input signal
- When the REF VIDEO input signal is not available: Internal synchronization

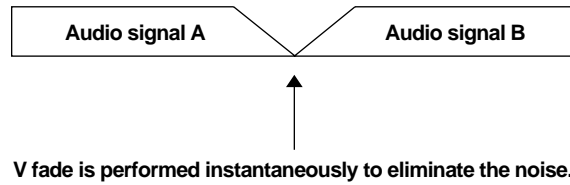
Audio V Fade Function

When editing tapes, the edit point splicing selection (setup menu No. 311 and 312) information is recorded on the tape. This information is then sensed during playback, and V fade or cut processing is automatically performed for these sections. [However, only when the playback fade selection (No. 727) is AUTO.]

When the edit point splicing selection (setup menu No. 311 and 312) is CUT



When the edit point splicing selection (setup menu No. 311 and 312) is FADE



<Notes>

- When the playback fade selection (No. 727) is CUT, cut processing is performed for all splices.
- When the playback fade selection (No. 727) is FADE, V fade processing is performed for all splices.

Audio recording channel and monitor output selection

Audio recording channel

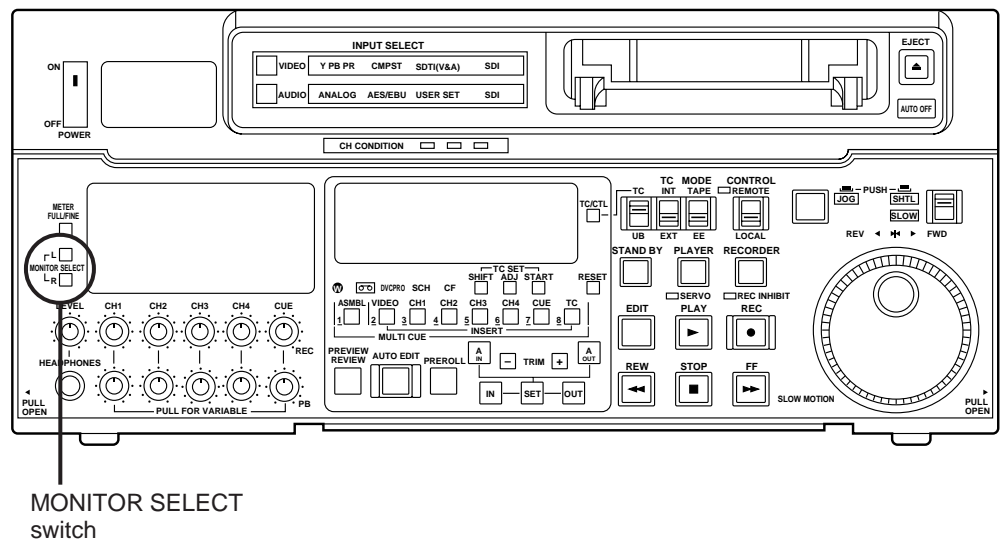
The audio recording channels are selected on the AUDIO setup menu as shown below.

Recording track	Recording signal
CH1	CH1 input/CH2 input/CH1 input + CH2 input
CH2	CH1 input/CH2 input/CH1 input + CH2 input
CH3	CH3 input/CH4 input/CH3 input + CH4 input
CH4	CH3 input/CH4 input/CH3 input + CH4 input
CUE	CUE input/CH1 input/CH2 input/CH3 input/CH4 input/ CH1 input + CH2 input/CH3 input + CH4 input/CH1 input + CH2 input + CH3 input + CH4 input

Monitor output channel

The monitor output channels are selected using the MONITOR SELECT switch as shown below.

Monitor output	Output signal
L	CH1/CH2/CH3/CH4/CH1+CH2/CH3+CH4/CH1+CH3/ CH2+CH4/CUE
R	CH1/CH2/CH3/CH4/CH1+CH2/CH3+CH4/CH1+CH3/ CH2+CH4/CUE



Printed circuit board

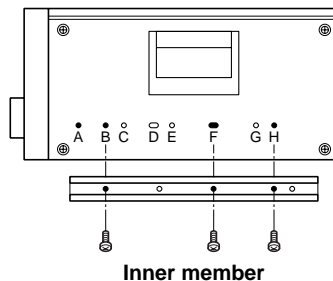
Printed circuit board	Abbr. name	Full name	Function	Factory setting
F8 board ADDA1	SW1	Audio Input Impedance SW	This sets the CH1 audio input impedance. HIGH/600Ω	HIGH
	SW41	Audio Input Impedance SW	This sets the CH2 audio input impedance. HIGH/600Ω	HIGH
	SW 101	Audio Input Impedance SW	This sets the CH3 audio input impedance. HIGH/600Ω	HIGH
	SW 141	Audio Input Impedance SW	This sets the CH4 audio input impedance. HIGH/600Ω	HIGH
H1 board CUE	SW101	Cue Input Impedance SW	This sets the CUE input impedance. HIGH/600Ω	HIGH

Rack mounting

The unit can be mounted into a 19-inch standard rack if the optional rack-mounting adaptors (AJ-MA75P) are used. For the installation rails, it is recommended that the rail and bracket for 18" length (model number CC3061-99-0400) of Chassis Trak be used. If an even greater clearance is to be left between the VTR and rack when the VTR is pulled out, however, it is recommended that the 22" long Chassis Trak (model number CC-3001-99-0191) be used. (The complete slide rail and bracket unit is not available from Panasonic.) For further details, consult with your dealer.

- 1 Use the removed screw to attach the inner members of the slide rails. Refer to below for the places where they are to be secured with the screws.

Locations where the screws are secured on right (R) side of inner members of slide rails



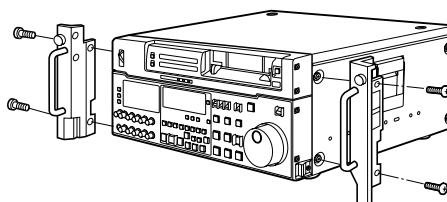
Attach the inner members at the same symmetrical positions on the left (L) side.

Note: The letters "A" to "H" are not actually marked on the side panels.

The length of the screws used is subject to restriction. Use screws which are less than 10 mm long in their place.

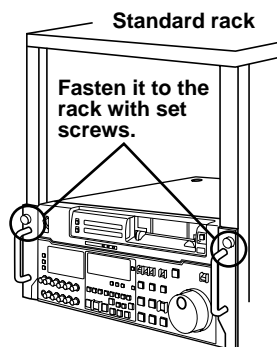
6 screws must be used to secure each inner member. When using the 22" long slide rails, secure the screws at 4 locations.

- 2 Attach the outer member brackets to the rack.
Check that the height is the same for the left and right brackets.
- 3 Remove the four screws at the front for attaching the left and right side panels.
- 4 Attach the AJ-MA75P rack mount adaptor using the 4 screws included.



Rack-mounting adaptors

- 5 Remove the 4 rubber legs from the bottom of the unit, and install the unit in the rack. After the unit has been installed, check that it moves smoothly along the rails.



<Notes>

- Keep the temperature inside the rack to between 5°C and 40°C.
- Bolt the rack securely to the floor so that it will not topple over when the VTR is drawn out.

Video head cleaning

This unit is equipped with an auto head cleaning function which automatically reduces the amount of dirt on the video heads. However, in order to maximize the unit's reliability, it is recommended that the video heads be cleaned as and when appropriate.

For further details on how to actually clean the heads, consult with one of our service companies or with your dealer.

Condensation

Condensation occurs due to the same principle involved when droplets of water form on a window pane of a heated room. It occurs when the unit or tape is moved between places where the temperature or humidity varies greatly or when, for instance:

- It is moved to a very humid place full of steam or a room immediately after it has been heated up.
- It is suddenly moved from a cold location to a hot or humid location.

When moving the unit to locations such as these, leave it standing for about 10 minutes rather than switching on the power immediately.

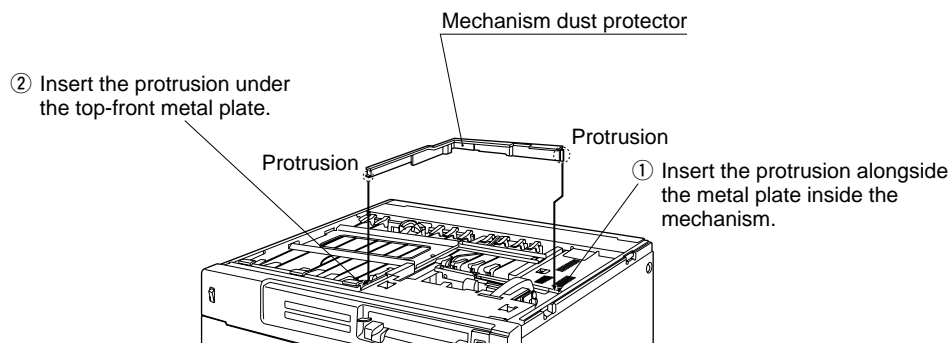
If condensation has formed on or in the unit, the AUTO OFF lamp lights and the cassette tape is automatically ejected.

Keep the power supplied and simply wait until the AUTO OFF lamp goes off.

<Note>

Do not use alcohol, benzine, paint thinners or any other solvents. They cause discoloration of the unit's external parts surfaces and mar the paint finish.

Installing the mechanism dust protector



Error messages

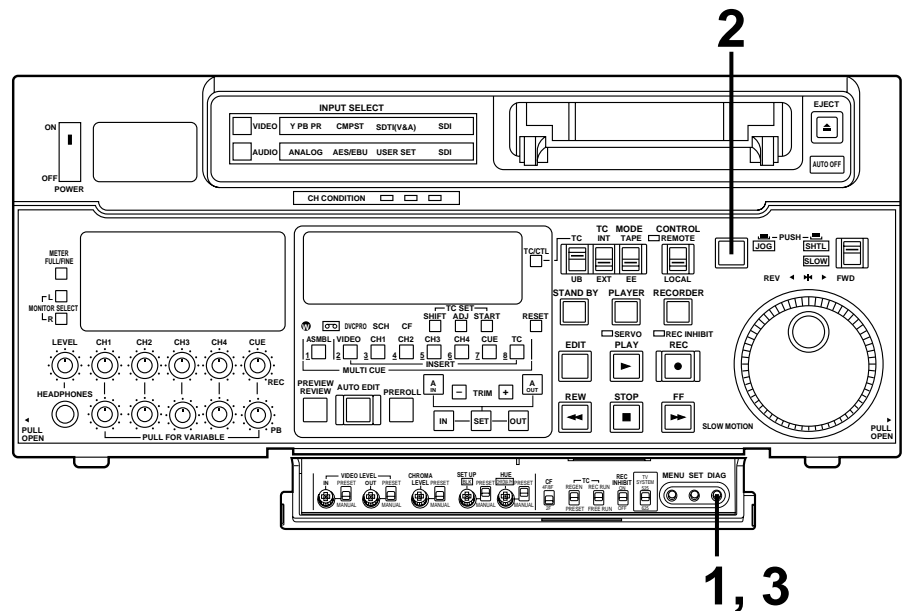
When a warning occurs in this unit, the warning lamp lights up.
Opening the DIAG menu will display the warning description on the counter display and the monitor. Also, when an abnormal operation is detected in this unit, the AUTO OFF lamp lights up and a message appears on the counter display.

DIAG menu

This display the VCR information.
VCR information includes “WARNING” information, serial number of the unit and “HOURS METER” (usage time) information. A DIAG menu appears on the monitor when the monitor is connected to the VIDEO OUT 3 connector on the connector section.

Displaying the DIAG menu

- 1** Press the DIAG button.
The DIAG menu screen is displayed on the monitor, and the message is displayed on the counter display.
- 2** The “WARNING” information, serial number of the unit and “HOURS METER” information can be switched by pressing the search buttons.
- 3** Press the DIAG button again to return to the original display.



“WARNING” information display

- A warning message is displayed whenever a warning occurs (the warning lamp lights up).
When warnings have not been detected, “NO WARNING” is displayed.
- When multiple warning occur, the descriptions for each warning can be checked by turning the search dial.

Error messages

Displaying the "HOURS METER" information

Turn the search dial to move the cursor (). The description for the item where the cursor is located is shown on the counter display.

Item No.	Item	Description
Ser		Displays the unit's serial No.
H00	OPERATION	Displays the time that the power has been supplied in one-hour units.
H01	DRUM RUN	Displays the time that the drum has been rotating in one-hour units.
H02	TAPE RUN	Displays the time that the tape has been running during FF, REW, PLAY, SEARCH (JOG, VAR, SHTL), REC, and EDIT modes (except for STILL in the JOG, VAR or SHTL mode) in one-hour units.
H03	THREADING	The number of times for threading/unthreading is displayed in single units.
H11	DRUM RUN r	Displays the time that the drum has been rotating in one-hour units. (Can be reset)
H12	TAPE RUN r	Displays the time that the tape has been running during FF, REW, PLAY, SEARCH (JOG, VAR, SHTL), REC, and EDIT modes (except for STILL in the JOG, VAR or SHTL mode) in one-hour units. (Can be reset)
H13	THREADING r	The number of times for threading/unthreading is displayed in single units. (Can be reset)
H30	POWER ON	The number of times the power has been turned on is displayed in single units.

<Notes>

- The resettable items in the "HOURS METER" information are reset by the shop when performing maintenance or other work.
- The search buttons and the search dial cannot be operated while the DIAG menu is displayed.

If "T&S&M" is selected in the setup menu No. 008 (DISPLAY SEL), a message appears in the mode display whenever a warning or error occurs. When multiple events occur, the event with the highest priority is displayed.

Priority	Display	Description
High ▲ ⋮ ▼ Low	Error messages (See error message table)	When an abnormal operation is detected in this unit, the AUTO OFF lamp lights up and an error message is displayed.
	INT SG	If "BB" or "CB" in No. 600 (INT SG) in the setup menu is selected, pressing the REC button or the EDIT button (E to E mode) will display "INT SG" for the first two seconds. This is also displayed for the first two seconds when starting editing.
	NO INPUT	If there is no input signal (except for analogue audio) to the connector selected using the INPUT SELECT switch, pressing the REC button or the EDIT button (E to E mode) will display "NO INPUT" for the first two seconds. This is also displayed for the first two seconds when starting editing.
	Warning messages (See error message table)	When a warning occurs in this unit, the warning lamp lights up and a warning message is displayed. When multiple warnings occur, the warning with the highest priority is displayed.

Error messages

Warning messages

Priority	Monitor display	Description	VTR operation
High ↑ ↓ Low	UNKNOWN SIG	This appears when the SDTI input signals are not DVCPRO or DV format signals*1.	No recording operations can be performed.
	NOT 1×25M SIG	This appears when the SDTI input signals are not DVCPRO (25 Mbps) format 1× transfer signals.	No recording operations can be performed.
	NOT 1×50M SIG	This appears when the SDTI input signals are not DVCPRO50 (50 Mbps) format 1× transfer signals.	No recording operations can be performed.
	INVALID VIDEO SIG	This appears when the compressed video signals in the SDTI input signals are invalid.	Operation continues*2 No editing operations can be performed.
	INVALID AUDIO SIG	This appears when the audio signals in the SDTI input signals are invalid.	Operation continues*3 No editing operations can be performed.
	INVALID TC SIG	This appears when the time codes in the SDTI input signals are invalid.	Operation continues*4 No editing operations can be performed.
	FAN STOP	This is displayed when the fan motor stops.	Operation continues
	NO RF	This appears during playback when a blank section (tape blank) lasting for one or more seconds has been detected. Such a section is identified as a tape blank when all of the following conditions are met. <ul style="list-style-type: none"> • No head outputs • No playback data readout • No CTL (Excluding DV and DVCAM tapes) 	Operation continues
	SERVO NOT LOCKED	This is displayed when the servo is not locked for three or more seconds during playback, recording, or editing.	Operation continues
	LOW RF	This is displayed when envelope levels approximately 1/3 that of normal levels are detected for more than one second during playback, recording, or editing.	Operation continues
	HIGH ERROR RATE	This is displayed when the error rate increases and correction/interpolation is performed on either the video or audio playback signal.	Operation continues
	OVER RECORDING	When voice-over editing is performed using the internal audio memory, this message appears if the duration of the signals recorded in the memory exceeds 20 seconds.	Operation continues

*1: The data stream format complies with the SMPTE 321M standard.

*2: This warning appears only during recording operations. In cases like this, no signals are recorded on the tape and only the erasure of the existing signals will be performed.

*3: This warning appears only during recording operations. In cases like this, the signals are recorded with the audio signals muted.

*4: This warning appears only during recording operations. In cases like this, the internally generated time codes are recorded.

Table of AUTO OFF Error messages

Counter display	Monitor display	Description	VTR operation (Restart condition)
CAP ROTATE TOO SLOW	CAP ROTA TOO SLOW	If the capstan motor speed is abnormally low, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
CAP TENSION ERROR	CAP TENSION ERROR	If an abnormal tension at the supply side is detected in the capstan mode, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
DEW	DEW	If condensation is detected, the AUTO OFF lamp lights, the message display flashes, and the VTR is transferred to the eject mode. After the tape is ejected, the drum rotates in order to eliminate the condensation. When the condensation has been eliminated, the AUTO OFF lamp and message display go off, and the VTR can be used. <Notes> 1) If condensation is detected in the eject mode, the drum starts rotating as soon as it is detected. 2) If condensation is detected when the cassette has been inserted, the drum rotation is stopped, and after the tape is ejected, the drum starts rotating.	EJECT (Normal operation resumed after condensation is eliminated)
DRUM ROTATE TOO FAST	DRUM ROTA TOO FAST	If the cylinder motor speed is abnormally high, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
DRUM ROTATE TOO SLOW	DRUM ROTA TOO SLOW	If the cylinder motor speed is abnormally low, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
DRUM TORQUE ERROR	DRUM TORQUE ERROR	When it has been detected that the cylinder motor is subject to an abnormal torque, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
E-FF	E-FF	If the tape start and tape end are detected simultaneously either during or after loading, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
FRONT LOAD ERROR	FRONT LOAD ERROR	The AUTO OFF lamp lights and the message display flashes when the take-up reel has been rotating idly for a fixed period of time while the start/end processing operation during loading (half position) is being performed.	STOP (POWER OFF→ON)
FRONT LOAD MOTOR	FRONT LOAD MOTOR	If the cassette does not move up even when 6 seconds have elapsed since the VTR was transferred to the eject mode, the AUTO OFF lamp lights, and the message display flashes. <Note> If the cassette does not move down inside the machine even when 6 seconds have elapsed since the cassette was inserted, the VTR is transferred to the eject mode.	STOP (POWER OFF→ON)
LOADING MOTOR	LOADING MOTOR	When the unloading operation is not completed within 6 seconds, the AUTO OFF lamp lights, and the message display flashes. <Note> When the loading operation is not completed within 6 seconds, the VTR is transferred to the eject (unloading) mode.	STOP (POWER OFF→ON)

Table of AUTO OFF Error messages

Counter display	Monitor display	Description	VTR operation (Restart condition)
REEL DIR UNMATCH	REEL DIR UNMATCH	If the reel motor at the take-up side is running in the reverse direction, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
REEL TENSION ERROR	REEL TENSION ERROR	If an abnormal tension at the supply side is detected in the reel mode, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
SERVO COMM ERROR	SERVO COMM ERROR	When the servo microcomputer does not follow the instructions of the system control microcomputer even when 10 seconds have elapsed, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
SERVO CONTROL ERROR	SERVO CONTROL ERR	When there is no response from the servo microcomputer for 1 or more seconds, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
SERVO ERROR	SERVO ERROR	When only the servo microcomputer was reset in an instantaneous power failure, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
S-FF/REW TIMEOVER	S-FF/REW TIMEOVER	If the start/end processing operation is not completed, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
S REEL ROTA TOO FAST	S REEL TOO FAST	If the supply reel motor should rotate at an abnormally fast rate, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
S REEL TORQUE ERROR	S REEL TORQUE ERR	If an abnormal torque applied to the supply reel motor is detected or if an abnormal current flowing to the current-sensing resistor is detected, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
T REEL ROTA TOO FAST	T REEL TOO FAST	If the take-up reel motor should rotate at an abnormally fast rate, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
T REEL TORQUE ERROR	T REEL TORQUE ERR	If an abnormal torque applied to the take-up reel motor is detected, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
UNLOAD ERROR	UNLOAD ERROR	If the tape has not been wound up during unloading, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
WINDUP ERROR	WINDUP ERROR	If, after the total tape amount has been detected, the amount of tape wound up on the take-up reel and the amount of tape supplied by the supply reel differ to an abnormal extent while the tape is travelling in the forward or reverse direction, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
WINDUP REEL NOT ROTA	W-UP REEL NOT ROTA	If, after the cassette has been inserted, the tape take-up reel has not wound up the tape while the total tape amount is not detected and while the tape is travelling in the forward or reverse direction, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)

RS-232C interface

1. Introduction

(1) The VTR can be operated by commands when the RS-232C interface is used.

(See command table on pages 109 – 111.)

(2) Conditions for acknowledging commands from RS-232C interface

The front panel REMOTE/LOCAL switch must be at REMOTE.

The setup menu No. 204 “RS232C SEL” must be ON.

If the above conditions are not met, [ACK] + [STX]ER001[EXT] is returned to the external unit.

Whether the [ACK] code is returned depends on the setting which has been selected for setup menu item No. 209 “RETURN ACK”.

2. Hardware specifications

External interface specifications

1) Connector specifications

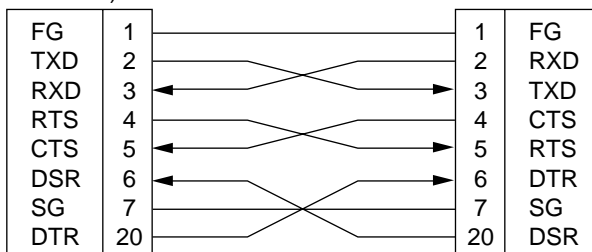
Connector: D-SUB 25-pin (crossover cable supported)

Pin No.	Signal	Circuit name	Description
1	FG	Protective ground	Frame ground
2	RXD	Received data	Data is sent to PC.
3	TXD	Transmitted data	Data is received from PC.
4	CTS	Clear to send	Shorted with pin 5.
5	RTS	Request to send	Shorted with pin 4.
6	DTR	Data terminal ready	No processing
7	SG	Signal ground	Signal ground
20	DSR	Data set ready	+ voltage output after communication enable status

2) Example of connection with controller (PC)

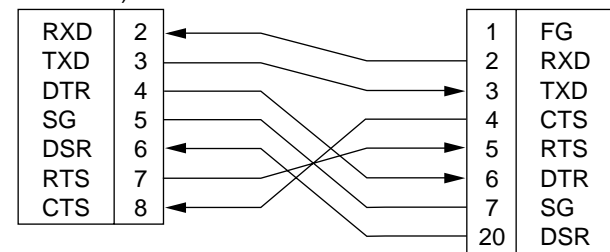
■ Using crossover cable with D-SUB 25-pin connectors

PC side
(D-SUB 25-pin connector)



■ Using crossover cable with D-SUB 9-pin and 25-pin connectors

PC side
(D-SUB 9-pin connector)



3. Software specifications

Protocol

1) Communication parameters

Communication system	Asynchronous, full duplex
Communication speed	300/600/1200/2400/4800/ <u>9600</u>
Bit length	7 bit/ <u>8 bit</u>
Stop bit	<u>1 bit</u> /2 bit
Parity bit	<u>NONE</u> /ODD/EVEN
ACK code	<u>ACK code returned</u> /ACK code not returned <Note> The ACK code is what is returned from the VTR to the controller when data has been successfully sent from the controller.

The underlining indicates the factory settings.

Any changes to the settings can be made using the setup menu items listed below.

Communication parameter	Setup menu item
Communication speed	No. 205 BAUD RATE
Bit length	No. 206 DATA LENGTH
Stop bit	No. 207 STOP BIT
Parity bit	No. 208 PARITY
ACK code	No. 209 RETURN ACK

2) Send format [controller (PC) → VTR]

■ Data format

[STX] [command] [:] [data] [ETX]
 02h XX XX XX 3Ah XX-XX 03h ←(ASCII code: symbols, numbers upper-case letters)

20h<XX<7Fh

- [command]: Command identifier; a 3-byte identifier (ASCII code: symbols, numbers, upper-case letters) is sent as the command.
- [:]: This code serves as a delimiter between the command and data.
- [data]: Data (ASCII code: symbols, numbers, upper-case letters) can be added in the number of bytes required.

■ Outline of send procedure from controller

1. The send command starts with STX (start of text = 02h). The command is then identified by COMMAND which follows and the data is added as required.
The format ends with ETX (end of text = 03h).
2. When a different command is to be sent, a response is awaited from the VTR, and then the command is sent. (See page 108.)
3. If STX is sent again before ETX is sent, the receive data buffer inside the VTR is cleared. A command error is returned to the controller, and the data is newly processed with STX which was received again at the head.

RS-232C interface

3) Return format [VTR → controller (PC)]

The following responses are made to the command. If necessary, more than one response is made.

■ When the communication has terminated normally

1. The receive completion message is returned.

[ACK]
06h

2. The execution completion message is returned.

[STX] [command] [data] [ETX]
02h XX XX XX XX-XX 03h

- [command]: This is the message (data) which is returned or the execution completion message identifier.
- [data]: This is the data to be returned. It can be omitted.

Example: Send command Return message (data)
 [STX] OPL [ETX] → [ACK] [STX] OPL [ETX]

■ When the communication has terminated abnormally

[NACK]
15h

■ When processing is not possible due to incorrect data or trouble in the VTR

1. The receive completion message is returned.

[ACK]
06h

2. An error code is returned.

[STX] E R N₁ N₂ N₃ [ETX]
02h Error code 03h

4. Error code table

- ER001: Invalid command
- Unsupported command received.
 - Error in command execution
- ER002: Parameter error
- ER102: VTR mode error (front loading motor)
- ER103: VTR mode error (loading motor)
- ER104: VTR mode error (drum, capstan system)
- ER105: VTR mode error (reel system)
- ER106: VTR mode error (tension system)
- ER108: VTR dew error
- ER1FF: VTR system error

5. Command table

(1) Commands relating to operation control

<Notes>

- As for the return (completion) message, [ACK] is first returned when data is received, and the execution message is subsequently returned. It is only the execution message which is listed in this table.
- In the case of commands not listed in the table, ER001 (invalid command) is returned after [ACK] has been returned.

VTR operation	Send command	Return (completion) message	Supplementary notes
STOP	[STX] OSP [ETX]	[STX] OSP [ETX]	This command is for stopping the tape travel.
EJECT	[STX] OEJ [ETX]	[STX] OEJ [ETX]	This command is for ejecting the cassette tape. The resulting output picture and sound statuses differ according to the settings selected for the setup menu No. 105 (AUTO EE SEL) and the setup menu No. 111 (FRZ MODE SEL).
PLAY	[STX] OPL [ETX]	[STX] OPL [ETX]	This command is for starting playback.
REWIND	[STX] ORW [ETX]	[STX] ORW [ETX]	This command is for rewinding the tape. The resulting output picture and sound statuses differ according to the settings selected for the setup menu No. 105 (AUTO EE SEL). The maximum tape speed differs according to the setting selected for setup menu No. 102 (FF. REW MAX).
FAST FORWARD	[STX] OFF [ETX]	[STX] OFF [ETX]	This command is for fast forwarding the tape. The resulting output picture and sound statuses differ according to the settings selected for the setup menu No. 105 (AUTO EE SEL). The maximum tape speed differs according to the setting selected for setup menu No. 102 (FF. REW MAX).
REC	[STX] ORC [ETX]	[STX] ORC [ETX]	This command is for starting the recording.
SHTL FORWARD	[STX] OSF:data [ETX]	[STX] OSF [ETX]	This is the forward direction shuttle command.
	data = n: speed data 0: STILL (STILL) 1: ×0.03 (×0.03) 2: ×0.1 (×0.1) 3: ×0.2 (×0.2) 4: ×0.5 (×0.5) 5: ×1 (×1) 6: ×2 (×1.85) 7: ×4.1 (×3.1) 8: ×9.5 (×9.5) 9: ×16*1 (×16*1) A: ×32*1 (×32*1)		
	*1 This speed differs according to the setting selected for setup menu No. 101 (SHTL MAX). The value for the DV/DVCAM format is shown in parenthesis ().		

RS-232C interface

VTR operation	Send command	Return (completion) message	Supplementary notes
SHTL REVERSE	[STX] OSR:data [ETX]	[STX] OSR [ETX]	This is the reverse direction shuttle command.
	data = n: speed data 0: STILL (STILL) 1: ×0.03 (×0.03) 2: ×0.1 (×0.1) 3: ×0.2 (×0.2) 4: ×0.5 (×0.5) 5: ×1 (×1) 6: ×2 (×1.85) 7: ×4.1 (×3.1) 8: ×9.5 (×9.5) 9: ×16*1 (×16*1) A: ×32*1 (×32*1)		
			*1 This speed differs according to the setting selected for setup menu No. 101 (SHTL MAX). The value for the DV/DVCAM format is shown in parenthesis ().
STANDBY OFF	[STX] OBF [ETX]	[STX] OBF [ETX]	This command is setting the VTR to standby OFF.
STANDBY ON	[STX] OBN [ETX]	[STX] OBN [ETX]	This command is setting the VTR to standby ON.

RS-232C interface

(2) Commands relating to inquiries

<Notes>

- As for the return (completion) message, [ACK] is first returned when data is received, and the execution message is subsequently returned. It is only the execution message which is listed in this table.
- In the case of commands not listed in the table, ER001 (invalid command) is returned after [ACK] has been returned.

VTR operation	Send command	Return (completion) message	Supplementary notes
CTL/TC DATA REQUEST	[STX] QCD [ETX]	[STX] CD data [ETX]	This command is for inquiring about the counter value.
		data = f w gh mm ss ff f = F w = S gh = CTL: g = SP (20h): for a plus display - (2Dh): for a minus display h = 0 - 9: hours TC: gh = 00 - 23: hours mm = 00 - 59: minutes ss = 00 - 59: seconds ff = 00 - 24: frames (625 mode) = 00 - 29: frames (525 mode)	CTL or TC is returned, whichever corresponds to the front display mode.
STATUS REQUEST	[STX] QOP [ETX]	[STX] xxx [ETX]	This command is for inquiring about the VTR's operation mode.
		xxx = OEJ: EJECT OFF: FAST FORWARD OPL: PLAY ORC: REC ORW: REWIND OSP: STOP (including the STANDBY ON) SRS: (IN/OUT) PREROLL OBF: STANDBY OFF OSF: SHTL FORWARD OSR: SHTL REVERSE OJG: JOG FORWARD/REVERSE OSW: VAR FORWARD/REVERSE EAE: AUTO EDIT EON: EDIT ON (MANUAL EDIT) EPV: PREVIEW ERV: REVIEW	
ID (VTR No.) REQUEST	[STX] QID [ETX]	[STX] data [ETX]	This command is for inquiring about the VTR used.
		data = AJ-D960E	

RS-232C interface

(3) Microsoft QuickBASIC sample programme

```
CLS
STX$ = CHR$(&H2): ETX$ = CHR$ (&H3): NAK$ = CHR$(15): ACK$ = CHR$(&H6)
PRINT "*** RS-232C COMMUNICATION SAMPLE PROGRAM ***"
PRINT "Type Command 'QUIT' to quit."
PRINT

REM *** Communication Port Initial & Open ***
REM Port 1,9600Bps,No parity,8 bit data,1 stop bit
OPEN "COM1:9600,N,8,1" FOR RANDOM AS #1 LEN = 256

REM *** Input Command & Send Command ***
SendCmd:
INPUT "Input Command ="; SEND$
IF SEND$ = "QUIT" THEN GOTO ProgEnd
PRINT #1, STX$ + SEND$ + ETX$

REM *** Wait for Receive Command ***
WHILE LOC(1) = 0
    WAITKEY$ = INKEY$
    IF WAITKEY$ = "Q" THEN PRINT "**** Quit ****": GOTO ProgEnd
WEND

REM *** Receive Command ***
RecvCmd:
RECV$ = INPUT$(1, #1)
IF RECV$ = STX$ THEN RECV$ = "[Stx]"
IF RECV$ = ACK$ THEN RECV$ = "[Ack]"
IF RECV$ = NAK$ THEN RECV$ = "[Nak]"
IF RECV$ = ETX$ THEN BUFFER$ = BUFFER$ + "[Etx]": GOTO DispOut
BUFFER$ = BUFFER$ + RECV$
GOTO RecvCmd

REM *** Output Receive Command ***
DispOut:
PRINT "Receive Command ="; BUFFER$
PRINT
BUFFER$ = ""
GOTO SendCmd

REM *** End Program ***
ProgEnd:
CLOSE
END
```


SDTI interface board

Digital data input/output operations using the SDTI format*1 (compressed digital interface) are enabled by installing the AJ-YAC960P SDTI interface board (optional accessory) in this unit.

*1: SDTI (serial data transport interface) complies with the SMPTE 305M standard.

The data stream format transferred via the SDTI complies with the SMPTE 321M standard.

How to use the SDTI/SDI common input signals

1. Using the signals as the SDI input signals

1-1 When "MANU" has been selected as the setup menu No. 650 (SER IN MODE) setting

Select SDI using the INPUT SELECT switch on the front panel.

1-2 When "AUTO" has been selected as the setup menu No. 650 (SER IN MODE) setting

Select SDTI or SDI using the INPUT SELECT switch on the front panel. SDI is automatically selected according to the input signal.

2. Using the signals as the SDTI input signals

2-1 When "MANU" has been selected as the setup menu No. 650 (SER IN MODE) setting

Select SDTI using the INPUT SELECT switch on the front panel.

2-2 When "AUTO" has been selected as the setup menu No. 650 (SER IN MODE) setting

Select SDTI or SDI using the INPUT SELECT switch on the front panel. SDI is automatically selected according to the input signal.

2-3 Selecting the time code

To select the time code of the SDTI input signal, set the TC INT/EXT switch to EXT, and select "VITC" using setup menu No. 505 (EXT TC SEL).

<Notes>

- When SDTI has been selected as the input signals, the SDTI signals are selected along with the video and audio signals.
- The video and audio signals in the SDTI input signals cannot be adjusted. The VIDEO INPUT LEVEL display is fixed at 0 dB.
- Only SDTI signals in the DVCPRO50 or DVCPRO format selected by setup menu No. 012 (SYS FORMAT) can be recorded. However, no guarantees are made either for the recording or for the EE pictures and sound when playback signals other than the regular 1× playback signals have been input.

SDTI interface board

How to use the SDTI/SDI common output signals

1. Using the signals as the SDI output signals

1-1 When playing back a DVCPRO50 or DVCPRO format tape in the EE mode
Select "SDI" as the setup menu No. 652 (SER OUT1 SEL) setting.

1-2 When playing back a DV or DVCAM format tape
Select "SDI" or "AUTO" as the setup menu No. 652 (SER OUT1 SEL) setting.

2. Using the signals as the SDTI output signals

2-1 When playing back a DVCPRO50 or DVCPRO format tape in the EE mode
Select "SDTI" or "AUTO" as the setup menu No. 652 (SER OUT1 SEL) setting.

2-2 When playing back a DV or DVCAM format tape
Select "SDTI" as the setup menu No. 652 (SER OUT1 SEL) setting.

<Notes>

- When playing back a DV or DVCAM format tape, DV compressed signals*¹ serve as the SDTI output.
- The video and audio signals in the SDTI output signals cannot be adjusted.
- During SLOW/STILL playback, the unprocessed video and audio signals are output as the SDTI output. When these video and audio signals are to be monitored using another device, they may differ from the video and audio signals played back by this unit.

*¹: Compliant with IEC61834-2.

How to use the 2× speed transmission mode

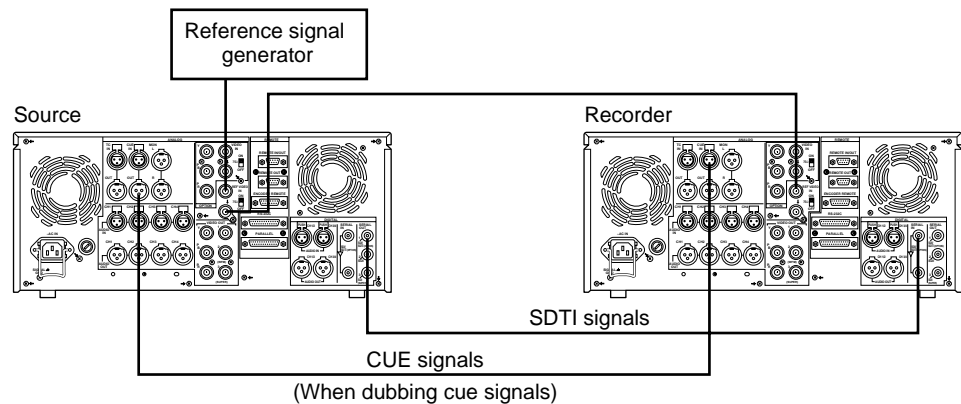
2× speed transmission mode is obtained by setting setup menu item No. 653 (SDTI MODE) to "2X_P." Insert a DVCPRO50 or DVCPRO tape and press the PLAY button for 2× speed playback with the VTR and 2× speed output of signals to the SDTI.

<Notes>

- Setup menu item No. 653 (SDTI MODE) is only effective when setup menu item No. 652 (SER OUT SEL) is set to "SDTI" or "AUTO".
- When the PLAY button is pressed in 2× speed transmission mode, playback will always be performed at 2× speed and 1× speed playback cannot be performed.
- In 2× speed transmission mode, the REC INHIBIT lamp will light when a tape is inserted, and recording operations are inhibited. Further, TAPE mode is always established and the EE screen is not output.
- When a DV/DVCAM tape is inserted, playback will always be at 1× speed, regardless of the setup menu item No. 653 (SDTI MODE) setting.

Precautions to observe when using the SDTI signals

- The unit cannot perform recording operations if the SDTI input signals are not 1× transfer signals in the DVCPRO50 or DVCPRO format selected by setup menu No. 012 (SYS FORMAT).
- Editing operations can be performed only when all the video and audio signals as well as the time codes in the SDTI input signals are regular data based on the DVCPRO50 or DVCPRO format selected by setup menu No. 012 (SYS FORMAT).
- Cue signals are not transferred by the SDTI interface. To dub these signals, use a separate cable for the cue signals. In this case, the selection based on setup menu No. 726 (REC CUE) is ignored, and input is fixed to cue.
- SDTI dubbing is not possible from tapes recorded using the DV or DVCAM format. Use SDI when dubbing tapes recorded in the DV or DVCAM format.
- No guarantees are made for the video and audio signal outputs when a tape on which slow playback signals have been input using SDTI for recording is played back again in the same slow mode.



Connections involving two units

Connector signals

VIDEO IN

SERIAL IN (DIGITAL)	BNC × 2	Active through
Y, P _B , P _R (ANALOG)	BNC × 3	(Board, option)
VIDEO IN	BNC × 2	Loop-through, 75Ω termination switch provided (Board, option)
REF VIDEO IN	BNC × 2	Loop-through, 75Ω termination switch provided

VIDEO OUT

SERIAL OUT (DIGITAL)	BNC × 3
Y, P _B , P _R (ANALOG)	BNC × 3 (Board, option)
VIDEO OUT	BNC × 3

AUDIO IN

SERIAL IN (DIGITAL)	BNC × 2	Active through
AUDIO IN (DIGITAL)	XLR × 2	CH1/CH2, CH3/CH4 AES/EBU format
AUDIO IN (ANALOG)	XLR × 4	CH1, CH2, CH3, CH4
CUE IN	XLR × 1	
TIME CODE IN	XLR × 1	

Pin No.	Signal
1	GND
2	HOT
3	COLD

AUDIO OUT

SERIAL OUT (DIGITAL)	BNC × 3	
AUDIO OUT (DIGITAL)	XLR × 2	CH1/CH2, CH3/CH4 AES/EBU format
AUDIO OUT (ANALOG)	XLR × 4	CH1, CH2, CH3, CH4
CUE OUT	XLR × 1	
TIME CODE OUT	XLR × 1	
MONITOR OUT	XLR × 2	
HEADPHONES (front)	6.5 mm	

RS-422A REMOTE (9P)

REMOTE IN/OUT

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	FRAME GROUND	4	RECEIVE COMMON	7	TRANSMIT B
2	TRANSMIT A	5	—————	8	RECEIVE A
3	RECEIVE B	6	TRANSMIT COMMON	9	FRAME GROUND

REMOTE OUT

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	FRAME GROUND	4	TRANSMIT COMMON	7	RECEIVE B
2	RECEIVE A	5	—————	8	TRANSMIT A
3	TRANSMIT B	6	RECEIVE COMMON	9	FRAME GROUND

Connector signals

PARALLEL REMOTE (25P)

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	PLAY COMMAND	10	————	19	STAND BY ON STATUS
2	STOP COMMAND	11	————	20	PREROLL STATUS
3	FF COMMAND	12	≥10V, MAX 300mA	21	SERVO LOCK STATUS
4	REW COMMAND	13	PLAY STATUS	22	OPERATION ENABLE STATUS
5	REC COMMAND	14	STOP STATUS	23	————
6	EJECT COMMAND	15	FF STATUS	24	————
7	STAND BY COMMAND	16	REW STATUS	25	GND
8	PREROLL COMMAND	17	REC STATUS		
9	IN SET COMMAND	18	EJECT STATUS		

<Notes>

- COMMAND pins: TTL level, active low, ≥100ms edge electrical signal.
- STATUS pins: open collector, sink current 6 mA

RS-232C REMOTE (25-pin D-SUB crossover cable supported)

Pin No.	Abbreviation	Circuit	Description
1	FRAME GROUND	Protective ground	Frame ground
2	RxD	Received data	Sends data to the PC.
3	TxD	Transmitted data	Receives data from the PC.
4	CTS	Clear to send	Shorted with pin 5.
5	RTS	Request to send	Shorted with pin 4.
6	DTR	Data terminal ready	No processing
7	GND	Signal ground	Signal ground
20	DSR	Data set ready	Positive power output after communication enable status

ENCODER REMOTE (15P)

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	————	6	SYSTEM H 0	11	RET GND
2	BLACK LEVEL		7SYS.SC COARSE (2)	12	————
3	C LEVEL	8	-12V	13	————
4	GND	9	CHROMA PHASE		14 SYS.SC FINE
5	+12V	10	VIDEO LEVEL	15	SYS.SC COARSE (1)

Specifications

GENERAL

Power supply: AC 220 – 240 V, 50 – 60 Hz
Power consumption: 280 W

Operating ambient temperature: 5°C to 40°C
Operating ambient humidity: 10% to 90% (no condensation)
Weight: 20 kg
Dimensions (W × H × D): 424 (max. 435.4) × 175.2 × 415 mm
(Not including the support legs, connectors, and JOG dial)

Recording format: DVCPRO50/DVCPRO format selectable
Recording video signal: 625i/525i selectable
Recording audio signal: DVCPRO50; 48 kHz 16-bit 4 channels
DVCPRO; 48 kHz 16-bit 2 channels

Recording tracks: Digital video audio; helical track
The time code is recorded in the sub-code area.
Cue track; 1 track
Control track; 1 track

Tape speed: 67.708 mm/sec (625i)
67.640 mm/sec (525i)

Recording time: 92 minutes (using the AJ-5P92LP)
33 minutes (using the AJ-5P33MP)

Tape: Metal tape
FF/REW time: Less than 3 min (with AJ-5P92LP)
Less than 2 min (with AJ-5P33MP)

Digital slow: DVCPRO50/DVCPRO; -1× to +2× speed
DV/DVCAM; -1× to +1× speed

Editing accuracy: ±0 frames (using the time code)
Tape timer accuracy: ±1 frame (using the continuous CTL signal)
Servo lock time: Less than 0.5 sec (colour framing/standby ON)

VIDEO

Digital video

Sampling frequencies: 625i/525i; Y; 13.5 MHz, P_B/P_R; 6.75 MHz (DVCPRO50)
Quantizing: 8 bits
Video compression method: DCT + adaptive sampling + variable-length encoding
Video compression rate: DVCPRO50; 1/3.3
DVCPRO; 1/5

Error correction: Reed-Solomon product code
Video recording/playback bit rate: DVCPRO50; 50 Mbps
DVCPRO; 25 Mbps

Digital IN/Analogue Component OUT

Video bandwidth: 625i; Y; 25 Hz to 5.5 MHz (±0.5 dB), 5.75 MHz (-2.0 dB)
P_B/P_R; 25 Hz to 2.5 MHz (±0.5 dB), 2.75 MHz (-2.0 dB)
525i; Y; 30 Hz to 5.5 MHz (±1.0 dB), 5.75 MHz (-2.0 dB)
P_B/P_R; 30 Hz to 2.5 MHz (±1.0 dB), 2.75 MHz (-2.0 dB)

S/N ratio: Better than 60 dB
K factor: Less than 1%
Y/P_B, P_R delay: Max. 10 ns

Video input connector

Analogue component input (option): BNC × 3 (Y, P_B, P_R)
Y; 1.0 V_{p-p}, 75Ω
P_B/P_R; 0.7 V_{p-p}, 75Ω (100% colour bar, 0% black level)

Analogue composite input (option): BNC × 2, loop-through, 75Ω on/off
Reference input: Analogue composite, BNC × 2, loop-through, 75Ω on/off
Serial digital component input: Complies with SMPTE 259M-C/EBU Tech.3267-E standard, BNC × 2, active through
SDTI input (option): Complies with SMPTE 305M/321M standard, BNC × 2, active through (also serves as SDI input connector)

Specifications

Video Output Connector

Analogue component output:	BNC × 3 (Y, P _B , P _R) Y; 1.0 V _{p-p} , 75Ω P _B /P _R ; 0.7 V _{p-p} , 75Ω (100% colour bar, 0% black level)
Analogue composite output:	BNC × 3, video 1, video 2 (video/WFM selectable), video 3 (superimpose on/off)
Serial digital component output:	BNC × 3, complies with SMPTE 259M-C/EBU Tech.3267-E standard, SDI 1, SDI 2, SDI 3, (superimpose on/off)
SDTI output (option):	BNC × 1, complies with SMPTE 305M/321M standard (also serves as SDI1 output connector)

Video Signal Adjustment

Composite video input signal:	±3 dB
Video output gain:	±3 dB
Video output chroma gain:	±3 dB
Video output chroma phase:	±30°
Video output black level:	±100 mV
Video output sync phase:	±15 μsec
Video output SC phase:	±180°

AUDIO

Digital Audio

Sampling frequencies:	48 kHz (synchronous with video)
Quantizing:	16 bits
Frequency response:	20 Hz to 20 kHz ± 1.0 dB (at the reference level)
Dynamic range:	Better than 90 dB (1 kHz, emphasis OFF, "A" weighted)
Distortion:	Less than 0.05% (1 kHz, emphasis OFF, reference level)
Crosstalk:	Less than -80 dB (1 kHz, between 2 channels)
Wow & flutter:	Below measurable limit
Headroom:	625i; 18 dB 525i; 20 dB
Emphasis:	T1 = 50 μsec, T2 = 15 μsec (on/off selectable)

Cue Track

Frequency response:	300 Hz to 6 kHz ± 3.0 dB
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Audio Input Connector

Analogue input (CH1/CH2/CH3/CH4):	XLR × 4, 600Ω/high impedance selectable (factory setting: 600Ω), +4/0/-20 dBm selectable*
Digital input (CH1/CH2, CH3/CH4):	XLR × 2, AES/EBU format
Serial digital input:	Complies with SMPTE 259M-C, 272M/EBU Tech.3267-E (BNC × 1, 75Ω)
Cue track input:	XLR × 1, 600Ω/high impedance selectable (factory setting: 600Ω), +4/0/-20/-60 dBm selectable*

Audio Output Connector

Analogue output (CH1/CH2/CH3/CH4):	XLR × 4, low impedance, +4/0/-20 dBm selectable (with 600Ω load)*
Digital output (CH1/CH2, CH3/CH4):	XLR × 2, AES/EBU format
Serial digital output:	Complies with SMPTE 259M-C, 272M-A/EBU Tech.3267-E (BNC × 1, 75Ω)
Cue track output:	XLR × 1, low impedance, +4/0/-20 dBm selectable (with 600Ω load)*
Monitor output:	XLR × 2, low impedance, +4/0/-20 dBm selectable (with 600Ω load)*
Headphones:	Variable level, 6.5 mm, 8Ω

Other Input/Output Connectors

Time code input:	XLR × 1, 0.5 to 8 V _{p-p} , 10 kΩ
Time code output:	XLR × 1, low impedance, 2.0±0.5 V _{p-p} (with 600Ω load)
RS-422A input:	D-sub 9-pin, RS-422A interface
RS-422A output:	D-sub 9-pin, RS-422A interface
RS-232C:	D-sub 25-pin, RS-232C interface
Parallel input/output:	D-sub 25-pin
Encoder remote:	D-sub 15-pin

Weight and dimensions when shown are approximately.
Specifications are subject to change without notice.

* EG model is fixed to -3 dBu.

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