

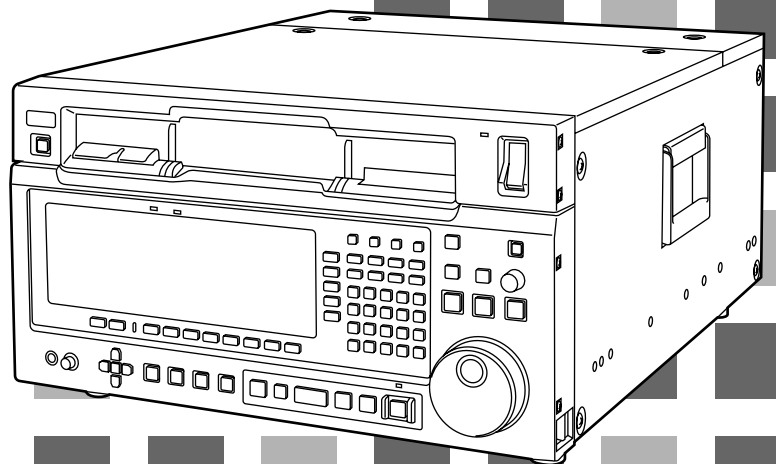
Panasonic



Digital Video Cassette Recorder

AJ-**HD3700H**_{PE}

Operating Instructions (Software)



Contents

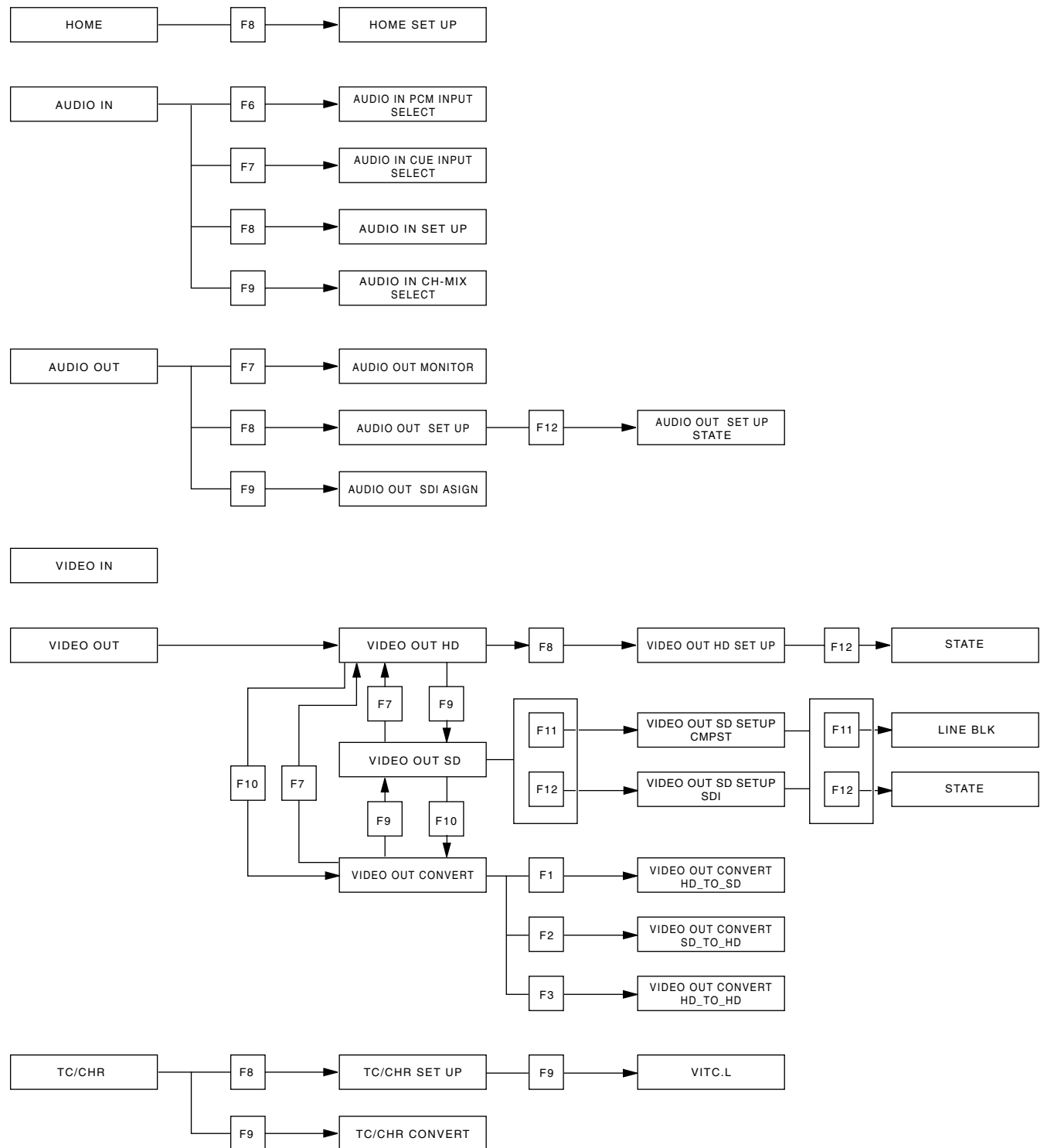
Menu screen transitions	4
Turning on the power	7
HOME menu displays	8
HOME menu	13
HOME SET UP menu	17
VIDEO IN menu	22
VIDEO OUT HD menu	24
VIDEO OUT HD SET UP menu	26
VIDEO OUT HD SET UP STATE menu	28
VIDEO OUT SD menu	30
VIDEO OUT SD SET UP COMPOSITE menu	32
VIDEO OUT SD SET UP CMPST STATE menu	34
VIDEO OUT SD SET UP SDI menu	36
VIDEO OUT SET UP LINE BLK (video output line blanking) menu	38
VIDEO OUT SD SET UP SDI STATE menu	40
VIDEO OUT CONVERT menu	42
VIDEO OUT CONVERT HD_TO_SD menu	43
VIDEO OUT CONVERT SD_TO_HD menu	44
VIDEO OUT CONVERT HD_TO_HD menu	45
AUDIO IN menu	46
AUDIO IN PCM INPUT SELECT menu	48

AUDIO IN CUE INPUT SELECT menu	51
AUDIO IN SET UP menu	53
AUDIO IN CH-MIX SELECT menu	55
AUDIO OUT menu	58
AUDIO OUT MONITOR menu	60
AUDIO OUT SET UP menu	62
AUDIO OUT SET UP STATE menu	66
AUDIO OUT SDI ASIGN menu	68
TC/CHR menu	70
TC/CHR SET UP menu	76
TC/CHR SET UP VITC.L menu	78
TC/CHR CONVERT menu	80
MULTI CUE menu	81
MULTI CUE SET UP menu	85
INSERT/ASSEMBLE MANUAL EDIT menu	87
INSERT/MANUAL EDIT CH SELECT menu	88
INSERT/ASSEMBLE MANUAL EDIT SET UP menu	90
INSERT/ASSEMBLE AUTO EDIT menu	98
INSERT AUTO EDIT CH SELECT menu	105
INSERT/ASSEMBLE AUTO EDIT SET UP menu	107

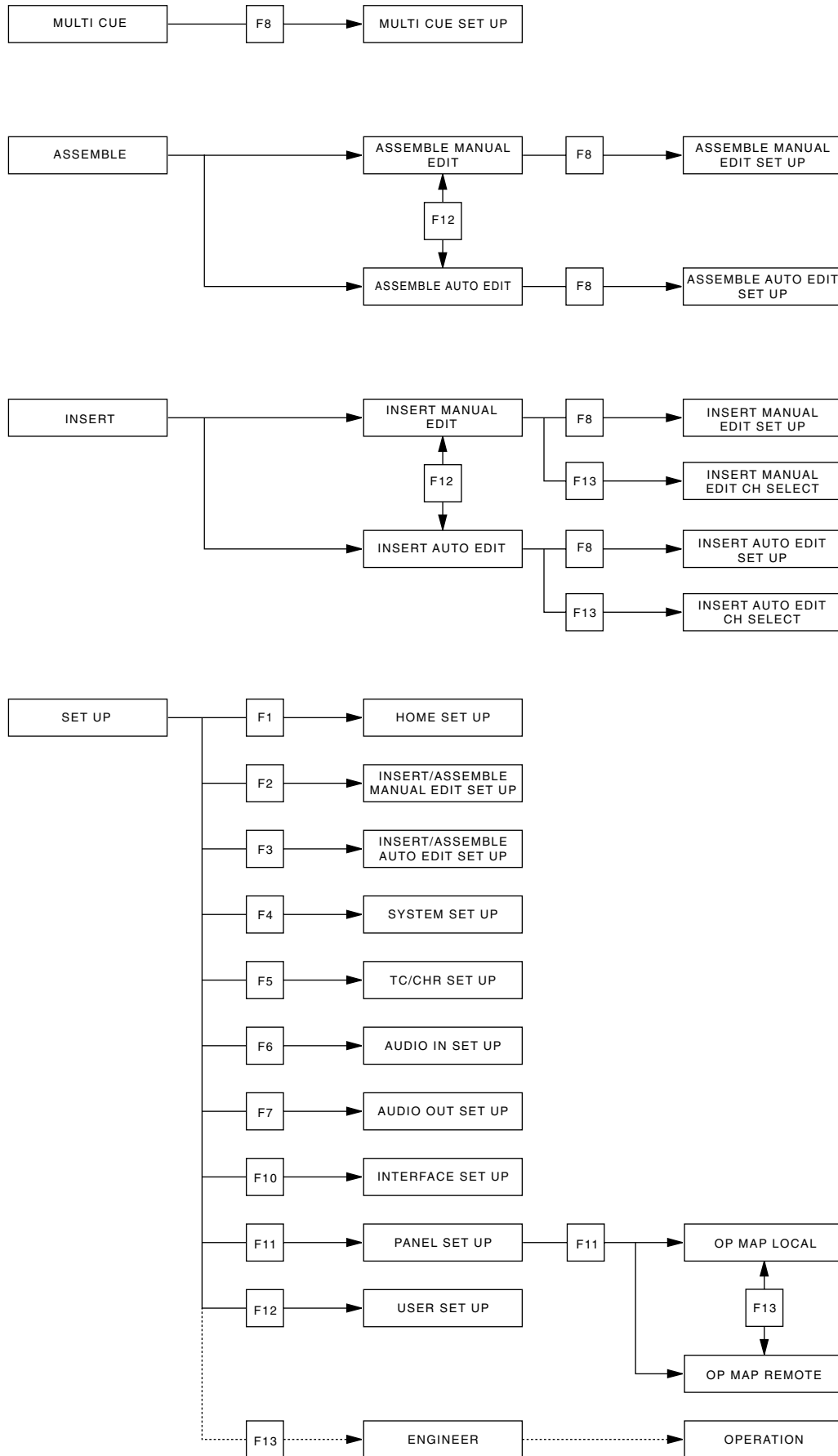
Contents

SET UP menu	111	TEST IC CARD ERROR LOG	
INTERFACE SET UP menu	112	menu	161
PANEL SET UP menu	118	TEST IC CARD ERROR LOG MONITOR	
PANEL SET UP (OP MAP REMOTE)		menu	162
menu	120		
PANEL SET UP (OP MAP LOCAL)		Error messages	163
menu	123	DIAG menu error messages	164
USER SET UP menu	125	DIAG ACTIVE menu	165
SYSTEM SET UP menu	130	DIAG MASKED menu	166
ENGINEER SET UP menu	136	DIAG LAST menu	167
OPERATION ENGINEER SET UP		DIAG error messages	168
menu	137	AUTO OFF error messages	172
		SYSTEM error messages	174
TEST menu	138	Operation messages	176
RF TEST menu	140	Operation messages (in AUTO EDIT	
RF adjustment value display menu . . .	143	mode)	177
AUDIO TEST menu	144		
MECHA TEST menu	145	Screen saver function	178
SYSTEM TEST menu	147		
SERVO TEST menu	148	List of menu screen displays	179
TEST FRONT menu	151		
TEST FRONT PANEL menu	152	INDEX	195
TEST FRONT KEY CHECK menu . . .	153		
Inserting the IC card	155		
TEST IC CARD menu	156		
TEST IC CARD USER menu	157		
TEST IC CARD MULTI CUE menu . . .	158		
TEST IC CARD MULTI CUE SELECT			
menu	159		
TEST IC CARD MULTI CUE MONITOR			
menu	160		

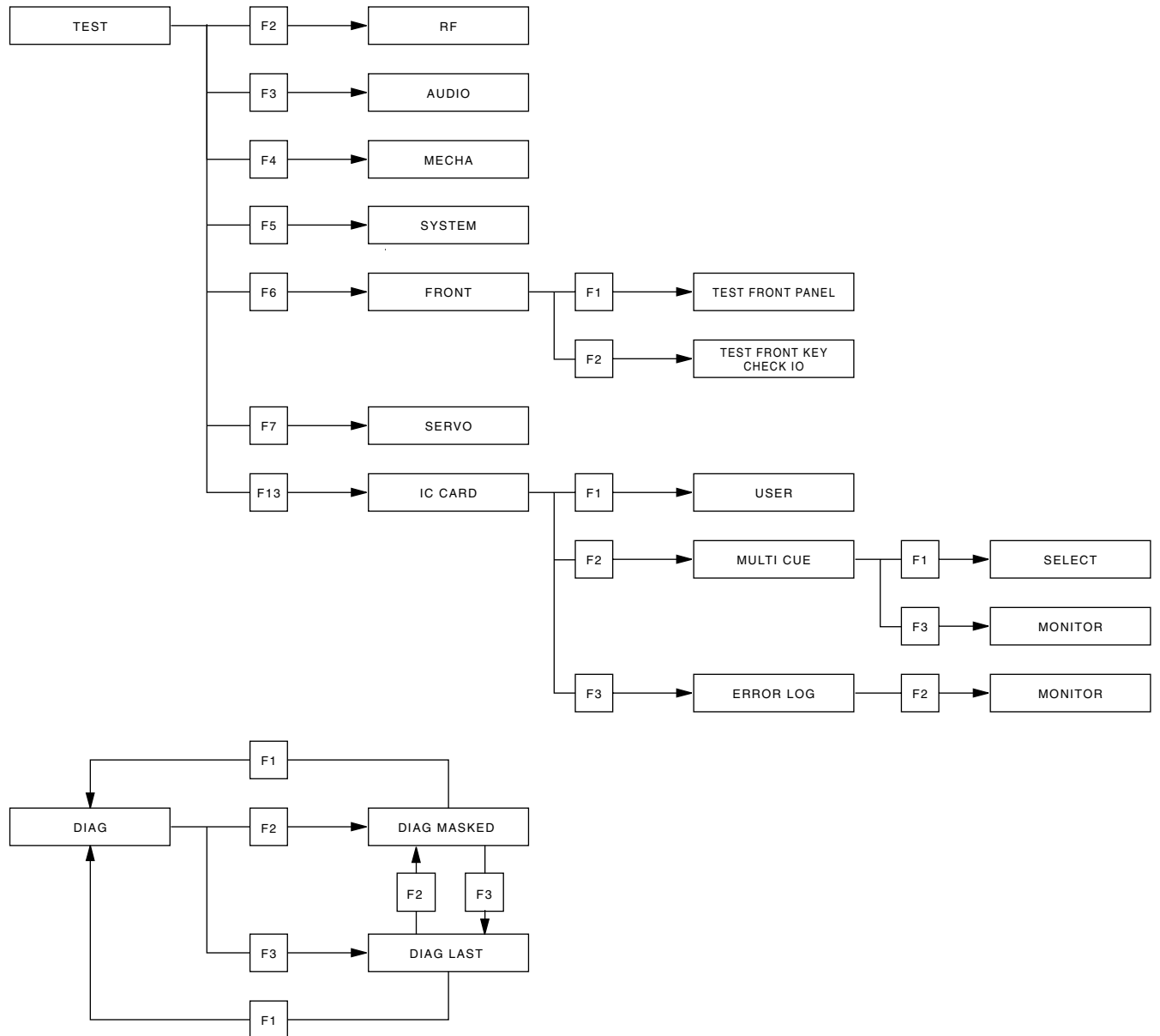
Menu screen transitions



Menu screen transitions



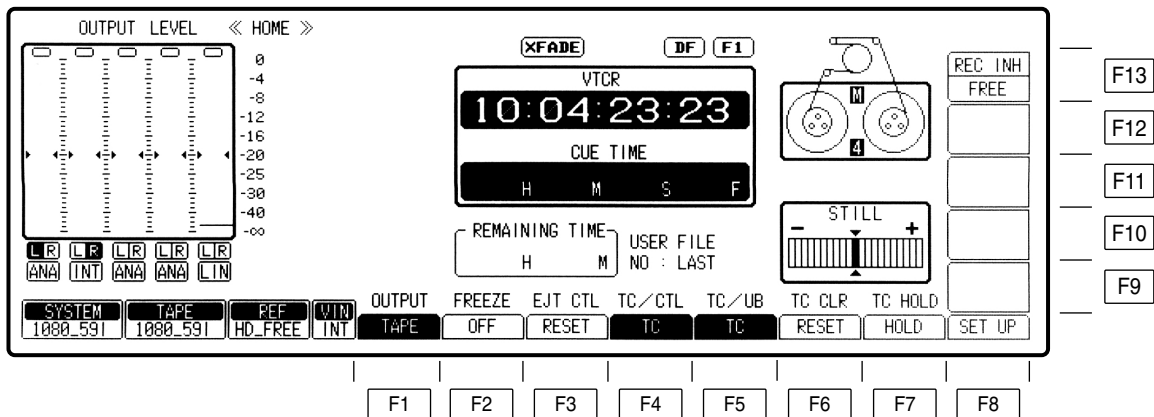
Menu screen transitions



Turning on the power

Turn on the power.

▼
The HOME menu is displayed.



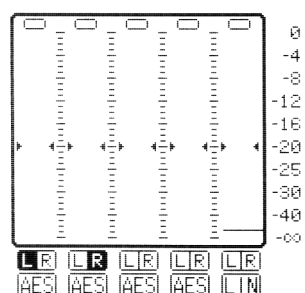
This VTR comes already programmed with menus that correspond to specific operating objectives, and the operations performed on each differ from one menu to another. When a menu is selected using a menu selection button, what appears on the display changes, and the function keys (F1 to F13) also implement the function corresponding to the respective menu items.

SET UP menus are provided in order for the user to have settings on hand for the seldom used functions, etc. among the various menu items.

The HOME menu is provided as the VTR's basic menu. It automatically appears on the display when the power has been turned on. (However, the IC CARD menu will automatically appear if an IC card has been inserted.)

HOME menu displays

- ☐ **Audio signal display area** (Either 8 or 4 channels will be automatically displayed depending on the format used.)



Use this to adjust the level of the input audio signals on the AUDIO IN menu. Alternatively, it is used to adjust the level of the audio playback output signals on the AUDIO OUT menu.

Press the L/R buttons to select the audio channel whose signals are to be output from the AUDIO MONITOR L/R connectors and HEADPHONES jack.

These display the type of input signals of each channel. The F1 (CH-1) to F6 (DIGITAL) [or F1 (CH-1) to F13 (CH-8) for 8 channels] on the AUDIO IN PCM INPUT SELECT menu are selected using the F9 (CH-MIX) key on the AUDIO IN CUE INPUT SELECT menu.

- ☐ **ANA:** Signals from the ANALOG INPUT connectors.
- CH1 AES:** Signals from the DIGITAL AUDIO INPUT connectors.
- ☐ **CH1 SER:** Signals from the serial V/A input connectors.
- ☐ **INT:** Signals from the internal signal generator.
- ☐ **LINE:** Signals from the CUE IN connector.
- CUE MIX:** CH1 to CH8 signals selected by CUE MIX setting.
- ☐ **AUTO:** This is always used for digital channel backup purposes.

- ☐ **Display lamps**



SYSTEM: This indicates the video system format which was set on the SETUP/SYSTEM menu.

1080_59i
525_59i
1080_23psf
1080_24psf
720_59p
1080_50i

TAPE: This indicates the format of the playback tape. "*****" appears in the EJECT mode.

If a section is unrecorded or if the format of a section cannot be identified, the lamp blinks while the display of the format identified up to the section concerned is retained.

1080_59i, 1080_60i
1035_59i, 1035_60i
525_59i
1080_23p, 1080_24p
720_59p, 720_60p
1080_50i

How to display the menus:

- AUDIO IN menu:

AUDIO IN

- AUDIO OUT menu:

AUDIO OUT

- AUDIO IN PCM INPUT SELECT menu:

AUDIO IN → F6

- AUDIO IN CUE INPUT SELECT menu:

AUDIO OUT → F7

HOME menu displays



REF: This indicates the status of the output reference signal which has been selected by the VTR.

HD REF59: HD REF with a field frequency of 59.94 Hz is selected.

HD REF47: HD REF with a field frequency of 47.96 Hz is selected.

HD REF48: HD REF with a field frequency of 48.00 Hz is selected.

HD REF50: HD REF with a field frequency of 50.00 Hz is selected.

SD REF59: The NTSC signal is selected as the SD REF signal.

SD REF50: The PAL signal is selected as the SD REF signal.

HD IN59: The HD serial input with a frame frequency of 29.97 Hz is selected as the REF signal.

HD IN47: The HD serial input with a frame frequency of 23.98 Hz is selected as the REF signal.

HD IN48: The HD serial input with a frame frequency of 24.00 Hz is selected as the REF signal.

HD IN50: The HD serial input with a frame frequency of 25.00 Hz is selected.

SD IN: The SD serial input is selected as the REF signal. (SD IN can be selected only when 525i has been selected as the VTR's system format.)

HD FREE: The HD internal signal generator is used since no REF signal has been selected using the OUT REF setting.

SD FREE: The SD internal signal generator is used since no REF signal has been selected using the OUT REF setting.

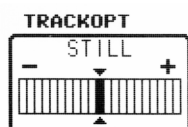
*DUAL: HD REF47 and SD REF59 have been selected simultaneously.

This setting takes effect when 1080/23psf has been selected as the VTR's system format, AUTO has been selected by the OUT REF setting, and two of the above REF signals have been input.

*This VTR uses the HD REF and SD REF signals as a reference for entering the 24 → 60 conversion inside the unit.

HOME menu displays

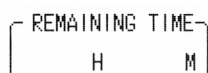
□ Setting mode display area



The displays appearing in this area indicate the modes which have been set.

- CUT:** Appears when the audio cut editing mode is set.
- XFADE:** Appears when the audio cross-fade editing mode is set.
- VFADE:** Appears when the audio V fade editing mode is set.
- INTRP:** Appears when the time code interpolation mode (in which the time code cannot be read out accurately) is established.
- DF:** Appears when the drop frame mode is set.
- F1/F2:** Indicates the field numbers for VITC.
- EMPHASIS:** Appears when pre-emphasis is applied to the audio signals.
- TRACK VAR:** Appears when an adjustment has been made with the tracking deviated from the fixed position.
- TRACK OPT:** Appears when an optimizing adjustment has been made for the tracking.

□ Remaining tape time



This indicates the remaining tape time as the tape travels.

□ User file display

USER FILE
NO : LAST

This indicates the number of file which is called when the power is switched on or the currently called user file. If there is a discrepancy between the contents of the user file displays and even one current setting, “*” will appear in front of the file number.

□ Time code displays



These indicate the time code values.

- CTL1:** Normal control signal
- CTL2:** Control signal (which cannot be reset)
- LTCR:** LTC readout
- LUBR:** LTC user bit readout
- VTOR:** VITC readout
- VUBR:** VITC user bit readout
- TCG:** Value generated by generator
- LUBG:** Value of LTC user bit generated
- VUBG:** Value of VITC user bit generated
- E-TC:** External time code
- E-UB:** External user bit

□ Checking the value generated by generator



Press the INPUT CHECK key. While the key is held down, the value generated by the generator is displayed.

TCG

00 : 41 : 07 : 04

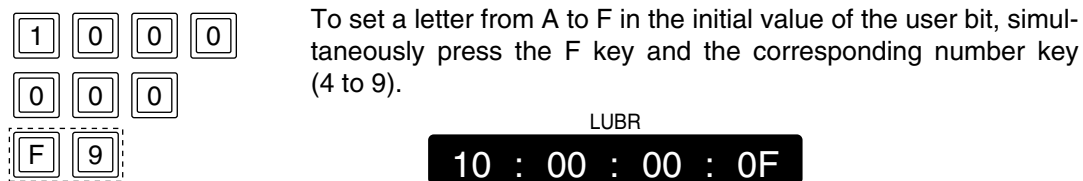
HOME menu displays

□ Setting the initial value for the time code

- (1) Press the center cursor key.
The display now appears in reverse video.



- (2) Press the center cursor key again so that the cursor is made to serve as a column cursor, and then use the number key to input the value.



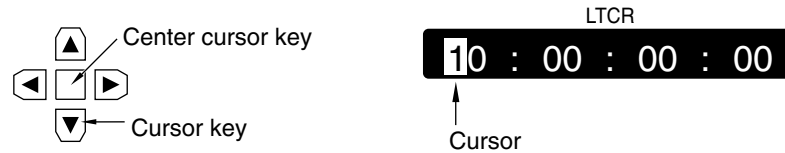
- (3) Press the ENT key.
The cursor is now cleared. (This completes the setting of the initial value.)

- To clear the value entered, press the C key in step (2).
- To check the value which has been input, press the INPUT CHECK key.

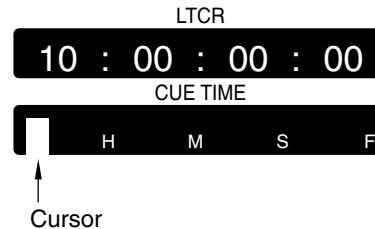
HOME menu displays

□ Setting and checking the cue time

- (1) Press the center cursor key.
The time code display now appears in reverse video.



- (2) Press the [▼] cursor key.
The cue time now appears in reverse video.



- (3) Press the center cursor key again so that the cursor is made to serve as a column cursor, and then use the number keys to input the value.



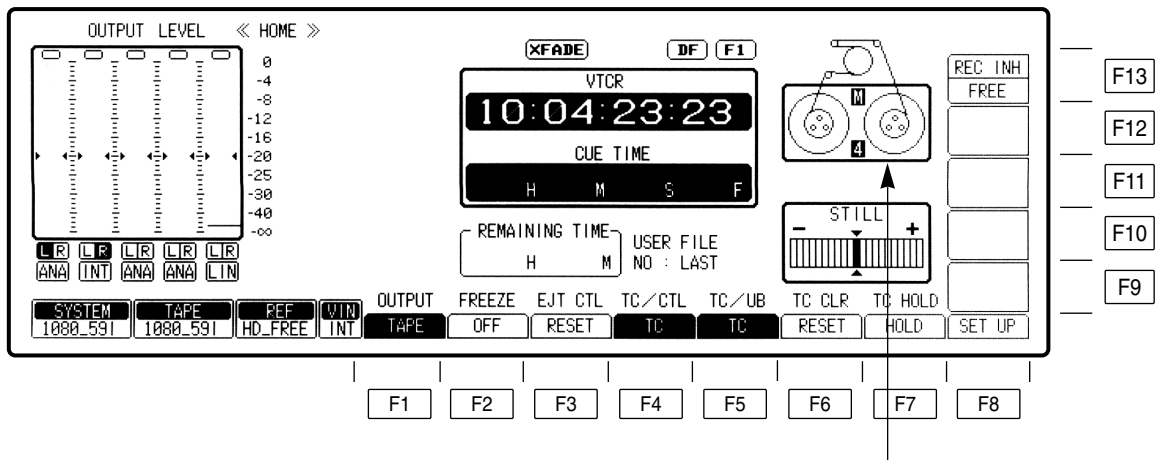
- (4) Press the ENT key.
The cursor is now cleared. (This completes the setting of the cue time.)

- (5) Press the PREROLL button.
The cue time on the tape is searched, and the tape is prerolled for the cue time, after which it stops.

- When the ENTRY button is pressed, the tape's current position is automatically input.
- Pressing the F key and PREROLL button at the same time in step (5) initiates the search operation, and the tape stops at the entered cue point.

HOME menu

This menu is displayed by pressing the following key: **HOME**



4: Cassette tape in the 4-channel audio format.

8: Cassette tape in the 8-channel audio format.

(This display indicates the C bit pin position of the cassette tape.)

If system format does not matched with the C bit pin position of the cassette tape, 4 or 8 display will flash to warn its miss-matching.

HOME menu

Key	Key designation	Description
F1	OUTPUT For selecting the audio/video output signals.	The mode opposite to the current one is established only while this key is held down. (When the key is pressed during TAPE setting, the EE mode is established.) (If this key is pressed together with the F key, the display switches.) TAPE: Outputs playback signal. EE: Outputs the EE system signals. •Valid only in STOP, REC or EJECT mode. Invalid during playback. •This key does not operate during CUE signal output.
F2	FREEZE For outputting the flash freeze frame.	Outputs field memory 1 screen continuously. Flash freeze frame is assumed only while this key is pressed. If this key is pressed together with the F key, the setting can be fixed. ON: Output field memory screens. OFF: No freeze-framing.
F3	EJT CTL For CTL operation in EJECT mode.	RESET: Resets CTL1 when cassette is ejected. Resets CTL2 when cassette is loaded. HOLD: Holds CTL values for both CTL1 and CTL2 when cassette is ejected.
F4	TC/CTL For timer mode switching.	TC: Displays the time code. CTL1: Displays the control signal value. (This can be reset to zero.) CTL2: Automatically resets the control signal value to zero when the cassette tape is loaded. The control signal value cannot be reset after this.
F5	TC/UB For switching the display between the TC and UB values.	TC: Displays the TC value. UB: Displays the UB value. •Valid only when [TC] is selected with F4 key. •Displays the time code readout value during playback. •Displays the time code value recorded on tape during recording. To display values generated at times other than recording, press the INPUT CHECK key.
F6	TC CLR For clearing the TC value. (TCG CLR) For clearing the UBG value. (UB CLR) For clearing the UB value.	Valid only when the TC/CTL key is set to CTL1. RESET: CTL1 time data is reset to zero. Valid only when the TC/CTL key and the TC/UB key are set to TC. RESET: TCG value is reset to zero when F key is simultaneously pressed. Valid only when the TC/CTL key is set to TC and the TC/UB key is set to UB. RESET: UBG value is reset to zero when F key is simultaneously pressed. However, since there are two UBG values, VITC UBG and LTC UBG, they are supported as follows by the TCR settings on the TC/CHR menu. TCR: AUTO Both VITC UBG and LTC UBG are reset to zero. TCR: LTC LTC UBG is reset to zero. TCR: VITC VITC UBG is reset to zero.
F7	TC HOLD For holding the TC value on the display.	Continues to display the time code data which was displayed when the key was pressed. •Press again to release the hold value.

HOME menu

Key	Key designation	Description
F8	SET UP	Transfers the VTR to the HOME SET UP menu screen.
F9–F10	—	
F11	PREAD A* For setting audio pre-read to ON or OFF (SD mode only)	This is used during insert editing in the AUTO or MANUAL EDIT mode when the already recorded digital signals are to be read in advance and used as the editing source. To set the item to ON, press the F together with the F11 or F12 key. To set it to OFF, press the F11 or F12 key on its own. When ON is selected as the setting, refer to the section on pre-read editing (next page). ON: The digital signals are read in advance (pre-read). OFF: The digital signals are not read in advance (pre-read). Simultaneous playback is possible during editing.
F12	PREAD V* For setting video pre-read to ON or OFF (SD mode only).	● If OFF is selected by the F11 or F12 key, vibration may occur when EE has been selected on the STATE screen. (This happens only when the input and output of the same channel have been connected.) ● If ON has been set for either of these items, the up-converter picture will be muted.
F13	REC INH For setting the record inhibit mode.	FREE: Enables recording. NRML.REC: Prohibits normal recording; enables editing. (The REC INHIBIT lamp blinks at long intervals.) ALL: Prohibits all recording. (REC INHIBIT lamp glows.) ● The CASSETTE REC INHIBIT mode which is set using the recording inhibit pins on the cassette tape takes precedence over this key's setting.

*The above functions can be set only when the 480/59.94i system format is selected.

HOME menu

□ Pre-read editing

- (1) Set the pre-read function to ON by pressing the F key and F11 key (PREAD A) or F12 key (PREAD V) together.

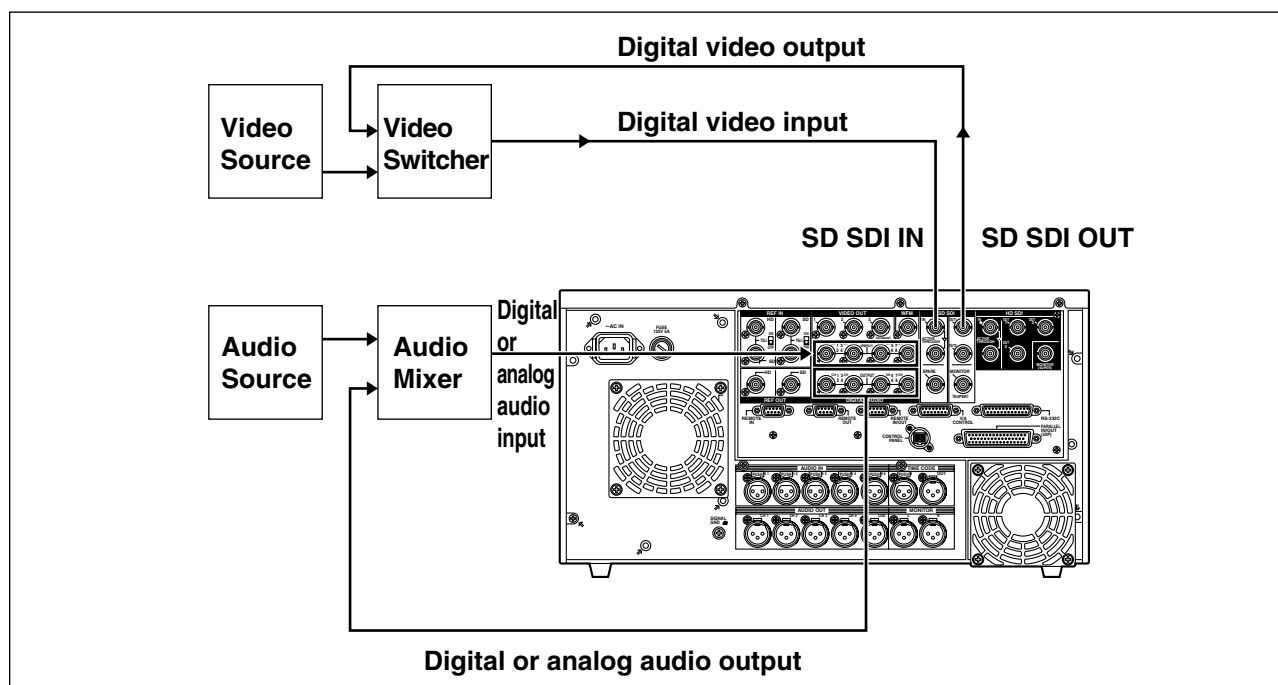
PREAD V
ON
PREAD A
ON

- (2) Perform the connections for pre-read editing as shown in the figure below.
- (3) Proceed with pre-read editing in the desired insert editing mode.
- (4) Restore the original connections upon completion of the editing.
- (5) Press the F11 or F12 key to set the pre-read function to OFF.
- (6) Check that there are no loop connections.

<Note>

During pre-read operations, the SD SDI MONITOR and AUDIO MONITOR connectors function as monitoring connectors, and the input signals are output from the IN point to the OUT point in their original state.

Further, the preread monitor function will not work when the monitor MIX function has been set to ON. To use the function, set MIX to OFF.



Connections for pre-read editing

HOME SET UP menu

This menu is displayed by pressing the following keys: **HOME** → **F8**
 OR
SET UP → **F1**

The screenshot shows the 'HOME : SET UP' menu. On the left, there's an 'OUTPUT LEVEL' section with a scale from 0 to -40 and a 'REFERENCE' box containing 'OUT REF : AUTO INPUT HD REF SD REF'. Below this is a row of buttons: SYSTEM (1080_23PsF), TAPE (*****), REF (HD_FREE), and WIN (DIG). To the right of these are 'SYNC PLY AT PLAY' (OFF), 'PRG PLY' (FIELD), 'CAP LOCK' (FINE), and 'TAPE MD.' (0.0%). Further right is a 'STILL' section with a scale from - to + and a 'REC INHIBIT' section with buttons for CASSETTE, FREE, VID/CNTL, and ALL. On the far right, there's a 'LTCR' section with a timer at 00:00:00:00 and buttons for STBY OFF (3 MIN), STILL (1 MIN), and PREROLL (5 SEC). At the bottom right, there's an 'EXIT' button. To the right of the screen, function keys F9 through F13 are listed, corresponding to the menu options: F9 for EXIT, F10 for PREROLL, F11 for STILL, F12 for 1 MIN, F13 for 3 MIN.

HOME SET UP menu

Key	Key designation	Description
F1	SYNC PLY Sync play.	Automatically compensates for the start initiated for the playback mode. For instance, when the VTR is set to the playback mode from the preroll point, it synchronizes its own phase to ensure that the tape arrives at the IN point after the preroll time has elapsed. (The function takes effect only when the front panel controls are used for operation.) ON: Sync play function operates. OFF: Normal playback is assumed.
F2	AT PLY For switching the playback picture in JOG/VAR.	FIELD: Plays the tape field by field. FRAME1*1/ FRAME2*2: Plays back on a frame by frame basis at the – 1a to + 1a speed and on a field by field basis at all other speeds. If the tape material image has a scene cutoff when moving from No. 2 field to No. 1 field, as when editing with the No. 1 field as cutoff, use FRAME 1. Use Frame 2 when the No. 2 field is the scene cutoff.
F3	PRG PLAY Program play.	Selects the variable step for program play. FINE: 0.1% step COARSE: 1.0% step
F4	PRG PLAY Program play.	Normal playback occurs at variable speed within the range of $\pm 5\%$ with the variable step of the F3 key. Refer to “Programmed play function”.
F5	CAP LOCK*3 For setting the capstan servo lock	Selects the capstan servo lock mode during playback. 4F AUTO (8F AUTO: 1080/23p, 1080/24p, 1080/50i): Assumes color frame auto lock mode. If there is any discontinuity in the color frame during playback, the unit locks again at a new color frame. 4F FORCE (8F FORCE: 1080/23p, 1080/24p, 1080/50i): Assumes color frame forced lock mode. If there is any discontinuity in the color frame during playback, the unit preserves the field sequence at initial lock. 2F: Assumes frame lock mode. ●The capstan servo lock mode can be set in AUTO (or MANUAL) EDIT SET UP menu. If the two settings differ, priority is given to the final mode setting.
F6	TAPE MD. Tape mode when the VTR is in standby OFF.	HD.STOP: Stops the drum when the tape is loose. HLF LOAD: Half-loads the tape.
F7	—	
F8	EXIT	Returns the VTR to the HOME menu screen.

*1 This item is not displayed when the 720/59p mode has been selected.

*2 This item does not function when the 720/59p, 1080/23Psf or 1080/24Psf mode has been selected.

*3 <Note>

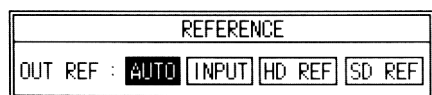
In the 1080/59i mode, the factory setting for this item is 2F. In the 1080/23p mode, it is 8F AUTO. The fact that the factory setting differs depending on the format should be borne in mind when one format is converted into another.

HOME SET UP menu

Key	Key designation	Description
F9–F10	——	
F11	PREROLL For selecting the preroll time.	After pressing the F11 key, turn the ADJUST control. Selection can be made between 0 and 30 seconds.
F12	STILL For setting the STOP/STILL (static frame) mode holding time.	Sets the stop/still (still picture) mode holding time. In order to protect the tape, the VTR is automatically transferred to the tape tension release mode (loosing) after a specific time has elapsed. This specific time can be set. After pressing the F12 key, turn the ADJUST control. 1 sec, 3 sec, 30 sec, 1 min, 3 min or 5 min can be set as the holding time.
F13	STBY OFF For setting the time for the transfer to standby OFF.	For setting the time for the transfer from tape loosing to standby OFF. After pressing the F13 key, turn the ADJUST control. 1 sec, 3 sec, 30 sec, 1 min, 3 min, 16 min and ∞ [Infinity: No transfer to standby OFF mode (drum stop/half loading)] can be set.

HOME SET UP menu

□ Reference



OUT REF: This sets the video output signal reference.

AUTO: When the REF VIDEO connector input signal is available, the output reference is locked to REF VIDEO; when it is not available, it is locked to the INPUT input signal. When neither the REF VIDEO nor INPUT input signal is available, the internal signal serves as the reference.

Depending on the format, the sequence of priority is as follows:

HD mode:

HD REF>SD REF>INPUT>FREE

SD mode:

SD REF>HD REF>INPUT>FREE

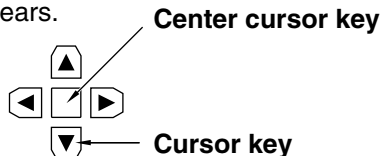
INPUT: When the INPUT input signal is available, the output reference is locked to the INPUT signal; when it is not available, the internal signal serves as the reference.

HD REF: When the HD REF input signal is available at the HD REF IN connector, the output reference is locked to the REF signal; when it is not available, the internal signal serves as the reference.

SD REF: When the SD REF input signal is available at the SD REF IN connector, the output reference is locked to the REF signal; when it is not available, the internal signal serves as the reference.

Operation

- (1) Press the center cursor key.
The cursor now appears.



- (2) Move the cursor to the item to be set using the cursor keys.
The selected item now blinks.

OUT REF: INPUT

- (3) Press the ENT key. The setting is now entered.

*In the 720/59p mode, use the SD REF for synchronization with an external component. (In this mode, SD REF or SF FREE is used.)

When AUTO has been set, the sequence of priority is as follows: SD REF>FREE.

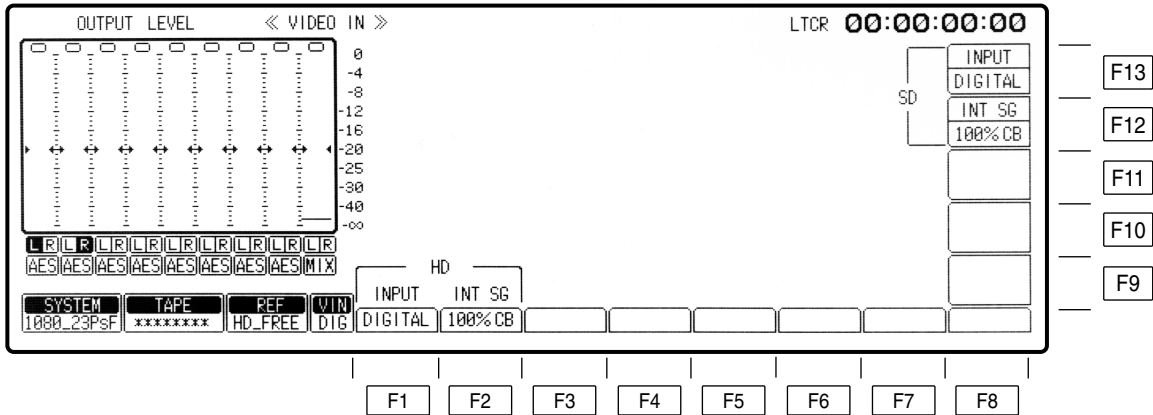
HOME SET UP menu

☐ Programmed play function

- (1) Press the F4 (PRG PLY) key.
- (2) Set the step to FINE or COARSE using the F3 (PRG PLY) key.
- (3) Set the programmed play speed using the ADJUST control.

PRG PLY
2.0%

- (4) Press the PLAY and VAR buttons together.
- (5) To change the playback speed, turn the ADJUST control while pressing the VAR button.
- (6) To stop programmed play, press the STOP button.



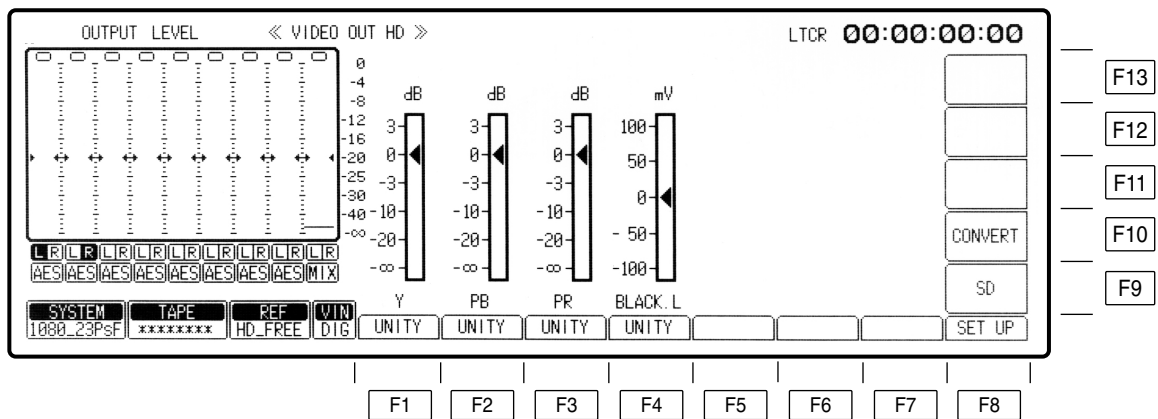
VIDEO IN menu

Key	Key designation	Description
F1	INPUT For selecting the HD video input signals.	DIGITAL: Selects the serial input signals. INT SG: Selects the internal signals.
F2	INT SG For selecting the type of HD internal signals.	75% CB: Selects the 75% color bar signal. 100% CB: Selects the 100% color bar signal. RAMP: Selects the RAMP signal. MULT-BST: Selects the multi-burst signal. BLACK: Selects the black-burst signal. SIF PLL: Selects the signals for checking the serial interface PLL. SIF EQ: Selects the signal for checking the serial interface equalizer. SMPTE CB*: Selects the SMPTE color bar signal.
F3–F11	—	
F12	INT SG For selecting the type of SD internal signals.	75% CB: Selects the 75% color bar signal. 100% CB: Selects the 100% color bar signal. RAMP: Selects the RAMP signal. MULT-BST: Selects the multi-burst signal. BLACK: Selects the black-burst signal. SIF PLL: Selects the signals for checking the serial interface PLL. SIF EQ: Selects the signal for checking the serial interface equalizer. SMPTE CB*: Selects the SMPTE color bar signal.
F13	INPUT For selecting the SD video input signals.	DIGITAL: Selects the serial input signals. INT SG: Selects the internal signals.

*When the 720/59p format has been selected, the SMPTE CB function does not function

VIDEO OUT HD menu

This menu is displayed by pressing the following key: VIDEO OUT



VIDEO OUT HD menu

Key	Key designation	Description
F1	For adjusting the Y level.	$-\infty$ to +3 dB (−3 dB to +3 dB in fine adjustment mode) ● Establishes the fine adjustment mode if the key is pressed together with the F key.
F2	PB For adjusting the P _B level.	$-\infty$ to +3 dB (−3 dB to +3 dB in fine adjustment mode) ● Establishes the fine adjustment mode if the key is pressed together with the F key.
F3	PR For adjusting the P _R level.	$-\infty$ to +3 dB (−3 dB to +3 dB in fine adjustment mode) ● Establishes the fine adjustment mode if the key is pressed together with the F key.
F4	BLACK.L For adjusting the black level.	± 100 mV
F5–F7	—	
F8	SET UP	Transfers the VTR to the VIDEO OUT HD SET UP menu screen.
F9	SD	Transfers the VTR to the VIDEO OUT SD menu screen.
F10	CONVERT	Transfers the VTR to the VIDEO OUT CONVERT menu screen.
F11–F13	—	

VIDEO OUT HD SET UP menu

This menu is displayed by pressing the following keys: VIDEO OUT → F8

« VIDEO OUT : HD SET UP »								LTCR 00:00:00:00	
						SERIAL SYS PHASE			F13
						0 SAMPLES		STATE	F12
									F11
									F10
									F9
LINE CONV				SERIAL SYS PHASE		INTERP.			
OFF					UNITY	AUTO	EXIT		
F1	F2	F3	F4	F5	F6	F7	F8		

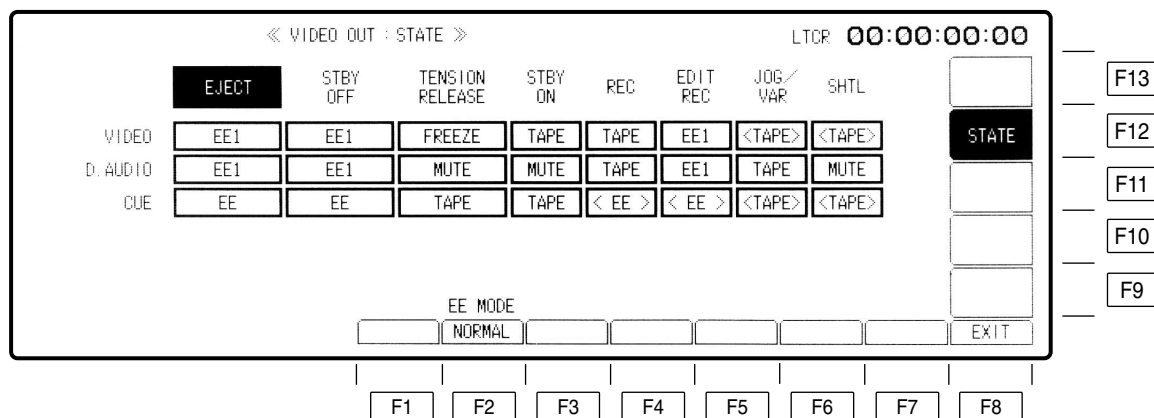
VIDEO OUT HD SET UP menu

Key	Key designation	Description
F1	LINE CONV*	Line conversion function OFF: No line conversion; when a 1035 tape is played back, 1080 signals with black bands added at the top and bottom of the picture are output. ON: Conversion from 1035 to 1080 lines.
F2-5	—	
F6	SERIAL SYS PHASE	Assumes white-on-black display (VAR mode) when the F key and F6 key are pressed simultaneously, and can be adjusted with the ADJUST control. Adjustment is possible up to a maximum of ± 0.5 H (depending on the mode). ± 1375 SAMPLE: 1080/23p and 1080/24p formats ± 1320 SAMPLE: 1080/50i and 1080/25p formats ± 1100 SAMPLE: 1080/59i format ± 825 SAMPLE: 720/59p format (1_SAMPLE=13.5 nSEC) Adjustment is by sample increments.
F7	INTERP. Interpolation	Initiates vertical interpolation during AT playback to reduce the vertical movement of the playback images. AUTO: Automatically initiates interpolation in the JOG or VAR mode. OFF: No interpolation.
F8	EXIT	Returns the VTR to the VIDEO OUT HD menu screen.
F9-F11	—	
F12	STATE	Transfers the VTR to the VIDEO OUT HD SET UP STATE menu screen.
F13	—	

*This item only functions when the 1080/59i format has been selected.

VIDEO OUT HD SET UP STATE menu

This menu is displayed by pressing the following keys: VIDEO OUT (or AUDIO OUT) → F8 → F12
OR
VIDEO OUT → F9 → F11 (or F12) → F12



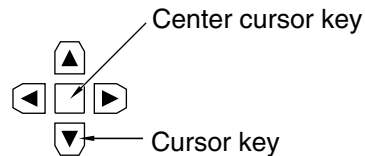
Key	Key designation	Description
F1	—	
F2	EE_MODE	NORMAL: The standard mode is established (E-E through mode is turned OFF). THROUGH: When the EE/EE1 is selected, the E-E through mode (AV minimum delay mode) is established. *A discrepancy occurs between the video (audio) output and time code output in the E-E through mode.
F3–F7	—	
F8	EXIT	Transfers the VTR to the VIDEO OUT HD SET UP menu screen.
F9–F11	—	
F12	STATE	Transfers the VTR to the VIDEO OUT HD SET UP menu screen.
F13	—	

VIDEO OUT SET UP STATE menu

□ Selecting the TAPE/EE output signals

The video, audio and cue signals which are output during the VTR's operation are switched on this menu to TAPE or EE signals.

- (1) Press the center cursor key to display the cursor.



- (2) Move the cursor to the desired position using the cursor keys.

*The cursor will not move to places which cannot be set.

	EJECT	STBY OFF	TENSION RELEASE	STBY ON	REC	EDIT REC	JOG/ VAR	SHTL
VIDEO	EE1	EE1	FREEZE	TAPE	TAPE	EE1	<TAPE>	<TAPE>
D.AUDIO	EE1	EE1	MUTE	MUTE	TAPE	EE1	TAPE	MUTE
CUE	EE	EE	TAPE	TAPE	<EE>	<EE>	<TAPE>	<TAPE>

- (3) Press the center cursor key to select TAPE or EE.
Refer to the following table for the types of setting options.

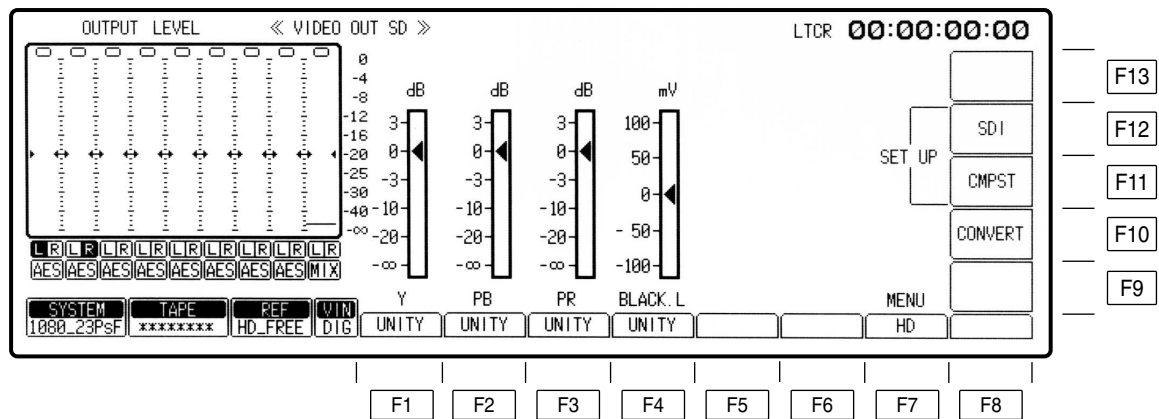
CH \ Mode	EJECT	STBY OFF	TENSION RELEASE	STBY ON	REC	EDIT REC	JOG/ VAR	SHTL
VIDEO	FREEZE BLACK GRAY FREE NOISE <u>EE1</u> EE2	FREEZE BLACK GRAY FREE NOISE <u>EE1</u> EE2	FREEZE BLACK GRAY FREE NOISE EE1 EE2	<u>TAPE</u> EE1 EE2	<u>TAPE</u> EE1 EE2	TAPE <u>EE1</u>	TAPE	TAPE
D.AUDIO	MUTE <u>EE1</u> EE2	MUTE <u>EE1</u> EE2	<u>MUTE</u> EE1 EE2	<u>MUTE</u> EE1 EE2	<u>TAPE</u> EE1 EE2	TAPE <u>EE1</u>	<u>TAPE</u> MUTE	TAPE <u>MUTE</u>
CUE	TAPE <u>EE</u>	TAPE <u>EE</u>	<u>TAPE</u> EE	<u>TAPE</u> EE	EE	EE	TAPE	TAPE

(Underline denotes the factory setting mode.)

- When a setting is to be established during head selection using the TEST menu or during editing, the setting applying to the operation concerned takes precedence over the setting selected using the VIDEO OUT SET UP STATE menu.
- When TAPE/EE has been set by F1 (OUTPUT) on the HOME menu, the HOME menu setting takes precedence.

VIDEO OUT SD menu

This menu is displayed by pressing the following keys: VIDEO OUT → F9



VIDEO OUT SD menu

Key	Key designation	Description
F1	Y For adjusting the Y level.	$-\infty$ to +3 dB (−3 dB to +3 dB in fine adjustment mode) ● Establishes the fine adjustment mode if the key is pressed together with the F key.
F2	PB For adjusting the P _B level.	$-\infty$ to +3 dB (−3 dB to +3 dB in fine adjustment mode) ● Establishes the fine adjustment mode if the key is pressed together with the F key.
F3	PR For adjusting the P _R level.	$-\infty$ to +3 dB (−3 dB to +3 dB in fine adjustment mode) ● Establishes the fine adjustment mode if the key is pressed together with the F key.
F4	BLACK.L For adjusting the black level.	± 100 mV
F5–F6	—	
F7	HD	Transfers the VTR to the VIDEO OUT HD menu screen.
F8–F9	—	
F10	CONVERT	Transfers the VTR to the VIDEO OUT CONVERT menu screen.
F11	CMPST	Transfers the VTR to the VIDEO OUT SD SET UP COMPOSITE menu screen.
F12	SDI	Transfers the VTR to the VIDEO OUT SD SET UP SDI menu screen.
F13	—	

VIDEO OUT SD SET UP COMPOSITE menu

This menu is displayed by pressing the following keys: VIDEO OUT → F9 → F11

« VIDEO OUT : SD SET UP : CMPST »

LTCR 00:00:00:00

SYS SC : 0 DEGREE

SYS H : 0 SAMPLES

COMB FIL ON

SYS SC UNITY

SYS H UNITY

INTERP. AUTO

EXIT

STATE

LINE BLK

7.5%STUP

OFF

F1

F2

F3

F4

F5

F6

F7

F8

F13

F12

F11

F10

F9

VIDEO OUT SD SET UP COMPOSITE menu

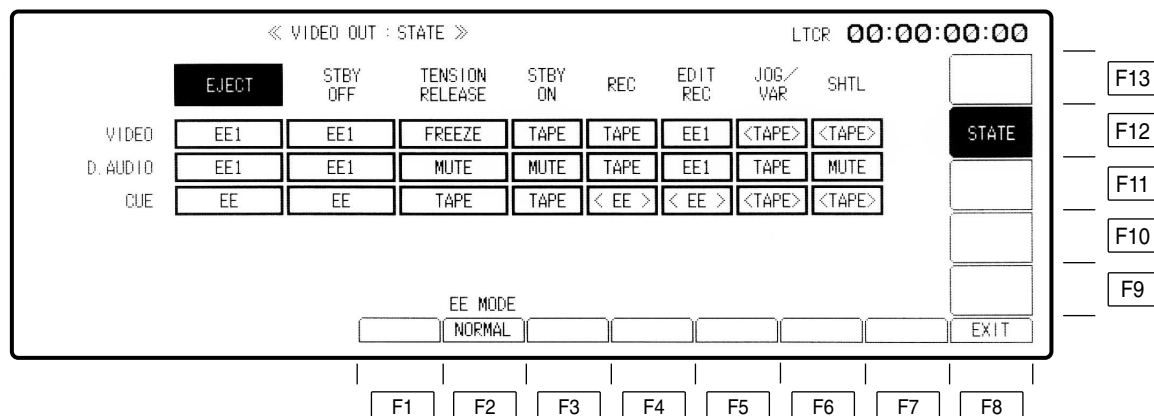
Key	Key designation	Description
F1	COMB FIL* ¹ For controlling the comb filter.	Selects whether the analog composite output signals are to be passed through the comb filter. ON: The signals are passed through the filter and output. OFF: The signals are not passed through the filter.
F2–F4	—	
F5	SYS SC For adjusting the system subcarrier.	Adjusts the system subcarrier of the composite output. When this key is pressed together with the F key, the white-on-black display (VAR MODE) is established, and the system subcarrier can be adjusted using the ADJUST control.
F6	SYS H For adjusting the system H phase.	Adjusts the system H phase of the composite output. Adjusts the system H phase of the composite output. When this key is pressed together with the F key, the white-on-black display (VAR MODE) is established, and the system H phase can be adjusted using the ADJUST control. The system H phase is adjusted in sample increments. $\pm 0.5H$ –858 to +858 (with 480/59.94i format) –864 to +864 (with 576/50i format)
F7	INTERP. Interpolation	Initiates vertical interpolation during AT playback to reduce the vertical movement of the playback images. AUTO: Automatically initiates interpolation in the JOG or VAR mode. OFF: No interpolation.
F8	EXIT	Returns the VTR to the VIDEO OUT SD menu screen.
F9	—	
F10	7.5%STUP For adding 7.5% setup to the composite output.	Selects whether to add 7.5% setup to the composite output. (This setting takes effect with NTSC output signals only; This setting is not displayed with PAL output signals.) ON: 7.5% setup is added. OFF: 7.5% setup is not added.
F11	LINE BLK* ²	For transferring to the video output line blanking menu. NTSC: Lines 10 to 21. PAL: Lines 8 to 22.
F12	STATE	Transfers the VTR to the VIDEO OUT SD SET UP CMPST STATE menu screen.
F13	—	

*¹This item does not function in the 1080/50i mode.

*²In a mode other than the 525i (480/59i) mode, this adjustment is possible only when the AJ-UDC3700P HD-SD format converter board (optional accessory) has been installed.

VIDEO OUT SD SET UP CMPST STATE menu

This menu is displayed by pressing the following keys: VIDEO OUT (or [AUDIO OUT])→F8→F12
OR
VIDEO OUT→F9→F11 (or F12)→F12



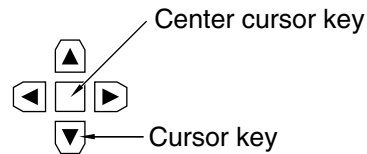
Key	Key designation	Description
F1	—	
F2	EE_MODE	NORMAL: The standard mode is established (E-E through mode is turned OFF). THROUGH: The E-E through mode (AV minimum delay mode) is established. *A discrepancy occurs between the video (audio) output and time code output in the E-E through mode.
F3–F7	—	
F8	EXIT	Transfers the VTR to the VIDEO OUT SD SET UP CMPST menu screen.
F9–F13	—	

VIDEO OUT SD SET UP CMPST STATE menu

□ Selecting the TAPE/EE output signals

The video, audio and cue signals which are output during the VTR's operation are switched on this menu to TAPE or EE signals.

- (1) Press the center cursor key to display the cursor.



- (2) Move the cursor to the desired position using the cursor keys.

*The cursor will not move to places which cannot be set.

	EJECT	STBY OFF	TENSION RELEASE	STBY ON	REC	EDIT REC	JOG/ VAR	SHTL
VIDEO	EE1	EE1	FREEZE	TAPE	TAPE	EE1	<TAPE>	<TAPE>
D. AUDIO	EE1	EE1	MUTE	MUTE	TAPE	EE1	TAPE	MUTE
CUE	EE	EE	TAPE	TAPE	< EE >	< EE >	<TAPE>	<TAPE>

- (3) Press the center cursor key to select TAPE or EE.

Refer to the following table for the types of setting options.

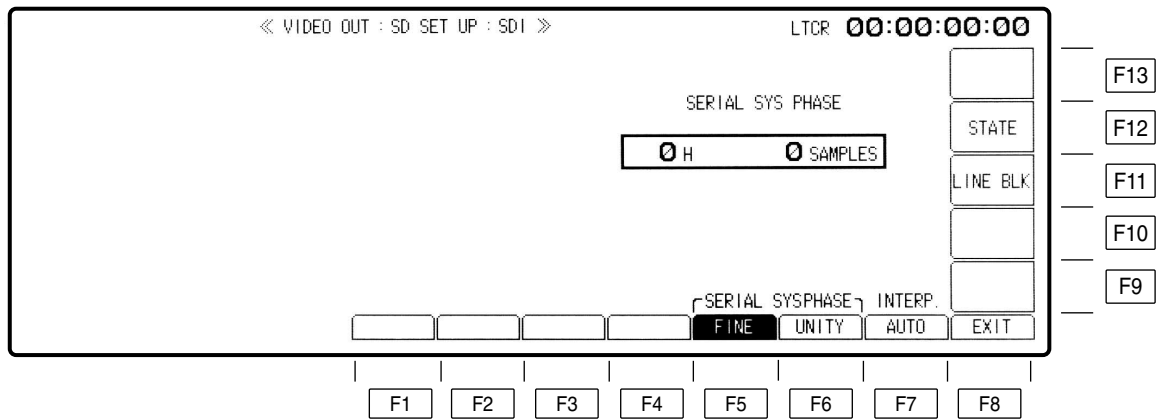
Mode CH	EJECT	STBY OFF	TENSION RELEASE	STBY ON	REC	EDIT REC	JOG/ VAR	SHTL
VIDEO	FREEZE BLACK GRAY FREE NOISE <u>EE1</u> EE2	FREEZE BLACK GRAY FREE NOISE <u>EE1</u> EE2	<u>FREEZE</u> BLACK GRAY FREE NOISE EE1 EE2	<u>TAPE</u> EE1 EE2	<u>TAPE</u> EE1 EE2	TAPE <u>EE1</u>	TAPE	TAPE
D.AUDIO	MUTE <u>EE1</u> EE2	MUTE <u>EE1</u> EE2	<u>MUTE</u> EE1 EE2	<u>MUTE</u> EE1 EE2	<u>TAPE</u> EE1 EE2	TAPE <u>EE1</u>	TAPE MUTE	TAPE <u>MUTE</u>
CUE	TAPE <u>EE</u>	TAPE <u>EE</u>	<u>TAPE</u> EE	<u>TAPE</u> EE	EE	EE	TAPE	TAPE

(Underline denotes the factory setting mode.)

- When a setting is to be established during head selection using the TEST menu or during editing, the setting applying to the operation concerned takes precedence over the setting selected using the VIDEO OUT SET UP STATE menu.
- When TAPE/EE has been set by F1 (OUTPUT) on the HOME menu, the HOME menu setting takes precedence.

VIDEO OUT SD SET UP SDI menu

This menu is displayed by pressing the following keys: VIDEO OUT → F9 → F12



VIDEO OUT SD SET UP SDI menu

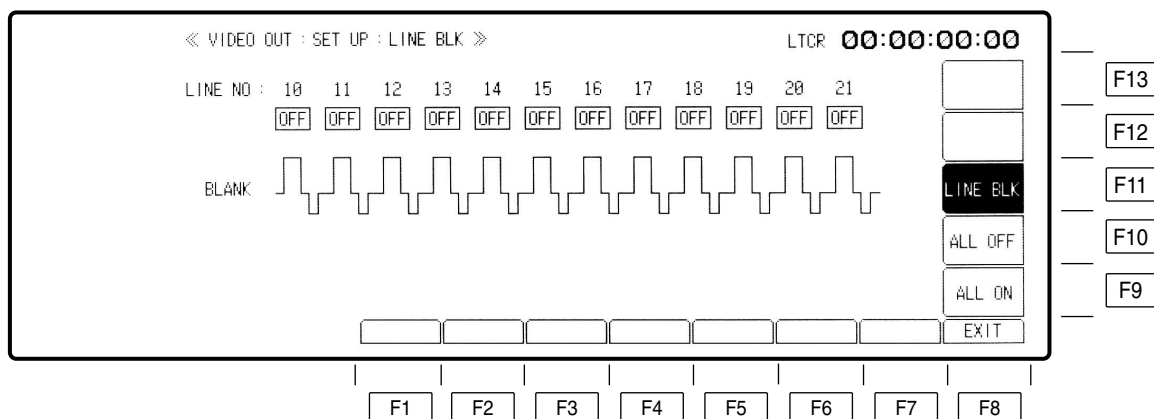
Key	Key designation	Description
F1–F4	—	
F5 F6	SERIAL SYS PHASE	Adjusts the sync phase of SD_SDI output in relation to the reference signal. FINE/COARSE • This can be selected when the function key is pressed together with the F key. With the 480/59.94i format: Adjustment can be made from –2H-858 to +1H+858. With the 480/59.94p format*1: Adjustment can be made from –857 to +858. With the 576/50i format*1: Adjustment can be made from –2H-864 to +1H+864. For FINE, adjustments are made in sample increments; for COARSE, they are made in H increments.
F7	INTERP. Interpolation	Initiates vertical interpolation during AT playback to reduce the vertical movement of the playback images. AUTO: Automatically initiates interpolation in the JOG or VAR mode. OFF: No interpolation.
F8	EXIT	Returns the VTR to the VIDEO OUT SD menu screen.
F9–F10	—	
F11	LINE BLK*2	For transferring to the video output line blanking menu. NTSC: Lines 10 to 21. PAL: Lines 8 to 22.
F12	STATE	Transfers the VTR to the VIDEO OUT SD SET UP SDI STATE menu screen.
F13	—	

*1This adjustment is possible only when the AJ-UDC3700P HD-SD format converter board (optional accessory) has been installed.

*2In a mode other than the 525i (480/59i) mode, this adjustment is possible only when the AJ-UDC3700P HD-SD format converter board (optional accessory) has been installed.

VIDEO OUT SET UP LINE BLK (video output line blanking) menu

This menu is displayed by pressing the following keys: VIDEO OUT → F9 → F11 (or F12) → F11.



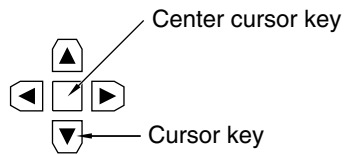
Key	Key designation	Description
F1–F7	—	
F8	EXIT	Returns the VTR to the VIDEO OUT SD SET UP menu screen.
F9	ALL ON	When this key is pressed together with the F key, all the lines are blanked.
F10	ALL OFF	When this key is pressed together with the F key, all the lines are non-blanked.
F11	LINE BLK	Refer to the “Setting the line blanking” (on the next page).
F12–F13	—	

VIDEO OUT SET UP LINE BLK (video output line blanking) menu

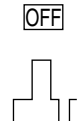
□ Setting the line blanking

The blanking lines in the vertical blanking period can be set in 1-line increments.

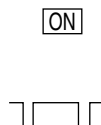
- (1) Press the center cursor key.
The cursor now appears.



- (2) Move the cursor and select the lines to be blanked.



- (3) Press the center cursor key to select ON or OFF for the display.



ON: The lines are blanked.

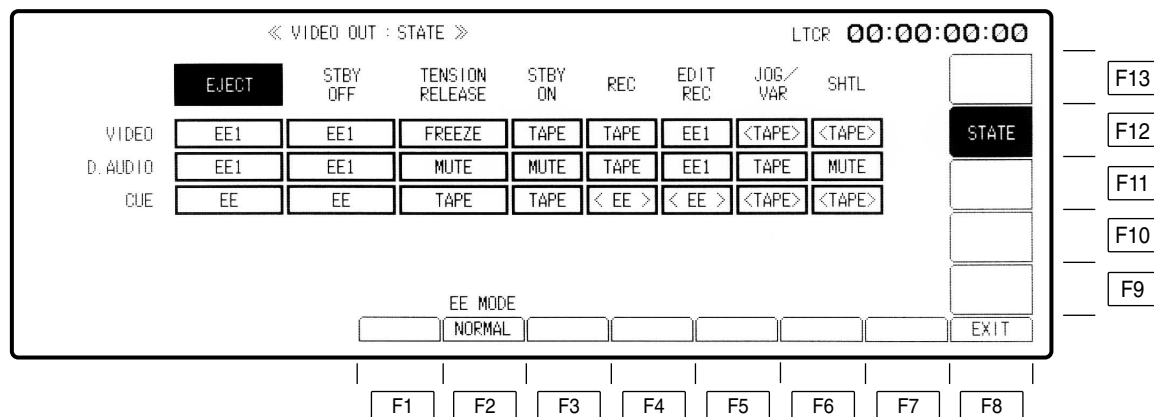
OFF: The non-blanking status is established, and no lines are selected.

- (4) Press the ENT key.
The blanking is now entered.

- (5) To return to the previous screen, press the F8 (EXIT) key.

VIDEO OUT SD SET UP SDI STATE menu

This menu is displayed by pressing the following keys: VIDEO OUT (or AUDIO OUT) → F8 → F12
OR
VIDEO OUT → F9 → F11 (or F12) → F12.



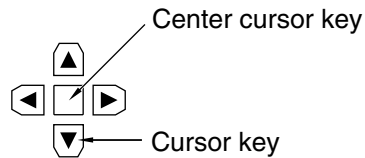
Key	Key designation	Description
F1	—	
F2	EE_MODE	NORMAL: The standard mode is established (E-E through mode is turned OFF). THROUGH: The E-E through mode (AV minimum delay mode) is established. *A discrepancy occurs between the video (audio) output and time code output in the E-E through mode.
F3-F7	—	
F8	EXIT	Transfers the VTR to the VIDEO OUT SD SET UP SDI menu screen.
F9-F13	—	

VIDEO OUT SET UP STATE menu

□ Selecting the TAPE/EE output signals

The video, audio and cue signals which are output during the VTR's operation are switched on this menu to TAPE or EE signals.

- (1) Press the center cursor key to display the cursor.



- (2) Move the cursor to the desired position using the cursor keys.

*The cursor will not move to places which cannot be set.

	EJECT	STBY OFF	TENSION RELEASE	STBY ON	REC	EDIT REC	JOG/ VAR	SHTL
VIDEO	EE1	EE1	FREEZE	TAPE	TAPE	EE1	<TAPE>	<TAPE>
D.AUDIO	EE1	EE1	MUTE	MUTE	TAPE	EE1	TAPE	MUTE
CUE	EE	EE	TAPE	TAPE	< EE >	< EE >	<TAPE>	<TAPE>

- (3) Press the center cursor key to select TAPE or EE.
Refer to the following table for the types of setting options.

CH \ Mode	EJECT	STBY OFF	TENSION RELEASE	STBY ON	REC	EDIT REC	JOG/ VAR	SHTL
VIDEO	FREEZE BLACK GRAY FREE NOISE <u>EE1</u> EE2	FREEZE BLACK GRAY FREE NOISE <u>EE1</u> EE2	FREEZE BLACK GRAY FREE NOISE EE1 EE2	<u>TAPE</u> EE1 EE2	<u>TAPE</u> EE1 EE2	TAPE <u>EE1</u>	TAPE	TAPE
D.AUDIO	MUTE <u>EE1</u> EE2	MUTE <u>EE1</u> EE2	MUTE EE1 EE2	<u>MUTE</u> EE1 EE2	<u>TAPE</u> EE1 EE2	TAPE <u>EE1</u>	<u>TAPE</u> MUTE	TAPE <u>MUTE</u>
CUE	TAPE <u>EE</u>	TAPE <u>EE</u>	<u>TAPE</u> EE	<u>TAPE</u> EE	EE	EE	TAPE	TAPE

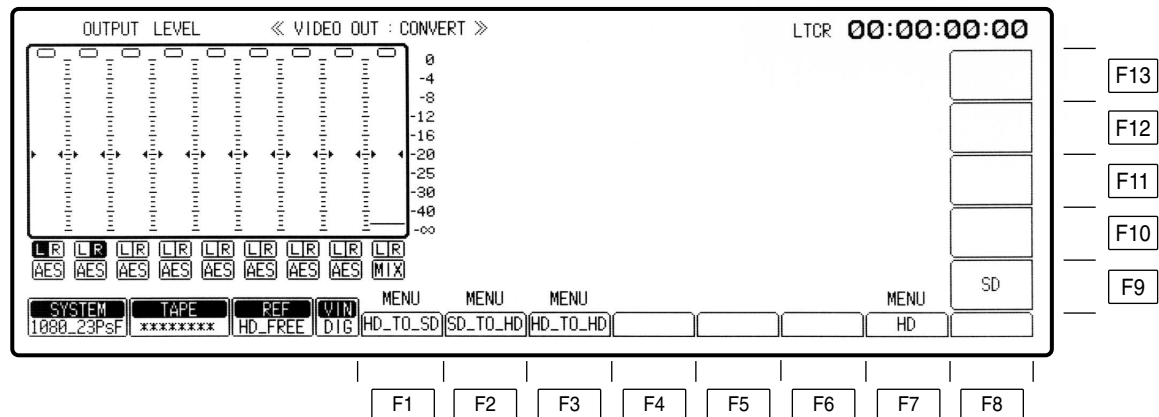
(Underline denotes the factory setting mode.)

- When a setting is to be established during head selection using the TEST menu or during editing, the setting applying to the operation concerned takes precedence over the setting selected using the VIDEO OUT SET UP STATE menu.
- When TAPE/EE has been set by F1 (OUTPUT) on the HOME menu, the HOME menu setting takes precedence.

VIDEO OUT CONVERT menu

(This menu appears when the AJ-UDC3700P HD-SD format converter board, an optional accessory, has been installed.)

This menu is displayed by pressing the following keys: VIDEO OUT → F10

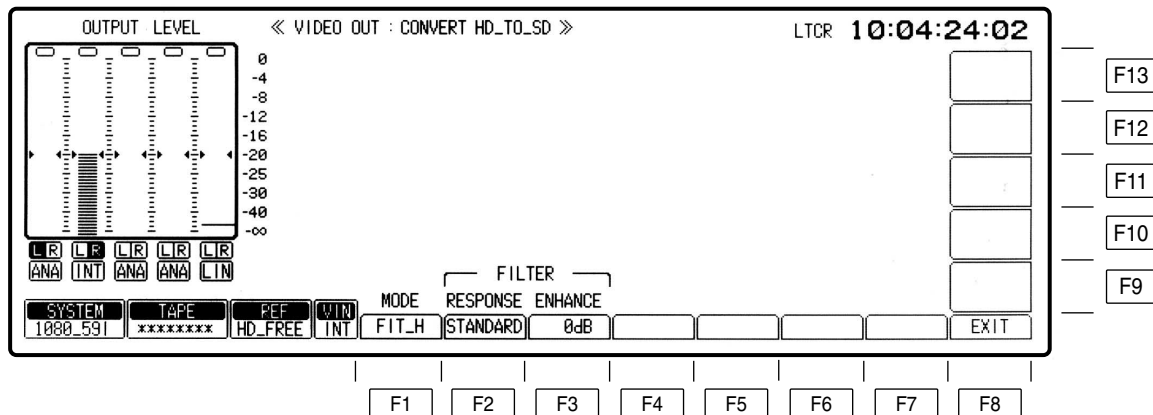


Key	Key designation	Description
F1	HD_TO_SD	Transfers the VTR to the VIDEO OUT CONVERT HD TO SD menu screen.
F2	SD_TO_HD	Transfers the VTR to the VIDEO OUT CONVERT SD TO HD menu screen.
F3	HD_TO_HD	Transfers the VTR to the VIDEO OUT CONVERT HD TO HD menu screen.
F4–F6	—	
F7	HD	Returns the VTR to the VIDEO OUT HD menu screen.
F8	—	
F9	SD	Returns the VTR to the VIDEO OUT SD menu screen.
F10–F13	—	

VIDEO OUT CONVERT HD_TO_SD menu

(This menu appears when the AJ-UDC3700P HD-SD format converter board, an optional accessory, has been installed.)

This menu is displayed by pressing the following keys: VIDEO OUT → F10 → F1

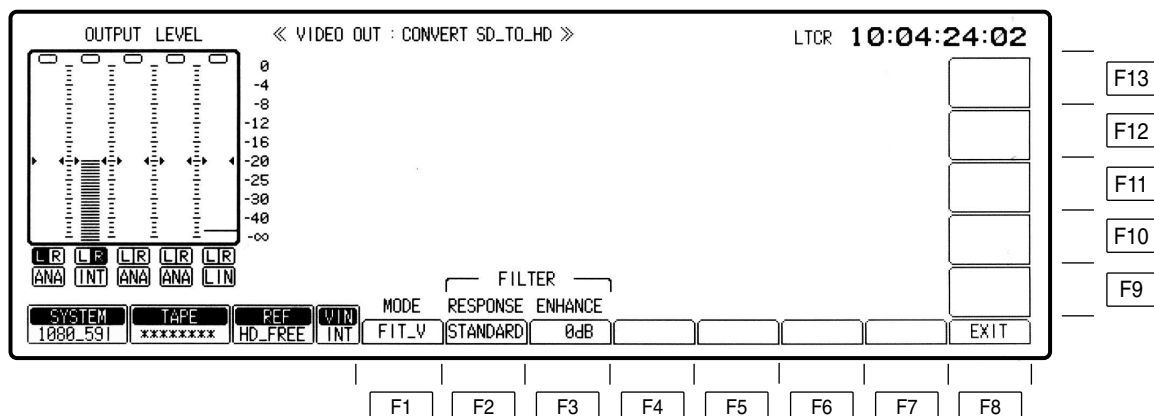


Key	Key designation	Description
F1	MODE	Selects the aspect ratio at which signals are output from the down-converter. FIT_V: Changes the magnification by matching the input size to the output size along the perpendicular axis. (The aspect ratio remains the same.) FIT_H: Changes the magnification by matching the input size to the output size along the horizontal axis. (The aspect ratio remains the same.) FIT_HV: Changes the magnification by matching the input size to the output size along the horizontal and perpendicular axes. (The aspect ratio may be distorted.) 14:9: Sets the aspect ratio to 14×9. 13:9: Sets the aspect ratio to 13×9. *When the 525p (480/59.94p) has been selected for the SD SDI MAIN output, the aspect ratio remains fixed at 16:9.
F2	RESPONSE	Selects the frequency bandwidth of the down-converter output signals. STANDARD: WIDE: NARROW:
F3	ENHANCE	Controls the enhancement adjustment of the down-converter output signals. 6dB: 3dB: 1.5dB: 0dB:
F4–F7	—	
F8	EXIT	Returns the VTR to the VIDEO OUT CONVERT menu screen.
F9–F13	—	

VIDEO OUT CONVERT SD_TO_HD menu

(This menu appears when the AJ-UDC3700P HD-SD format converter board, an optional accessory, has been installed.)

This menu is displayed by pressing the following keys: VIDEO OUT → F10 → F2



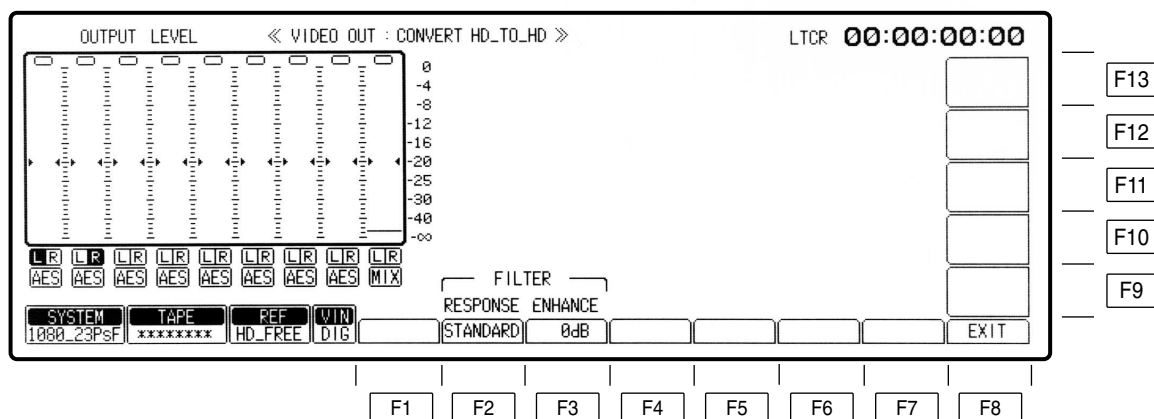
Key	Key designation	Description
F1	MODE	Selects the aspect ratio at which signals are output from the up-converter. FIT_V: Changes the magnification by matching the input size to the output size along the perpendicular axis. (The aspect ratio remains the same.) FIT_H: Changes the magnification by matching the input size to the output size along the horizontal axis. (The aspect ratio remains the same.) FIT_HV: Changes the magnification by matching the input size to the output size along the horizontal and perpendicular axes. (The aspect ratio may be distorted.)
F2	RESPONSE	Selects the frequency bandwidth of the up-converter output signals. STANDARD: WIDE: NARROW:
F3	ENHANCE	Controls the enhancement adjustment of the up-converter output signals. 6dB: 3dB: 1.5dB: 0dB:
F4–F7	—	
F8	EXIT	Returns the VTR to the VIDEO OUT CONVERT menu screen.
F9–F13	—	

VIDEO OUT CONVERT HD_TO_HD menu

(This menu appears when the AJ-UDC3700P HD-SD format converter board, an optional accessory, has been installed.)

This menu is displayed by pressing the following keys: VIDEO OUT → F10 → F3

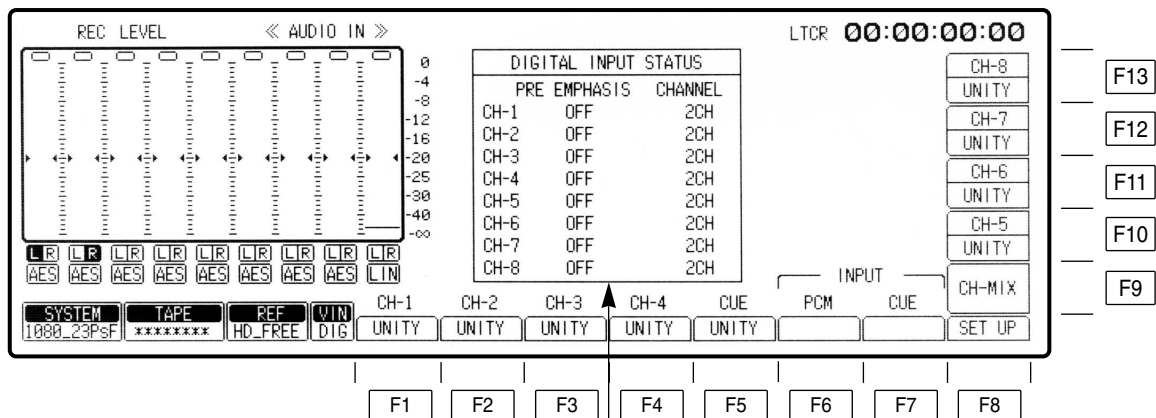
*This menu is operational when 1080/23.98p or 1080/24p has been set as the system format.



Key	Key designation	Description
F1	—	—
F2	RESPONSE	Selects the frequency bandwidth of the converter output signals. STANDARD: WIDE: NARROW:
F3	ENHANCE	Controls the enhancement adjustment of the converter output signals. 6dB: 3dB: 1.5dB: 0dB:
F4–F7	—	—
F8	EXIT	Returns the VTR to the VIDEO OUT CONVERT menu screen.
F9–F13	—	—

AUDIO IN menu

This menu is displayed by pressing the following key: **AUDIO IN**



The digital audio input statuses are displayed here.

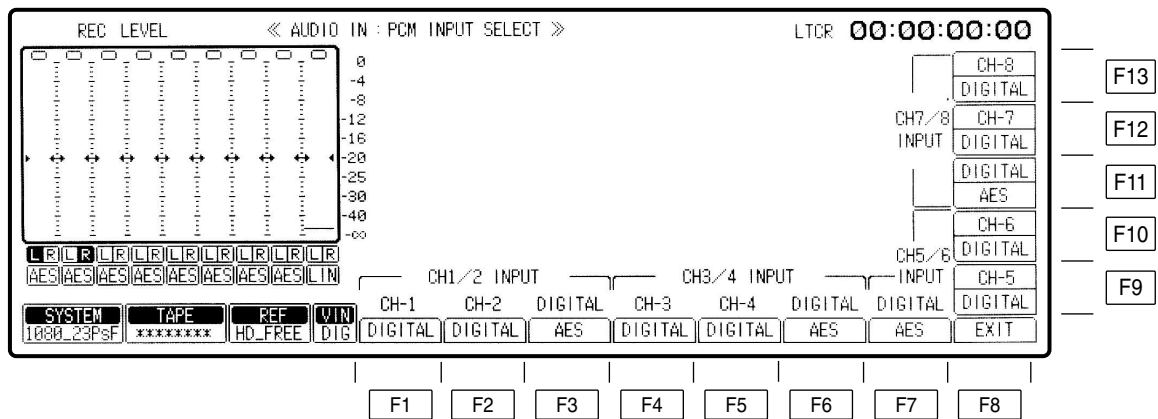
PRE EMPHASIS ON: Pre-emphasis is applied to the input signals.
OFF: Regular signals with no pre-emphasis are supplied.

AUDIO IN menu

Key	Key designation	Description
F1	CH-1 For adjusting the audio CH1 input level.	UNITY: Input level is fixed at UNITY value. VAR: Input level can be varied with ADJUST control. ●For switchover, press the UNITY/VAR button.
F2	CH-2 For adjusting the audio CH2 input level.	
F3	CH-3 For adjusting the audio CH3 input level.	
F4	CH-4 For adjusting the audio CH4 input level.	
F5	CUE For adjusting the cue audio input level.	
F6	PCM	Transfers the VTR to AUDIO IN PCM INPUT SELECT menu screen.
F7	CUE	Transfers the VTR to the AUDIO IN CUE INPUT menu screen.
F8	SET UP	Transfers the VTR to the AUDIO IN SET UP menu screen.
F9	CH-MIX	Transfers the VTR to the AUDIO IN CH-MIX menu screen.
F10	CH-5 For adjusting the audio CH5 input level.	UNITY: Input level is fixed at UNITY value. VAR: Input level can be varied with ADJUST control. ●For switchover, press the UNITY/VAR button.
F11	CH-6 For adjusting the audio CH6 input level.	
F12	CH-7 For adjusting the audio CH7 input level.	
F13	CH-8 For adjusting the audio CH8 input level.	

AUDIO IN PCM INPUT SELECT menu

This menu is displayed by pressing the following keys: **AUDIO IN** → **F6**



AUDIO IN PCM INPUT SELECT menu

Key	Key designation	Description
F1	CH-1 For selecting the recording signals of digital audio CH1.	ANALOG: Selects the signals of the analog CH1 input connector. DIGITAL: Selects the digital audio input signals (AES/SDI selection is made in line with the CH2 setting using F3). INT SG: Selects the internal generator signals.
F2	CH-2 For selecting the recording signals of digital audio CH2.	For selecting the recording signals of digital audio channel 2. ANALOG: Selects the signals of the analog CH2 input connector. DIGITAL: Selects the digital audio input signals (AES/SDI selection is made in line with the CH1 setting using F3). INT SG: Selects the internal generator signals.
F3	DIGITAL For selecting the CH1 and CH2 digital input signals.	AES: Selects the AES digital audio input signals. SERIAL: Selects the serial input signals.
F4	CH-3 For selecting the recording signals of digital audio CH3.	ANALOG: Selects the signals of the analog CH3 input connector. DIGITAL: Selects the digital audio input signals (AES/SDI selection is made in line with the CH4 setting using F6). INT SG: Selects the internal generator signals.
F5	CH-4 For selecting the recording signals of digital audio CH4.	ANALOG: Selects the signals of the analog CH4 input connector. DIGITAL: Selects the digital audio input signals (AES/SDI selection is made in line with the CH3 setting using F6). INT SG: Selects the internal generator signals.
F6	DIGITAL For selecting the CH3 and CH4 digital input signals.	AES: Selects the AES digital audio input signals. SERIAL: Selects the serial input signals.
F7	DIGITAL For selecting the CH5 and CH6 digital input signals.	AES: Selects the AES digital audio input signals. SERIAL: Selects the serial input signals.
F8	EXIT	Returns the VTR to the AUDIO IN menu screen.
F9	CH-5 For selecting the recording signals of digital audio CH5.	ANA CH1: Selects the signals of the analog CH1 input connector. DIGITAL: Selects the digital audio input signals (AES/SDI selection is made in line with the CH6 setting using F7). INT SG: Selects the internal generator signals.

AUDIO IN PCM INPUT SELECT menu

Key	Key designation	Description
F10	CH-6 For selecting the recording signals of digital audio CH6.	ANA CH2: Selects the signals of the analog CH2 input connector. DIGITAL: Selects the digital audio input signals (AES/SDI selection is made in line with the CH5 setting using F7). INT SG: Selects the internal generator signals.
F11	DIGITAL For selecting the CH7 and CH8 digital input signals.	AES: Selects the AES digital audio input signals. SERIAL: Selects the serial input signals.
F12	CH-7 For selecting the recording signals of digital audio CH7.	ANA CH3: Selects the signals of the analog CH3 input connector. DIGITAL: Selects the digital audio input signals (AES/SDI selection is made in line with the CH8 setting using F11). INT SG: Selects the internal generator signals.
F13	CH-8 For selecting the recording signals of digital audio CH8.	ANA CH4: Selects the signals of the analog CH4 input connector. DIGITAL: Selects the digital audio input signals (AES/SDI selection is made in line with the CH7 setting using F11). INT SG: Selects the internal generator signals.

AUDIO IN CUE INPUT SELECT menu

This menu is displayed by pressing the following keys: **AUDIO IN** → **F7**

The screenshot displays the 'AUDIO IN : CUE INPUT SELECT' menu. At the top, it shows 'REC LEVEL' and 'LTCR 00:00:00:00'. The main area features a level meter with eight channels (CH-1 to CH-8) and a 'D.MIX' section. Below the meter, there are buttons for 'SYSTEM', 'TAPE', 'REF', 'VIN', and 'DIG'. The bottom of the screen shows a row of function keys (F1 to F8) and a vertical column of function keys (F9 to F13) on the right side.

Channel	Level	Input
CH-1	0	OFF
CH-2	-4	OFF
CH-3	-8	OFF
CH-4	-12	OFF
CH-5	-16	OFF
CH-6	-20	OFF
CH-7	-25	OFF
CH-8	-30	OFF
D.MIX	-40	OFF

Function Key Mappings:

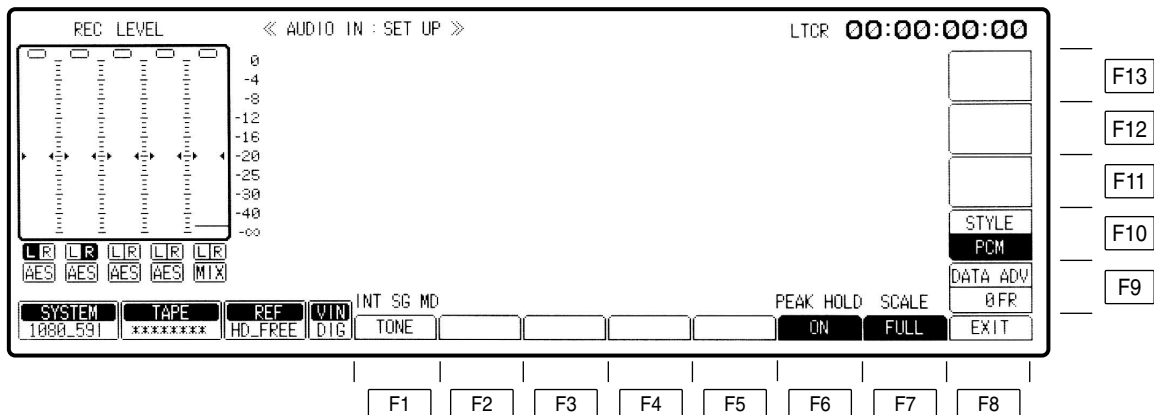
- F1: SYSTEM
- F2: TAPE
- F3: REF
- F4: VIN
- F5: DIG
- F6: CH-1
- F7: CH-2
- F8: CH-3
- F9: CH-4
- F10: CH-5
- F11: CH-6
- F12: CH-7
- F13: CH-8

AUDIO IN CUE INPUT SELECT menu

Key	Key designation	Description
F1	CH-1 For setting cue mixing for CH1.	
F2	CH-2 For setting cue mixing for CH2.	(displayed only when D-MIX is set using F9) SOURCE: Mixes the input signals.
F3	CH-3 For setting cue mixing for CH3.	TAPE: Mixes the playback signals. OFF: No mixing.
F4	CH-4 For setting cue mixing for CH4.	
F5–F7	—	
F8	EXIT	Returns the VTR to the AUDIO IN menu screen.
F9	CUE For selecting the cue audio recording signals.	For selecting the signals to be recorded on the cue track. D-MIX: Mixes and records the digital channel signals selected by D-MIX. LINE: Selects the analog cue input signals. AUTO: In the normal recording mode, mixes and records all the (CH1 to CH4)* signals; during editing, automatically selects SOURCE for selected channels and TAPE for non-selected channels. *This differs, depending on the format.
F10	CH-5 For setting cue mixing for CH5.	
F11	CH-6 For setting cue mixing for CH6.	(displayed only when D-MIX is set using F9) SOURCE: Mixes the input signals.
F12	CH-7 For setting cue mixing for CH7.	TAPE: Mixes the playback signals. OFF: No mixing.
F13	CH-8 For setting cue mixing for CH8.	

AUDIO IN SET UP menu

This menu is displayed by pressing the following keys: **AUDIO IN** → **F8**
 OR
SET UP → **F6**



AUDIO IN SET UP menu

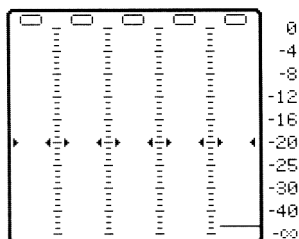
Key	Key designation	Description
F1	INT SG MD	For selecting the internal audio test signal. TONE: Reference level sinusoidal waves are output. SILENCE: A signal tone is not output. (Mute signals are output.)
F2–F5	—	
F6	PEAK HOLD For setting the peak hold.	For holding the peak recording and playback levels on the display. ON: Peak level is held. OFF: Peak level is not held.
F7	SCALE For switching the level meter scale.	For switching the scale of the audio level meter on display to standard scale or fine scale. FINE: Scale in 0.2 dB increments. (–24dB to –15dB) FULL: Standard scale (–∞ to –0dB) Refer to “Switching the audio level meter scale” (on this page).
F8	EXIT	Returns the VTR to the AUDIO IN menu screen.
F9	DATA ADV* ¹	0–1 Fr (in increments of 1/10th of a frame): The amount by which the data is to be advanced when the digital audio input/output format is in the data mode can be set in increments of 1/10th of a frame. (When “0” is set, the amount is set to the default setting inside the VTR.)
F10	STYLE* For setting the digital audio input/output data format.	This menu item can be set by pressing the F10 key together with the F key. PCM: The format is set to the regular PCM audio mode. DATA: The format is set to the data mode (compressed audio: Dolby-E* ²).
F11–F13	—	

*¹The data mode is operational only in the 4-channel audio versions of the 1080/59.94i and 720/59.94p system formats.

The data advance amount and data style can be set on both the AUDIO IN SETUP menu and AUDIO OUT SETUP menu. If the setting is updated on one menu, it will be updated on the other menu as well. Furthermore, these settings cannot be performed on a channel by channel basis.

*²“Dolby” and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

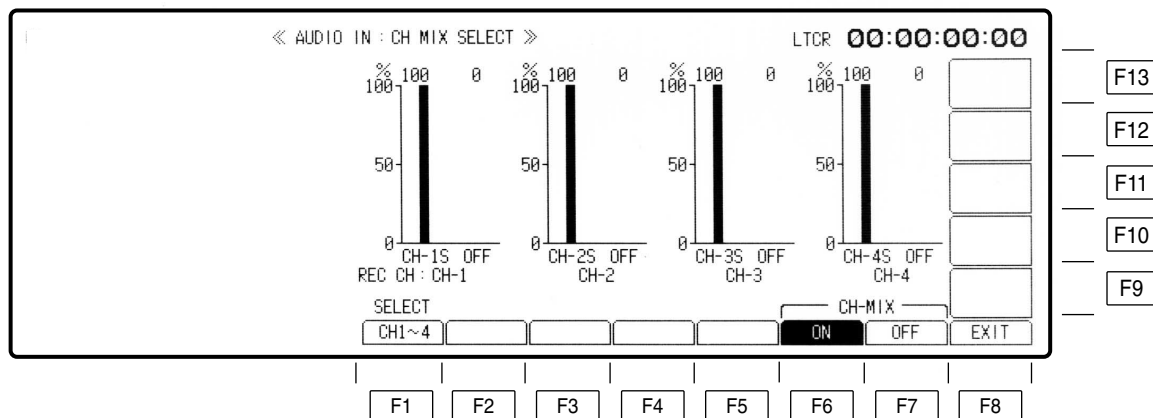
□ Switching the audio level meter scale



- If the audio level is adjusted below –24 dB in the FINE mode, the ↓ mark is displayed; if it is adjusted above –15 dB, the ↑ mark is displayed.

AUDIO IN CH-MIX SELECT menu

This menu is displayed by pressing the following keys: **AUDIO IN** → **F9**



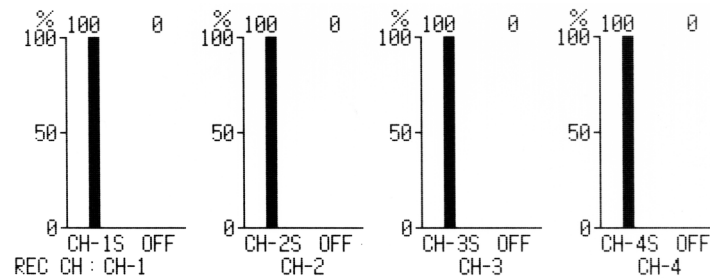
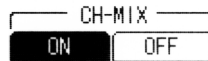
Key	Key designation	Description
F1	SELECT	Selects the channels whose signals are to be mixed. CH1-CH4: The signals from CH1 through CH4 are selected for mixing. CH5-CH8*: The signals from CH5 through CH8 are selected for mixing.
F2-F5	—	
F6	CH-MIX (ON) For mixing the input signals with the signals played back simultaneously and recording them.	The signals which have been input to the digital audio channels and any two channels of the playback signals on the tape are selected and mixed at the desired ratio. ON: "ON" is selected by pressing the F6 key, and the signals can be mixed. OFF: "OFF" is selected by pressing the F7 key, and the channel signals cannot be mixed.
F7	CH-MIX (OFF) For prohibiting the mixing of the input signals and signals played back simultaneously and their recording.	Even when OFF has been selected, the mixing settings set by the F6 key will still be retained.
F8	EXIT	Returns the VTR to the AUDIO IN menu screen.
F9-F13	—	

*This setting is not displayed when the digital sound is in the 4-channel format.

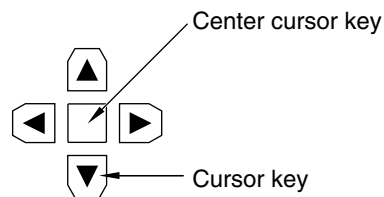
AUDIO IN CH-MIX SELECT menu

□ Mix-and-record

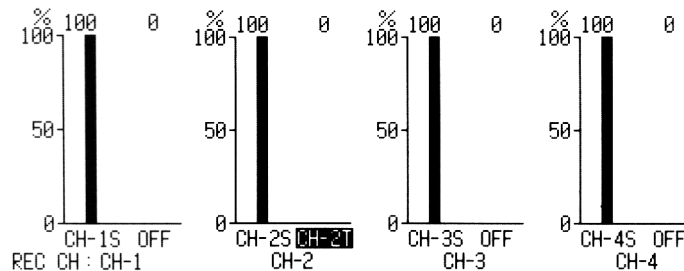
- (1) Press the F6 (CH-MIX) key to set it ON.
The mixing graph display now appears.



- (2) Press the center cursor key to display the cursor.



- (3) Use the cursor keys to move the cursor to the channel in which the sound is to be mixed.



- (4) Press the center cursor key to select the signals to be mixed.

The desired signals can be set on a channel by channel basis.

The following signals can be set:

CH-1S CH-2S CH-3S CH-4S CH-5S CH-6S CH-7S CH-8S (input signals of each channel)

CH-1T CH-2T CH-3T CH-4T CH-5T CH-6T CH-7T CH-8T (play-back signals of each channel)

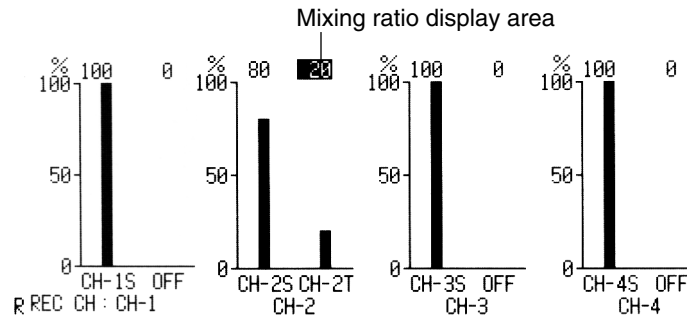
OFF (no mixing)

•The same signal cannot be selected for one channel.

AUDIO IN CH-MIX SELECT menu

□ Mix-and-record (continued)

- (5) Move the cursor to the mixing ratio display area, and turn the ADJUST control to set the ratio at which the signals are to be mixed (in 1% increments).



<Notes>

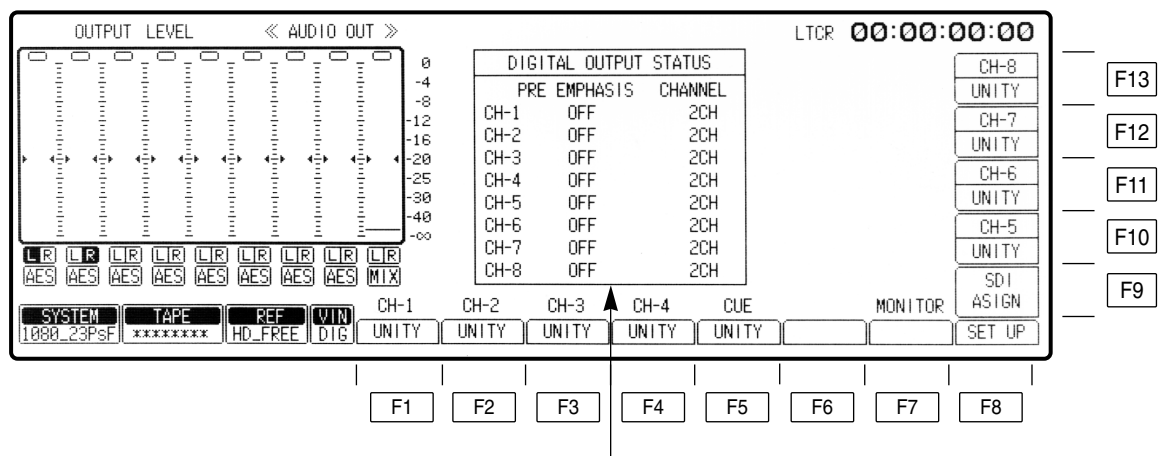
- When the PLAY button is pressed after the CH-MIX mode has been set, the F6 (CH-MIX) key keeps blinking. The regular playback sound is output at this time.
- When the F6 key is pressed while it is blinking, the CH-MIX sound is output. To adjust the ratio while monitoring the actual mixing sound, proceed in this status.
- To set the CH-MIX mode function to OFF, press the F7 (CH-MIX) key.

Sound output based on VTR's mode and F6, F7 key statuses

VTR mode Key status	F6 key is lighted	F6 key is blinking	F7 key is lighted (OFF)
EE/STOP	CH-MIX sound	—	EE/TAPE
PLAY (EDIT, NORMAL)	CH-MIX sound	Playback sound	Playback sound
REC	CH-MIX sound	—	EE/TAPE
JOG/VAR/SHTL	—	Playback sound	Playback sound

AUDIO OUT menu

This menu is displayed by pressing the following key: **AUDIO OUT**



The digital audio input statuses are displayed here.

PRE EMPHASIS ON: Pre-emphasis is applied to the input signals.
OFF: Regular signals with no pre-emphasis are supplied.

AUDIO OUT menu

Key	Key designation	Description
F1	CH-1 For adjusting the audio CH1 playback level.	UNITY: Input level is fixed at UNITY value. VAR: Input level can be varied with ADJUST control. ●For switchover, press the UNITY/VAR button.
F2	CH-2 For adjusting the audio CH2 playback level.	
F3	CH-3 For adjusting the audio CH3 playback level.	
F4	CH-4 For adjusting the audio CH4 playback level.	
F5	CUE For adjusting the cue audio playback level.	
F6	—	
F7	MONITOR	Transfers the VTR to the AUDIO OUT MONITOR menu screen.
F8	SET UP	Transfers the VTR to the AUDIO OUT SET UP menu screen.
F9	SDI ASIGN	Transfers the VTR to the AUDIO OUT SDI ASIGN menu screen.
F10	CH-5 For adjusting the audio CH5 playback level.	UNITY: Input level is fixed at UNITY value. VAR: Input level can be varied with ADJUST control. ●For switchover, press the UNITY/VAR button.
F11	CH-6 For adjusting the audio CH6 playback level.	
F12	CH-7 For adjusting the audio CH7 playback level.	
F13	CH-8 For adjusting the audio CH8 playback level.	

AUDIO OUT MONITOR menu

This menu is displayed by pressing the following keys: **AUDIO OUT** → **F7**

« AUDIO OUT : MONITOR »

LTOR 00:00:00:00

CUE OUT SELECT

CH1CH2CH3CH4

CH5CH6CH7CH8

MONI MIX

L CH

CH1CH2CH3CH4

CH5CH6CH7CH8

R CH

CH1CH2CH3CH4

CH5CH6CH7CH8

MONI AUTO

MODE

L CH

R CH

SHTLONON

A. MONI

VAR

EXIT

MONI MIX

MODE

AVERAGE

L CH

OFF

R CH

OFF

F1

F2

F3

F4

F5

F6

F7

F8

F9

F10

F11

F12

F13

- 60 -

AUDIO OUT MONITOR menu

Key	Key designation	Description
F1	MODE For selecting the mode.	Selects the VTR mode in which the monitor output signals are automatically switched to the cue signals. SHTL: Automatically outputs the playback signals of the cue channel in the SHTL, FF or REW mode. Outputs the signals of the channel selected by the L and R buttons in any other mode. VAR/SHTL: Automatically outputs the playback signals of the cue channel in the SHTL, FF, REW, JOG or VAR mode.
F2	L CH	Outputs the signals of the channel selected by the L and R buttons in any other mode. Selects whether the auto mode is to be activated for the left channel. OFF: Always outputs the channel signals selected by the L button. ON: Automatically outputs the cue signals in accordance with the mode selected by F1.
F3	R CH	Selects whether the auto mode is to be activated for the right channel. OFF: Always outputs the channel signals selected by the R button. ON: Automatically outputs the cue signals in accordance with the mode selected by F1.
F4–F6	—	
F7	A.MONI For selecting the audio monitor output level adjustment.	Selects whether to adjust the audio monitor output level using the headphones volume control on the front panel. UNITY: The audio monitor output level is forcibly fixed at the UNITY value. VAR: The level can be adjusted using the headphones volume control.
F8	EXIT	Returns the VTR to the AUDIO OUT menu screen.
F9–F10	—	
F11 F12	R CH L CH	For setting whether the signals from the left and right channels are to be mixed and output to the MONITOR connector. OFF: The signals are not mixed. ON: The signals are mixed.
F13	MODE	For selecting the way in which the channel signals output to the MONITOR connector are to be mixed. ADD: Simple addition AVERAGE: Simple averaging

CUE OUT SELECT

This is used to select the main line CH1 through CH4 (8) signals serving as the CUE output. When the center cursor key is pressed, CUE OUT SELECT is highlighted, enabling the setting to be selected. (If MONITOR MIX is highlighted, press the F key and a cursor key (◀ or ▶) together to enable this setting to be selected.)

Select the channel using the cursor keys (◀, ▶, ▲ and ▼), and press the center cursor key to turn the selection ON or OFF.

MONITOR MIX

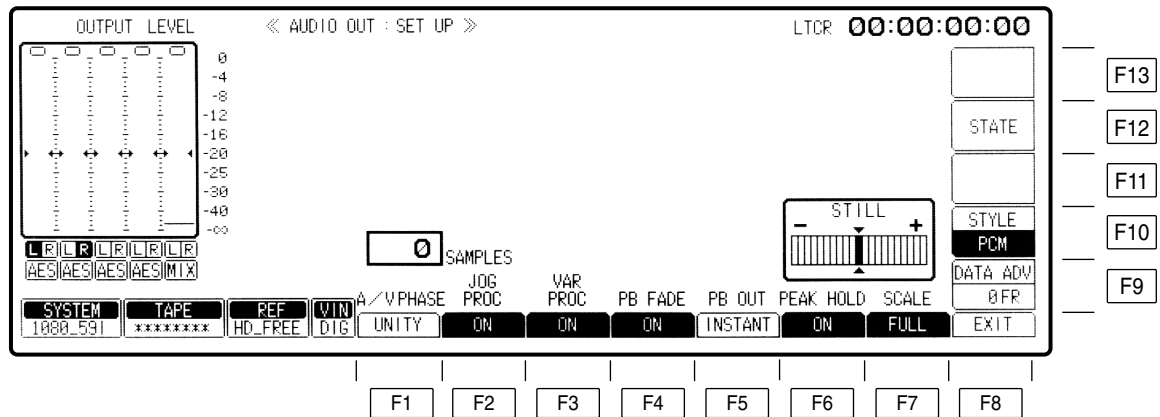
This is used to select the mixed left and right channel signals to be output to the MONITOR connector. As the selection condition, not more than two channels (maximum 4 channels) among CH1 through CH4 and among CH5 through CH8 can be set to serve as the left or right channel. When the center cursor key is pressed, MONITOR MIX is highlighted, enabling the setting to be selected. (If CUE OUT SELECT is highlighted, press the F key and a cursor key (◀ or ▶) together to enable this setting to be selected.)

Select the channel using the cursor keys (◀, ▶, ▲ and ▼), and press the center cursor key to turn the selection ON or OFF.

(This setting is for selecting the channels; whether or not the selected signals are to be actually set is performed by switching between the F11 and F12 keys.)

AUDIO OUT SET UP menu

This menu is displayed by pressing the following keys: **AUDIO OUT** → **F8**
 OR
SET UP → **F7**



AUDIO OUT SET UP menu

Key	Key designation	Description
F1	A/V PHASE* For adjusting the audio output phase in relation to the video phase.	When digital signals output from the unit are processed by an external unit, a phase difference between video and audio signals can be produced. Such differences can be eliminated by adjusting the audio and video signal phases. ●Refer to “Adjusting the audio output signals in relation to the video signals.”
F2	JOG PROC For setting the digital process ON/OFF.	Selects the digital processing in the JOG mode. ON: Performs PCM audio digital processing. OFF: No PCM audio digital processing.
F3	VAR PROC For setting the digital process ON/OFF.	Selects the digital processing in the VAR mode. ON: Performs PCM audio digital processing. OFF: No PCM audio digital processing.
F4	PB FADE Playback fade.	Uses V-fade to instantaneously eliminate the audio noise occurring during playback at the cut edit points. ON: Activates the playback V-fade processing at all cut edit points on the tape. OFF: No playback V-fade processing.
F5	PB OUT Selects the audio output when playback is started.	When shifting from stop to play status, some time elapses before the audio signals are output. This time lapse can be shortened. INSTANT: Shortens the time lapse before audio is output. The first part of the audio signal to be output, however, produces an incomplete sound. Use for transmission purposes is not recommended. Convenient when used for search operations, for instance, because the audio signals can be checked quickly. DELAYED: Outputs the audio signals as soon as they are complete.
F6	PEAK HOLD For setting the peak hold of the level meter.	For holding the peak recording and playback levels. ON: Peak level is held. OFF: Peak level is not held.
F7	SCALE For switching the level meter scale.	For switching the scale of the audio level meter on display to standard scale or fine scale. FINE: Scale in 0.2 dB increments. (–24dB to –15dB) FULL: Standard scale. (–∞ to –0dB) Refer to “Switching the level meter scale” in the AUDIO IN SET UP menu section (on page 54).
F8	EXIT	Returns the VTR to the AUDIO OUT menu screen.
F9	DATA ADV*	0–1 Fr (in increments of 1/10th of a frame): The amount by which the data is to be advanced when the digital audio input/output format is in the data mode is adjusted. (When “0” is set, the amount is set to the default setting inside the VTR.)

*This item does not function when the E-E through mode (refer to the description of the F2 key on the AUDIO OUT SET UP STATE menu) has been set.

AUDIO OUT SET UP menu

Key	Key designation	Description
F10	STYLE*	This menu item can be set by pressing the F10 key together with the F key. PCM: The style is set to the normal PCM audio mode. DATA: The style is set to the data mode (compressed audio: Dolby-E).
F11	—	
F12	STATE	Transfers the VTR to the AUDIO OUT SET UP STATE menu screen. (See page 66.)
F13	—	

*The data mode is operational only in the 4-channel audio versions of the 1080/59.94i and 720/59.94p system formats.

The items on this menu can also be set on the AUDIO IN SETUP menu. If the setting is updated on one menu, it will be updated on the other menu as well. Furthermore, these settings cannot be performed on a channel by channel basis.

AUDIO OUT SET UP menu

□ Adjusting the audio output signals in relation to the video signals

- (1) Press the F1 (A/V PHASE) key to put the display in reverse video.

A/V PHASE
UNITY

- (2) Adjust the phase difference using the ADJUST control.
When the ADJUST control is turned, the display changes to VAR.
(The adjustment can now be varied in 1-sample increments from +16 to –96 samples.)

ADJUST

+4 SAMPLES

A/V PHASE
VAR

- (3) Upon completion of the adjustment, press the F1 (A/V PHASE) key.

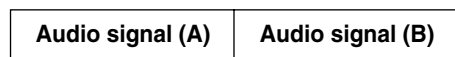
- When the UNITY/VAR key is pressed during the adjustment, the UNITY mode is restored.
When the key is pressed again, the mode reverts to VAR.

UNITY
/VAR

□ Fade function

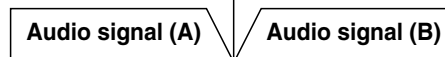
During editing, the cut-edited data is recorded automatically; during playback, this data is detected and the section concerned is V-faded.

Playback V-fade function OFF



↑
Noise appears at the joins in the editing.

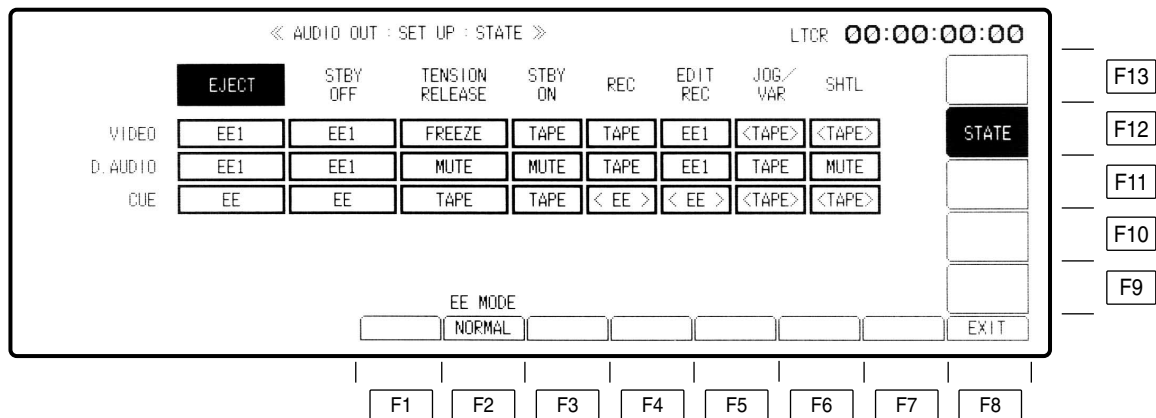
Playback V-fade function ON



↑
V-fading is performed for an instant to eliminate the noise.

AUDIO OUT SET UP STATE menu

This menu is displayed by pressing the following keys: **AUDIO OUT** → **F8** → **F12**



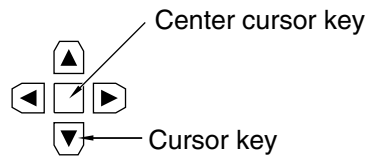
Key	Key designation	Description
F1	—	
F2	EE_MODE	NORMAL: The standard mode is established (E-E through mode is turned OFF). THROUGH: The E-E through mode (AV minimum delay mode) is established. *A discrepancy occurs between the video (audio) output and time code output in the E-E through mode.
F3–F7	—	
F8	EXIT	Transfers the VTR to the AUDIO OUT SET UP menu screen.
F9–F13	—	

VIDEO OUT SET UP STATE menu

□ Selecting the TAPE/EE output signals

The video, audio and cue signals which are output during the VTR's operation are switched on this menu to TAPE or EE signals.

- (1) Press the center cursor key to display the cursor.



- (2) Move the cursor to the desired position using the cursor keys.

- The cursor will not move to places which cannot be set.

	EJECT	STBY OFF	TENSION RELEASE	STBY ON	REC	EDIT REC	JOG/ VAR	SHTL
VIDEO	EE1	EE1	FREEZE	TAPE	TAPE	EE1	<TAPE>	<TAPE>
D. AUDIO	EE1	EE1	MUTE	MUTE	TAPE	EE1	TAPE	MUTE
CUE	EE	EE	TAPE	TAPE	< EE >	< EE >	<TAPE>	<TAPE>

- (3) Press the center cursor key to select TAPE or EE.

Refer to the following table for the types of setting options.

Mode CH	EJECT	STBY OFF	TENSION RELEASE	STBY ON	REC	EDIT REC	JOG/ VAR	SHTL
VIDEO	FREEZE BLACK GRAY FREE NOISE <u>EE1</u> EE2	FREEZE BLACK GRAY FREE NOISE <u>EE1</u> EE2	<u>FREEZE</u> BLACK GRAY FREE NOISE EE1 EE2	<u>TAPE</u> EE1 EE2	<u>TAPE</u> EE1 EE2	TAPE <u>EE1</u>	TAPE	TAPE
D.AUDIO	MUTE <u>EE1</u> EE2	MUTE <u>EE1</u> EE2	<u>MUTE</u> EE1 EE2	<u>MUTE</u> EE1 EE2	TAPE EE1 EE2	TAPE <u>EE1</u>	TAPE MUTE	TAPE <u>MUTE</u>
CUE	TAPE <u>EE</u>	TAPE <u>EE</u>	<u>TAPE</u> EE	<u>TAPE</u> EE	EE	EE	TAPE	TAPE

(Underline denotes the factory setting mode.)

- When a setting is to be established during head selection using the TEST menu or during editing, the setting applying to the operation concerned takes precedence over the setting selected using the VIDEO OUT SET UP STATE menu.
- When TAPE/EE has been set by F1 (OUTPUT) on the HOME menu, the HOME menu setting takes precedence.

AUDIO OUT SDI ASSIGN menu

This menu is displayed by pressing the following keys: **AUDIO OUT** → **F8** → **F12**

The screenshot displays the **AUDIO OUT : SDI ASSIGN** menu. At the top left, there's an **OUTPUT LEVEL** section with a scale from 0 to -60 and several vertical level meters. Below this is a row of buttons: **L**, **R**, **L**, **R**, **L**, **R**, **L**, **R**, **L**, **R**, **L**, **R**, **L**, **R**, **L**, **R**. Below these are buttons for **AES**, **AES**, **AES**, **AES**, **AES**, **AES**, **AES**, **AES**, **MIX**. The top right shows **LTCR 00:00:00:00**. The center features a signal flow diagram with **HD** and **SD** boxes and arrows labeled **HD_TO_HD**, **SD_TO_HD**, **HD_TO_SD**, and **SD_TO_SD**. On the right side, there are several settings: **SD_TO_SD** with **CH1~4** and **CH1~4** options (linked to **F13** and **F12**), **SD_TO_HD** with **CH1~4**, **CH1~4**, **CH5~8**, and **OFF** options (linked to **F11**, **F10**, and **F9**). At the bottom, there's a row of buttons: **SYSTEM** (1080_23PsF), **TAPE** (*****), **REF** (HD_FREE), **VIN** (DIG), **CH1~4**, **CH5~8**, **CH1~4**, **CH1~4**, **CH1~4**, **CH1~4**, **EXIT**. Below these buttons are labels **F1** through **F8**.

AUDIO OUT SDI ASIGN menu

Key	Key designation	Description
F1	HD_TO_HD CH1~4	Selects the channels whose signals are to be output to HD SDI embedded audio channels 1 through 4. CH1~4: The signals of CH1 through CH4 are output. CH5~8: The signals of CH5 through CH8 are output. OFF: No signals are output.
F2	HD_TO_HD CH5~8*	Selects the channels whose signals are to be output to HD SDI embedded audio channels 5 through 8. CH1~4: The signals of CH1 through CH4 are output. CH5~8: The signals of CH5 through CH8 are output. OFF: No signals are output.
F3	—	
F4	HD_TO_SD CH1~4	Selects the channels whose signals are to be output to SD SDI embedded audio channels 1 through 4. CH1~4: The signals of CH1 through CH4 are output. CH5~8: The signals of CH5 through CH8 are output. OFF: No signals are output.
F5~F7	—	
F8	EXIT	Returns the VTR to the AUDIO OUT menu screen.
F9	SD_TO_HD CH5~8*	Selects the channels whose signals are to be output to HD SDI embedded audio channels 5 through 8. CH1~4: The signals of CH1 through CH4 are output. OFF: No signals are output.
F10	SD_TO_HD CH1~4	Selects the channels whose signals are to be output to HD SDI embedded audio channels 1 through 4. CH1~4: The signals of CH1 through CH4 are output. OFF: No signals are output.
F11~12	—	
F13	SD_TO_SD CH1~4	Selects the channels whose signals are to be output to SD SDI embedded audio channels 1 through 4. CH1~4: The signals of CH1 through CH4 are output. OFF: No signals are output.

*This setting is not displayed when the digital sound is in the 4-channel format.

TC/CHR menu

This menu is displayed by pressing the following key: TC/CHR

The screenshot displays the TC/CHR menu interface. At the top, it shows 'OUTPUT LEVEL' with a scale from 0 to -40, 'SUPER POSITION' with a large empty box, and 'LTCR 00:00:00:00'. Below the output level, there are eight vertical sliders for LR and AES channels. To the right of the sliders is a 'STILL' control with a vertical bar and '+'/'- buttons. Below the sliders, there are buttons for 'SYSTEM' (1080_23PsF), 'TAPE' (*****), 'REF' (HD_FREE), and 'VIN' (DIG). To the right of these are buttons for 'SOURCE' (INT), 'TC SLAVE' (AUTO), 'UB SLAVE' (OFF), 'RUN MD' (REC RUN), 'DF MD' (ON), and 'CF BIT' (ON). On the far right, there is a vertical stack of buttons: 'CHR TYPE', 'REVERSE', 'SUPER ER' (OFF), 'SUPER TC ST', 'TCR', 'AUTO', 'CONVERT', and 'SET UP'. To the right of the interface, there are function keys F1 through F8, and F9 through F13 are listed on the far right.

TC/CHR menu

Key	Key designation	Description
F1	SOURCE For selecting internal/external time code signal.	INT: Built-in time code generator. EXT LTC: LTC time code from TIME CODE input connector. S LTC: LTC time code added to serial signals; not displayed when the SD mode is selected. S VTC: VTC time code added to serial signals; not displayed when the SD mode is selected. EXT VITC: VITC time code added to video signals; not displayed when the HD mode is selected.
F2	TC SLAVE For setting up time code slave lock mode.	●When the F1 (SOURCE) key is at [INT], AUTO, PRESET and SALVE are displayed. AUTO: Generator locks at the value read out by the reader. In this case there is no time code setting. (Only during editing.) During normal recording, however, any setting of the generator can be performed. PRESET: Generator does not lock at the value read out by the reader. Generator can be set freely. SLAVE: The generator is locked to the reader's readout value. In this case, the time code cannot be set. ●When the F1 (SOURCE) key is at [TEXT LTC], SALVE and DIRECT are displayed. SLAVE: Generator locks to external LTC time code. (When there is no external input, E-TC time data blinks.) DIRECT: External LTC time code is recorded as is. (When there is no external input, E-TC: * *: * *: * *: * *: * are displayed.) ●When the F1 key is at [S VITC], [S LTC] or [EXT VITC], this key is not displayed. In this case, the generator value typically locks to external VITC or LTC time code.
F3	UB SLAVE User bit lock.	ON: User bit locks to user bit value read by reader (TCR) or to external user bit value, and cannot be set. OFF: Generator does not lock to value read out by reader. User bit value can be set freely.
F4	RUN MD Time code progress.	REC RUN: Runs the TC only while recording is in progress. FREE RUN: Runs the TC all the time in the same way as a clock.
F5	DF MD* For selecting drop or non-drop frame.	Valid only when the F1 (SOURCE) key selects [INT]. ON: Drop frame mode is set. OFF: Non-drop frame mode is set. ●When [EXT LTC], [S VITC] or [S LTC] is selected in the F1 key, the VTR conforms to drop/non-drop frame mode of external time code.

*This is not displayed when the 1080/23p, 1080/24p or 1080/50i system format has been selected.

TC/CHR menu

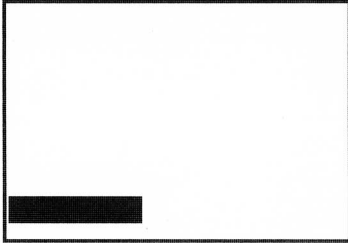
Key	Key designation	Description
F6	CF BIT* ¹ For selecting the color frame bit ON/OFF during recording.	ON: CF BIT is recorded. OFF: CF BIT is not recorded. ●When [EXT LTC], [S VITC] or [S LTC] is selected in the F1 key, the VTR conforms to the external color frame bit.
F7	—	
F8	SETUP	Transfers the VTR to the TC/CHR SET UP menu screen.
F9	CONVERT* ²	Transfers the VTR to the TC/CHR CONVERT menu screen.
F10	TCR For selecting time code read out mode.	LTC: LTC is read out all the time. AUTO: At low speed, VITC is read preferentially. When it is not read, then LTC is read. VITC: VITC is read out all the time. ●In either setting, when the time code cannot be read, values corrected by control signal are read out. (Interpolation mode is assumed and [INTRP] is displayed on the HOME menu.)
F11	SUPER For setting superimpose.	TC: Only the TC is superimposed. TC.ST: The TC and VTR status are superimposed. TC.UB: The TC and user bits are superimposed. TC.ST.RT: The TC, VTR status and remaining tape time are superimposed. OFF: No superimposed display.
F12	SUPER ERR	ON: The warning displays are superimposed. OFF: The warning displays are not superimposed.
F13	CHR TYPE For selecting type of character to be superimposed.	REVERSE: Characters appear against a black background. INTENSE: Characters are displayed more intensely.

*¹This is displayed only when the 480/59.94i system format has been selected.

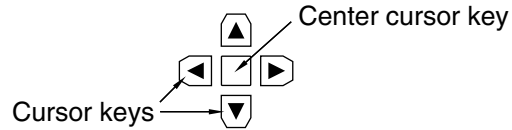
*²This is displayed only when the 1080/23p, 1080/24p or 1080/50i system format has been selected.

TC/CHR menu

□ Changing the superimposing position



(1) Move the position using the cursor keys.



- When a cursor key is held down, the cursor will move more quickly.
- When the center cursor key is pressed, the superimposing returns to its initial position.

□ Time code displays and VTR's operating modes

Display the time codes and VTR's operating modes as required.

Time code displays

CTL1: Control signal 1

CTL2: Control signal 2

LTCR: LTC time code readout value

LUBR: LTC user bit readout value

VTCT: VITC time code readout value

VUBR: VITC user bit readout value

TCG: Value generated by time code generator

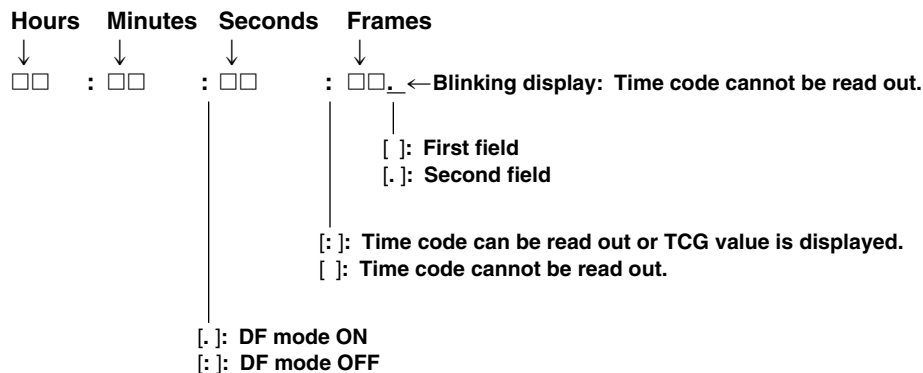
LUBG: Value of LTC user bit generated

VUBG: Value of VITC user bit generated

EXTC: External time code value

EXUB: External user bit value

- The colon (":") between the seconds and frames denotes the readout mode of the time code reader.



TC/CHR menu

□ Time code displays and VTR's operating modes (continued)

VTR's operating modes

STOP	F.FWD
PREVIEW	REW
REVIEW	EDIT PLAY (edit playback)
PREROLL	EDIT REC (edit recording)
AUTO EDIT (automatic editing)	CUE UP
JOG	STANDBY OFF
VAR	EJECT
SHTL	DMC PREVIEW
REC	DMC EDIT
REC	
(display blinks during Pre-CTL operation)	OUT PREVIEW
PLAY	DMC SAMPLE
	(variable memory speed sampling underway)
P PLY (programmed playback)	DMC PLAY (variable memory playback underway)
TSO (TAPE SPEED OVERRIDE)	AUTO OFF

- In the shuttle/variable mode and CUE UP and PREROLL modes, the tape travel direction is indicated as "+" or "-", and the tape speed is displayed as an integer.
- In the jog mode, the tape travel is indicated by "<" when it is moving in the forward direction, by "*" when it has stopped, and by ">" when it is moving in the reverse direction.
- In the programmed playback and TSO modes, "+" or "-" is used to indicate the deviation direction, and the deviation data is displayed as a percentage.

□ Error information displays

Press the F12 (SUPER ER) key to set it ON.

The error information will now be displayed.

FAN STOP (fan stopped)	HD REF ERROR (no HD reference signal input)
ERASE ERROR (erase current stopped)	SD REF ERROR (no SD reference signal input)
COMP.CPU ERROR	HD SDI ERROR (HD SDI signal error)
(error in communication with CPU)	
CONCEAL SW OFF	SD SDI ERROR (SD SDI signal error)
(conceal SW at "OFF" position)	
ECC SW OFF (ECC SW at "OFF" position)	FREQ UNMATCH
	(frequency settings fail to match)
SERVO UNLOCK (no servo lock)	VIDEO ERROR (video system error)
CTL NOT DET. (no CTL signal detection)	PCM ERROR (PCM signal system error)
LOW RF (drop in RF level during recording)	RS-422 ERROR (RS-422 system error)
CONCEAL V/A (video/audio error corrected)	RS-232C ERROR (RS-232C system error)
CONCEAL A (audio error corrected)	VA-CONT ERROR (VA controller error)
CONCEAL V (video error corrected)	TC ERROR (time code error occurred)
AUDIO MUTE (audio output muted)	CARD LOW BATT
	(low charge in front IC card battery)
HIGH ERROR (inner error value too high)	SYSCON ERROR
	(system control system error occurred)
CTL HEAD CLOG (CTL head clogged)	MECHA ERROR
	(mechanical system error occurred)
LTC HEAD CLOG (LTC head clogged)	SERVO ERROR
	(reel, drum or capstan error occurred)
OPT ERROR (optimization system error)	SYSTEM ERROR (other error)

TC/CHR menu

Table of user bit settings

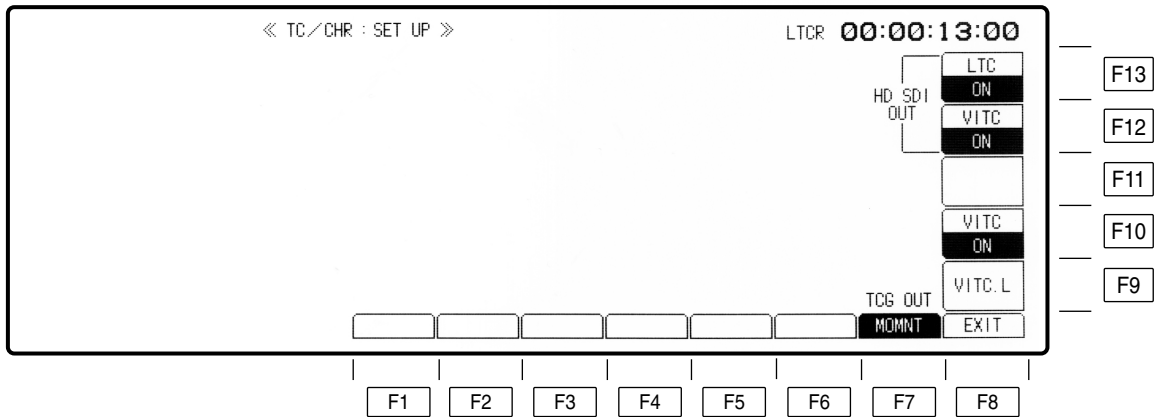
F1 (SOURCE)	F2 (TC SLAVE)	F3 (UB SLAVE)	F10 (TCR)	LUBG mode	VUBG mode
INT (internal) TC	—	ON	LTC	REGEN	INT UB
			AUTO		REGEN
			VITC	INT UB	
		OFF	LTC	PRESET	INT UB
			AUTO		PRESET
			VITC	INT UB	
S LTC S VITC EXT LTC	— SLAVE	ON	LTC	EXT REGEN	INT UB
			AUTO		EXT REGEN
			VITC	INT UB	
		OFF	LTC	PRESET	INT UB
			AUTO		PRESET
			VITC	INT UB	
EXT LTC	DIRECT	ON	LTC	DIRECT	INT UB
			AUTO		EXT REGEN
			VITC		
		OFF	LTC		INT UB
			AUDIO		
			VITC		PRESET*

*The user bit can be set in all modes except for recording.

- DIRECT:** The external LTC input signal is recorded directly and output. It is not synchronized with the internal reference signal.
- REGEN:** The user bit is slave-locked to the value read out on the tape. The user bit cannot be set.
- EXT REGEN:** The user bit is slave-locked to the externally input VITC or LTC. The user bit cannot be set.
- PRESET:** The user bit is not locked to the value read out on the tape or external input. The user bit can be set.
- INT UB:** In this mode, the previous user bit is retained, and neither the REGEN nor PRESET functions can be implemented.
To set the user bit again, use the F1 (SOURCE), F2 (TC SLAVE) or F3 (UB SLAVE) key to select one of the three modes above.

TC/CHR SET UP menu

This menu is displayed by pressing the following keys: **TC/CHR** → **F8**
OR
SET UP → **F5**



TC/CHR SET UP menu

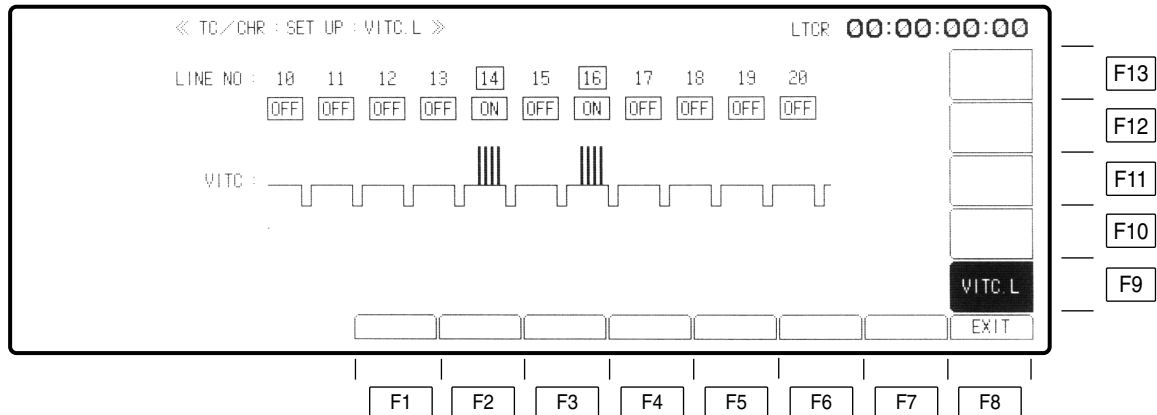
Key	Key designation	Description
F1–F6		
F7	TCG OUT	For selecting whether to latch the TCG display and LTC output using the INPUT CHECK key*. MOMNT: Establishes the INPUT CHECK mode only while the key is held down. LATCH: The INPUT CHECK mode is established when the INPUT CHECK key is pressed, and it is held even when the key is released. The mode is released in a mode other than the EJECT, STBY ON/OFF or STOP mode or when the F1 (OUTPUT) key on the HOME menu is pressed.
F8	EXIT	Returns the VTR to the TC/CHR menu screen.
F9	VITC.L	For transferring to the VITC LINE selection menu. SD mode: The recording VITC superimposing and the lines in which it is superimposed are set. The playback VITC superimposing and the lines in which it is superimposed are set. HD mode: The DOWN CON SD output VITC superimposing and the lines in which it is superimposed are set.
F10	VITC For superimposing VITC onto the SD output.	For selecting whether the VITC information is to be superimposed on SD recording and output. ON: VITC is superimposed. OFF: VITC is not superimposed.
F11	—	
F12	VITC For selecting the VITC.	For selecting whether the VITC information is to be carried on the HD SDI output. Selects whether the VITC is to be carried. ON: VITC is carried. OFF: VITC is not carried.
F13	LTC For selecting the LTC.	For selecting whether the LTC information is to be carried on the HD SDI output. Selects whether the LTC is to be carried. ON: LTC is carried. OFF: LTC is not carried.

NTSC: 10–20 lines
(Default 14, 15)
PAL: 8–22 lines
(Default 11, 13)

*The video input signals can be checked at the SD SDI MONITOR OUT or HD SDI MONITOR OUT connector, and the audio input signals can be checked at the MONITOR connector and HEADPHONES jack; these signals are switched to the input signals while the INPUT CHECK key is held down.

TC/CHR SET UP VITC.L menu

This menu is displayed by pressing the following keys: **TC/CHR** → **F8** → **F9**
 OR
SET UP → **F5** → **F9**.

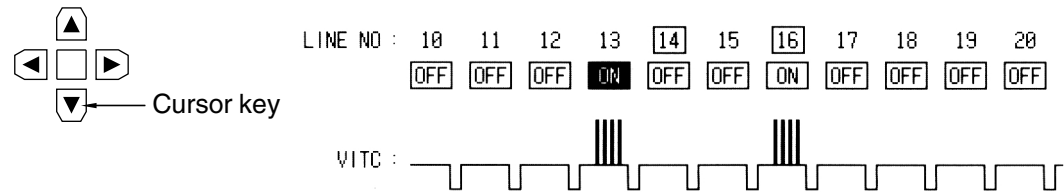


Key	Key designation	Description
F1–F7	—	
F8	EXIT	Returns the VTR to the TC/CHR menu screen.
F9	VITC.L	SD mode: The superimposing of the recording VITC and the lines where it is to be superimposed are set. The superimposing of the playback VITC and the lines where it is to be superimposed are set. HD mode: The superimposing of the DOWN CON SD output VITC and the lines where it is to be superimposed are set.
F10–F13	—	

TC/CHR SET UP VITC.L menu

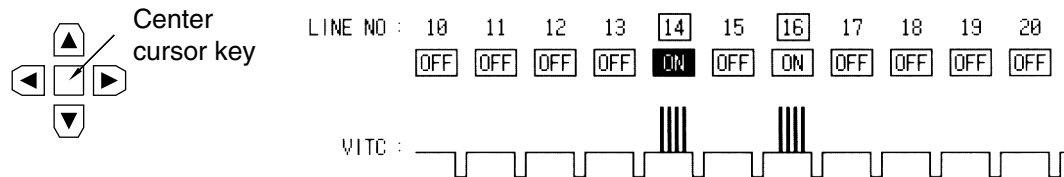
□ Selecting the line where VITC is to be inserted

1. Use the cursor keys (◀, ▶) to select the lines where VITC is to be inserted.



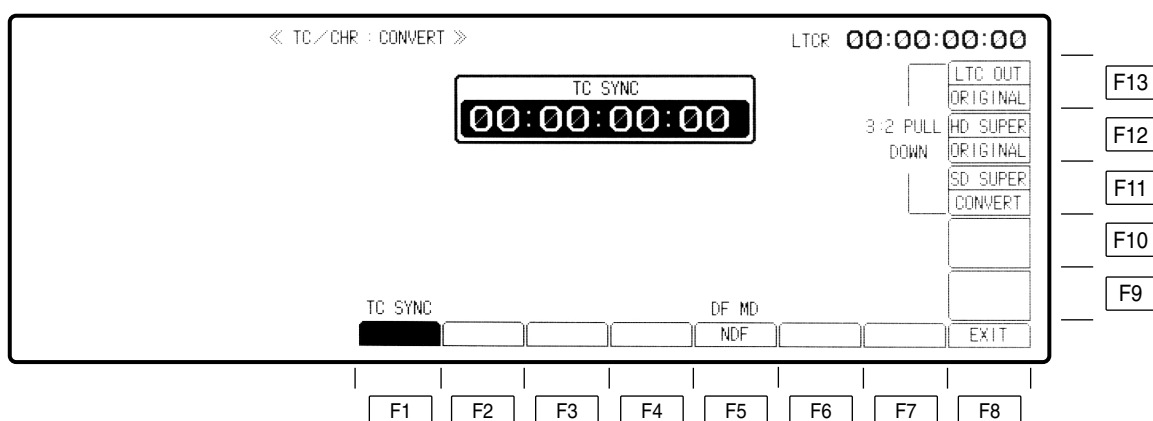
The line numbers shown in the boxes on the screen indicate the recommended insertion lines (lines 14 and 16 for NTSC and lines 11 and 13 for PAL).

2. To select other lines, press the center cursor key.
(Up to two lines can be selected for insertion.)



TC/CHR CONVERT menu

This menu is displayed by pressing the following keys: **TC/CHR** → **F9**



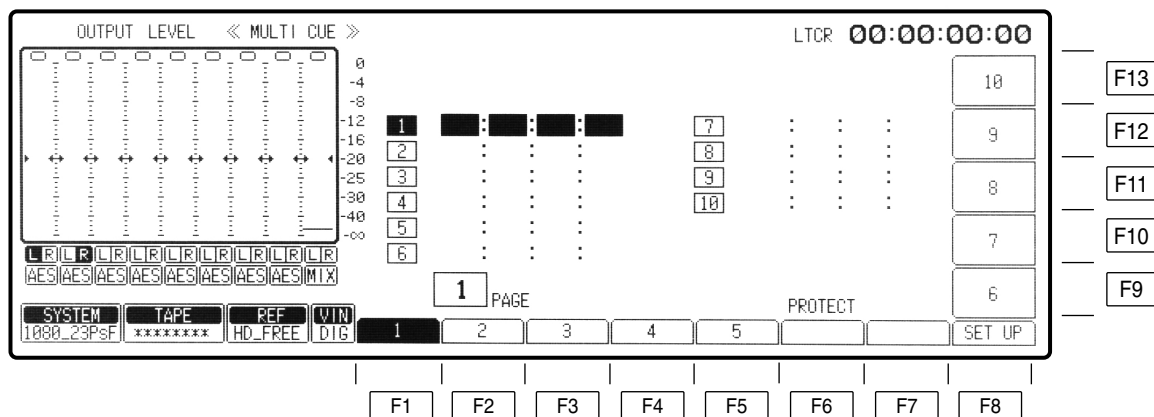
Key	Key designation	Description
F1	TC SYNC* ¹ For selecting the point at which the TC value is to be set.	For selecting the point at which the TC value is to be set when the time code is converted. When this key is pressed, the window is opened, and the TC value can be input.
F2–F5	—	
F6	DF MD* ²	For selecting drop frame or non-drop frame of the time code signals, which are to be TC converted and output, for the 3:2 pull-down output from 1080/23p or 1080/24p. DF: Drop frame is set. NDF: Non-drop frame is set.
F7	—	
F8	EXIT	Returns the VTR to the TC/CHR menu screen.
F9–F10	—	
F11	SD SUPER* ²	CONVERT: Counts up at 30 frames. ORIGINAL: Counts up at 24 frames.
F12	HD SUPER* ²	CONVERT: Counts up at 30 frames. ORIGINAL: Counts up at 24 frames.
F13	LTC OUT* ²	CONVERT: Counts up at 30 frames. ORIGINAL: Counts up at 24 frames.

*¹This can be set only when the 1080/23p or 1080/24p system format is set and when F11, F12 or F13 key has been set to **CONVERT**.

*²These keys are displayed only when the 1080/23p or 1080/24p system format has been selected.

MULTI CUE menu

This menu is displayed by pressing the following key: **MULTI CUE**



MULTI CUE menu

Key	Key designation	Description
F1	1 For designating the cue number 1 and page.	Designates the cue number for registering the cue point. When the key is pressed together with the F key, the page for registering the point is also designated.
F2	2 For designating the cue number 2 and page.	
F3	3 For designating the cue number 3 and page.	
F4	4 For designating the cue number 4 and page.	
F5	5 For designating the cue number 5 and page.	
F6	PROTECT For designating protection on a page by page basis.	This function is executed by pressing this key together with the F key. ON: Sets the displayed page to the protected status. Cue points on this page cannot be registered, changed or cleared. OFF: Releases the protected status of the page displayed. Cue points on this page can be registered, changed or cleared.
F7	—	
F8	SET UP	Transfers to the MULTI CUE SET UP menu screen.
F9	6 For designating the cue number 6 and page.	Designates the cue number for registering the cue point. When the key is pressed together with the F key, the page for registering the point is also designated.
F10	7 For designating the cue number 7 and page.	
F11	8 For designating the cue number 8 and page.	
F12	9 For designating the cue number 9 and page.	
F13	10 For designating the cue number 10 and page.	

MULTI CUE menu

□ Switching the pages

- A particular page can be selected by pressing one of the F1 (1) through F5 (5) or F9 (6) through F13 (10) keys together with the F key.
 - The pages are scrolled up when the F key and “▶” key are pressed together.
 - The pages are scrolled down when the F key and “◀” key are pressed together.
- If an attempt is made to scroll down from page 1, page 10 will be displayed.
If an attempt is made to scroll up from page 10, page 1 will be displayed.



□ Protecting pages

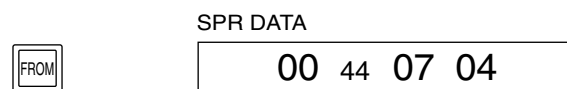
When the F6 (PROTECT) key and F key are pressed together, the protected status is set for the page displayed.
When the F6 key and F key are pressed together again, the protected status is released.
Once protected, the number of the page is displayed as follows:



□ Entering cues

Up to a hundred cue points can be entered.

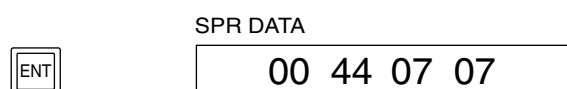
- (1) Select the number of the cue point to be entered.
Press one of the F1 through F5 or F9 through F13 keys. The number corresponding to the pressed key appears in reverse video.
- (2) Input the time code.
There are three ways of inputting the time code.
 - 1) Use the search dial to search the cue point, and press the ENTRY button.
 - 2) Input the time code directly using the number keys, and press the ENT key.
 - 3) Move the cursor to the section where the value can be captured.
 1. Press the FROM key.
The time code of the cursor position is captured in the scratchpad register.



2. Increment or decrement the number using the “+,” “-” and number keys.

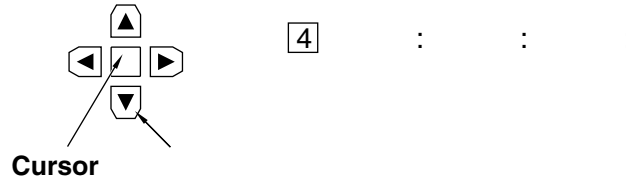


3. Press the ENT key.
The result of the operation is now displayed.

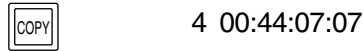


MULTI CUE menu

4. Move the cursor to the section where the captured time code is to be displayed.



5. Press the COPY key to call the captured time code.



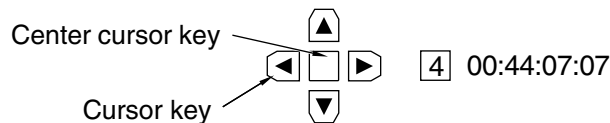
The cue data is now entered.

- The position of the next cue number automatically appears in reverse video when the F1 (AUTO STEP) key on the MULTI CUE SET UP menu has been set to ON.
- An entered cue point remains in the memory even when the power is turned off.

□ Changing cue points

Proceed as follows to change an already entered cue point.

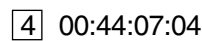
- (1) Press the key (F1–F5, F9–F13) corresponding to the cue to be entered.
- (2) Press the cursor keys to move the column cursor to the time code of the cue point to be changed.



- (3) Press the center cursor key to change the cursor to the column cursor, and then input the value using the number keys.



- (4) Press the ENT key.



□ Clearing cue data

Proceed as follows to clear an already entered cue point.

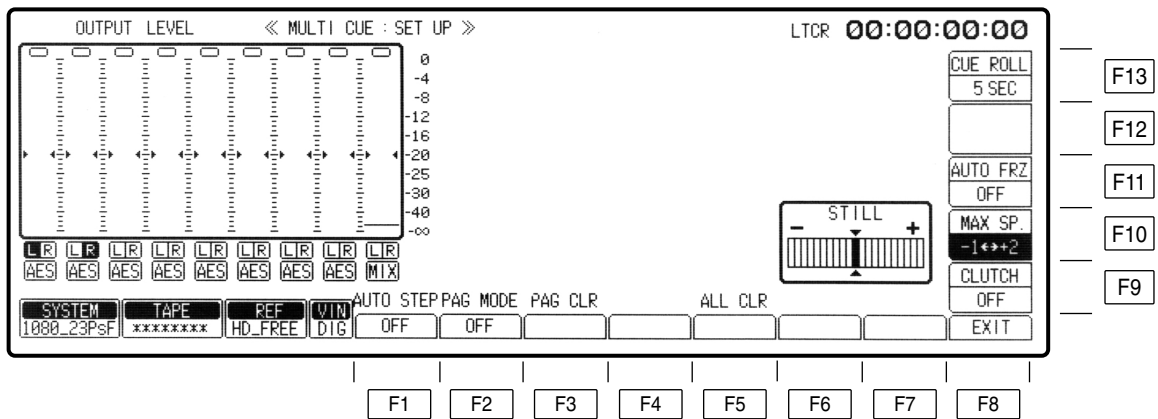
- (1) Press the key (F1–F5, F9–F13) corresponding to the cue to be cleared.
- (2) Press the C key.
- (3) Press the ENT key.

□ Clearing all the cue points

Press the F8 (SET UP) key, and then press the F3 (PAG CLR) on the SET UP menu and F key together. All the cue points on the page concerned are now cleared. To clear all the cue points on all the pages (with the exception of the cue points on protected pages), press the F5 (ALL CLR) and F key together.

MULTI CUE SET UP menu

This menu is displayed by pressing the following keys: **MULTI CUE** → **F8**



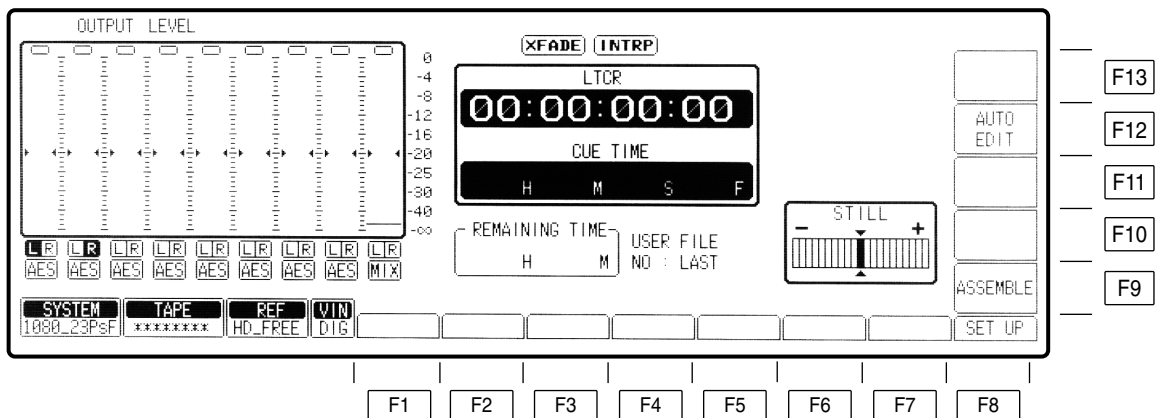
MULTI CUE SET UP menu

Key	Key designation	Description
F1	AUTO STEP For setting the auto step mode.	ON: Moves the cursor to the next item automatically when a cue point is registered. OFF: Cursor is not moved. •When F2 (PAG MODE) below is at ON, the cursor moves only on the page. For example, upon completion of registration of cue point number 10, the cursor moves to the time code input site of cue number 1 on the same page. •When F2 (PAG MODE) below is at OFF, the cursor moves between two pages. For example, upon completion of registration of cue point number 10, the cursor moves to the time code input site of cue number 1 on the next page.
F2	PAG MODE For setting the cursor movement mode.	ON: Cursor moves only on the same page. OFF: Cursor moves between two pages.
F3	PAG CLR For clearing cue data on a page.	All the cue data on a page is cleared. This function is executed when the key is pressed together with the F key. •Data on a protected page is not cleared.
F4	—	
F5	ALL CLR For clearing all the cue data.	All the cue data is cleared. This function is executed when the key is pressed together with the F key. •Data on a protected page is not cleared.
F6–F7	—	
F8	EXIT	Returns the VTR to the MULTI CUE menu screen.
F9	CLUTCH For setting the dial clutch in the VAR mode.	ON: Sets the clutch to the –1a, 0a, +1a or +2a speed. OFF: The clutch is not set.
F10	MAX SP. For setting the maximum tape speed in the VAR mode.	–1 ← → +2: Tape speed in the range of –1 to +2 –1 ← → +1: Tape speed in the range of –1 to +1 0 ← → +1: Tape speed in the range of 0 to +1
F11	AUTO FRZ* For setting the freeze frame output in the VAR mode.	ON: A freeze frame is output when the EXECUTE button is pressed during variable mode. (Tape running continues.) The setting is released when the STOP, PLAY, FF, REW, JOG, VAR or SHTL button is pressed. OFF: A freeze frame is not output.
F12	—	
F13	CUE ROLL For setting the preroll time.	Sets the preroll time. Preroll time can be set in 1-second steps from 0 to 30 sec.

*This item is operational on the MULTI CUE menu screen.

INSERT/ASSEMBLE MANUAL EDIT menu

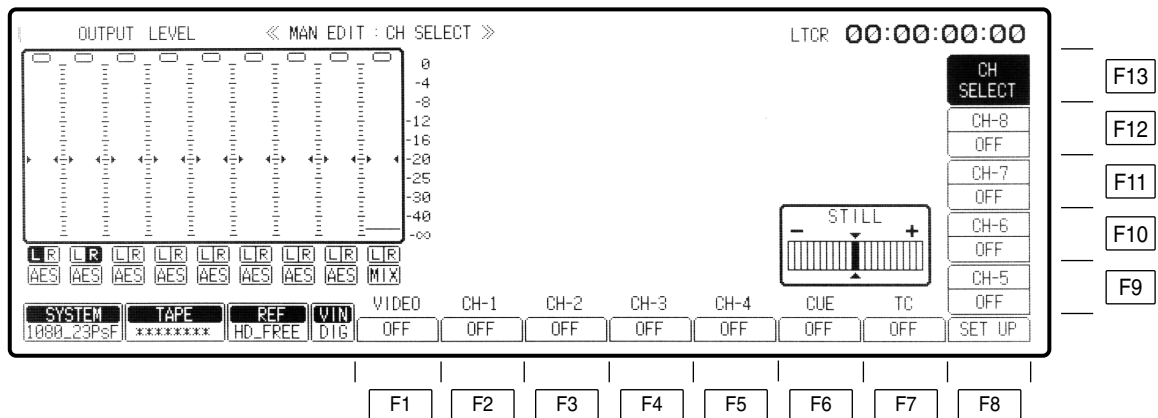
Press the **ASSEM** (or **INSERT**) → **F12** keys to display the MANUAL EDIT menu.



Key	Key designation	Description
F1–F7	—	
F8	SET UP	Transfers the VTR to the MANUAL EDIT SET UP menu screen.
F9	INSERT/ASSEMBLE For setting the editing mode ON/OFF.	Selects the editing mode. ON: Sets the editing mode to ON. OFF: Sets the editing mode to OFF.
F10–F11	—	
F12	AUTO EDIT	Transfers the VTR to the AUTO EDIT menu screen.
F13	CH SELECT For selecting the editing channel.	Transfers the VTR to the INSERT MANUAL EDIT CH SELECT (editing channel selection) menu screen (but only for insert editing).

INSERT MANUAL EDIT CH SELECT menu

This menu is displayed by pressing the following keys: **INSERT** → **F12** → **F13**



*CH-5 to CH-8 are not displayed when PCM audio has been set to the 4-channel format.

INSERT MANUAL EDIT CH SELECT menu

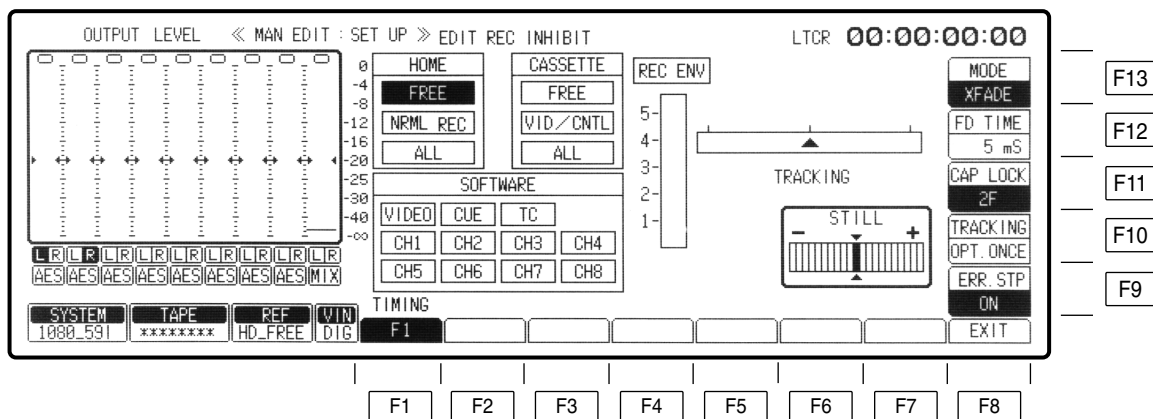
Key	Key designation	Description
F1	VIDEO For selecting the video channel ON/OFF.	
F2	CH-1 For selecting the audio CH1 ON/OFF.	For selecting the editing channel. Valid only for insert editing.
F3	CH-2 For selecting the audio CH2 ON/OFF.	ON: Selected as the editing channel. OFF: Not selected as the editing channel.
F4	CH-3 For selecting the audio CH3 ON/OFF.	● In the case of insert editing with selection of digital audio channel only, be sure to continue with a stabilized input video signal. - If the input video signal is distorted, audio might not be recorded properly.
F5	CH-4 For selecting the audio CH4 ON/OFF.	
F6	CUE For selecting the cue channel ON/OFF.	
F7	TC For selecting the LTC time code channel ON/OFF.	
F8	SET UP	Transfers the VTR to the MANUAL EDIT SET UP menu screen.
F9	CH-5 For selecting the audio CH5 ON/OFF.	For selecting the editing channel. Valid only for insert editing.
F10	CH-6 For selecting the audio CH6 ON/OFF.	ON: Selected as the editing channel. OFF: Not selected as the editing channel.
F11	CH-7 For selecting the audio CH7 ON/OFF.	● In the case of insert editing with selection of digital audio channel only, be sure to continue with a stabilized input video signal. - If the input video signal is distorted, audio might not be recorded properly.
F12	CH-8 For selecting the audio CH8 ON/OFF.	
F13	CH SELECT	Transfers the VTR to the INSERT MANUAL EDIT menu screen.

INSERT/ASSEMBLE MANUAL EDIT SET UP menu

Press the **ASSEM** (or **INSERT**) → **F12** keys to change to the MANUAL EDIT menu, then press the **F8** key to display this menu.

OR

Press the **SET UP** → **F2** keys to display this menu.



INSERT/ASSEMBLE MANUAL EDIT SET UP menu

Key	Key designation	Description
F1	TIMING* For setting the edit timing.	Sets the timing with which to record the fields at the edit IN point and OUT point. This menu item can be set by pressing the F1 key and the F key together. F1: Editing starts from the odd-numbered field at the IN point, and it ends when an even-numbered field one frame before the OUT point is recorded. F2: Editing starts from the even-numbered field at the IN point, and it ends when an odd-numbered field at the OUT point is recorded. F1/F2: The fields for the edit IN point and OUT point are determined by the timing at which the edit command is issued. If the edit timing command is issued in an even-numbered field, editing is ended in an odd-numbered field; conversely, if the edit timing command is issued in an odd-numbered field, editing is ended in an even-numbered field. •The edit timing can also be set on the AUTO EDIT SET UP menu. If a different mode has been set on the AUTO EDIT SET UP menu, the mode which has been set on the INSERT/ASSEMBLE MANUAL EDIT SET UP menu will be changed. •The F1 setting is forcibly established when the CONTROL (REMOTE/LOCAL) switch has been set to LOCAL.
F2–F7	—	
F8	EXIT	Returns the VTR to the MANUAL EDIT menu screen.
F9	ERR.STP Error stop.	When the ENV value at which editing started (5 frames before) has dropped to 25% below the REC ENV value when optimizing was completed, an error is considered to have occurred, and one of the following operations is selected. ON: During execution of editing in optimize mode, if an error has occurred up to the IN point, editing is aborted and the stop mode is assumed. OFF: Displays a message and continues editing when an error has occurred.
F10	TRACKING For adjusting the tracking.	Under normal times, tracking adjustment is not necessary. Adjustment is made if tracking disparities have occurred during editing. VAR: The tracking can be adjusted manually. Refer to “Manually adjusting the tracking” (on page 96). FIX: The tracking is fixed. OPT ONCE: At the initial editing after the cassette has been inserted, the tracking is optimized while the tape is playing back up to the IN point. The tracking is not subsequently optimized. When the PLAY button and STAND BY button are pressed together during EDIT/PLAY, the tracking is optimized again, and it is optimized with each EDIT/PLAY operation. OPT AUTO: The tracking is optimized while the tape is playing back up to the IN point with each editing operation, and it is retained even if the VTR is transferred to another menu. Refer to “Automatically adjusting the tracking.”

*This item cannot be displayed when the 1080/23p or 1080/24p format has been selected. (It is forcibly set to F1.)

INSERT/ASSEMBLE MANUAL EDIT SET UP menu

Key	Key designation	Description
F11	CAP LOCK For setting the capstan servo lock.	For selecting the capstan servo lock mode during playback. 4F AUTO (8F AUTO: 1080/23p, 1080/24p, 1080/50i): Assumes the color frame auto lock mode. If discontinuity is produced in the color frame during playback, the unit locks again to a new color frame. 4F FORCE (8F FORCE: 1080/23p, 1080/24p, 1080/50i): Assumes the color frame forced lock mode. If there is any discontinuity in the color frame during playback, the unit preserves the field sequence at initial lock. 2F: Assumes frame lock mode. ●The capstan servo lock mode can be set in HOME SET UP menu. If the two settings differ, priority is given to the final mode setting.
F12	FD TIME* For setting the audio fade time.	Valid when the F13 key is set to X FADE or V FADE. The times that can be set are as follows: 5, 10, 15, 20, 25, 50, 100 ms. (Initial setting is 5 ms.) For the setting procedure, refer to “Selecting the audio fade time” (on page 97).
F13	MODE* For setting the audio fade edit.	Audio editing can be accomplished while cross-fade editing prior playback audio and input audio or V-fade editing. X FADE: Performs audio cross-fade editing. CUT: Performs cut (normal) editing. V FADE: Performs audio V-fade editing.

*Only CUT can be selected when TAPE has been selected as the EDIT REC STATE setting. However, FADE can be selected by pressing this key and F key together, in which case the EDIT REC STATE setting is switched to EE1.

INSERT/ASSEMBLE MANUAL EDIT SET UP menu

☐ EDIT REC INHIBIT mode display

This display shows the statuses of the editing inhibit modes.

HOME			CASSETTE		
FREE			FREE		
NRML REC			VID/CNTL		
ALL			ALL		
SOFTWARE					
VIDEO	CUE	TC			
CH1	CH2	CH3	CH4		
CH5	CH6	CH7	CH8		

●SOFTWARE

The editing inhibit modes selected for each channel are shown here. Refer to “Selecting the SOFTWARE inhibit channels.”

VIDEO: Video channel editing is inhibited.

CH1–CH8

(CH4): Digital audio channel editing is inhibited.

CUE: Cue channel editing is inhibited.

TC: Time code channel editing is inhibited.

●HOME

The recording inhibit modes established using the F13 (REC INH) key on the HOME menu are shown here.

FREE: Recording can be performed.

NRML REC: The normal recording mode is inhibited.

ALL: All recording/editing operations are inhibited.

●CASSETTE

The recording inhibit modes established by the cassette tape are shown here.

FREE: Recording can be performed.

VID/CNTL: The video and control signals are inhibited.

ALL: All recording/editing operations are inhibited.

☐ Sequence of priority for recording inhibit modes

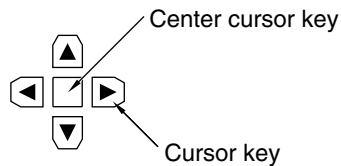
A sequence of priority applies to the inhibit modes and, depending on which modes have been selected, it may not be possible to perform recording. If, for example, “ALL” has been selected for CASSETTE, no editing or recording will be possible regardless of the other settings.

First:	CASSETTE
Second:	HOME
Third:	SOFTWARE

INSERT/ASSEMBLE MANUAL EDIT SET UP menu

□ Selecting the SOFTWARE inhibit channels

(1) Press the center cursor key. The cursor now appears.



(2) Press the cursor key to move the cursor to the channel where editing is to be inhibited.

CH4

(3) Press the center cursor key. Once the display appears in reverse video, the selection of the editing inhibit channel is completed. When the center cursor key is pressed again, the editing inhibit is released.

CH4

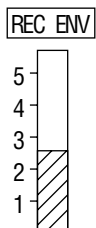
- Assembly editing cannot be selected if there is even one editing inhibit channel.

<Notes>

- When ALL or PRE CTL has been set for CASSETTE EDIT REC INHIBIT or HOME REC INHIBIT, all recording and editing operations will be inhibited.
- When VIDEO/CNTL has been set for CASSETTE EDIT REC INHIBIT, editing inhibit applies to the video channel at all times.

□ REC ENV display

This shows the RF envelope level at which sound is played back from the rotary recording heads during playback.



INSERT/ASSEMBLE MANUAL EDIT SET UP menu

□ Tracking

● Automatically adjusting the tracking (optimizing)

To optimize the tracking automatically, press the F10 (TRACKING) key to select OPT ONCE or OPT AUTO.

Set the preroll time to 5 seconds or more.

- At the OPT ONCE setting, the tracking is optimized only once while the tape is playing up to the IN point during the first editing after the cassette has been inserted. The tracking is not subsequently optimized, and the value is fixed.
- At the OPT AUTO setting, the tracking is optimized while the tape is playing up to the IN point with each editing.

<Notes>

- The OPT ONCE setting is suitable when continuous editing is to be performed such as in the case below. (If OPT AUTO is set when this kind of editing is to be performed, the tracking error may build up.)

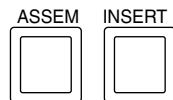
Base	Edit ❶	Edit ❷	Edit ❸	Base
------	--------	--------	--------	------

- The OPT AUTO setting is suitable when intermittent editing is to be performed such as in the case below.

Base	Edit ❶	Base	Edit ❷	Base
------	--------	------	--------	------

- Proceed as follows to optimize the tracking again using OPT ONCE.

- (1) Press the INSERT or ASSEMBLE button to highlight the F9 key and establish the editing mode. Check that the INSERT or ASSEMBLE LED has lighted.



- (2) Press the PLAY button to establish the PLAY (EDIT PLAY) mode.

- (3) Optimizing is initiated by pressing the PLAY and STAND BY buttons together.

<Notes>

- (1) The optimized tracking value is retained even when the VTR is transferred to another menu.
- (2) The following message appears while the tracking is being optimized, and the ▲ mark that indicates the tracking value appears to show the progress made in the processing.

OPTIMIZING

Upon completion of the optimizing, the following message appears, the TRACK OPT appears on the INSERT/ASSEMBLE MANUAL EDIT and HOME menu screens.

COMPLETE

- (3) The following message appears and optimizing is suspended in the following cases:
- When the VTR is set to a mode other than PLAY while optimizing is underway.
 - When optimizing has failed.
 - When no video signals have been recorded on the tape.
 - When no CTL signals have been recorded on the tape.

NOT COMPLETE

At times like these, the center value (0) is set as the optimized value.

- (4) If the optimizing processing fails to be completed even after 5 seconds, the following message appears and optimizing is suspended.

TIME OVER

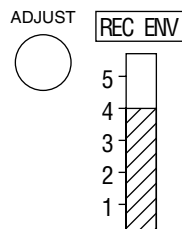
- (5) When the cassette is ejected, the optimized value is canceled.

☐ Manually adjusting the tracking

- (1) Insert the tape, and play it back.
- (2) Press the F10 (TRACKING) key and set it to VAR.

TRACKING
VAR

- (3) Turn the ADJUST control, and adjust it so that the envelope level is set to its maximum.



INSERT/ASSEMBLE MANUAL EDIT SET UP menu

□ Selecting the audio fade time

- (1) Press the F13 (MODE) key to set it to X FADE or V FADE.

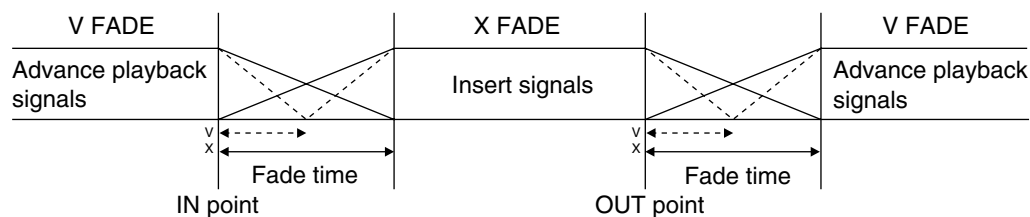
MODE
X FADE

- (2) Press the F12 (FD TIME) key.

FD TIME
10

- (3) Turn the ADJUST control to select the audio fade time.

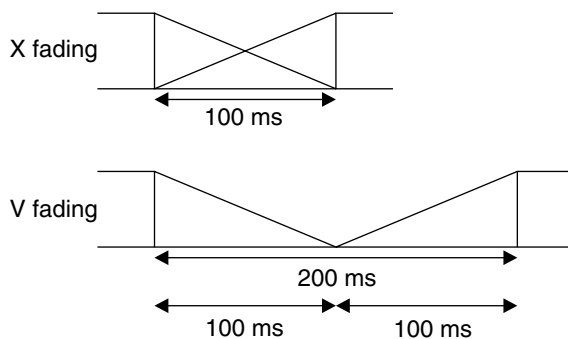
ADJUST
25



The solid lines indicate X fading.
The broken lines indicate V fading.

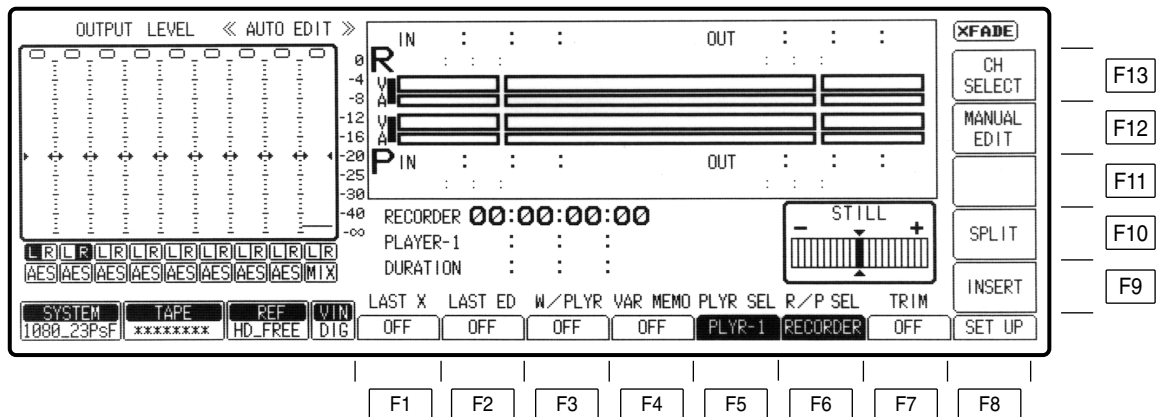
<Note>

The V fade time is a multiple of the time set for FD TIME.
If, for instance, FD TIME is to be set to 100ms:



INSERT/ASSEMBLE AUTO EDIT menu

The AUTO EDIT menu is displayed by pressing the following keys: **ASSEM** or **INSERT** → **F12**



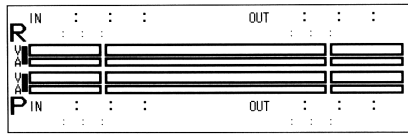
INSERT/ASSEMBLE AUTO EDIT menu

Key	Key designation	Description
F1	LAST X For calling the edit data to be input.	When the F1 key is pressed, "LOAD" is displayed, and the edit data which was input last is called.
F2	LAST ED For calling all the last data edited.	When the F2 key is pressed, "LOAD" is displayed, and all the data which was edited last is called.
F3	W/PLYR Continuous VTR remote control ON/OFF.	Performs remote control of VTR connected by RS-422A. ON: Remote control possible. OFF: Unit operated independently. ●See also F5 (PLYR SEL) key.
F4	VAR MEMO Variable memory.	This function stores the playback speed and direction settings established by the search dial in its memory and automatically reproduces these settings. (At times, these settings are reproduced by one's own VTR; at other times, they may control the player that is connected.) ON: Enables the variable memory function. OFF: Disables the variable memory function.
F5	PLYR SEL Selects player for remote control.	PLYR-1: Controls the VTR connected to REMOTE OUT connector. PLYR-2: Controls the VTR connected to REMOTE IN/OUT connector.
F6	R/P SEL Selects VTR for operation.	PLAYER: Performs remote control of the player selected by F5 (PLYR SEL) key. PECORDER: Control is the main unit (recorder) only.
F7	TRIM Frame correction of edit point.	ON: Registered edit points are corrected by frame unit. OFF: Releases trim function.
F8	SET UP	Transfers the VTR to the AUTO EDIT SET UP menu screen.
F9	INSERT For setting the editing mode ON/OFF.	ON: Sets the editing mode ON. OFF: Sets the editing mode OFF.
F10	SPLIT Split editing ON/OFF.	This function registers each audio and video edit point during insert editing. ON: Enables split editing. OFF: Releases split editing. (For details, refer to pages 40 and 41 in the Hardware Operating Instructions.)
F11	—	
F12	MANUAL EDIT	Transfers the VTR to the MANUAL EDIT menu screen.
F13	CH SELECT Edit channel selection.	Transfers the VTR to the INSERT AUTO EDIT CH SELECT (editing channel selection) menu screen (but only for insert editing).

INSERT/ASSEMBLE AUTO EDIT menu

□ Tape position indicator

This indicates the edit points (IN and OUT) and tape positions of the recorder and player.



- EOT (end of tape) or BOT (beginning of tape) is displayed when the tape is at its end or beginning.
- During split editing, the audio and video edit points are indicated separately.

□ Duration

RECORDER 00:00:00:00
PLAYER-1 : : :
DURATION : : :

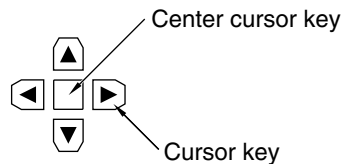
If the duration is known, it is sufficient to enter only the IN or OUT edit points for the recorder and player: the remaining points will be automatically calculated.

(Recorder's time code readout value)
(Player's time code readout value)
(Editing time)

□ Entering the edit points

(1) Input the points directly using the number keys.

- 1) Press the center cursor key.
The cursor now appears.



- 2) Press the cursor key to move the cursor to the data input position (player's IN point in the figure).

IN : : :

P

- 3) Press the center cursor key.
The cursor now changes into a column cursor.

IN 0 : : :

P

- 4) Input the edit point using the number keys.

0 0 0 0 3 4 1 4

- 5) Press the ENT key.
Follow the same steps to enter the IN and OUT points of the recorder and player.

- Enter three edit points for the recorder and player.
(Refer to the section on duration.)
- **To clear the data:** Move the cursor to the position where the data is to be cleared, and press the center cursor key. The cursor now changes into a column cursor. The entered point can be cleared by pressing the C key now.

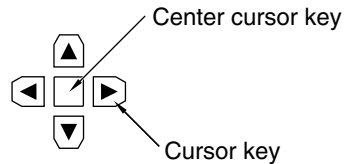
INSERT/ASSEMBLE AUTO EDIT menu

(2) Search the edit point using the search dial.

- 1) Search the edit point using the search dial.
- 2) Press the ENTRY button.

•Trimming operations

- (1) Press the center cursor key.
The cursor now appears.

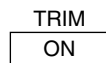


- (2) Press the cursor key to move the cursor to the section with the data to be trimmed.

IN 00:00:02:14

R

- (3) Set the F7 (TRIM) key to ON.

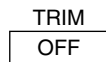


- (4) Press the center cursor key again so that the cursor is made to serve as a column cursor.

- (5) Press the “+” or “-” button to trim the edit point in 1-frame increments.

Each time the “+” button is pressed, the point is incremented by 1 frame.
If the “+” button is held down, the point is incremented continuously.

- (6) Press the F7 (TRIM) key to set it to OFF.



IN 00:00:02:16

R

<Notes>

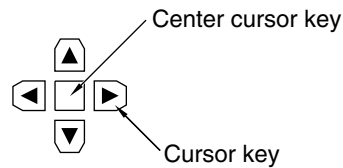
When the edit points are entered during editing with the player or editor (recorder), the final (fourth) edit point is automatically calculated from the other edit points and entered as a virtual edit point.

- The “*” mark appears at the side of a virtual edit point display.
- If a virtual edit point is to be cleared, it will be cleared automatically by clearing the other edit points.

INSERT/ASSEMBLE AUTO EDIT menu

Input the data using the scratchpad.

- 1) Press the center cursor key.
The cursor now appears.



- 2) Press the cursor key to move the cursor to the time code IN or OUT position which is to be input.

- 3) Press the FROM key.
The time code at the cursor position is displayed inside the register.

SPR DATA

00 : 14 : 03 : 05

- 4) Use the “+”, “-” and number keys to increment or decrement the time code, and press the ENT key.
The operation result is now displayed inside the register.

- 5) Press the cursor keys to move the cursor to the cursor position (IN or OUT) to which the operation result is to be copied.

- 6) Press the COPY key.
The time code of the changed edit point is now displayed.

- If an illegal number was input during the incrementing or decrementing in step 4), an error message will appear.

ERROR INVALID TC DATA

- Corrections can be made until the COPY key is pressed.

• Calling the edit data which was input last

- (1) Press the center cursor key.
The cursor now appears.
- (2) Press the cursor key to move the cursor to the data section which is to be called.
- (3) Press the F1 (LAST X) key to set it to LOAD.
The data which was input last now appears.

IN

 00:00:02:16

• Calling all the data which was edited last

- (1) Press the F2 (LAST ED) key to set it to LOAD.
All the data which was edited last now appears.

INSERT/ASSEMBLE AUTO EDIT menu

□ Variable memory function

1. Set the F3 (W/PLYR) key to OFF.

W/PLYR

2. Set the F4 (VAR MEMO) key to ON.

VAR MEMO

- If the IN and OUT points have already been entered, they are automatically cleared.
 - If ON is set for the split mode, it is forcibly set to OFF.
 - When the variable memory function is used, AUDIO IN and OUT points cannot be entered.
3. Input the VTR's edit IN point.
This serves as the variable memory playback start point.
 - There is no need to set the OUT point with variable memory playback.
 4. Set the initial speed using the search dial.
The initial speed is now shown on the search indicator.
 5. Press the PREROLL and EXECUT buttons together to start operation.
The tape travels to the preroll point, and playback starts at the initial speed.
 6. When the edit IN point is passed, the EXECUTE button lamp starts blinking.
 7. Turn the search dial and enter the tape speed in the memory.
 - The data can be stored in the memory while the EXECUTE button lamp is blinking.
When the memory becomes full, the EXECUTE button lamp comes on, and no more data can be stored in the memory.
 - To change the initial speed or data stored in the memory, repeat the procedure from step 4.
 8. To end the variable memory operation, press the STOP button.
 9. To reproduce the data stored in the memory, press the EXECUTE button.
- The tape plays from the position past the IN point in accordance with the data stored in the memory, and it keeps traveling at the last speed stored in the memory until the STOP button is pressed.
 - The data stored in the memory is cleared when the F4 (VAR MEMO) button is set from OFF to ON.
It is also cleared when the power switch is set to OFF.

INSERT/ASSEMBLE AUTO EDIT menu

□ Variable memory editing

By operating the search dial on a VTR connected to the unit's RS-422A REMOTE OUT connector or REMOTE IN/OUT connector, the playback speed and direction can be stored in that VTR's memory, and the memory data can be reproduced during automatic editing and stored in this unit (recorder).

1. Set the F3 (W/PLYR) key to ON.

W/PLYR
ON

- To operate the VTR connected to the REMOTE OUT connector by remote control, set F5 (PLYR SEL) on the ASSEMBLE/INSERT AUTO EDIT menu to PLAY-1.
- To operate the VTR connected to the REMOTE IN/OUT connector by remote control, set F5 (PLYR SEL) on the ASSEMBLE/INSERT AUTO EDIT menu to PLAY-2.

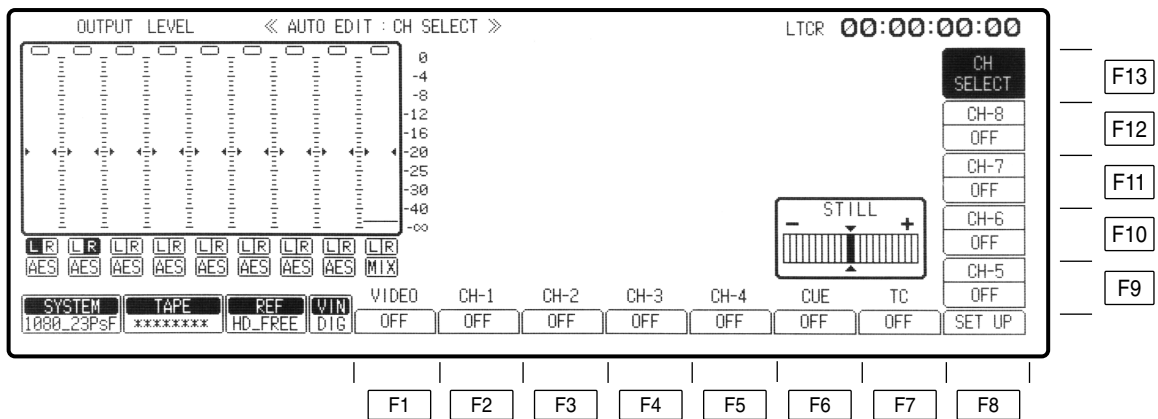
2. Set the F4 (VAR MEMO) key to ON.

VAR MEMO
ON

3. Enter the recorder's video IN and OUT points as well as the player's IN point.
4. Select the player using the F6 (R/P SEL) key, and set the initial speed using the search dial. The initial speed is now shown on the search indicator.
5. Press the PREVIEW/REVIEW button.
The tape travels to the preroll point, and playback starts at the initial speed.
6. When the edit IN point is passed, the EXECUTE button lamp starts blinking.
7. Use the recorder's search dial to store the speed up to the recorder's OUT point in the memory.
The data can be stored in the memory up to the recorder's OUT point while the EXECUTE button lamp is blinking. When the memory becomes full, the EXECUTE button lamp comes on, and no more data can be stored in the memory.
8. To preview data stored in the memory, press the PREVIEW/REVIEW button.
The data stored in the memory is then reproduced.
Phase synchronization is not performed. To adjust the edit timing, use the F9 (DLY STRT) key on the INSERT/ASSEMBLE AUTO EDIT SET UP menu.
9. To change the data stored in the memory during preview, operate the search dial. The EXECUTE button lamp blinks, and the new data is stored.
10. Press the STOP button to change the initial speed which was stored in the memory.
Set the F6 (R/P SEL) key to PLAYER, and set the initial speed using the search dial while pressing the STOP button. If the initial speed is changed, the data stored in the memory will be cleared so repeat the operation from step 5.
11. To proceed with variable memory automatic editing, press the REC/EDIT button. The player's tape is played back in accordance with the data stored in the memory and entered in this unit (recorder).
12. To review, press the REC/EDIT button and, upon completion of the editing, press the PREVIEW/REVIEW button.
 - The data stored in the memory is cleared when the F10 (VAR MEMO) key is set from OFF to ON.
 - The data stored in the memory is also cleared when the power switch is set to OFF.

INSERT AUTO EDIT CH SELECT menu

This menu is displayed by pressing the following keys: **INSERT** → **F12** → **F13**



INSERT AUTO EDIT CH SELECT menu

Key	Key designation	Description
F1	VIDEO For selecting the video channel ON/OFF.	
F2	CH-1 For selecting the audio CH1 ON/OFF.	For selecting the editing channel. Valid only for insert editing.
F3	CH-2 For selecting the audio CH2 ON/OFF.	ON: Selected as the editing channel. OFF: Not selected as the editing channel.
F4	CH-3 For selecting the audio CH3 ON/OFF.	● In the case of insert editing with selection of digital audio channel only, be sure to continue with a stabilized input video signal. - If the input video signal is distorted, audio might not be recorded properly.
F5	CH-4 For selecting the audio CH4 ON/OFF.	
F6	CUE For selecting the cue channel ON/OFF.	
F7	TC For selecting the LTC time code channel ON/OFF.	
F8	SET UP	Transfers the VTR to the AUTO EDIT SET UP menu screen.
F9	CH-5 For selecting the audio CH5 ON/OFF.	For selecting the editing channel. Valid only for insert editing.
F10	CH-6 For selecting the audio CH6 ON/OFF.	ON: Selected as the editing channel. OFF: Not selected as the editing channel.
F11	CH-7 For selecting the audio CH7 ON/OFF.	● In the case of insert editing with selection of digital audio channel only, be sure to continue with a stabilized input video signal. - If the input video signal is distorted, audio might not be recorded properly.
F12	CH-8 For selecting the audio CH8 ON/OFF.	
F13	CH SELECT	Transfers the VTR to the INSERT AUTO EDIT menu screen.

INSERT/ASSEMBLE AUTO EDIT SET UP menu

This menu is displayed by pressing the following keys: **ASSEM** (or **INSERT**) to change to the AUTO EDIT menu, then press the **F8** key
OR
SET UP → **F2**

OUTPUT LEVEL << AUTO EDIT : SET UP >> EDIT REC INHIBIT

LTOR 00:00:00:00

HOME: FREE, NRML REC, ALL

CASSETTE: FREE, VID/CNTL, ALL

SOFTWARE: VIDEO, CUE, TC, CH1, CH2, CH3, CH4, CH5, CH6, CH7, CH8

TRACKING: STILL

MODE: XFADE

FD TIME: 5 mS

CAP LOCK: 2F

TRACKING: OPT. ONCE

DLY STRT: 0FR

SYSTEM: 1000_591

TAPE: *****

REF: HD_FREE

VIN: DTG

TIMING: F1, V PREV, A PREV, PLR SYNC, PREROLL, POSTROLL, REACTION, EXIT

F1, F2, F3, F4, F5, F6, F7, F8

F9, F10, F11, F12, F13

INSERT/ASSEMBLE AUTO EDIT SET UP menu

Key	Key designation	Description
F1	TIMING* ¹ For setting the edit timing.	Sets the timing at which to record the fields at the edit IN point and OUT point. This timing can be set by pressing the F1 key and the F key together. F1: Editing starts from the odd-numbered field at the IN point, and it ends when an even-numbered field one frame before the OUT point is recorded. F2: Editing starts from the even-numbered field at the IN point, and it ends when an odd-numbered field at the OUT point is recorded. F1/F2: The fields for the edit IN point and OUT point are determined by the timing at which the edit command is issued. If the edit timing command is issued in an even-numbered field, editing is ended in an odd-numbered field; conversely, if the edit timing command is issued in an odd-numbered field, editing is ended in an even-numbered field. However, the F1 setting is forcibly established when manual editing is performed using this unit alone. Bear in mind that if mutually different settings have been selected, the setting selected last takes precedence. ●The timing can also be set using the F1 (TIMING) key of the MANUAL SET UP menu.
F2	V PREV Video preview.	Selects the video signals for preview duration (between IN and OUT points). VVV: Monitors video input signals. VBV: Monitors black signals.
F3	A PREV Audio preview.	Selects the audio signals for preview duration (between IN and OUT points). SSS: Monitors audio input signals. SMS: Monitors mute sound.
F4	PLR SYNC Player synchronization.	Sets whether to activate the phase synchronization function in deck-to-deck editing and set the editing accuracy to ± 0 (when TC is selected). ON: The phase synchronization function is activated, and the editing accuracy is set to ± 0 (when TC is selected). However, when CF does not match during editing in the CF mode, the player's IN point is forcibly incremented by +1. OFF: The phase synchronization function is not activated.
F5	PREROLL For setting the preroll time.	Sets the preroll time in 1-second increments. Any time from 0 to 30 seconds can be selected.
F6	POSTROLL For setting the postroll time.	Sets the postroll time in 1-second increments. Any time from 0 to 30 seconds can be selected.
F7	REACTION For compensating the time with a time lag	Compensates the reaction time after the ENTRY button is pressed until the actual operation. Compensation from 0 to 30 <u>frames</u>*² in 1-frame increments can be provided. ●When an edit point has been set by the ENTRY button, the value obtained after subtracting the reaction time from the moment when the button was pressed becomes the edit point. Operation 1. Press the F7 (REACTION) key. 2. Adjust with the ADJUST control. 3. Press the F7 key.

*¹This item cannot be displayed when the 1080/23p or 1080/24p format has been selected. (It is forcibly set to F1.)

*²This range differs depending on the format used.

INSERT/ASSEMBLE AUTO EDIT SET UP menu

Key	Key designation	Description
F8	EXIT	Returns the VTR to the AUTO EDIT menu screen.
F9	DLY STRT Delay start.	Sets the timing after the playback command was issued until the actual operation in 1-frame increments. (This is used to facilitate the synchronization with another VTR which has a different servo reference.) The timing can be set from –30 frames to +30 frames *1 in 1-frame increments. (With a “–” value, the operation is performed earlier, and the preroll time is compensated for in the LOCAL mode. With a “+” value, the operation is performed later, and it takes effect both in the REMOTE and LOCAL modes.)
F10	TRACKING For adjusting the tracking.	At normal times, tracking adjustment is not necessary. Adjustment is made if tracking disparities have occurred during editing. VAR: The tracking can be adjusted manually. Refer to “Manually adjusting the tracking” (on page 96). FIX: The tracking is fixed. OPT ONCE: At the initial editing after the cassette has been inserted, the tracking is optimized while the tape is playing back up to the IN point. The tracking is not subsequently optimized. Tracking can be optimized again. Refer to “Automatically adjusting the tracking” (on page 95). When the PLAY button and STAND BY button are pressed together during EDIT/PLAY, the tracking is optimized again, and it is optimized with each EDIT/PLAY operation. OPT AUTO: The tracking is optimized while the tape is playing back up to the IN point with each editing operation, and it is retained even if the VTR is transferred to another menu. Refer to “Automatically adjusting the tracking” (on page 95).
F11	CAP LOCK For setting the capstan servo lock.	For selecting the capstan servo lock mode during playback. 4F AUTO (8F AUTO: 1080/23p, 1080/24p, 1080/50i): Assumes the color frame auto lock mode. If discontinuity is produced in the color frame during playback, the unit locks again to a new color frame. 4F FORCE (8F FORCE: 1080/23p, 1080/24p, 1080/50i): Assumes the color frame forced lock mode. If there is any discontinuity in the color frame during playback, the unit preserves the field sequence at initial lock. 2F: Assumes frame lock mode. ●The capstan servo lock mode can be set in HOME SET UP menu. If the two settings differ, priority is given to the final mode setting.
F12	FD TIME*2 For setting the audio fade time.	Valid when the F13 key is set to X FADE or V FADE. The times that can be set are as follows: 5, 10, 15, 20, 25, 50, 100 ms. (Initial setting is 5 ms.) For the setting procedure, refer to “Setting the audio fade time” (on page 97).
F13	MODE*2 For selecting audio fade editing.	Audio editing can be accomplished while cross-fade editing prior playback audio and input audio or V-fade editing. X FADE: Performs audio cross-fade editing. CUT: Performs cut (normal) editing. V FADE: Performs audio V-fade editing.

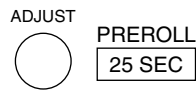
*1This range differs depending on the format used.

*2Only CUT can be selected when TAPE has been selected as the EDIT REC STATE setting. However, FADE can be selected by pressing this key and F key together, in which case the EDIT REC STATE setting is switched to EE1.

INSERT/ASSEMBLE AUTO EDIT SET UP menu

☐ **Selecting the preroll time**

- (1) Press the F5 (PREROLL) key.
- (2) Set the preroll time using the ADJUST control.
Any time up to 30 seconds can be set.



- (3) Press the F5 key.

- If this setting is at variance from the preroll time set on the HOME SET UP menu, the preroll time selected last takes precedence.

☐ **Setting DLY START**

- (1) Press the F9 (DLY STRT) key.
- (2) Set the time using the ADJUST control.
- (3) Press the F9 key.

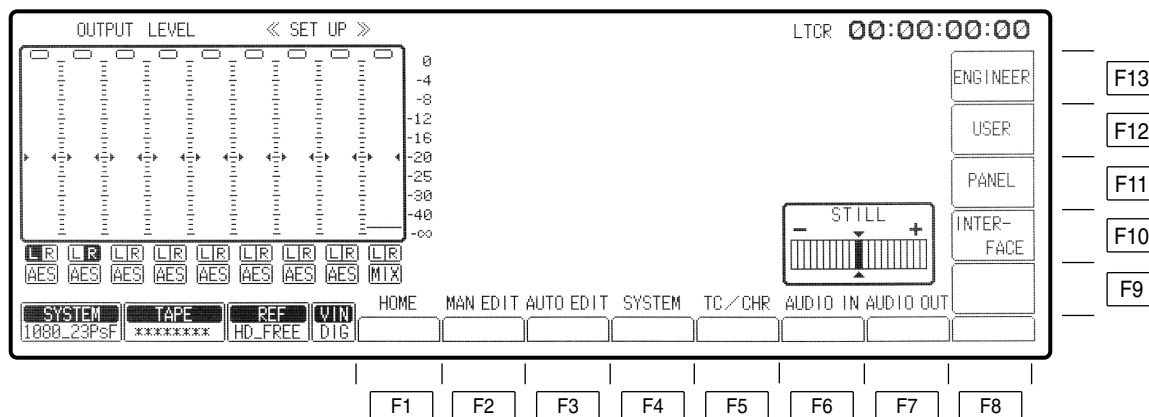
- This is set when the VTR's start timing is to be synchronized with the start timing of another VTR in the event that these timings differ.
- When this VTR is used as the master (recorder) in deck-to-deck operations, adjustment can be made in either the "+" or "-" direction, but when the VTR is used in the remote mode (when a controller is connected or this VTR is used as the player in deck-to-deck operations), adjustment can be made in the "+" (delay) direction only.

☐ **Setting EDIT REC INHIBIT**

The procedure is the same as for the INSERT/ASSEMBLE MANUAL EDIT SET UP menu (on page 93).

SET UP menu

This menu is displayed by pressing the following key: **SET UP**

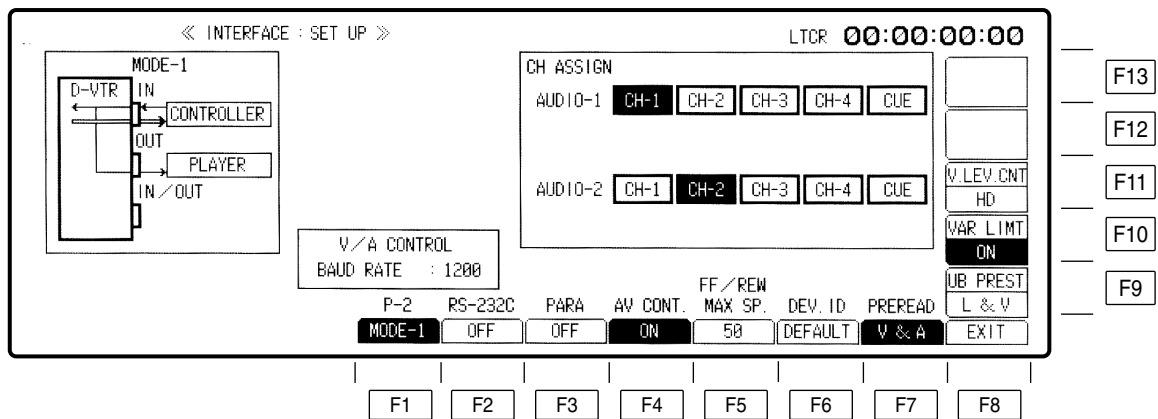


Key	Key designation	Description
F1	HOME	Transfers the VTR to the HOME SET UP menu screen.
F2	MAN EDIT	Transfers the VTR to the INSERT/ASSEMBLE MANUAL EDIT SET UP menu screen.
F3	AUTO EDIT	Transfers the VTR to the INSERT/ASSEMBLE AUTO EDIT SET UP menu screen.
F4	SYSTEM	Transfers the VTR to the SYSTEM SET UP menu screen.
F5	TC/CHR	Transfers the VTR to the TC/CHR SET UP menu screen.
F6	AUDIO IN	Transfers the VTR to the AUDIO IN SET UP menu screen.
F7	AUDIO OUT	Transfers the VTR to the AUDIO OUT SET UP menu screen.
F8–F9	—	
F10	INTERFACE	Transfers the VTR to the INTERFACE SET UP menu screen.
F11	PANEL	Transfers the VTR to the PANEL SET UP menu screen.
F12	USER	Transfers the VTR to the USER SET UP menu screen.
F13	ENGINEER*	Transfers the VTR to the ENGINEER SET UP menu screen.

*The ENGINEER menu is displayed by pressing the F and F13 keys at the same time.

INTERFACE SET UP menu

This menu is displayed by pressing the following keys: **SET UP** → **F10**



INTERFACE SET UP menu

Key	Key designation	Description
F1	P-2 RS-422A Control mode setting.	When the component connected to the RS-422A REMOTE connector is to be operated by remote control, one of four modes can be selected to match the system configuration. The flow of the signals in each mode is displayed on the menu. (Refer to "Correlation between modes and connectors" (on page 115).) MODE-1: The VTR connected to the REMOTE OUT or REMOTE IN/OUT connector is controlled. MODE-2: Two or more VTRs are controlled in the same mode as this unit. MODE-3: The VTR connected to the REMOTE OUT connector can be controlled. MODE-4: Two or more VTRs can be controlled in the same mode as this unit. OFF: No control is exercised using RS-422A.
F2	RS-232C	ON: Enables parameter settings and control. OFF: Disables parameter settings and control. BAUD RATE: Baud rate settings. The following baud rates can be set: 300, 600, 1200, 2400, 4800, and 9600. DATA LENGTH: Data length setting. Data lengths 7 and 8 can be set. START BIT: Start bit setting. Start bit 1 (fixed). STOP BIT: Stop bit setting. Start bits 1 and 2 can be set. PARITY: Parity bit setting. Parity bits are NON, ODD and EVEN.
F3	PARA 50P parallel remote ON/OFF.	ON: Enables control. OFF: Disables control.
F4	AV CONT. V/A control.	ON: Enables control from the V/A controller. OFF: Disables control from the V/A controller.
F5	FF/REW MAX SP FF/REW maximum speed setting.	Tape speed at FF or REW can be set at $\times 50$ or $\times 32$.
F6	DEV. ID Device type.	Can be set by pressing the C, F and F6 keys simultaneously. Enables selection of the device ID returned to controller via RS-422A. In addition to the DEFAULT value, there are four types of device ID: ID-1, ID-2, ID-3 and USER. Select ID to match the controller in use. To change the USER setting device ID, consult with service personnel.

INTERFACE SET UP menu

Key	Key designation	Description
F7	PREREAD For setting pre-read from the remote commands.	The setting can be changed by pressing the F7 key while holding down the F key. VIDEO: Video pre-read can be set. AUDIO: Audio pre-read can be set. V&A: Both video and audio pre-read can be set.
F8	EXIT	Returns the VTR to the SET UP menu screen.
F9	UB PRESET For setting the UB preset from remote.	Selects the setting destination for the TCG UB preset command supplied from the external source (RS-422/232C). L&V: Sets the destination for LTC UB and VITC UB. LTC: Sets the destination for LTC UB only. VITC: Sets the destination for VITC UB only.
F10	VAR LIMT*	Selects the limit speed for the VAR command supplied from the external source (RS-422/232C). This item can be set by pressing the F10 key and F key together. ON: The tape speed is limited to the range from $-1x$ to $+2x$ normal speed. OFF: The tape speed is limited to the range from $-1.5x$ to $+2.5x$ normal speed. (At speed above $2x$ or so or below $-1x$, pictures are searched without AT ON TRACK.)
F11	V. LEV. CNT	Selects whether to vary the VTR HD/SD output in response to an external video component adjustment command (RS-422, V/A controller). NORMAL: Identifies HD/SD commands and varies the level of each. HD: Varies HD output level forcibly. SD: Varies SD output level forcibly. BOTH: Varies This is varied in tandem with the HD output/SD output level.
F12-F13	—	

*<Note>

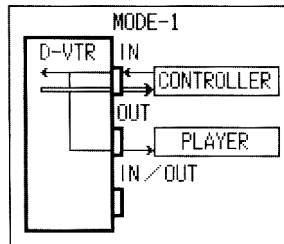
Set this item to OFF for slow editing with the unit connected to an editing controller (such as the BVE-9100). Phase synchronization may not be possible with slow editing near the $-1x$ or $+2x$ speed.

INTERFACE SET UP menu

□ Table of correlations between modes and connectors

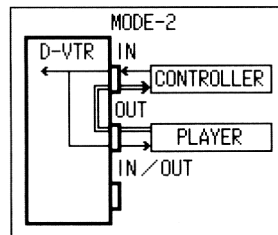
MODE	Connections used when the unit is used as the source unit and operated by remote control by an editor or when editing is performed using a controller (remote)			Connections used when editing is performed by operating the controls on the unit's front panel (local)		
	IN	OUT	IN/OUT	IN	OUT	IN/OUT
MODE-1	Controller	Player 1	Disabled	Disabled	Player 1	Disabled
MODE-1	Controller	Player 1	Disabled	Disabled	Disabled	Player 2
MODE-2	Controller	Player 1	Disabled	Disabled	Disabled	Disabled
MODE-3	Disabled	Player 1	Controller	Disabled	Player 1	Disabled
MODE-3	Disabled	Player 1	Controller	Disabled	Disabled	Player 2
MODE-4	Disabled	Player 1	Controller	Disabled	Disabled	Disabled

MODE-1 connection diagram

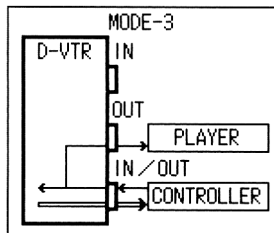


◁ — Command
 ◁ = Return data

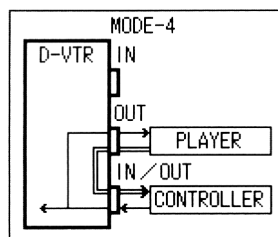
MODE-2 connection diagram



MODE-3 connection diagram



MODE-4 connection diagram



INTERFACE SET UP menu

□ Setting the RS-232C parameters

- (1) Press the F2 (RS-232C) key to set it ON.
The parameter display now appears.

BAUD RATE: 300, 600, 1200, 2400, 4800, 9600 bps
DATA LENGTH: 7 or 8 bits
START BIT: 1 bit, fixed
STOP BIT: 2 or 1 bit
PARITY: None, odd or even

- (2) Press the center cursor key.
The input area now blinks.
- (3) Press the cursor keys to select the input area.
The cursor moves on a block by block basis when the F key and cursor key are pressed together.

BAUD RATE: 4800

- (4) Press the center cursor key to set the parameter.

BAUD RATE: 9600

- (5) Press the ENT key to enter the setting.

□ Setting the V/A control parameters

One of the following baud rates can be selected for the V/A control parameters.

BAUD RATE: 300, 600, 1200, 2400, 4800 bps

- (1) Press the center cursor key.
The input area now blinks.
- (2) Move the cursor to the V/A CONTROL block by pressing the F key and cursor key together.

V/A CONTROL
BAUD RATE 300

- (3) Press the center cursor key to set the parameter.

V/A CONTROL
BAUD RATE 4800

- (4) Press the ENT key to enter the setting.

INTERFACE SET UP menu

□ Setting the CH ASSIGN audio channel

The commands from a controller which has only analog audio CH1 and CH2 preset commands can be re-read and allotted to the digital audio CH1 to CH4 (or CH1 to CH8 with an 8-channel format) and CUE channels.

- (1) Press the center cursor key to display the cursor.
The input area now blinks.

- (2) Move the cursor to the CH ASSIGN block by pressing the F key and cursor key together.

AUDIO-1	CH-1				
AUDIO-2					

- (3) Press the cursor key to move the cursor to the position of the channel to be selected.

AUDIO-1		CH-2			
AUDIO-2					

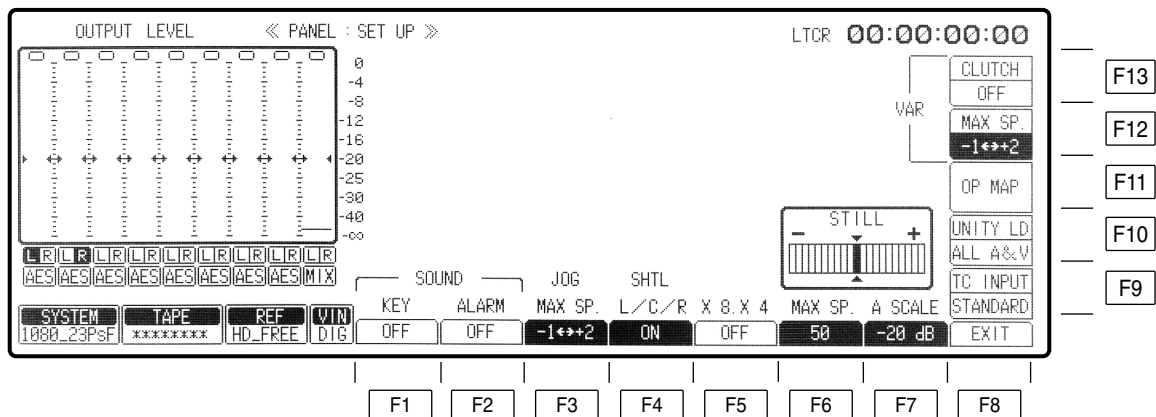
- (4) Press the center cursor key to set the display ON or OFF.
At ON, the channel will appear in reverse video.

AUDIO-1		CH-2			
AUDIO-2					

- (5) Press the ENT key to enter the setting.

PANEL SET UP menu

This menu is displayed by pressing the following keys: **SET UP** → **F11**



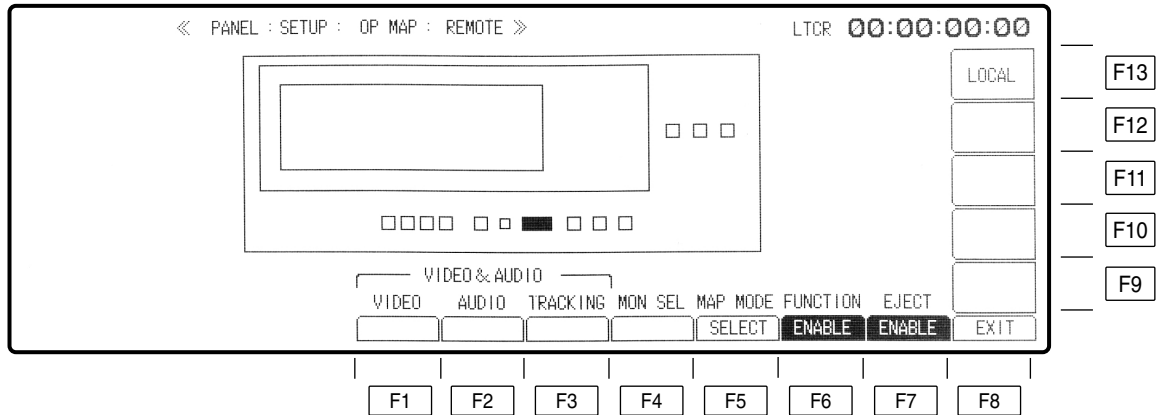
PANEL SET UP menu

Key	Key designation	Description
F1	SOUND KEY Selection of click sound for function keys and IN/OUT keys.	OFF: No click sound. HIGH: Loud click sound. LOW: Soft click sound.
F2	SOUND ALARM Selection of warning sound when error occurs.	OFF: No warning sound. HIGH: Loud warning sound. LOW: Soft warning sound.
F3	JOG MAX SP. Jog maximum speed.	-2 ← → +2: Speed range from -2× to +2×. -1 ← → +1: Speed range from -1× to +1×. -1 ← → +2: Speed range from -1× to +2×.
F4	SHTL L/C/R Shuttle dial clutch ON/OFF.	OFF: No clutch. (F5 key also goes off.) ON: Clutch set at three points: left edge, center and right edge.
F5	SHTL ×8, ×4 Selection of shuttle dial a8, a4 clutch.	OFF: No clutch. ×8: Clutch set at ±8 speed positions. ×4, ×8: Clutch set at four positions: ±4× speed and ±8× speed. ×4 Clutch set at ±4× speed positions.
F6	SHTL MAX SP. Shuttle maximum speed.	50: The maximum shuttle speed is set to 50× normal playback. 32: The maximum shuttle speed is set to 32× normal playback. 16: The maximum shuttle speed is set to 16× normal playback.
F7	A.SCALE Audio level meter scale setting.	-20 (-18) dB: Scale marker of level meter is set to -20 (-18) dB.* 0 dB: Scale marker of level meter is set to -0 dB. *The setting will be -18 dB when the audio reference level has been set to -18 dB.
F8	EXIT	Returns the VTR to the SET UP menu screen.
F9	TC INPUT Time code input mode	STANDARD: In this mode, the time code is input starting from the first of the two hour digits. REVERSE: In this mode, the time code is input starting from the frame digits. These settings are valid in all modes in which the time code can be input manually.
F10	UNITY LD	ALL A&V: Lamp lights when UNITY is set for all the digital audio record/playback system levels and the video playback system levels (excluding SYSTEM system levels). AUDIO PB: Lamp lights when all digital audio playback system levels are at unity.
F11	OP MAP	Transfers the VTR to the OP MAP REMOTE menu screen.
F12	VAR MAX SP. Variable maximum speed.	-1 ← → +2: Speed range from -1× to +2×. -1 ← → +1: Speed range from -1× to +1×. 0 ← → +1: Speed range from 0× to +1×.
F13	VAR CLUTCH Variable mode clutch ON/OFF.	ON: Clutch set at -1/0/+1/+2× speed positions. OFF: No clutch.

PANEL SET UP (OP MAP REMOTE) menu

Press the **SET UP** → **F11** → **F11** keys to display the OP MAP REMOTE menu.

This menu is used to set and display the buttons, keys, controls, etc. which can be operated on the unit's front panel in the remote mode.



PANEL SET UP (OP MAP REMOTE) menu

Key	Key designation	Description
F1	VIDEO For adjusting the video level.	Selects the VIDEO OUT menu level adjustment function. When the key is pressed, the display is highlighted.
F2	AUDIO For adjusting the audio level.	Selects the AUDIO REC and PB level adjustment function. When the key is pressed, the display is highlighted.
F3	TRACKING For selecting the tracking adjustment.	Selects the tracking adjustment. When the key is pressed, the display is highlighted.
F4	MON SEL For selecting the monitor.	Selects the L/R selector button for monitoring the audio signals. When the key is pressed, the display is highlighted.
F5	MAP MODE For enabling key operations.	ALL: All the keys can be operated by remote control. SELECT: The selected keys can be operated by remote control.
F6	FUNCTION For enabling or disabling all the functions.	ENABLE: All the functions are enabled. DISABLE: All the functions are disabled.
F7	EJECT For enabling or disabling the operation of the EJECT button during remote control operations.	ENABLE: Eject operations are enabled. DISABLE: Eject operations are disabled.
F8	EXIT	Returns the VTR to the SET UP menu screen.
F9–F12	—	
F13	LOCAL	Transfers the VTR to the OP MAP LOCAL menu screen.

PANEL SET UP (OP MAP REMOTE) menu

□ Correlation between F5 (MAP MODE) and F6 (FUNCTION) keys

F5 (MAP MODE)	F6 (FUNCTION)	Description of setting	
		Operation keys (STOP, PLAY, etc.)	Function keys (F1 to F13, controls, etc.)
ALL	ENABLE	Regardless of this menu's settings, all settings are enabled.	Regardless of this menu's settings, all settings are enabled.
	DISABLE	Regardless of this menu's settings, all settings are disabled.	Regardless of this menu's settings, all settings are disabled.
SELECT	ENABLE	Only keys selected on this menu enabled.	Only functions selected by F1 to F4 on this menu and other specific functions enabled.
	DISABLE	Regardless of this menu's settings, all settings are disabled.	As above.

<Notes>

- Even when the F6 key has been set to ENABLE on this menu, its setting will be changed to DISABLE if the unit is in the remote control mode and it receives the LOCAL DISABLE command.
(The EJECT button acts in accordance with the F7 (EJECT) key setting.)
- At the time of shipment, the F6 key was set to ENABLE and the F5 key to SELECT.

□ OP MAP setting method

- Those buttons and keys which are marked on the graphics of the control panel shown on the display correspond to the buttons on the actual control panel.
The part corresponding to a key or button which has been pressed on the control button is highlighted.
- When the JOG, VAR or SHTL button is pressed, the search dial appears.
- When the F1 (VIDEO) key is pressed, the ADJUST control appears.
- When the F2 (AUDIO) key is pressed, the ADJUST control appears.
- When the F3 (TRACKING) key is pressed, the ADJUST control appears.
- When the F4 (MON SEL) key is pressed, the L/R button appears.

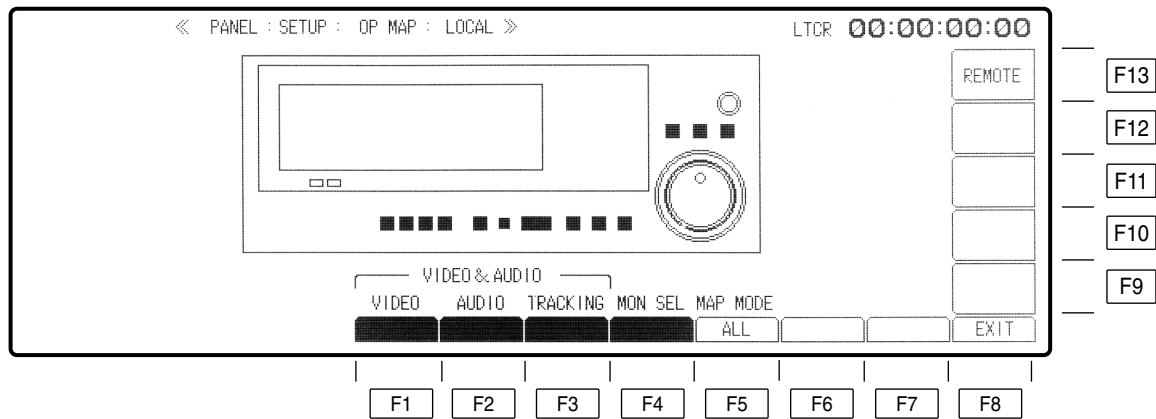
PANEL SET UP (OP MAP LOCAL) menu

Press the **SET UP** → **F11** → **F11** → **F13** keys to display the OP MAP LOCAL menu.

This menu is used to set and display the buttons, keys, controls, etc. which cannot be operated on the unit's front panel in the local mode.

The menu serves to prevent settings or adjustment values from being changed when the corresponding button, key or control is touched by mistake.

●With the initial setting, all operations are enabled.



PANEL SET UP (OP MAP LOCAL) menu

Key	Key designation	Description
F1	VIDEO For adjusting the video level.	Selects the VIDEO OUT menu level adjustment function. When the key is pressed, the display is highlighted.
F2	AUDIO For adjusting the audio level.	Selects the AUDIO REC and PB level adjustment function. When the key is pressed, the display is highlighted.
F3	TRACKING For selecting the tracking adjustment.	Selects the tracking adjustment. When the key is pressed, the display is highlighted.
F4	MON SEL For selecting the monitor.	Selects the L/R selector button for monitoring the audio signals. When the key is pressed, the display is highlighted.
F5	MAP MODE For enabling key operations.	ALL: Regardless of the OP MAP settings, operation of all the functions is enabled. SELECT: Operation of the only the functions to be selected in the OP MAP mode is enabled.
F6–F7	—	
F8	EXIT	Returns the VTR to the SET UP menu screen.
F9–F12	—	
F13	REMOTE	Transfers the VTR to the OP MAP REMOTE menu screen.

☐ OP MAP setting method

- Those buttons and keys which are marked on the graphics of the control panel shown on the display correspond to the buttons on the actual control panel.
The part corresponding to a key or button which has been pressed on the control button is highlighted.
- When the JOG, VAR or SHTL button is pressed, the search dial appears.
- When the F1 (VIDEO) key is pressed, the ADJUST control appears.
- When the F2 (AUDIO) key is pressed, the ADJUST control appears.
- When the F3 (TRACKING) key is pressed, the ADJUST control appears.
- At the time of shipment, the F5 (MAP MODE) key was set to ALL so that all the keys, buttons, etc. are operational.

USER SET UP menu

This menu is displayed by pressing the following keys: **SET UP** → **F12**

Key	Key designation	Description
F1	LOAD For loading user files.	Loads the data in the user file selected by the cursor. Loading is executed by pressing this key together with the F key.
F2	SAVE For saving user files.	Saves the data in the user file selected by the cursor. Saving is executed by pressing this key together with the F key.
F3	DELETE For deleting user files.	Deletes the data in the user file selected by the cursor. Deleting is executed by pressing this key together with the F key.
F4	—	
F5	POWER UP Sets the file to be loaded when the power is turned on.	LAST: Call last file FACTORY: Call factory file* 1 to 10: Calls user file.
F6–F7	—	
F8	EXIT	Returns the VTR to the SET UP menu screen.
F9	LOCK For locking files.	Press together with F key. File selected with cursor locks and cannot be renewed or deleted. Press again to release the lock. Use with user files 5 to 10.
F10	PASSWORD Password.	Used to set or release the lock mode for files 1 to 4 with a password. After this key is pressed, the 4-character password is input.
F11–F13	—	

*The items set using F1 to F7 on the SYSTEM SET UP menu (on pages 131 and 132) are not rewritten even if the factory files are loaded.

USER SET UP menu

□ Saving user files

Twelve files are provided in this unit.

Two of these files are reserved: the LAST file containing the statuses established when the power was last turned off, and the FACTORY file containing the factory statuses (initial settings). These two files cannot be deleted or updated.

The other 10 files are available as user files for storing the menu settings selected by the user. They can be called, deleted or updated as desired.

- (1) Set to the state in which the menu settings are to be saved.

For details on the data saved in the files, refer to the tables at the end of this manual.

- When UNITY and VAR settings are provided, the VAR values will also be saved even if the UNITY setting has been selected.

- (2) Press the cursor keys to select the number of the desired file.

FACTORY	
1	*
2	*
3	*
4	*

The cursor appears at the place which was designated last.

- (3) Input the filename.

Up to 20 characters can be input.

1. EDITOR 1

- (4) Press the F key and F2 (SAVE) key together to save the file.

Inputting the filename

A	B	C	D	E	F	G	H	I	J
K	L	M	N	O	P	Q	R	S	T
U	V	W	X	Y	Z	0	1	2	
3	4	5	6	7	8	9	<	=	>
?	;	+	,	-	(	)	.	_	

- 0 to 9: Press the number keys.

- To enter a letter of the alphabet, proceed as follows.

- 1) Press the center cursor key.
- 2) Use the ADJUST control to move the column cursor to the left or right, and select the desired character.
When the F key and cursor key are pressed together, the cursor can be moved up or down or to the left or right.
- 3) When the ENT key is pressed, the character above the cursor is input.
- 4) Press the center cursor key to complete the character input.
- 5) Press the F key and F2 (SAVE) key together to save the file.

- To correct a character, press the BS key.

To redo the entire input, press the C key.

A password is required to access files 1 to 4.

- (1) Press the F10 (PASSWORD) key.

- (2) Input a password consisting of 4 characters.

- For details on the password, consult your servicing engineer.

USER SET UP menu

☐ Locking user files

When locked, the files are protected from subsequent attempts to delete or update their data.

- (1) Press the cursor keys to select the file to be locked.

1. EDITOR 1 ☐

- (2) Input the password for files 1 to 4.

For files 5 to 10, press the F key and F9 key together.

When a file is locked, its display is shown in reverse video.

1. EDITOR 1 ☐

- When files are to be unlocked:

When the password is input for files 1 to 4, the files are unlocked.

1. Press the cursor keys and select the file to be unlocked.

2. Press the F10 (PASSWORD) key.

3. Input the 4-character password.

If the input password is correct, the file is unlocked.

If it is incorrect, the file will not be unlocked.

When the F key and F9 key are pressed together again, files 5 to 10 are unlocked.

1. EDITOR 1 ☐

☐ Updating user files

- (1) Press the cursor keys to select the file to be updated.

- If the file is locked, unlock it.

1. EDITOR 1



↑ Unlocked

(the file must be unlocked
if the display is in reverse video)

- (2) Change the contents of the file.

For instance, press the F4 (TC/CTL) key on the HOME menu and change TC to CTL1.

- (3) Press the F key and F2 (SAVE) key together. Then press the F4 (TC/CTL) key on the HOME menu and change to TC again.

The changed setting is now saved in the file.

When the F key and F1 (LOAD) key are pressed together and the HOME button is pressed to display the HOME menu, the setting of the F4 (TC/CTL) key which was changed above will have been changed to CTL1.

- The pre-updated setting is cleared.

USER SET UP menu

☐ Deleting user files

Unnecessary files can be deleted.

- (1) Press the cursor keys to select the file to be deleted.

5. EDITOR 2 ☐ (File locked)

- (2) Check that the file to be deleted is unlocked.

If it is locked, refer to the section on locking the user files, and unlock the file.

5. EDITOR 2 ☐ (Lock released)

- (3) Press the F key and F3 (DELETE) key together.

The file is now deleted.

- A locked file cannot be deleted unless it is first unlocked.

☐ Calling user files

Files saved in the memory can be called.

- (1) Press the cursor keys to select the file to be called.

1. EDITOR 1 ☐

- (2) When the F key and F1 (LOAD) key are pressed together, the file is called.

Check the called file.

☐ Automatically calling a file when the power is switched on

When the power is switched on, a file can be called automatically.

- (1) Press the F5 (POWER UP) key.

Each time this key is pressed, a file is called.

The selected file is called automatically the next time the power is turned on.

- The LAST file serves as the initial setting.

USER SET UP menu

☐ Copying user filenames

When a file is to be given the same name, the filename is copied.

(1) Press the cursor keys to select the filename to be copied.

1. EDITOR 1 ☐

(2) Press the FROM key.

1. EDITOR 1 ☐

(3) Press the cursor keys to select the number of file serving as the copy destination.

5. ☐

(4) Press the COPY key. The filename is copied.

5. EDITOR 1 ☐

(5) Press the F and F2 (SAVE) key together.

- This function copies the filename only.
Bear in mind that the contents of the file cannot be copied.

SYSTEM SET UP menu

This menu is displayed by pressing the following keys: **SET UP** → **F4**

The system format and video output format currently set in the menu are displayed.

<< SET UP : SYSTEM >>
LTCR 00:00:00:00

FORMAT	
VIDEO	AUDIO
1080/23.98PsF	24bit/8CH

VIDEO OUTPUT	
HD SDI MAIN	1080/23.98PsF
HD SDI MONI	1080/23.98PsF
SD SDI MAIN	525I
SD SDI MONI	525I
COMPOSITE	NTSC

SYSTEM

FREQ

VIDEO

AUDIO

HD SDI

HD MONI

SD SDI

A.REC.GRD
CST.C.BIT
EXIT

F1

F2

F3

F4

F5

F6

F7

F8

F13

F12

F11

F10

F9

SYSTEM SET UP menu (Refer to the setting flowchart and output status tables on pages 134 and 135.)

Exactly Which operation is performed differs depending on whether the AJ-UDC3700P HD-SD format converter board, an optional accessory, has been installed.

Key	Key designation	Description
F1	FREQ* For selecting the SYSTEM frequency.	For selecting the system frequency. When the F1 key is pressed while holding down the F key, the frequency selection window is opened. The frequency can now be selected using the cursor keys. 59.94: The 59.94 Hz system is selected. 23.98: The 23.98 Hz system is selected. 24: The 24 Hz system is selected. 50: The 50 Hz system is selected. The selection is entered by pressing the ENT key while holding down the BS key. When “59.94” has been selected, the video recording format selection window is opened. When “23.98” or “24” has been selected, the HD SDI MAIN output selection window is opened. When “50” has been selected, the system format is entered as 1080/50i, and the window is closed.
F2	—	
F3	VIDEO For selecting the video recording format.	For selecting the video recording format. When the F3 key is pressed while holding down the F key, the video recording format selection window is opened. The format can now be selected using the cursor keys (but only when “59.94” has been selected as the system frequency setting). 1080I: The 1080/59.94i recording format is selected. 525I: The 525/59.94i recording format is selected. 720P: The 720/59.94p recording format is selected. The selection is entered by pressing the ENT key while holding down the BS key. When “1080I” or “720P” has been selected, the audio recording format selection window is opened. When “525I” has been selected, the system format is entered as 525/59i, and the window is closed.
F4	AUDIO For selecting the audio recording format.	For selecting the audio recording format. When the F4 key is pressed while holding down the F key, the audio recording format selection window is opened. The format can now be selected using the cursor keys (but only when the “1080/59I” or “720/59P” format has been selected). 24bit/8CH: The audio 8-channel format is selected. 20bit/4CH: The audio 4-channel format is selected. The selection is entered by pressing the ENT key while holding down the BS key. When “720P” has been selected as the system format, the SD SDI MAIN output selection window is opened. When “1080I” has been selected as the system format, the system format is entered, and the selection window is closed.

*The FREQ setting is acknowledged only in the status where the cassette has been ejected.

If an attempt has been made to change this setting while a cassette is still inserted, the “EJECT CASSETTE TO CHANGE FORMAT” message appears to warn the user to eject the cassette first.

SYSTEM SET UP menu

Key	Key designation	Description
F5	HD SDI	For selecting the HD SDI MAIN output format. When the F5 key is pressed while holding down the F key, the HD SDI MAIN output format selection window is opened. The format can now be selected using the cursor keys (but only when “23.98” or “24” has been selected as the system frequency setting). 1080/23.98PsF (1080/24PsF): The output is in the 1080/23.98PsF (1080/24PsF) format. 1080/59.94I (1080/60I): The output is in the 1080/59.94i (1080/60i) format. 720/59.94P (720/60P): The output is in the 1080/59.94p (720/60p) format. When “1080/23.98PsF (1080/24PsF)” has been selected, the HD SDI monitor output selection window is opened. When “1080/59I” or “720/59P” has been selected, the HD_SD_I_MAIN output selection window is opened. When any other selection is made, it is entered by pressing the ENT key while holding down the BS key. At the same time, the window is closed
F6	HD MONI	For selecting the format in which the signals are to be output to the HD_SD_I monitor. When the F6 key is pressed while holding down the F key, the HD_SD_I monitor output selection window is opened. The output format can now be selected using the cursor keys (but only when “23.98” or “24” has been selected as the HD_SD_I frequency setting). 1080/23.98PsF (1080/24PsF): The output is in the 1080/23.98PsF (1080/24PsF) format. 1080/59.94I (1080/60I): The output is in the 1080/59.94i (1080/60i) format. When “1080/23.98PsF (1080/24PsF)” has been selected, the HD SDI MAIN output format selection window is opened. When any other selection is made, it is entered by pressing the ENT key while holding down the BS key. At the same time, the window is closed.

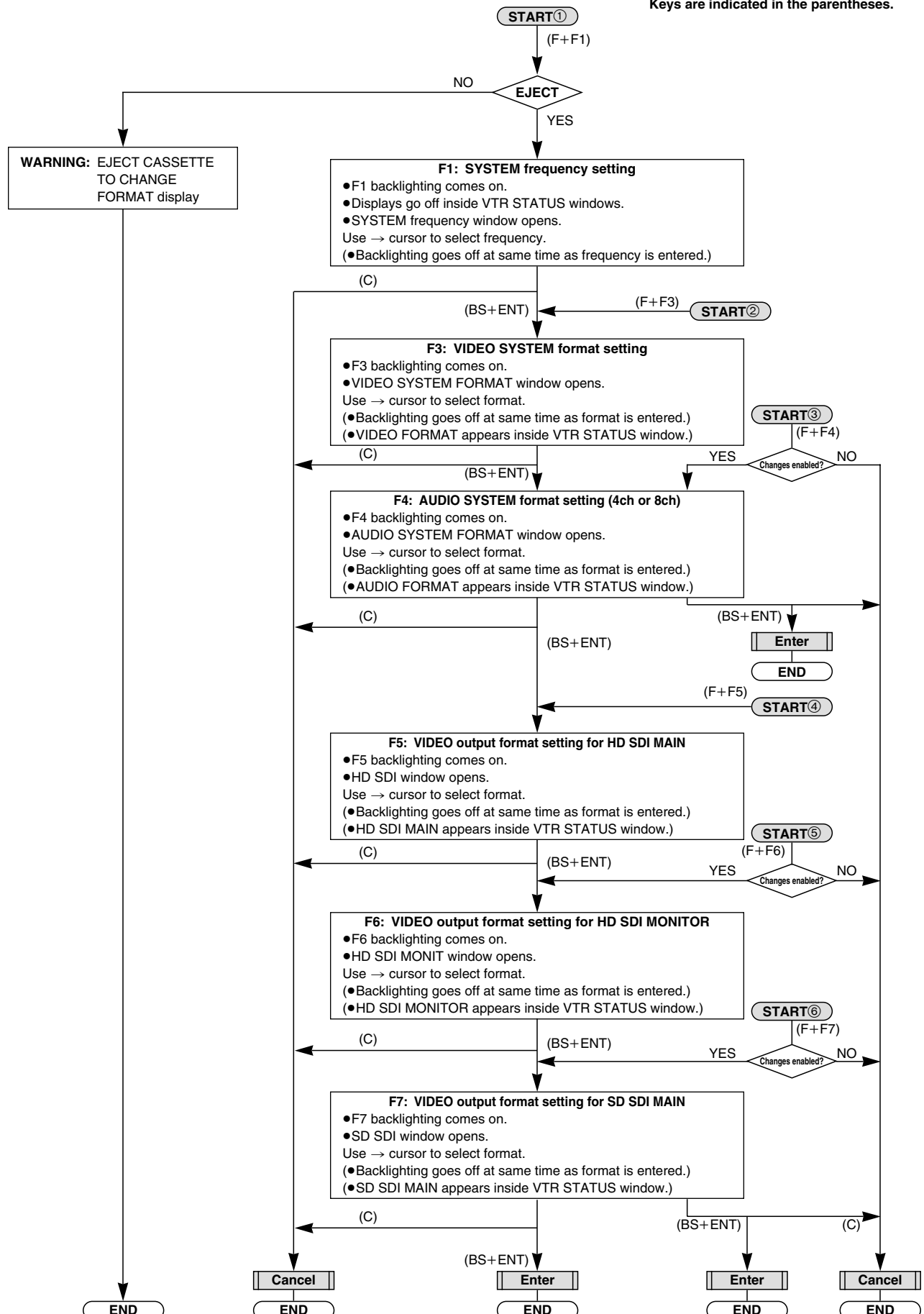
By pressing the C key while any of the selection windows are open, it is possible to return the selection status to the previously set data. (Even when data has been entered by pressing the ENT key while the BS key is held down, operation will still be as described above while the related windows are open.)

SYSTEM SET UP menu

Key	Key designation	Description
F7	SD SDI	For selecting the format in which the signals are to be output to SD SDI MAIN. When the F7 key is pressed while holding down the F key, the HD SDI MAIN output selection window is opened. The output format can now be selected using the cursor keys [but only when “720/59.94P” or “1080/23.98PsF” (same format set for monitor as for HS SDI MAIN) has been selected as the system format.] 525i: The output is in the 525i format. 525P: The output is in the 525p format. The selection is entered by pressing the ENT key while holding down the BS key. At the same time, the window is closed.
F8	EXIT	Returns the VTR to the SET UP menu screen.
F9	A.REC.GRD	Selects the recording/editing inhibit operation during recording/editing by setting the cassette’s C bit. CST.C.BIT: If the C bit setting and SYSTEM menu setting are at variance, the VTR is not transferred to the recording/editing operation, and an operation error will appear at the same time. FREE: The VTR is transferred to the recording/editing operation as per the SYSTEM menu setting. If the C bit setting and SYSTEM menu setting are at variance and an attempt is made to execute a recording/editing operation, an operation message will appear.
F10	—	
F11	PB AUTO	Selects whether to select the 4CH or 8CH mode using the cassette’s C bit setting during tape playback. ON: The 4CH or 8CH mode is automatically selected during playback using the cassette's C bit setting. (When the C bit is UP, 4CH mode operation is performed; when it is DOWN, 8CH mode operation is performed.) If the tape format and the cassette C bit setting are at variance, a warning message will appear. OFF: The tape is played back in the mode set using the SYSTEM menu regardless of the C bit status. If the tape format and SYSTEM menu setting are at variance, a warning message will appear.
F12–F13	—	

SYSTEM SET UP menu

Keys are indicated in the parentheses.



SYSTEM SET UP menu

System format and video output status table

[When the AJ-UDC3700P HD-SD format converter board (optional accessory) has been installed]

System format front setting						HD SDI OUT	HD MONI OUT	SD SDI OUT	SD SDI MONI	CMPST
F1: FREQ	F3: VIDEO	F4: AUDIO	F5: HD SDI	F6: HD MONI	F7: SD SDI					
59.94	1080I	4ch	(1080/59.94i)	(1080/59.94i)	(525i)	1080/59.94i	1080/59.94i	525/59.94i	525/59.94i	NTSC
		8ch								
	720P	4ch	(720/59.94p)	(720/59.94p)	525i	720/59.94p	720/59.94p	525/59.94i		
		525p			525/59.94p					
		525i			525/59.94i					
		525p			525/59.94p					
525I	(4ch)	(1080/59.94i)	(1080/59.94i)	(525i)	1080/59.94i	1080/59.94i	525/59.94i			
23.98	(1080PsF)	(8ch)	1080/23.98psf	1080/23.98psf	525i	1080/23.98psf	1080/23.98psf	525/59.94i	525/59.94i	NTSC
				525p	525/59.94p			525/59.94i	NTSC	
				1080/59.94i	(****)			No signals	No signals	No signals
			1080/59.94i	(1080/59.94i)	525i	1080/59.94i	1080/59.94i	525/59.94i	525/59.94i	NTSC
					525p			525/59.94p	525/59.94i	NTSC
					525i			525/59.94i	525/59.94i	NTSC
525p	525/59.94p	525/59.94i	NTSC							
24	(1080PsF)	(8ch)	1080/24psf	1080/24psf	(****)	1080/24psf	1080/24psf	No signals	No signals	No signals
				1080/60i	(****)					
			1080/60i	(1080/60i)	(****)	1080/60i	1080/60i			
			720/60p	720/60p	(****)	720/60p	720/60p			
50	(1080I)	(8ch)	(1080/50i)	(1080/50i)	(625i)	1080/50i	1080/50i	625/50i	625/50i	PAL

System format and video output status table

[When no AJ-UDC3700P HD-SD format converter board (optional accessory) has been installed]

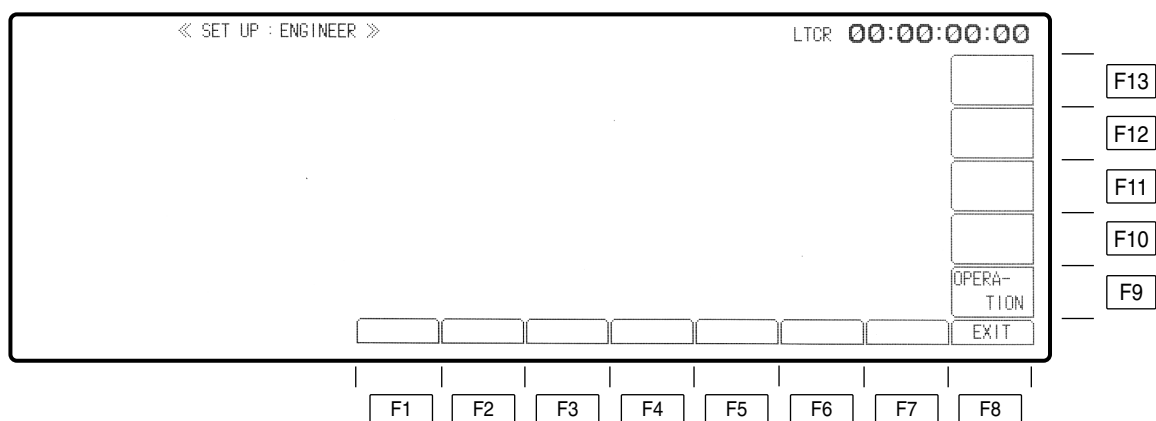
System format front setting						HD SDI OUT	HD MONI OUT	SD SDI OUT	SD SDI MONI	CMPST
F1: FREQ	F3: VIDEO	F4: AUDIO	F5: HD SDI	F6: HD MONI	F7: SD SDI					
59.94	1080I	4ch	(1080/59.94i)	(1080/59.94i)	(****)	1080/59.94i	1080/59.94i	No signals	No signals	No signals
		8ch			(****)					
	720P	4ch	(720/59.94p)	(720/59.94p)	(****)	720/59.94p	720/59.94p			
		8ch			(****)					
	525I	(4ch)	(****)	(****)	525i	BLACK	BLACK			
23.98	(1080PsF)	(8ch)	(1080/23.98psf)	(1080/23.98psf)	(****)	1080/23.98psf	1080/23.98psf	No signals	No signals	No signals
24	(1080PsF)	(8ch)	(1080/24psf)	(1080/24psf)	(****)	1080/24psf	1080/24psf			
50	(1080I)	(8ch)	(1080/50i)	(1080/50i)	(****)	1080/50i	1080/50i			

<Note>

The settings in parentheses cannot be selected since they are established automatically.

ENGINEER SET UP menu

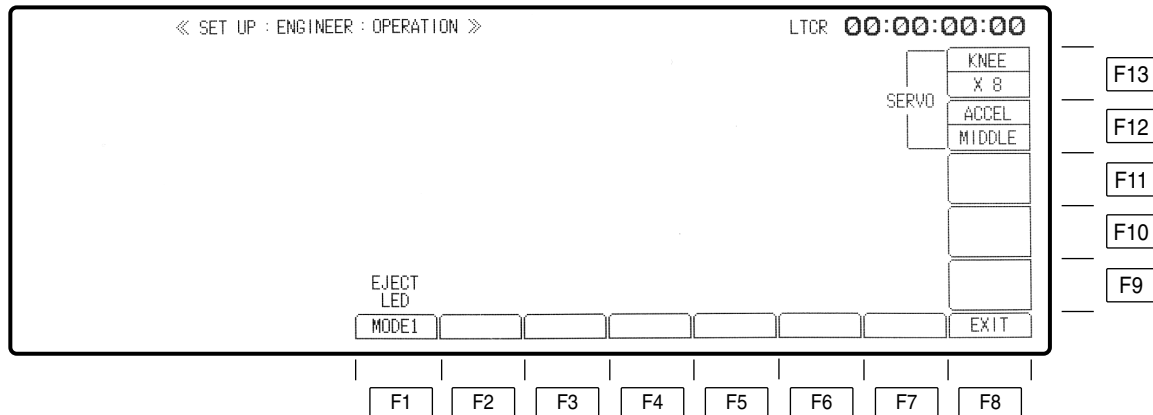
This menu is displayed when the **SET UP** → **F13** and **F** keys are pressed together.



Key	Key designation	Description
F1–F7	—	
F8	EXIT	Returns the VTR to the SET UP menu screen.
F9	OPERATION	Transfers the VTR to the OPERATION ENGINEER SET UP menu screen.
F10–F13	—	

OPERATION ENGINEER SET UP menu

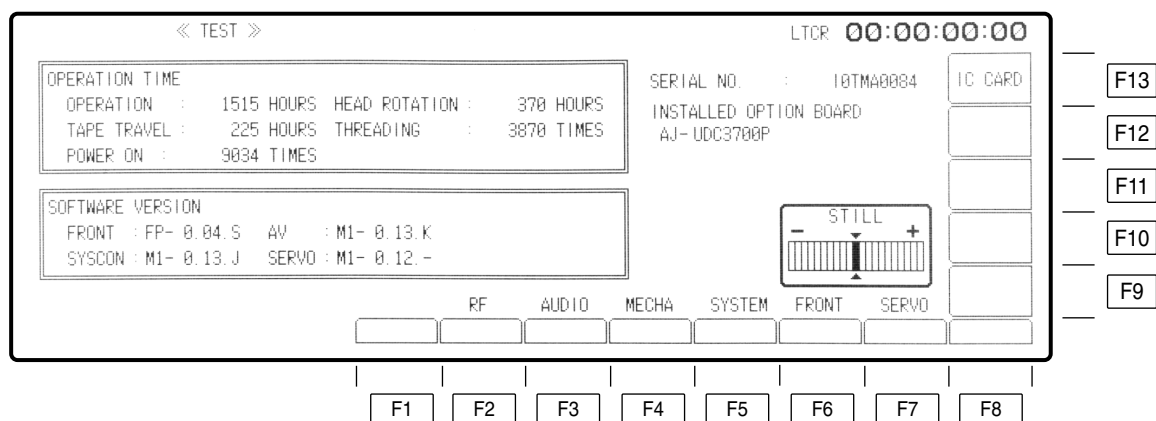
This menu is displayed when the **SET UP** → **F13** and **F** keys are pressed together, and then the **F9** key is pressed.



Key	Key designation	Description
F1	EJECT LED	Enables the lighting conditions of the EJECT button's LED to be selected. MODE 1: The LED lights during the time starting when the VTR is transferred to the eject mode until the cassette is ejected or when cassette unloading is completed. (It lights during the unloading period and in the EJECT mode.) MODE 2: The LED lights during the time starting when the VTR is transferred to the eject mode until the cassette is ejected. (It lights only during the unloading period.)
F2–F7	—	
F8	EXIT	Returns the VTR to the ENGINEER SET UP menu screen.
F9–F11	—	
F12	ACCEL	Selects how far to accelerate the reel at a speed under multiple speed selected by F13 (KNEE) during a FF or REW operation (in the SHTL mode). MAX: Maximum acceleration is applied at all times. MIDDLE: Medium acceleration as far as the knee is applied. (This is the default value.) MIN: The acceleration as far as the knee is reduced. •When the MAX setting is selected, there is no knee due to the maximum acceleration. •There is no knee when an L-size cassette is used.
F13	KNEE	Selects the multiple of the normal speed at which the reel speed is to be transferred from the acceleration selected by F12 (ACCEL) to maximum acceleration during a FF or REW operation (in the SHTL mode). ×8: 8×normal speed ×15: 15×normal speed ×20: 20×normal speed ×30: 30×normal speed

TEST menu

This menu is displayed when the **TEST** key is pressed.



Key	Key designation	Description
F1	—	
F2	RF	Transfers the VTR to the RF TEST menu screen.
F3	AUDIO	Transfers the VTR to the AUDIO TEST menu screen.
F4	MECHA	Transfers the VTR to the MECHA TEST menu screen.
F5	SYSTEM	Transfers the VTR to the SYSTEM TEST menu screen.
F6	FRONT	Transfers the VTR to the TEST FRONT menu screen.
F7	SERVO	Transfers the VTR to the SERVO TEST menu screen.
F8–F12	—	
F13	IC CARD	Transfers the VTR to the TEST IC CARD menu screen.

TEST menu

☐ OPERATION TIME display

How long the VTR has been used for appears on this display.

OPERATION: Total power-on time
HEAD ROTATION: Cumulative head drum rotation time
TAPE TRAVEL: Cumulative tape travel time
THREADING: Total number of loading/unloading repetitions
POWER ON: Number of times power has been turned on

OPERATION TIME			
OPERATION	:	1515 HOURS	HEAD ROTATION : 370 HOURS
TAPE TRAVEL	:	225 HOURS	THREADING : 3870 TIMES
POWER ON	:	9043 TIMES	

☐ SOFTWARE VERSION

The software versions appear on this display.

FRONT: Front software
SYSCON: System control software
AV: AV control software
SERVO: Servo software

SOFTWARE VERSION			
FRONT	:	FP-0.04.F	AV : M1-0.13.0
SYSCON	:	M1-0.13.M	SERVO : M1-0.13.-

☐ Serial number display

The VTR's serial number appears here.

SERIAL NO:

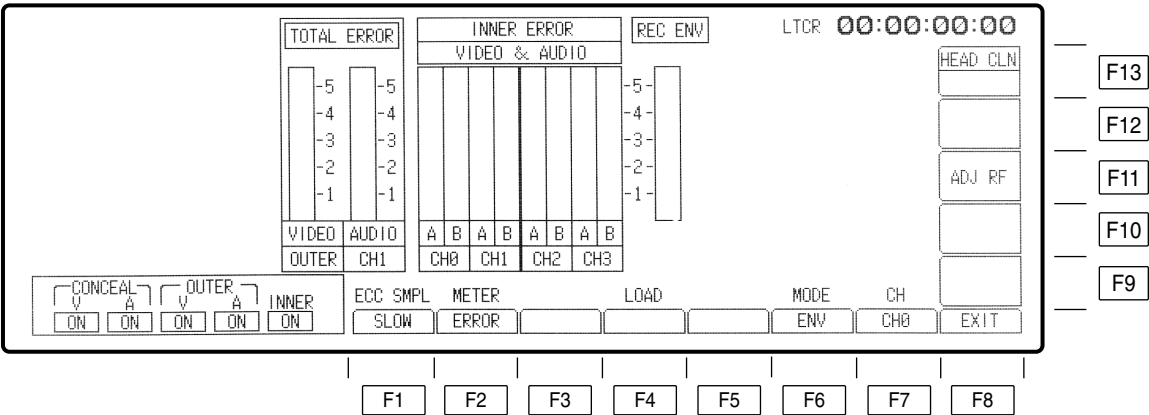
☐ Optional board display

The optional board installed in the VTR.

INSTALLED OPTION BOARD
AJ-UDC3700P

RF TEST menu

This menu is displayed by pressing the following keys: **TEST** → **F2**



RF TEST menu

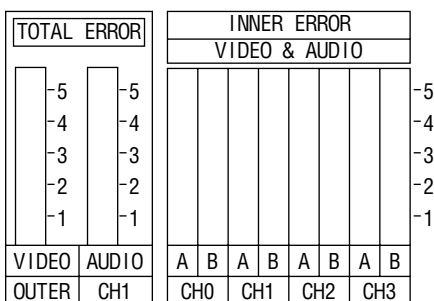
Key	Key designation	Description
F1	EECC SMPL Change of error rate measurement time.	FAST: Measurement interval is 20 fields. SLOW: Measurement interval is 2 seconds.
F2	METER Switch of meter display.	ERROR: Displays inner error level. ENV: Displays envelop level.
F3	—	
F4	LOAD Load of default value.	All RF adjustment values return to factory settings. (Executes when pressed together with F key.)
F5	—	
F6	MODE	For selecting waveform monitor (WFM) output.* EYE: Outputs eye pattern. ENV: Outputs envelop. CONFI: Outputs CONFI CTL. R/P: Outputs R/P CTL. TC: Outputs TC waveform.
F7	CH	For selecting EYE/ENV channel.* CH0: Selects EYE or ENV of CH0. CH1: Selects EYE or ENV of CH1. CH2: Selects EYE or ENV of CH2. CH3: Selects EYE or ENV of CH3
F8	EXIT	Returns the VTR to the TEST menu screen.
F9–F10	—	
F11	ADJ RF RF adjustment value display.	RF adjustment value is displayed and F6, F7, F11 and F12 functions change to RF adjustment value display mode. Refer to “RF adjustment value display menu” (page 143).
F12	—	
F13	HEAD CLN Manual head cleaning.	While this key is pressed, head cleaning takes place. (Head cleaning lasts for a maximum of only 20 seconds.) Operation 1. Set VTR to PLAY mode. 2. Press the F13 (HEAD CLN) key. Head cleaning functions during PLAY, JOG or VAR mode.

*When the RF adjustment value display mode has been entered by F11, the WFM selection made immediately beforehand is held.

RF TEST menu

□ Error rate display

The error rates (error occurrence rates) are indicated on the 1) TOTAL ERROR and 2) INNER ERROR displays.



1) TOTAL ERROR

During recording, the error rate of the simultaneous playback signals is displayed. During playback, the error rate of the playback signals is displayed. The audio channels are switched using the center cursor key.

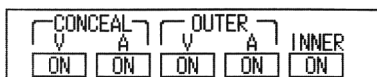
2) INNER ERROR

The error rates after the inner errors have been corrected are displayed for the 8 heads.

Proceed as follows to switch between VIDEO & AUDIO and AUDIO.

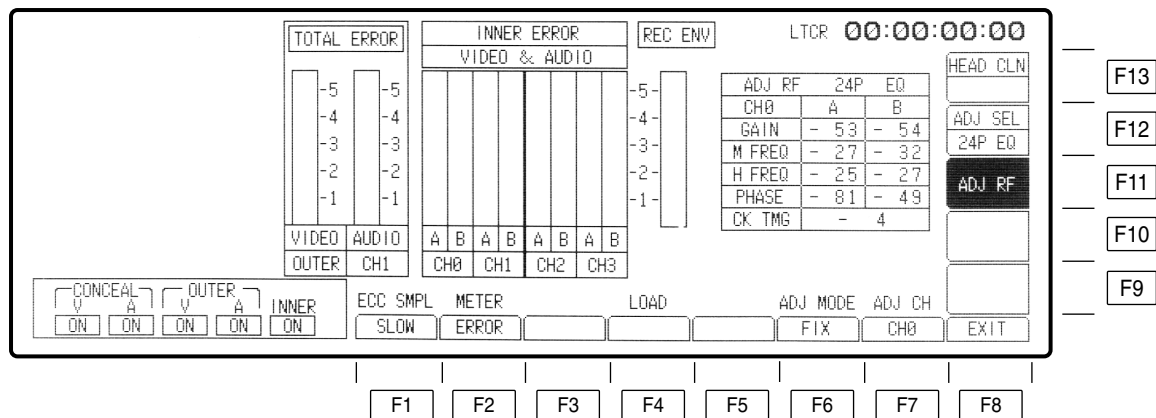
1. Press the center cursor key to display the cursor.
2. Press the F key and cursor key (◀ or ▶) together to move the cursor to INNER ERROR.
3. Press the center cursor key to select VIDEO & AUDIO or AUDIO.
4. Press the ENT key to enter the selection.

□ Correction and revision statuses



- Press the F key and cursor key together to move the highlighted portion from the error rate display described above.
- By aligning the cursor with CONCEAL V or A, with OUTER V or A, or with INNER and then pressing the center cursor key, it is possible to switch between ON and OFF.
- These settings are forcibly set to ON when the test menu is exited. Do NOT turn them OFF since doing so will cause noise to be generated in the playback picture and sound.

RF adjustment value display menu



Key	Key designation	Description
F1–F5	—	
F6	ADJ MODE Adjust mode.	FIX: Holds the current adjusted value. Parameter can be readjusted by remote adjustment but the value cannot be changed with this unit.
F7	ADJ CH	Selects the channel for display. EQ/REC/PLL: CH0, CH1, CH2, CH3
F8–F10	—	
F11	ADJ RF RF adjustment value display.	When the F11 key is pressed, ADJ SEL is displayed at the F12 key and the current adjusted value of the selected parameter is displayed. Selects adjustment mode with F6 key and channel with F7 key.
F12	ADJ SEL	This is used to display the selected RF adjusted value. EQ: The adjusted value of the playback equalizer is displayed. REC: The recording adjusted value is displayed. PLL: The PLL relative speed adjusted value is displayed. Pressing the F12 key enables switching by a toggling action in the following sequence: ****EQ→****PLL→****REC→****EQ→and so on. Pressing the F key and F12 key together enables switching by a toggling action in the following sequence: 6014**→6018**→501**→24P**→D3**→6014** and so on. The RF system adjusted values for each format are displayed as these adjusted values. (They are used by the servicing engineer.)

AUDIO TEST menu

This menu is displayed by pressing the following keys: **TEST** → **F3**

« TEST : AUDIO » LTCR 00:00:00:00

< ANA. INPUT REF LEVEL >

CH1	+4dB
CH2	+4dB
CH3	+4dB
CH4	+4dB
CUE	+4dB

< ANA. OUTPUT REF LEVEL >

CH1	+4dB
CH2	+4dB
CH3	+4dB
CH4	+4dB
CUE	+4dB
MONI.L	+4dB
MONI.R	+4dB

< IMPEDANCE > 600Ω

< DIGI. REF LEVEL > Fs-20dB

IN LEV. OUT LEV.

CH-1 CH-2 CH-3 CH-4 CUE MONI.L MONI.R EXIT

+4dB +4dB +4dB +4dB +4dB +4dB +4dB

F1 F2 F3 F4 F5 F6 F7 F8

F9 F10 F11 F12 F13

Key	Key designation	Description
F1	CH-1	Sets the CH1 analog input/output reference level.
F2	CH-2	Sets the CH2 analog input/output reference level.
F3	CH-3	Sets the CH3 analog input/output reference level.
F4	CH-4	Sets the CH4 analog input/output reference level.
F5	CUE	Sets the CUE input/output reference level.
F6	MONI.L	Sets the monitor L channel output reference level.
F7	MONI.R	Sets the monitor R channel output reference level.
F8	EXIT	Returns the VTR to the TEST menu screen.
F9	REF.LEV	Sets the PCM audio reference level. (This can be done only in the servicing engineer mode. ●When the F9 and F keys are pressed together, the reference level (Fs) toggles between –18 dB and –20 dB.
F10	IMPED.	Sets the input impedance. (This can be done only in the servicing engineer mode*.) ●When the F10 and F keys are pressed together, the input impedance is toggled between 600 ohms and HIGH.
F11	—	
F12	OUT LEV.	Sets the analog output reference level. ●When the F12, BS and F keys are pressed together, the names of the F1 to F7 menus are displayed, and switching between them is acknowledged.
F13	IN LEV.	Sets the analog input reference level. ●When the F12, BS and F keys are pressed together, the names of the F1 to F5 menus are displayed, and switching between them is acknowledged.

MECHA TEST menu

This menu is displayed by pressing the following keys: **TEST** → **F4**

« TEST : MECHA »

LTOR 00:00:00:00

MODE

SENSOR

EXIT

NORMAL

F1

F2

F3

F4

F5

F6

F7

F8

F13

F12

F11

F10

F9

The menu below is displayed when the **F5** key is pressed.

« TEST : MECHA »

LTOR 00:00:00:00

AROUND CYLINDER

AROUND REEL BASEMENT

CASSETTE CARRIAGE

MODE

C.SIZE

SENSOR

EXIT

NO_TAPE

M

F1

F2

F3

F4

F5

F6

F7

F8

F13

F12

F11

F10

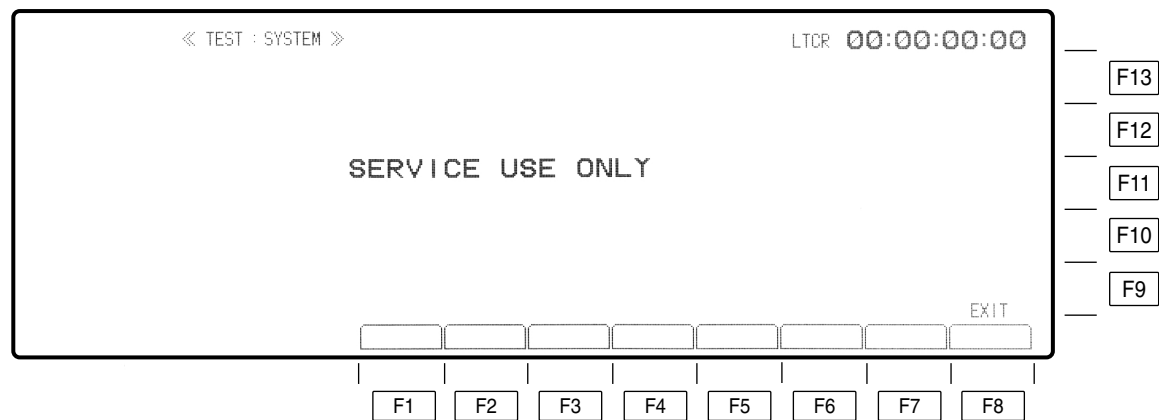
F9

MECHA TEST men

Key	Key designation	Description
F1	MODE Loading without tape.	NORMAL: Normal operation. NO-TAPE: Loading without cassette tape is possible. Loading starts when the STOP button is pressed. Cassette is selected with F3 key. To abort operation, press the EJECT button.
F2	—	
F3	C.SIZE Cassette size selection.	Selects the size of the pseudo cassette when [NO TAPE] has been selected with F1 key. Large, medium or small cassette size can be selected.
F4	—	
F5	SENSOR Sensor operation check.	When this key is pressed for highlighting, the sensor frame is shown on the menu. Operation of each peripheral sensor of cylinder, reel base and front loading is checked. This key is especially for checks by service personnel. Press the F8 (EXIT) key to restore the original frame.
F6–F7	—	
F8	EXIT	Returns the VTR to the TEST menu screen.
F9–F13	—	

SYSTEM TEST menu

This menu is displayed by pressing the following keys: **TEST** → **F5**.
This menu contains keys for adjustments by service personnel. General users cannot operate these keys.
Press F8 key to return to TEST menu.



Key	Key designation	Description
F1-F7	—	
F8	EXIT	Returns the VTR to the TEST menu screen.
F9-F13	—	

SERVO TEST menu

This menu is displayed by pressing the following keys: **TEST** → **F7**.

REEL TORQUE	
LOADING	+115
T-REEL FWD	+103
LOOSING	+120

TOTAL ERROR	
-5 -4 -3 -2 -1	-5 -4 -3 -2 -1

INNER ERROR	
VIDEO & AUDIO	
VIDEO	AUDIO
OUTER	CH1

REC ENV	
LTCR 00:00:00:00	

TRACKING	
MECHA	
HSM : NORMAL LINEAR	
TC DELAY : AUTO OFF	

ADJ ENABLE	
BIMORPH INIT	
TRACKING OPT. ONCE	
MECHA	

TORQUE		DATA SEND		MEASURE		AT		METER		PG SHIFT		ADJ RATE	
ERROR		+1950		FINE		EXIT							

F1

F2

F3

F4

F5

F6

F7

F8

F13

F12

F11

F10

F9

SERVO TEST menu

Key	Key designation	Description
F1	TORQUE Reel torque adjustment.	Key for adjustment by service personnel.
F2	DATA SEND Torque data forwarding.	Key for adjustment by service personnel.
F3	MEASURE (Measure)	Key for adjustment by service personnel.
F4	AT AT head adjustment.	Key for adjustment by service personnel.
F5	METER	ERROR: Displays inner error level. ENV: Displays envelop level.
F6	PG SHIFT PG shifter adjustment.	Key for adjustment by service personnel.
F7	ADJ RATE Adjust rate.	Key for adjustment by service personnel.
F8	EXIT	Returns the VTR to the TEST menu screen.
F9	MECHA Mechanical adjustment.	Key for adjustment by service personnel.
F10	TRACKING Tracking adjustment.	Under normal conditions, tracking adjustment is not necessary. Adjust if there are tracking discrepancies while editing. VAR: Tracking is adjusted manually. Refer to “Manually adjusting the tracking” (page 96). FIX: Tracking is fixed at the center position of the manual adjustment. OPT. ONCE: Tracking is optimized only once while the tape is playing up to the IN point during the first editing after the cassette has been inserted. Thereafter, optimization does not take place. However, optimization can be performed again. Refer to “Automatically adjusting the tracking” (page 95). OPT. AUTO: Tracking is optimized while the tape is playing up to the IN point with each editing. Refer to “Automatically adjusting the tracking” (page 95).
F11	—	
F12	BIMORPH INIT Removal of hysteresis at AT voltage element.	Key for adjustment by service personnel.
F13	ADJ ENABLE	Key for adjustment by service personnel.

SERVO TEST menu

☐ **Error rate display**

The error rates are displayed in terms of the 1) TOTAL ERROR and 2) INNER ERROR.

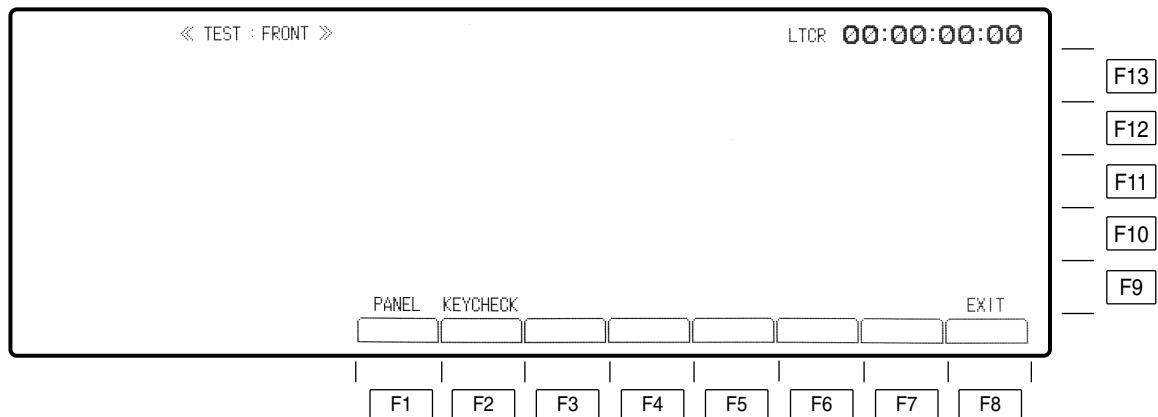
For details, refer to the description of the error rate display for the RF TEST menu (on page 142).

☐ **Tracking adjustment**

For details of the tracking adjustment, refer to the INSERT/ASSEMBLE MANUAL EDIT SET UP menu (on page 95).

TEST FRONT menu

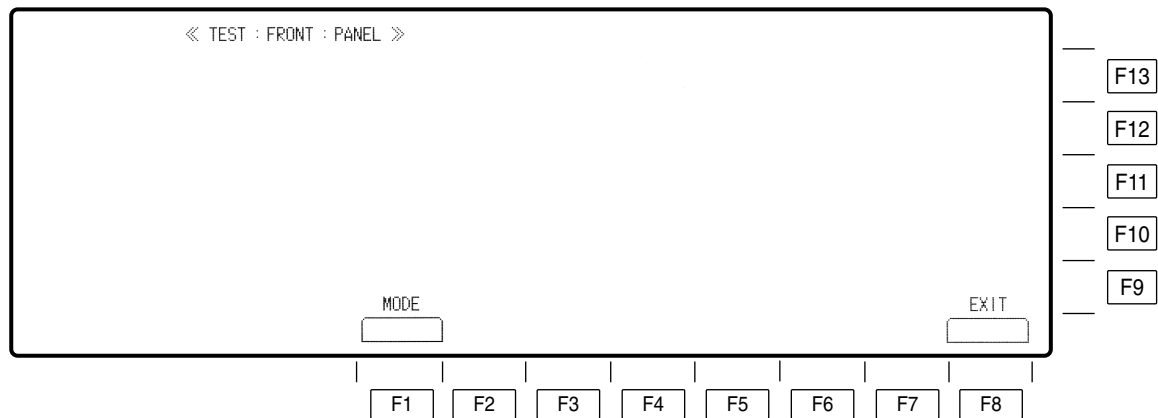
This menu is displayed by pressing the following keys: **TEST** → **F6**



Key	Key designation	Description
F1	PANEL Display check.	Transfers the VTR to TEST FRONT PANEL menu screen.
F2	KEYCHECK Front panel key check.	Transfers the VTR to the TEST KEY CHECK menu screen.
F3–F7	—	
F8	EXIT	Returns the VTR to the TEST menu screen.
F9–F13	—	

TEST FRONT PANEL menu

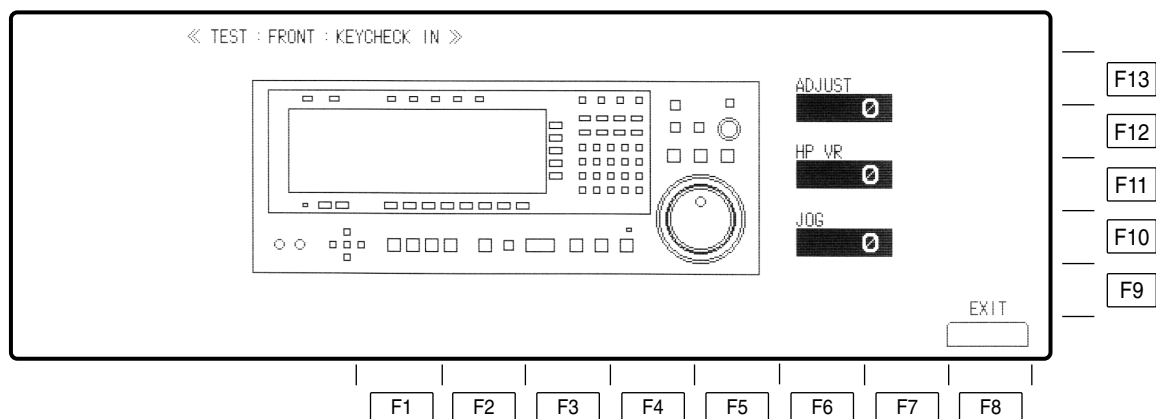
This menu is displayed by pressing the following keys: **TEST** → **F6** → **F1**.



Key	Key designation	Description
F1	MODE Display dot check.	The entire display panel is lighted up in a fixed pattern and display dots are checked. Each time the key is pressed, 12 types of pattern are displayed.
F2–F7	—	
F8	EXIT	Returns the VTR to the TEST FRONT menu screen.
F9–F13	—	

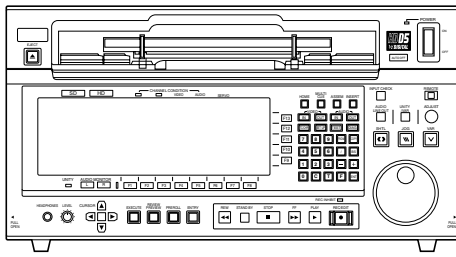
TEST FRONT KEY CHECK menu

This menu is displayed by pressing the following keys: **TEST** → **F6** → **F2**.



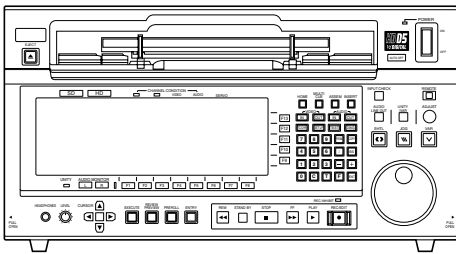
Key	Key designation	Description
F1–F7	—	
F8	EXIT	Returns the VTR to the TEST FRONT menu screen.
F9–F13	—	

☐ Dial and controls



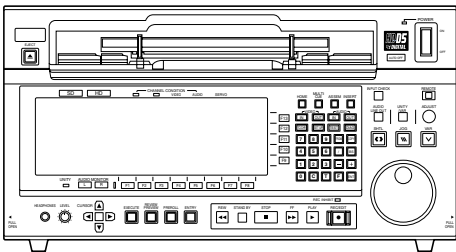
When the ADJUST control, headphones control or search dial is turned, the number of pulses counted is displayed.

☐ **LEDs**



Each time the F1 key is pressed, the LEDs on the panel light up in sequence and are checked.

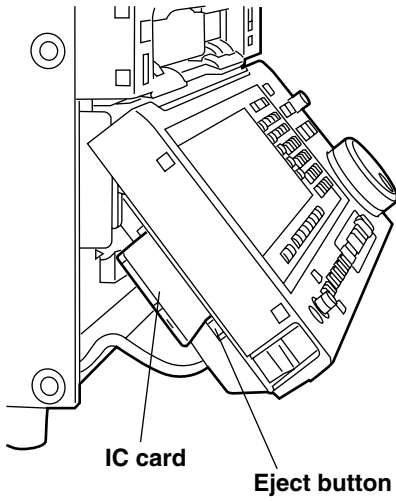
□ Keys



When a key (button) on the panel is pressed, the corresponding key on the menu screen is highlighted, and the buzzer sounds at the same time. This makes it possible to confirm that the front microcomputer has recognized the key.

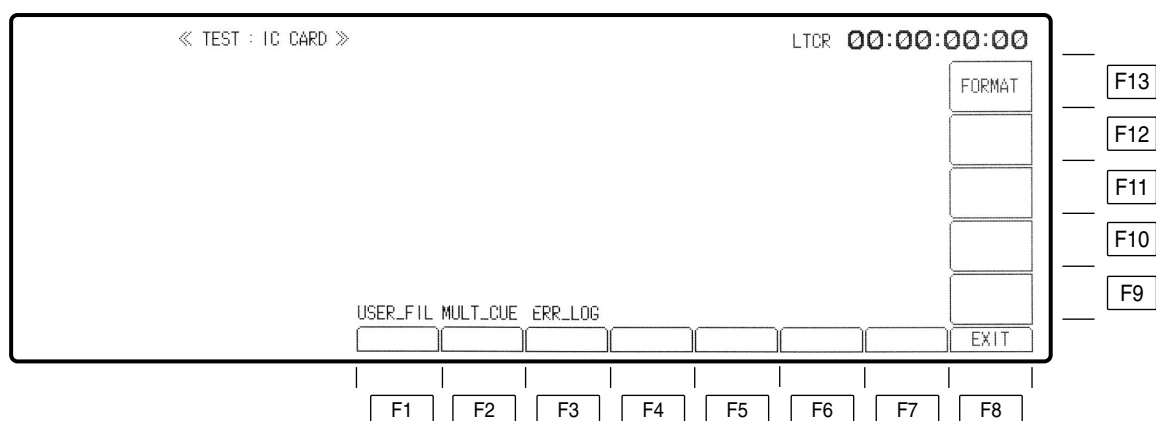
Inserting the IC card

The insertion slot for the IC card is located on the back left of the front panel. Insert the IC card before using the TEST IC CARD menu.



TEST IC CARD menu

This menu is displayed by pressing the following keys: **TEST** → **F13**



Key	Key designation	Description
F1	USER_FIL	User file management takes place using IC card. When the F key is pressed, transfer is made to TEST IC CARD USER FILE menu. •There is a load/save function for current (present deck status) and all registered files. •When user file is forwarded to deck, whether SYS_H and SYS_C should be sent together can be selected.
F2	MULT_CUE	100 CUE_POINTS (MULTI_CUE) can be loaded/saved to IC card. When the F key is pressed, transfer is made to MULTICUE menu. •Whether to send all at once or by page can be selected.
F3	ERR_LOG	Function available for memory of deck mode, time code and type when warning appears. When the F3 key is pressed, the VTR is transferred to the TEST IC CARD ERROR LOG menu. •Function available for 50-step memory data. •When memory buffer becomes full, there is a function for switching to erasure of old material and renewal of new warning. •Function available for memory storage of this data on IC card. •Function available to monitor IC card data.
F4-F7	—	
F8	EXIT	Returns the VTR to the TEST menu screen.
F9-F12	—	
F13	FORMAT	IC card is formatted. Please note that all data on the IC card is destroyed. When the F key is pressed together with C key and F13 (FORMAT) key, the IC card is formatted.

<Note>

Avoid installing an IC card formatted by this unit in the AJ-HD2000/2700 or any other model.

Conversely, avoid installing an IC card formatted by any other model in this unit.

The file structure used for these cards is different from one model to another, and this may give rise to problems in the VTR's operation.

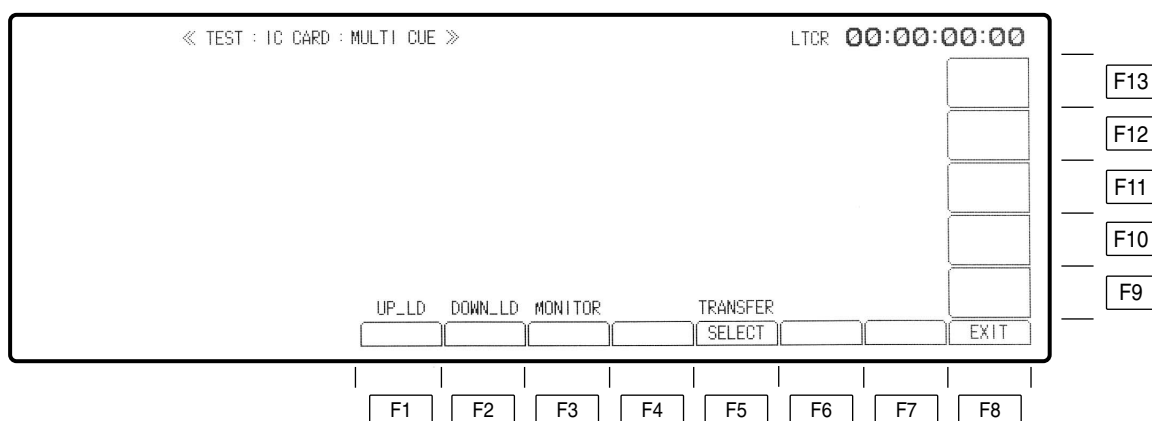
TEST IC CARD USER menu

This menu is displayed by pressing the following keys: **TEST** → **F13** → **F1**.

Key	Key designation	Description
F1	LOAD	Calls out IC card user file. (Executes when pressed together with F key.)
F2	SAVE	Registers IC card user file. (Executes when pressed together with F key.)
F3	DELETE	Deletes IC card user file. (Executes when pressed together with F key.)
F4	—	
F5	UP_LD	Loads file registered from IC card to deck. (Executes when pressed together with F key.)
F6	DOWN_LD	Loads file registered from deck to card. (Executes when pressed together with F key.)
F7	W/SYS	Upon transfer of user file from IC card to deck, selects whether to send card data or to use deck original data for SYSH and SYS SC. ON: Card data are sent. OFF: Original deck data are used. This function is valid only with LOAD (F1) and UP_LD (F5).
F8	EXIT	Returns the VTR to the TEST IC CARD menu screen.
F9	LOCK	Sets and releases lock of user file. (Executes when pressed together with F key.)
F10-F12	—	
F13	TRANS MD	Upon loading of file registered from IC card to deck, selects whether to load from file 5 to 10 or to load all files from 1 to 10. FILE 5-10: Loads files 5 to 10 from IC card to deck. ALL: Loads all files from 1 to 10 from IC card to deck. For ALL, press the F key and C key together with F13 key. ●This function is valid only with UP_LD (F5).

TEST IC CARD MULTI CUE menu

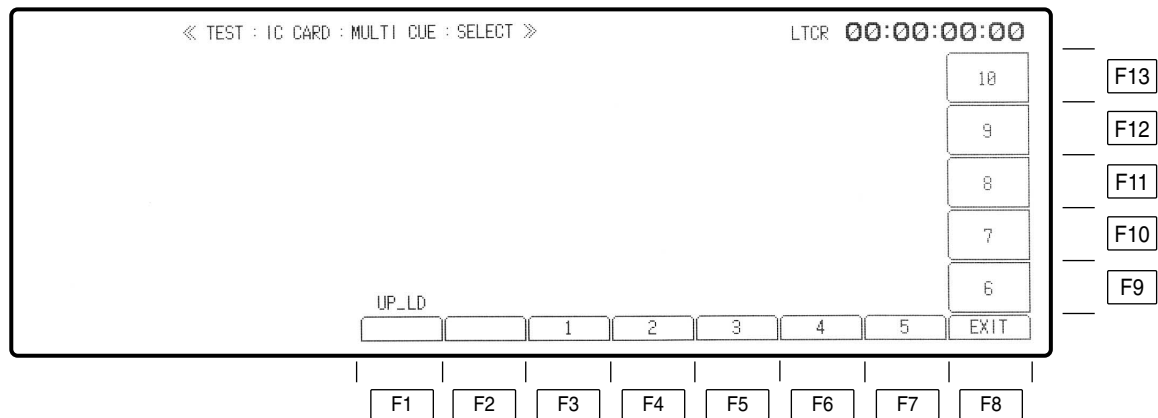
This menu is displayed by pressing the following keys: **TEST** → **F13** → **F2**



Key	Key designation	Description
F1	LP_LD	Loads file registered from IC card to deck. •Executes when pressed together with F key. When there is a page on which writing is prohibited, the message "PROTECTED PAGE" appears and the function is not executed. If you still wish to execute the function, either release the protected page feature or stop sending to the protected page. Upon execution, transfers automatically to deck MULTI CUE menu.
F2	DOWN_LD	Loads file registered from deck to IC card to deck. Upon execution, transfers automatically to deck MONITOR menu. (Executes when pressed together with F key.)
F3	MONITOR	Displays MULTI_CUE data saved in IC card.
F4	—	
F5	TRANSFER	At the time of UP_LD from IC card to deck, switch is made between either sending all or sending by individual page. ALL: Sends all items. SELECT: Transfers to page select menu upon execution of UP_LD.
F6-F7	—	
F8	EXIT	Returns the VTR to the TEST IC CARD menu screen.
F9-F13	—	

TEST IC CARD MULTI CUE SELECT menu

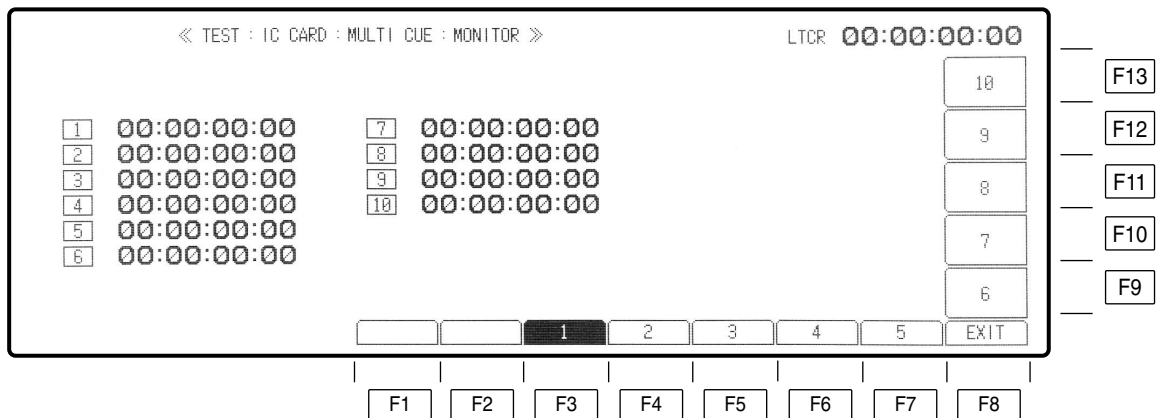
This menu is displayed when the **TEST** → **F13** → **F2** → **F** and **F1** keys are pressed together.



Key	Key designation	Description
F1	LP_LD	Selected files are loaded from IC card to deck by pressing the UP_LD key after selection of the pages to be forwarded.
F2	—	
F3–F7		Selects the pages to be forwarded.
F8	EXIT	Returns to TEST IC CARD MULTI CUE menu screen.
F9–F13		Selects the pages to be forwarded.

TEST IC CARD MULTI CUE MONITOR menu

This menu is displayed by pressing the following keys: **TEST** → **F13** → **F2** → **F3**.



Key	Key designation	Description
F1–F2	—	
F3–F7	1–5 Designation of 1–5 cue number.	
F8	EXIT	Returns the VTR to the TEST IC CARD MULTI CUE menu screen.
F9–F13	6–10 Designation of 6–10 cue number.	

TEST IC CARD ERROR LOG menu

This menu is displayed by pressing the following keys: **TEST** → **F13** → **F3**

Key	Key designation	Description
F1	DOWN_LD	Loads current memory data from VTR to IC card. In addition, the serial No., software version and operation time are saved. If there is no error log data in any file other than one containing the machine current data (a file saved in the IC card or current data of the VTR), "ERROR" appears, and the data cannot be downloaded. ●Executes when pressed together with F key.
F2	MONITOR	Displays the error log data saved in the IC card. After the machine current data (a file saved in the IC card or current data of the VTR) has been downloaded, the error log data currently stored in the VTR's memory is displayed. ●Executes when pressed together with F key.
F3	DELETE	ERROR LOG data saved in IC card is deleted. ●Executes when pressed together with F key.
F4	—	
F5	AUTOSTEP	When warning exceeds buffer capacity, selects whether to erase old material sequentially and renew. ON: Renews regularly. (The 50th step data is a latest data.) OFF: No renewal when capacity is full.
F6–F7	—	
F8	EXIT	Returns the VTR to the TEST IC CARD menu screen.
F9–F12	—	
F13	INITIAL	Deletes all the past error log data currently stored in the VTR's memory and all the error log data currently displayed. When downloading is attempted after executing INITIAL with no error log data, "ERROR" appears since there is no error log data, and data cannot be downloaded to the IC card while the machine current data can be downloaded.

TEST IC CARD ERROR LOG MONITOR menu

This menu is displayed by pressing the following keys: **TEST** → **F13** → **F3** → **F2** keys are pressed.
To check the current log data of the VTR, first download the machine current data, and then monitor the log data.

<< TEST : IC CARD : ERROR LOG : MONITOR >>

NO. WARNING

1. NO EXTERNAL HD. REFERENCE

2.

3.

4.

5.

6.

7.

8.

TOTAL 1 / 1

MODE OFF TAPE
TIME CODE

EJECT 00:00:00:00

LTCR 00:00:00:00

SERIAL NO. : 18TMA0084

SOFTWARE VERSION

FRONT : FP- 0.04.S

SYSCON : M1- 0.13.J

AV : M1- 0.13.K

SERVO : M1- 0.12.-

OPERATION TIME

OPERATION : 1515 HOURS

HD ROTATION : 370 HOURS

TAPE TRAVEL : 225 HOURS

THREADING : 3870 TIMES

POWER ON : 9035 TIMES

F1F2F3F4F5F6F7F8

F13
F12
F11
F10
F9

EXIT

Key	Key designation	Description
F1-F7	—	
F8	EXIT	Returns the VTR to the TEST IC CARD ERROR LOG menu screen.
F9-F13	—	

*When more errors are generated than the number that can be displayed on the front panel, use the scroll key to move the error display.

Error messages

Four kinds of error messages are displayed by this VTR.

(1) DIAG menu

A warning mark (W) blinks at the top left of the menu screen when an erroneous setting, failure to verify a condition, warning or other problem that interferes with the use of the VTR has arisen. When the DIAG key is pressed, an error message appears on the screen.

(2) AUTO OFF mode

When a problem occurs in the VTR and it is no longer possible to continue using the VTR without fixing it, the AUTO OFF lamp and SYSTEM lamp at the front of the VTR come on, and an error message appears on the display.

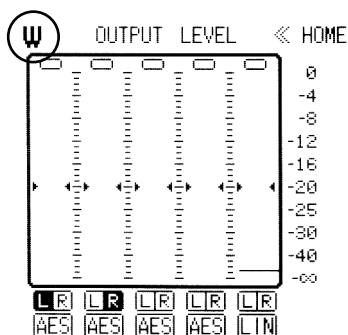
(3) System error

When a problem occurs in the VTR and its operation can no longer be guaranteed, the SYSTEM lamp at the front of the VTR comes on, and an error message appears on the display.

(4) Operation error

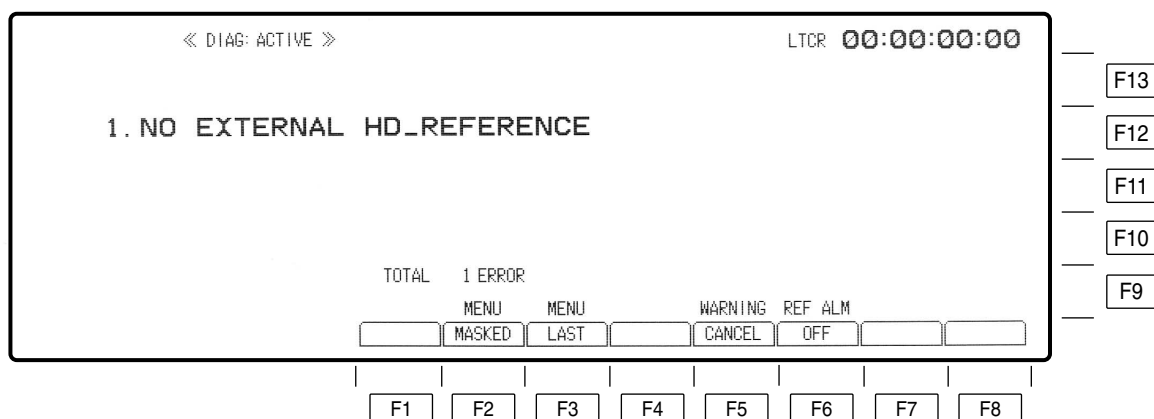
When the wrong button or key has been pressed or a wrong value has been input during operation, a message appears at the bottom right of the screen telling the user how to proceed with operation.

DIAG menu error messages



A warning mark (W) blinks at the top left of the screen when an erroneous setting, failure to verify a condition, warning or other problem that interferes with the use of the VTR has arisen.

If the DIAG key is pressed while a warning is shown, an error message appears on the screen.



There are the following three kinds of DIAG menu screens.

DIAG ACTIVE menu

This is the menu that appears initially when the DIAG key is pressed. An error message corresponding to the unmasked (not canceled) warning which has just occurred is displayed.

DIAG MASKED menu

This is the menu that appears when the F2 (MENU MASKED) key is pressed. An error message corresponding to the masked (canceled) warning is displayed.

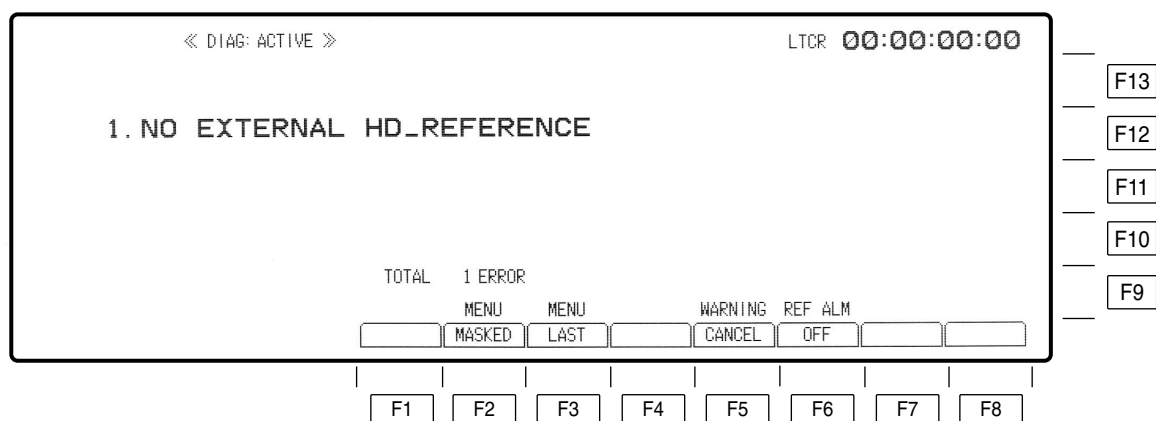
DIAG LAST menu

This is the menu that appears when the F3 (MENU LAST) key is pressed. The error messages for the last three warnings are displayed.

*Any error message is cleared as soon as the error is remedied.

DIAG ACTIVE menu

When the DIAG key is pressed while the warning mark is displayed, the DIAG ACTIVE menu below appears.



Key	Key designation	Description
F1	—	
F2	MENU MASKED	Transfers the VTR to the DIAG MASKED menu screen.
F3	MENU LAST	Transfers the VTR to the DIAG LAST menu screen.
F4	—	
F5	WARNING CANCEL	Masks (cancels) the warning currently on display in the DIAG ACTIVE menu. The error message for the masked warning can be displayed on the DIAG MASKED menu.
F6	REF ALM	ON: When there is no REF input, STOP lamp blinks. OFF: When there is no REF input, STOP lamp does not blink.
F7–F13	—	

☐ When there are multiple warnings

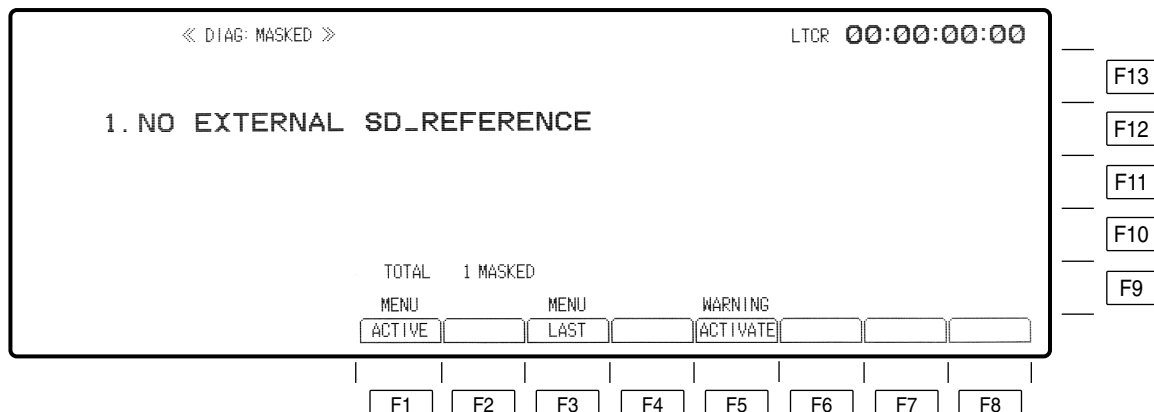
- Error messages are displayed from item of highest priority.
- All the messages can be viewed sequentially by operating the cursor and the up/down arrow keys.
- Total number of warnings is displayed.

☐ When F6 (REF ALM) key is set to ON, refer to the following table.

OUT_REF	SD_REF present/ absent	HD_REF present/ absent	STOP blinks/glows
AUTO/INPUT	Present	—	Glows
	Absent	Present	Glows
		Absent	Blinks
HD	—	Present	Glows
		Absent	Blinks
SD	Present	—	Glows
	Absent		Blinks

DIAG MASKED menu

When the [F2] (MENU MASKED) key is pressed on the DIAG ACTIVE or DIAG LAST menu, the DIAG MASKED menu below appears.



Key	Key designation	Description
F1	MENU ACTIVE	Transfers the VTR to the DIAG ACTIVE menu.
F2	—	
F3	MENU LAST	Transfers the VTR to the DIAG LAST menu.
F4	—	
F5	WARNING ACTIVATE	Releases mask (cancel) of the warning currently on display. Mask of the warning currently on display in the DIAG MASKED menu is released. The error message for the warning for which mask was released can be displayed on the DIAG ACTIVE menu.
F6–F13	—	

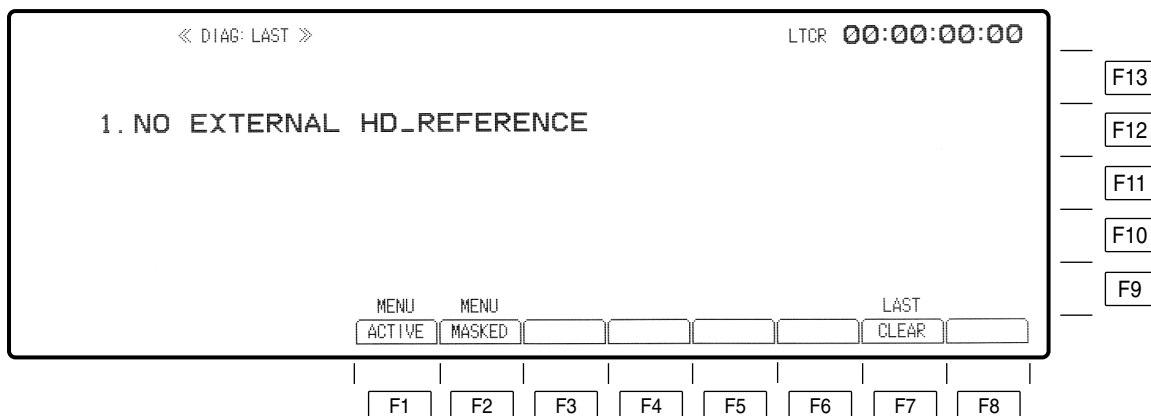
☐ When there are 2 or more canceled (masked) warnings

- Error messages are displayed from item of highest priority.
- All the messages can be viewed sequentially by operating the cursor and the up/down arrow keys.
- Total number of warnings is displayed.

DIAG LAST menu

When the F3 (MENU LAST) key is pressed on the DIAG ACTIVE or DIAG MASKED menu, the DIAG LAST menu below appears.

The error messages for the last three warnings are displayed.



Key	Key designation	Description
F1	MENU ACTIVE	Transfers the VTR to the DIAG ACTIVE menu.
F2	MENU MASKED	Transfers the VTR to the DIAG MASKED menu.
F3–F6		
F7	LAST CLEAR	Clears all warnings displayed on the current DIAG LAST menu. All warnings displayed on the current DIAG LAST menu are cleared when the F key is pressed together with the F7 (LAST CLEAR) key. When a new warning is generated, its contents are displayed
F8–F13	—	

☐ When 2 or more warnings have occurred

- Error messages are displayed from item of highest priority.
- All the messages can be viewed sequentially by operating the cursor and the up/down arrow keys.

DIAG error messages

Message	Error description	On-screen display
FAN STOP1	FAN-1 has stopped. It will continue to operate for a while but when the internal temperature rises, its power will be turned off.	FAN STOP
FAN STOP2	FAN-2 has stopped. It will continue to operate for a while but when the internal temperature rises, its power will be turned off.	FAN STOP
NO CUE ERASE CURRENT	No erase current is flowing to the CUE erase head.	ERASE ERROR
NO TC ERASE CURRENT	No erase current is flowing to the TC erase head.	ERASE ERROR
NO FULL ERASE CURRENT	No erase current is flowing to the full erase head.	ERASE ERROR
NO CTL ERASE CURRENT	No erase current is flowing to the CTL erase head.	ERASE ERROR
COMP. CPU NOT RESPONDING	The compression CPU is not working properly.	COMP. CPU ERROR
VIDEO CONCEAL SW OFF	The VIDEO CONCEAL SW has been set to OFF due to the TEST RF menu setting.	CONCEAL SW OFF
INNER ECC SW OFF	The INNER ECC SW has been set to OFF due to the TEST RF menu setting.	ECC SW OFF
OUTER VIDEO ECC SW OFF	The OUTER VIDEO ECC SW has been set to OFF due to the TEST RF menu setting.	ECC SW OFF
OUTER AUDIO ECC SW OFF	The OUTER AUDIO ECC SW has been set to OFF due to the TEST RF menu setting.	ECC SW OFF
AUDIO CONCEAL SW OFF	The AUDIO CONCEAL SW has been set to OFF due to the TEST RF menu setting.	CONCEAL SW OFF
SERVO UNLOCK	The servo has been disengaged (unlocked).	SERVO UNLOCK
CTL NOT DETECTED	The CTL signal cannot be played back.	CTL NOT DET.
LOW RF	The RF playback level has dropped. Clean the video heads.	LOW RF
AUDIO MUTE	The audio output has been muted. Check the tape playback mode.	AUDIO MUTE
CONCEAL A	Errors were corrected in the PCM audio data. Check the tape playback mode.	CONCEAL A
CONCEAL V	Errors were corrected in the video data. Check the tape playback mode.	CONCEAL V
HIGH ERROR RATE	The error rate has deteriorated.	HIGH ERROR
CTL HEAD CLOGGING	The CTL head is clogged. Clean the video heads.	CTL HEAD CLOG
LTC HEAD CLOGGING	The LTC head is clogged. Clean the video heads.	LTC HEAD CLOG
LOW RF (REC HEAD)	The level of the RF envelope played back from the rotary recording head has dropped.	LOW RF
MISTRACK IN OPTIMIZED TRACKING DATA	Tracking optimizing was not completed successfully.	OPT ERROR

DIAG error messages

Message	Error description	On-screen display
WRONG OPTIMIZED TRACKING VALUE	The tracking optimizing operation resulted in a drop in the maximum envelope level by over 25%. Check the tape playback mode.	OPT ERROR
SERVO UNLOCKED BEFORE IN POINT	The servo was disengaged (unlocked) before an edit IN point.	OPT ERROR
NO EXTERNAL HD REF	The REF signal is not supplied to the HD REF input connector.	HD REF ERROR
NO EXTERNAL SD REF	The REF signal is not supplied to the SD REF input connector.	SD REF ERROR
NO COLOR BURST IN SD REF	There is no burst signal in the SD REF signal.	SD REF ERROR
NO STANDARD SCH-RANGE IN REF	A problem has occurred in SCH of the SD REF signal.	SD REF ERROR
NO HD SDI INPUT	There is no HD SDI input.	HD SDI ERROR
CRC ERROR IN HD SDI INPUT	A CRC error has been detected from the HD SDI input signal.	HD SDI ERROR
NO EMBEDDED AUDIO (CH1/2/3/4) INPUT	Audio signals are not detected in the HD SDI input signal.	HD SDI ERROR
NO EMBEDDED AUDIO (CH5/6/7/8) INPUT	Audio signals are not detected in the HD SDI input signal.	HD SDI ERROR
AUDIO (CH1/2/3/4) DATA ERROR IN HD SDI INPUT	A transmission error was detected in the audio signals of the HD SDI input signal.	HD SDI ERROR
AUDIO (CH5/6/7/8) DATA ERROR IN HD SDI INPUT	A transmission error was detected in the audio signals of the HD SDI input signal.	HD SDI ERROR
NO EMBEDDED LTC	The LTC signal is not detected in the HD SDI input signal.	HD SDI ERROR
LTC ERROR IN HD SDI INPUT	A transmission error was detected in the LTC signal of the HD SDI input signal.	HD SDI ERROR
NO EMBEDDED VITC	The VITC signal is not detected in the HD SDI input signal.	HD SDI ERROR
VITC ERROR IN HD SDI INPUT	A transmission error was detected in the VITC signal of the HD SDI input signal.	HD SDI ERROR
NO SD SDI INPUT	There is no SD SDI input.	SD SDI ERROR
NO EMBEDDED AUDIO INPUT	Audio signals are not detected in the SD SDI input signal.	SD SDI ERROR
UNMATCH AUDIO RECORDED FORMAT CHECK CASSETTE C BIT	Check the C hole (for identifying the 4-channel/8-channel format) on the cassette. Its setting does not match the system format which has been set.	FRMT UNMATCH
UNMATCH AUDIO RECORDED FORMAT CHECK SYSTEM FORMAT	Check the VTR system format. It does not match C hole (for identifying the 4-channel/8-channel format) setting on the cassette.	FRMT UNMATCH
INPUT DIGITAL AUDIO CH1/2 SYNC ERROR CONFIRM INPUT DIGITAL AUDIO	A sync error has occurred in the AES/EBU CH1/2 input signals. Check the input signals.	PCM ERROR
INPUT DIGITAL AUDIO CH3/4 SYNC ERROR CONFIRM INPUT DIGITAL AUDIO	A sync error has occurred in the AES/EBU CH3/4 input signals. Check the input signals.	PCM ERROR

DIAG error messages

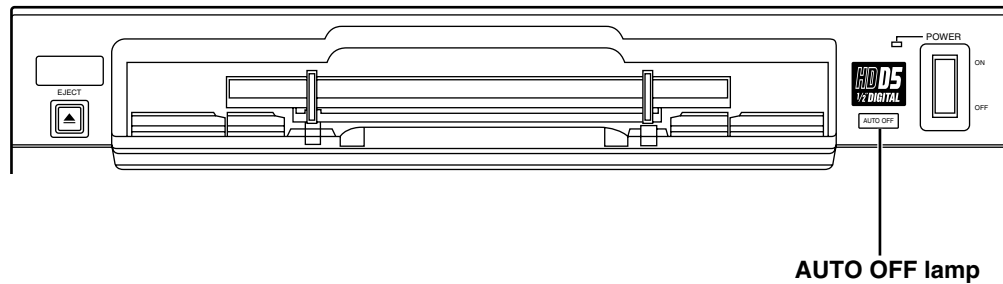
Message	Error description	On-screen display
INPUT DIGITAL AUDIO CH5/6 SYNC ERROR CONFIRM INPUT DIGITAL AUDIO	A sync error has occurred in the AES/EBU CH5/6 input signals. Check the input signals	PCM ERROR
INPUT DIGITAL AUDIO CH7/8 SYNC ERROR CONFIRM INPUT DIGITAL AUDIO	A sync error has occurred in the AES/EBU CH7/8 input signals. Check the input signals.	PCM ERROR
INPUT AUDIO CH1/2 CRCC ERROR CONFIRM INPUT DIGITAL AUDIO	A CRCC error has occurred in the AES/EBU CH1/2 input signals. Check the input signals.	PCM ERROR
INPUT AUDIO CH3/4 CRCC ERROR CONFIRM INPUT DIGITAL AUDIO	A CRCC error has occurred in the AES/EBU CH3/4 input signals. Check the input signals.	PCM ERROR
INPUT AUDIO CH5/6 CRCC ERROR CONFIRM INPUT DIGITAL AUDIO	A CRCC error has occurred in the AES/EBU CH5/6 input signals. Check the input signals.	PCM ERROR
INPUT AUDIO CH7/8 CRCC ERROR CONFIRM INPUT DIGITAL AUDIO	A CRCC error has occurred in the AES/EBU CH7/8 input signals. Check the input signals.	PCM ERROR
INPUT DIGITAL AUDIO CH1/2 PARITY ERROR CONFIRM INPUT DIGITAL AUDIO	A parity error has occurred in the AES/EBU CH1/2 input signals. Check the input signals.	PCM ERROR
INPUT DIGITAL AUDIO CH3/4 PARITY ERROR CONFIRM INPUT DIGITAL AUDIO	A parity error has occurred in the AES/EBU CH3/4 input signals. Check the input signals.	PCM ERROR
INPUT DIGITAL AUDIO CH5/6 PARITY ERROR CONFIRM INPUT DIGITAL AUDIO	A parity error has occurred in the AES/EBU CH5/6 input signals. Check the input signals.	PCM ERROR
INPUT DIGITAL AUDIO CH7/8 PARITY ERROR CONFIRM INPUT DIGITAL AUDIO	A parity error has occurred in the AES/EBU CH7/8 input signals. Check the input signals.	PCM ERROR
RECEIVED INVALID COMMAND FROM RS-422 PORT	An undefined command has been received.	RS-422 ERROR
SUM-CHECK ERROR IN RECEIVED COMMAND FROM RS-422 PORT	A sum check error has occurred in the received command.	RS-422 ERROR
PARITY ERROR IN RECEIVED COMMAND FROM RS-422 PORT	A parity error has occurred in the received command.	RS-422 ERROR
FRAMING ERROR IN RECEIVED COMMAND FROM RS-422 PORT	A framing error has occurred in the received command.	RS-422 ERROR
OVER-RUN ERROR IN RECEIVED COMMAND FROM RS-422 PORT	An overrun error has occurred in the received command.	RS-422 ERROR
RS-422 COMMUNICATION STOP BY TIME OUT	A timeout error has occurred.	RS-422 ERROR
RECEIVED INVALID COMMAND FROM RS-232C PORT	An undefined command has been received.	RS-232C ERROR

DIAG error messages

Message	Error description	On-screen display
SUM-CHECK ERROR IN RECEIVED COMMAND FROM RS-232C PORT	A sum check error has occurred in the received command.	RS-232C ERROR
PARITY ERROR IN RECEIVED COMMAND FROM RS-232C PORT	A parity error has occurred in the received command.	RS-232C ERROR
FRAMING ERROR IN RECEIVED COMMAND FROM RS-232C PORT	A framing error has occurred in the received command.	RS-232C ERROR
OVER-RUN ERROR IN RECEIVED COMMAND FROM RS-232C PORT	An overrun error has occurred in the received command.	RS-232C ERROR
RS-232C COMMUNICATION STOP BY TIME OUT	A timeout error has occurred.	RS-232C ERROR
RECEIVED INVALID COMMAND FROM VA_CONT PORT	An undefined command has been received.	VA-CONT ERROR
SUM-CHECK ERROR IN RECEIVED COMMAND FROM VA_CONT PORT	A sum check error has occurred in the received command.	VA-CONT ERROR
PARITY ERROR IN RECEIVED COMMAND FROM VA_CONT PORT	A parity error has occurred in the received command.	VA-CONT ERROR
FRAMING ERROR IN RECEIVED COMMAND FROM VA_CONT PORT	A framing error has occurred in the received command.	VA-CONT ERROR
OVER-RUN ERROR IN RECEIVED COMMAND FROM VA_CONT PORT	An overrun error has occurred in the received command.	VA-CONT ERROR
EXT LTC NOT READ	There is a problem with the EXT TC input.	TC ERROR
EXT VITC NOT READ	There is a problem with the EXT VITC input.	TC ERROR
LTC IN TAPE NOT READ	The LTC signal is not played back.	TC ERROR
IC CARD LOW BATTERY	The IC card battery has a low remaining charge. Replace the card.	CARD LOW BATT

AUTO OFF error messages

If a problem has occurred and the VTR cannot continue operating or the mechanism or tape may be damaged by continued operation, the AUTO OFF lamp on the VTR's front panel come on, the buzzer sounds, and an error message appears on the screen. In this situation, stop operating the VTR, and proceed to fix the problem.



AUTO OFF
CASSETTE UNLOAD FAIL
POWER OFF

- With the exception of the DEW error message, the original screen will not be restored unless the power is turned off and then back on again.

If the error persists even after the power has been turned off and then back on again, the problem is serious, and the VTR will need to be repaired or some of its parts replaced. Immediately turn off the power, remove the power plug from the power outlet, and contact your dealer. Bear in mind that continued operation may exacerbate the existing problem and/or cause other unforeseen problems.

AUTO OFF occurs mainly when the tape transport system is experiencing problems. When AUTO OFF has occurred, open the VTR's top panel, check that the tape in use has been properly installed in the transport system, and then turn on the power. If the tape in use has become disengaged from the transport system, contact your dealer.

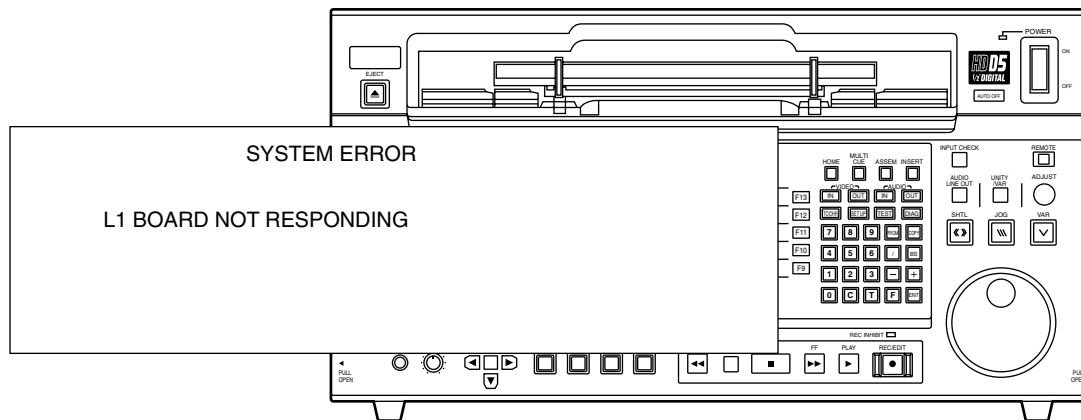
AUTO OFF error messages

Message	Error description	On-screen display
CPU TAPE HANDLE TROUBLE	The CPU is not working properly due to an error in the interrupt processing, etc.	SYS CON ERROR
CPU (SERVO SYS) COMM. TROUBLE	A problem has occurred in communication between the servo microcomputer and system control microcomputer.	SERVO ERROR
CASSETTE PHOTO SENSOR TROUBLE	A problem with the LED has been detected.	MECHA ERROR
DETECTION SWITCH FAIL (A)	There is a problem with the cassette's 3-stage switch (A) (on the cylinder side).	MECHA ERROR
DETECTION SWITCH FAIL (B)	There is a problem with the cassette's 3-stage switch (B) (middle position).	MECHA ERROR
DETECTION SWITCH FAIL (C)	There is a problem with the cassette's 3-stage switch (C) (on the cassette insertion slot side).	MECHA ERROR
ROTATE-RANGE OVER	A problem with the cylinder's rotation has been detected.	SERVO ERROR
CAPSTAN NOT ROTATE	A problem with the capstan's rotation has been detected.	SERVO ERROR
TAPE TENSION ERROR	A tape tension error has been detected. (Pinch roller ON status) Check the tape transport system.	SERVO ERROR
TAPE TENSION OVER-RANGE IN SHTL	A tape tension error has been detected. (Reel drive status with pinch roller OFF) Check the tape transport system.	SERVO ERROR
REEL DIRECTION UNMUTCH	A discrepancy in the rotational directions of the supply and take-up reels has been detected. Check the tape transport system.	SERVO ERROR
WIND-UP REEL NOT ROTATE	Defective rotation of the take-up reel has been detected. (During capstan drive) Check the tape transport system.	SERVO ERROR
NO S-REEL FG PULSE	Trouble with the rotation of the supply reel has been detected.	SERVO ERROR
NO T-REEL FG PULSE	Trouble with the rotation of the take-up reel has been detected.	SERVO ERROR
CASSETTE UNLOAD FAIL	A problem with the cassette "up" operation has occurred. Check the tape transport system.	MECHA ERROR
SUB UNLACING FAIL	A problem with the sub-unloading operation has occurred. Check the tape transport system.	MECHA ERROR
MAIN UNLACING FAIL	A problem with the main unloading operation has occurred. Check the tape transport system.	MECHA ERROR
DEW	The formation of condensation has been detected. Refrain from inserting a cassette since this condition may cause the tape to adhere to the inside parts, etc., thereby damaging it.	MECHA ERROR

SYSTEM error messages

When a problem has occurred in the VTR and its operation can no longer be guaranteed, the system error lamp comes on, the buzzer sounds, and an error message appears on the screen.

In this situation, stop operating the VTR immediately, and proceed to fix the trouble.



- With system errors, the original screen will be restored when the power switch is turned off and the cause of the error is eliminated.

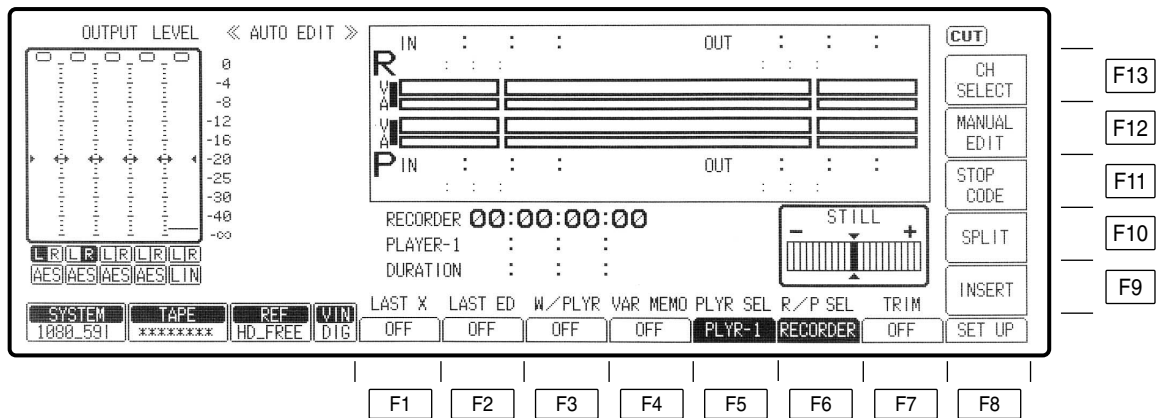
SYSTEM error messages

Message	Error description	On-screen display
AV NOT RESPONDING	The AV microcomputer is not working properly. The reference signals from the S5 printed circuit board may not be the prescribed ones or some similar kind of problem is to blame.	SYSTEM ERROR
SYS CON NOT RESPONDING	A problem has occurred in communication between the system control microcomputer and front microcomputer.	SYSTEM ERROR
S2 BOARD NOT RESPONDING	The S2 printed circuit board has been removed.	SYSTEM ERROR
S3 BOARD NOT RESPONDING	The S3 printed circuit board has been removed.	SYSTEM ERROR
S4 BOARD NOT RESPONDING	The S4 printed circuit board has been removed.	SYSTEM ERROR
S5 BOARD NOT RESPONDING	The S5 printed circuit board has been removed.	SYSTEM ERROR
L1 BOARD NOT RESPONDING	The L1 printed circuit board has been removed.	SYSTEM ERROR
L2 BOARD NOT RESPONDING	The L2 printed circuit board has been removed.	SYSTEM ERROR
CASSETTE LOAD FAIL	A problem has occurred during the cassette "down" operation.	MECHA ERROR
SUB LACING FAIL	A problem was detected during the sub-loading operation, and the cassette was ejected. Check the tape transport system.	MECHA ERROR
MAIN LACING FAIL	A problem was detected during the main loading operation, and the cassette was ejected. Check the tape transport system.	MECHA ERROR
HUB POSITION	The reel hub position does not match the cassette size. The cassette was ejected as a result.	MECHA ERROR

Operation messages

In the majority of cases, when a mistake has been made in operating a button or key during automatic editing, a message appears at the bottom right of the screen (above the tape speed display) telling the user how to proceed with operation.

- The message is automatically cleared after it has been displayed for several seconds.



Operation messages (in AUTO EDIT mode)

No.	Message	Description of error/problem
350	NO CASSETTE	A cassette tape has not been inserted.
351	NO PRESET	The editing channel has not been selected in the editing mode or during insert editing.
352	NO IN POINT	The edit point data required for editing has not been entered.
353	NO PLY' R MODE	The mode in which the player is to be controlled has not been established. Set it correctly on the INSERT (or ASSEMBLE) AUTO EDIT menu.
354	NOT REC' R MODE	The mode in which the recorder is to be controlled has not been established. Set it correctly on the INSERT (or ASSEMBLE) AUTO EDIT menu.
355	NEGATIVE DURATION	The time data of the edit OUT point is ahead of the time data of the edit IN point.
356	INVALID DATA	Illegal or invalid data has been input.
357	PLAYER LOCAL	The connected player is in the LOCAL mode.
359	REC INHIBITED	An attempt has been made to execute automatic editing while the recording inhibit mode is set. Select the HOME menu setting and operate the recording inhibit pins on the cassette tape to release the REC INHIBIT mode.
360	W/PLAYER NOT SET	A mode in which the player can be used has not been established. Check the F1 (MODE) key setting on the INSERT (or ASSEMBLE) AUTO EDIT SET UP menu.
361	BOT	The tape is at its end.
362	EOT	The tape is at its start.
363	SHIFT TC FOR CF EDIT	The TC value used in the CF lock mode is incorrect

Screen saver function

This function is designed to prolong the service life of the VTR's large display screen.

The screen's life may be shortened when the screen continuously displays menu screens on which no movement is occurring.

Consequently, when the same menu screen on which no movement occurs is displayed continuously on the display screen for 5 or more minutes, it is automatically replaced with the screen saver screen shown below.



The logo displayed moves around the screen.

<Notes>

- The screen saver function is activated only when a menu screen on which absolutely no movement occurs has been displayed continuously for 5 or more minutes. If a function key is pressed at some point, it will not be activated unless another 5 minutes have elapsed from the moment when the key was pressed.
- Neither will the screen saver function be activated when the time code value on a menu screen has changed during recording, playback, etc. even if nothing else has changed.

List of menu screen displays

The underlined setting in the selection item column denotes the mode initially set.

FUNC key	Menu								FUNC key
	HOME		HOME SET UP		VIDEO IN		VIDEO OUT HD		
	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	
F1	OUTPUT	TAPE EE	SYNC PLY	ON OFF	INPUT	DIGITAL INT SG	Y	UNITY VAR (can be changed using the ADJUST control)	F1
F2	FREEZE	ON OFF	AT PLY	FIELD FRAME1 FRAME2	INT SG	75 % CB 100 % CB RAMP MULT-BST BLACK SIF PLL SIF EQ SMPTE CB	P _B		F2
F3	EJT CTL	RESET HOLD	PRG PLAY	FINE COARSE			P _R		F3
F4	TC/CTL	TC CTL1 CTL2	PRG PLAY	Variable up to 5% in increments set by the F3 key 0.0 %			BLACK.L	UNITY VAR	F4
F5	TC/UB	TC UB	CAP LOCK	8F AUTO (24/50) (4F) 8F FORCE (24/50) (4F) 2E					F5
F6	(CTL) CLR (TC) (UB)	RESET	TAPE MODE	HD.STOP HLF LOAD					F6
F7	TC HOLD								F7
F8	SET UP	Transfers VTR to menu screen.	EXIT				SET UP	Transfers VTR to menu screen.	F8
F9							SD	Transfers VTR to menu screen.	F9
F10							CONVERT	Transfers VTR to menu screen.	F10
F11			PREROLL	nSEC 1≤n≤30 n=5					F11
F12			STILL	1/3/30 SEC 1/3/5 MIN	INT SG	75 % CB 100 % CB RAMP MULT-BST BLACK SIF PLL SIF EQ SMPTE CB			F12
F13	REC INN	FREE NRML.REC ALL	STBY OFF	1/3/30 SEC 1/3/16 MIN ∞	INPUT	DIGITAL INT SG			F13

List of menu screen displays

The underlined setting in the selection item column denotes the mode initially set.

FUNC key	Menu								FUNC key
	VIDEO OUT HD SET UP		VIDEO OUT HD SET UP STATE		VIDEO OUT SD		VIDEO OUT SD SET UP COMPOSITE		
	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	
F1	LIN CONV	ON <u>OFF</u>			Y	<u>UNITY</u> VAR	COMB FIL	ON OFF	F1
F2			EE_MODE	<u>NORMAL</u> THROUGH	P _B	(−∞--+3 dB)			F2
F3					P _R				F3
F4					BLACK.L				F4
F5							SYS SC	<u>UNITY</u> VAR	F5
F6	SERIAL SYS PHASE	±1375 SAMPLE ±1320 SAMPLE ±1100 SAMPLE ±825 SAMPLE					SYS H	−858--+858 −864--+864	F6
F7	INTERP.	<u>AUTO</u> OFF			HD	Transfers VTR to menu screen.	INTERP.	<u>AUTO</u> OFF	F7
F8	EXIT	Transfers VTR to menu screen.	EXIT	Transfers VTR to menu screen.			EXIT	Transfers VTR to menu screen.	F8
F9									F9
F10					CONVERT	Transfers VTR to menu screen.	7.5 % SET UP	ON <u>OFF</u>	F10
F11					CMPT	Transfers VTR to menu screen.	LINE BLK	Transfers VTR to menu screen.	F11
F12	STATE	Transfers VTR to menu screen.	STATE	Transfers VTR to menu screen.	SDI	Transfers VTR to menu screen.	STATE	Transfers VTR to menu screen.	F12
F13									F13

List of menu screen displays

The underlined setting in the selection item column denotes the mode initially set.

FUNC key	Menu								FUNC key
	VIDEO OUT SD SET UP CMPST STATE		VIDEO OUT SD SET UP SDI		VIDEO OUT SET UP LINE BLK		VIDEO OUT SD SET UP SDI STATE		
	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	
F1									F1
F2	EE_MODE	<u>NORMAL</u> THROUGH					EE_MODE	<u>NORMAL</u> THROUGH	F2
F3									F3
F4									F4
F5			SERIAL SYS PHASE	<u>FINE</u> COARSE					F5
F6			SYS PHASE	±2H					F6
F7			INTERP.	<u>AUTO</u> OFF					F7
F8	EXIT		EXIT		EXIT		EXIT		F8
F9					ALL ON				F9
F10					ALL OFF				F10
F11			LINE BLK	Transfers VTR to menu screen.	LINE BLK	Transfers VTR to menu screen.			F11
F12	STATE	Transfers VTR to menu screen.	STATE	Transfers VTR to menu screen.			STATE	Transfers VTR to menu screen	F12
F13									F13

List of menu screen displays

The underlined setting in the selection item column denotes the mode initially set.

FUNC key	Menu								FUNC key
	VIDEO OUT CONVERT		VIDEO OUT CON- VERT HD_TO_SD		VIDEO OUT CON- VERT SD_TO_HD		VIDEO OUT CON- VERT HD_TO_HD		
	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	
F1	HD_TO_SD	Transfers VTR to menu screen.	MODE	<u>FIT_H</u> FIT_V FIT_HV 14:9 13:9	MODE	<u>FIT_H</u> FIT_V FIT_HV			F1
F2	SD_TO_HD	Transfers VTR to menu screen.	RESPONSE	<u>STANDARD</u> WIDE NARROW	RESPONSE	<u>STANDARD</u> WIDE NARROW	RESPONSE	<u>STANDARD</u> WIDE NARROW	F2
F3	HD_TO_HD	Transfers VTR to menu screen.	ENHANCE	6 dB 3 dB 1.5 dB <u>0 dB</u>	ENHANCE	6 dB 3 dB 1.5 dB <u>0 dB</u>	ENHANCE	6 dB 3 dB 1.5 dB <u>0 dB</u>	F3
F4									F4
F5									F5
F6									F6
F7	HD	Transfers VTR to menu screen.							F7
F8			EXIT		EXIT		EXIT		F8
F9	SD	Transfers VTR to menu screen.							F9
F10									F10
F11									F11
F12									F12
F13									F13

List of menu screen displays

The underlined setting in the selection item column denotes the mode initially set.

FUNC key	Menu								FUNC key
	AUDIO IN		AUDIO IN PCM INPUT SELECT		AUDIO IN CUE INPUT SELECT		AUDIO IN SET UP		
	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	
F1	CH-1	<u>UNITY</u> VAR	CH-1	ANALOG <u>DIGITAL</u> INT SG	CH-1 (With D.MIX)	SOURCE TAPE OFF	INT SG MD	<u>TONE</u> SILENCE	F1
F2	CH-2		CH-2	ANALOG <u>DIGITAL</u> INT SG	CH-2 (With D.MIX)				F2
F3	CH-3		DIGITAL	AES SERIAL	CH-3 (With D.MIX)				F3
F4	CH-4		CH-3	ANALOG <u>DIGITAL</u> INT SG	CH-4 (With D.MIX)				F4
F5	CUE		CH-4	ANALOG <u>DIGITAL</u> INT SG					F5
F6	PCM	Transfers VTR to menu screen.	DIGITAL	AES SERIAL			PEAK HOLD	<u>ON</u> OFF	F6
F7	CUE	Transfers VTR to menu screen.	(DIGITAL)*	(AES)* (SERIAL)*			SCALE	FINE <u>FULL</u>	F7
F8	SET UP	Transfers VTR to menu screen.	EXIT		EXIT		EXIT		F8
F9	CH-MIX	Transfers VTR to menu screen.	(CH-5)*	(ANA_CH1)* (<u>DIGITAL</u>)* (INT SG)*	CUE	D-MIX <u>LINE</u> AUTO	DATA ADV	0-1Fr	F9
F10	(CH-5)*	(UNITY)* (VAR)*	(CH-6)*	(ANA_CH2)* (<u>DIGITAL</u>)* (INT SG)*	(CH-5)*	SOURCE TAPE <u>OFF</u>	STYLE	<u>PCM</u> DATA	F10
F11	(CH-6)*		(DIGITAL)*	(AES)* (SERIAL)*	(CH-6)*				F11
F12	(CH-7)*		(CH-7)*	(ANA_CH3)* (<u>DIGITAL</u>)* (INT SG)*	(CH-7)*				F12
F13	(CH-8)*		(CH-8)*	(ANA_CH4)* (<u>DIGITAL</u>)* (INT SG)*	(CH-8)*				F13

*: Items and settings in parentheses apply when the 8-channel format is used.

List of menu screen displays

The underlined setting in the selection item column denotes the mode initially set.

FUNC key	Menu								FUNC key
	AUDIO IN CH-MIX		AUDIO OUT		AUDIO OUT MONITOR		AUDIO OUT SET UP		
	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	
F1	SELECT	CH1-CH4 CH5-CH8	CH-1	<u>UNITY</u> VAR	MODE	<u>SHTL</u> VAR/SHTL	A/V PHASE	<u>UNITY</u> VAR	F1
F2			CH-2		L CH	OFF <u>ON</u>	JOG PROC	<u>ON</u> OFF	F2
F3			CH-3		R CH	OFF <u>ON</u>	VAR PROC	<u>ON</u> OFF	F3
F4			CH-4				PB FADE	<u>ON</u> OFF	F4
F5			CUE				PB OUT	<u>INSTANT</u> DELAYED	F5
F6	CH-MIX (ON)	ON OFF					PEAK HOLD	<u>ON</u> OFF	F6
F7	CH-MIX (OFF)	ON OFF	MONITOR	Transfers VTR to menu screen.	A MONI	<u>UNITY</u> VAR	SCALE	FINE <u>FULL</u>	F7
F8	EXIT		EXIT		EXIT		EXIT		F8
F9			SDI ASIGN	Transfers VTR to menu screen.			DATA_ ADV	0-1Fr	F9
F10			(CH-5)*	<u>(UNITY)*</u> (VAR)*			STYLE	<u>PCM</u> DATA	F10
F11			(CH-6)*		R CH	ON <u>OFF</u>			F11
F12			(CH-7)*		L CH		STATE	Transfers VTR to menu screen.	F12
F13			(CH-8)*			MODE	ADD <u>AVERAGE</u>		

*: Items and settings in parentheses apply when the 8-channel format is used.

List of menu screen displays

The underlined setting in the selection item column denotes the mode initially set.

FUNC key	Menu								FUNC key
	AUDIO OUT SET UP STATE		AUDIO OUT SDI ASIGN		TC/CHR		TC/CHR SET UP		
	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	
F1			HD_TO_HD CH1-4	CH1-4 CH5-8 OFF	SOURCE	INT EXT LTC S LTC S VITC	LTC ADV	EDIT_REC REC EDIT OFF	F1
F2	EE_MODE	NORMAL THROUGH	(HD_TO_HD) (CH5-8)	(CH1-4) (CH5-8) (OFF)	TC SLAVE	AUTO PRESET SLAVE DIRECT			F2
F3					UB SLAVE	ON OFF			F3
F4			HD_TO_SD CH1-4	CH1-4 CH5-8 OFF	RUN MD	REC RUN FREE RUN			F4
F5					DF MD	ON OFF			F5
F6					(CF BIT)	(ON) (OFF)	COUNTER	FREE HOLD	F6
F7							TCG OUT	MOMNT LATCH	F7
F8	EXIT		EXIT		SET UP	Transfers VTR to menu screen.	EXIT		F8
F9			SD_TO_HD CH5-8	CH1-4 CH5-8 OFF	CONVERT	Transfers VTR to menu screen.	VITC.L	Transfers VTR to menu screen.	F9
F10			SD_TO_HD CH1-4	CH1-4 CH5-8 OFF	TCR	LTC AUTO VITC	VITC	ON OFF	F10
F11					SUPER	TC TC. ST. TC. UB TC. ST. RT OFF			F11
F12					SUPER ER	ON OFF	VITC	ON OFF	F12
F13			SD_TO_HD CH1-4	CH1-4 CH5-8 OFF	CHAR TYPE	REVERSE INTENSE	LTC	ON OFF	F13

List of menu screen displays

The underlined setting in the selection item column denotes the mode initially set.

FUNC key	Menu								FUNC key
	TC/CHR SET UP VITC. L		TC/CHR CONVERT		MULTI CUE		MULTI CUE SET UP		
	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	
F1			TC SYNC		1		AUTO STEP	ON <u>OFF</u>	F1
F2					2		PAG MODE	ON <u>OFF</u>	F2
F3					3		PAG CLR		F3
F4					4				F4
F5			DF MODE	DF <u>NDF</u>	5		ALL CLR		F5
F6					PROTECT	ON OFF			F6
F7									F7
F8	EXIT		EXIT		SET UP	Transfers VTR to menu screen.	EXIT		F8
F9	VTIC.L				6		CLUTCH	ON <u>OFF</u>	F9
F10					7		MAX SP.	$-1 \longleftrightarrow +2$ $-1 \longleftrightarrow +1$ $0 \longleftrightarrow +1$	F10
F11			SD SUPER	CONVERT <u>ORIGINAL</u>	8		AUTO FRZ	ON <u>OFF</u>	F11
F12			HD SUPER	CONVERT <u>ORIGINAL</u>	9				F12
F13			LTC OUT	CONVERT <u>ORIGINAL</u>	10		CUE_ ROLL	nSEC 1≤n≤30 n=5	F13

List of menu screen displays

The underlined setting in the selection item column denotes the mode initially set.

FUNC key	Menu								FUNC key
	MANUAL EDIT		MANUAL EDIT SET UP		AUTO EDIT		AUTO EDIT SET UP		
	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	
F1			TIMING	F1 F2 F1/F2	LAST X	LOAD <u>OFF</u>	TIMING	F1 F2 F1/F2	F1
F2					LAST ED	LOAD <u>OFF</u>	V PREV	VVV VBV	F2
F3					W/PLYR	ON <u>OFF</u>	A PREV	SSS SMS	F3
F4					VAR MEMO	ON <u>OFF</u>	PLYR- SYNC	ON <u>OFF</u>	F4
F5					PLYR SEL	PLYR-1 PLYR-2	PREROLL	nSEC 1≤n≤30 n=5	F5
F6					R/P SEL	PLAYER <u>RECORDER</u>	POSTROLL	nSEC 1≤n≤30 n=2	F6
F7					TRIM	ON <u>OFF</u>	REACTION	nFR 0≤n≤25 n=0	F7
F8	SET UP	Transfers VTR to menu screen.	EXIT		SET UP	Transfers VTR to menu screen.	EXIT		F8
F9	INSERT/ ASSEMBLE	ON <u>OFF</u>	ERR. STP	<u>ON</u> OFF	INSERT/ ASSEMBLE	ON <u>OFF</u>	DLY STRT	±n frames 1≤n≤30 n=0	F9
F10			TRACKING	VAR FIX <u>OPT. ONCE</u> OPT. AUTO	SPLIT	ON <u>OFF</u>	TRACKING	VAR FIX <u>OPT. ONCE</u> OPT. AUTO	F10
F11			CAP LOCK	4F AUTO 4F FORCE 2F (1080/59i) <u>8F AUTO</u> 8F FORCE			CAP LOCK	4F AUTO 4F FORCE 2F (1080/59i) <u>8F AUTO</u> 8F FORCE	F11
F12	AUTO EDIT	Transfers VTR to menu screen.	FD TIME	5/10/15/ 20/25/50 100 ms	MANUAL EDIT	Transfers VTR to menu screen.	FD TIME	5/10/15/ 20/25/50/ 100 ms	F12
F13	CH SELECT (displayed during INSERT editing only)	Transfers VTR to menu screen.	MODE	X FADE <u>CUT</u> V FADE	CH SELECT (displayed during INSERT editing only)	Transfers VTR to menu screen.	MODE	X FADE <u>CUT</u> V FADE	F13

List of menu screen displays

The underlined setting in the selection item column denotes the mode initially set.

FUNC key	Menu								FUNC key
	INSERT MANUAL/AUTO EDIT CH SELECT		SET UP		INTERFACE SET UP		PANEL SET UP		
	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	
F1	VIDEO	ON <u>OFF</u>	HOME	Transfers VTR to menu screen.	P-2	MODE-1 MODE-2 MODE-3 MODE-4 OFF	SOUND KEY	OFF HIGH LOW	F1
F2	CH-1	ON <u>OFF</u>	MAN EDIT	Transfers VTR to menu screen.	RS-232C	ON <u>OFF</u>	SOUND ALARM	OFF HIGH LOW	F2
F3	CH-2	ON <u>OFF</u>	AUTO EDIT	Transfers VTR to menu screen.	PARA	ON <u>OFF</u>	JOG MAX SP	-2↔+2 -1↔+1 <u>-1↔+2</u>	F3
F4	CH-3	ON <u>OFF</u>	SYSTEM	Transfers VTR to menu screen.	AV CONT	<u>ON</u> OFF	SHTL L/C/R	<u>ON</u> OFF	F4
F5	CH-4	ON <u>OFF</u>	TC/CHR	Transfers VTR to menu screen.	FF/REW MAX SP.	32/ <u>50</u>	SHTL ×8, ×4	<u>OFF</u> ×8 ×8, ×4 ×4	F5
F6	CUE	ON <u>OFF</u>	AUDIO IN	Transfers VTR to menu screen.	DEV ID	ID-1 ID-2 ID-3 USER	SHTL MAX SP	16/32/ <u>50</u>	F6
F7	TC	ON <u>OFF</u>	AUDIO OUT	Transfers VTR to menu screen.	(PREREAD) (480/59i)	(VIDEO) (AUDIO) (A&V)	A. SCALE	<u>-20</u> (18) dB 0dB	F7
F8	SET UP	Transfers VTR to menu screen.			EXIT		EXIT		F8
F9	CH-5	ON <u>OFF</u>			UB PRESET	<u>L&V</u> LTC VITC	TC INPUT	STANDARD REVERSE	F9
F10	CH-6	ON <u>OFF</u>	INTERFACE	Transfers VTR to menu screen.	VAR LIM	ON <u>OFF</u>	UNITY	<u>ALL A&V</u> AUDIO PB	F10
F11	CH-7	ON <u>OFF</u>	PANEL	Transfers VTR to menu screen.	V LEV CNT	NORMAL HD SD BOTH	OP MAP	Transfers VTR to menu screen.	F11
F12	CH-8	ON <u>OFF</u>	USER	Transfers VTR to menu screen.	(R. PANEL)	(ENABLE) (DISABLE)	VAR MAX SP	-1↔+2 -1↔+1 0↔+1	F12
F13	CH SELECT	Transfers VTR to menu screen.	ENGINEER	Transfers VTR to menu screen.	(F. PANEL)	(ENABLE) (DISABLE)	VAR CLUTCH	ON <u>OFF</u>	F13

List of menu screen displays

The underlined setting in the selection item column denotes the mode initially set.

FUNC key	Menu								FUNC key
	OP MAP REMOTE/LOCAL		USER SET UP		SYSTEM SET UP		ENGINEER SET UP		
	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	
F1	VIDEO	ON <u>OFF</u>	LOAD		FREQ	59.94 23.98 24 50			F1
F2	AUDIO	ON <u>OFF</u>	SAVE						F2
F3	TRACKING	ON <u>OFF</u>	DELETE		VIDEO	1080I 525I 720I			F3
F4	MON SEL	ON <u>OFF</u>			AUDIO	24 bit/8CH 20 bit/4CH			F4
F5	MAP MODE	ALL <u>SELECT</u>	POWER UP	<u>LAST</u> FACTORY 1–10	HD SDI	1080/23.98PsF (1080/24PsF) 1080/59.94I (1080/60I) 720/59.94P (720/60P)			F5
F6	FUNCTION (displayed during INSERT editing only)	<u>ENABLE</u> DISABLE			HD MONI	1080/23.98PsF (1080/24PsF) 1080/59.94I (1080/60I)			F6
F7	EJECT (displayed during INSERT editing only)	<u>ENABLE</u> DISABLE			SD_SDI	525I 525P			F7
F8	EXIT		EXIT		EXIT		EXIT		F8
F9			LOCK		A. REC. GDR	<u>CST. C. BIT</u> FREE	OPERATION	Transfers VTR to menu screen.	F9
F10			PASS WORD						F10
F11					PB AUTO	<u>ON</u> OFF			F11
F12									F12
F13	REMOTE/ LOCAL	Transfers VTR to menu screen.							F13

List of menu screen displays

The underlined setting in the selection item column denotes the mode initially set.

FUNC key	Menu								FUNC key
	OPERATION ENGINEER SET UP		TEST		RF TEST		AUDIO TEST		
	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	
F1	EJECT LED	MODE-1 MODE-2			ECC SMPL	<u>SLOW</u> FAST	CH-1		F1
F2			RF	Transfers VTR to menu screen.	METER	<u>ERROR</u> ENV	CH-2		F2
F3			AUDIO	Transfers VTR to menu screen.			CH-3		F3
F4			MECHA	Transfers VTR to menu screen.	LOAD		CH-4		F4
F5			SYSTEM	Transfers VTR to menu screen.			CUE		F5
F6			FRONT	Transfers VTR to menu screen.	MODE	<u>ENV</u> R/P CONFI TC EYE	MONI. L		F6
F7			SERVO	Transfers VTR to menu screen.	CH	<u>CH0</u> CH1 CH2 CH3	MONI. R		F7
F8	EXIT				EXIT		EXIT		F8
F9							REF. LEV		F9
F10					AT HEIGHT	(F6 display changes) (F7)	IMPED.		F10
F11					ADJ RF	<u>D5 EQ</u> D5 REC D5 PLL			F11
F12	ACCEL	MAX MIDDLE MIN			ADJ SEL		OUT LEV.		F12
F13	KNEE	8 15 20 30	IC CARD	Transfers VTR to menu screen.	HEAD CLN		IN LEV.		F13

List of menu screen displays

The underlined setting in the selection item column denotes the mode initially set.

FUNC key	Menu								FUNC key
	MECHA TEST		SYSTEM TEST		SERVO TEST		TEST FRONT		
	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	
F1	MODE	<u>NORMAL</u> NO-TAPE			TORQUE		PANEL	Transfers VTR to menu screen.	F1
F2					DATA SEND		KEY CHECK	Transfers VTR to menu screen.	F2
F3	C.SIZE				MEASURE	<u>OFF</u> LOADING			F3
F4					AT				F4
F5	SENSOR				METER	<u>ERROR</u> ENV			F5
F6					PG SHIFT				F6
F7					ADJ RATE	<u>FINE</u> COARSE			F7
F8	EXIT		EXIT		EXIT		EXIT		F8
F9					MECHA				F9
F10					TRACKING	VAR FIX <u>OPT. ONCE</u> OPT. AUTO			F10
F11									F11
F12					BIMORPH INIT				F12
F13					ADJ ENABLE				F13

List of menu screen displays

The underlined setting in the selection item column denotes the mode initially set.

FUNC key	Menu								FUNC key
	TEST FRONT KEY CHECK		TEST FRONT PANEL		TEST IC CARD		TEST IC CARD USER		
	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	
F1			MODE		USER_FIL	Transfers VTR to menu screen.	LOAD		F1
F2					MULT_CUE	Transfers VTR to menu screen.	SAVE		F2
F3					ERR_LOG	Transfers VTR to menu screen.	DELETE		F3
F4									F4
F5							UP_LD		F5
F6							DOWN_LD		F6
F7							W/SYS		F7
F8	EXIT		EXIT		EXIT		EXIT		F8
F9							LOCK		F9
F10									F10
F11									F11
F12									F12
F13					FORMAT		TRNS MD		F13

List of menu screen displays

The underlined setting in the selection item column denotes the mode initially set.

FUNC key	Menu								FUNC key
	TEST IC CARD MULTI CUE		TEST IC CARD MULTI CUE SELECT		MULTI CUE MONITOR TEST IC CARD		TEST IC CARD ERR LOG		
	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	
F1	UP_LD		UP_LD				DOWN_LD		F1
F2	DOWN_LD						MONITOR		F2
F3	MONITOR				1		DELETE		F3
F4					2				F4
F5	TRANSFER				3		AUTO STOP		F5
F6					4				F6
F7					5				F7
F8	EXIT		EXIT		EXIT		EXIT		F8
F9					6				F9
F10					7				F10
F11					8				F11
F12					9				F12
F13					10		INITIAL		F13

List of menu screen displays

The underlined setting in the selection item column denotes the mode initially set.

FUNC key	Menu								FUNC key
	TEST IC CARD ERR LOG MONITOR								
	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	Setting item	Selection item	
F1									F1
F2									F2
F3									F3
F4									F4
F5									F5
F6									F6
F7									F7
F8	EXIT								F8
F9									F9
F10									F10
F11									F11
F12									F12
F13									F13

[A]

Alarm tone setting	PANEL SET UP/F2/119
Assemble editing: Automatic editing	AUTO EDIT/F12/99
Manual editing	MANUAL EDIT/F12/87
AT head hysteresis removal	SERVO TEST/F12/149
AT playback switching	HOME SET UP/F2/18
AUDIO FADE: Fade editing	
(during automatic editing)	AUTO EDIT SET UP/F12–F13/109
Fade editing	
(during manual editing)	MANUAL EDIT SET UP/F12–F13/92, 97
Fade playback	AUDIO OUT SET UP/F4/63
AUDIO MONITOR: Mixed monitor channel selection	AUDIO OUT MONITOR/F11–F12/61
Monitor volume adjustment	AUDIO OUT MONITOR/F7/61
AUDIO OUT SDI ASSIGN	
HD TO HD	AUDIO OUT SDI ASIGN/F1, F2/69
HD TO SD	AUDIO OUT SDI ASIGN/F4/69
SD TO HD	AUDIO OUT SDI ASIGN/F9, F10/69
SD TO SD	AUDIO OUT SDI ASIGN/F13/69
AUDIO/VIDEO delay adjustment	AUDIO OUT SET UP/F1/63, 65
AUDIO: Analog input reference level setting mode	AUDIO TEST/F13/144
Analog input/output signal reference	
level setting	AUDIO TEST/F1–F5/144
Analog output reference level setting mode	AUDIO TEST/F12/144
Audio-to-video output adjustment	AUDIO OUT SET UP/—/65
Channel input selection	AUDIO IN PCM INPUT SELECT/F1–F7, F9–F13/49, 50
	AUDIO IN CH-MIX SELECT/F6–F7/55–57
Channel mixing	MANUAL EDIT CH SELECT/F2–F5, F9–F12/89
Channel ON/OFF	AUDIO IN SET UP/F9/54
DATA ADV amount	AUDIO OUT SET UP/F9/63
	AUDIO IN/F1–F5, F10–F13/47
Input signal recording level adjustment	PANEL SET UP/F7/119
Level meter scale setting	AUDIO IN SET UP/F7/54
Level meter scale switching	AUDIO OUT SET UP/F7/63
	AUDIO OUT MONITOR/F11–F12/61
Monitor connector output mixed signal switching	AUDIO OUT MONITOR/F7/61
Monitor volume adjustment	AUDIO OUT SDI ASIGN/F1, F2, F4, F9, F10, F13/69
Output SDI channel assignment	AUDIO OUT/F1–F5, F10–F13/59
	AUDIO IN SET UP/F6/54
Output signal level adjustment	AUDIO OUT SET UP/F6/62
Peak hold	AUTO EDIT/F10/52, 53, 107
	AUDIO OUT SET UP STATE/—/66, 67
Split editing	AUTO OFF/—/176, 177
State	AUTO EDIT/F12/99
AUTO OFF error messages	USER SET UP/F5/125
Automatic editing	AUDIO OUT SET UP/F1/63, 65
Automatic file call at power-on setting	
A/V phase adjustment	

[B]

Black level adjustment

Menu/function keys/pages

VIDEO OUT HD/F4/25
VIDEO OUT SD/F4/31

[C]

Capstan servo lock setting

Automatic cursor movement
Changing and clearing
Clearing all cue data
Clearing cue data on a page
Cursor movement ON/OFF
Entering
Number designation
Preroll time selection
Protect

Channel assignment

Control signal resetting

Cue audio: Channel ON/OFF

D MIX signal selection
Editing ON/OFF

MANUAL EDIT SET UP/F11/92
AUTO EDIT SET UP/F11/109
MULTI CUE SET UP/F1/86
MULTI CUE/—/84
MULTI CUE SET UP/F5/86
MULTI CUE SET UP/F3/86
MULTI CUE SET UP/F2/86
MULTI CUE/—/83, 84
MULTI CUE/F1–F5, F9–F13/82
MULTI CUE SET UP/F13/86
MULTI CUE/F6/82, 83
INTERFACE SET UP/—/117
AUDIO OUT SDI ASSIGN/F1–F2, F4–F5, F9–F10,
F12–F13/69
HOME/F6/14
AUDIO IN CUE INPUT SELECT/F1–F4, F10–F13/52
AUDIO IN CUE INPUT SELECT/F9/52
MANUAL EDIT/F9/87

[D]

Device ID setting, alignment with controller

DIAG error messages

INTERFACE SET UP/F6/113
DIAG/—/163–171

[E]

Editing: Data (all data input last) call

Data (edit data input last) call

Delay (startup from playback command) setting

Duration

Edit inhibit (EDIT REC INHIBIT) setting during
manual editing

Edit point entry

Edit point recording field selection
(during automatic editing) setting

Edit point recording field selection
(during manual editing) setting

Edit point trimming

AUTO EDIT/F2/99, 102
AUTO EDIT/F1/99, 102
AUTO EDIT SET UP/F9/109, 110
AUTO EDIT/—/100
MANUAL EDIT SET UP/—/93, 94
AUTO EDIT/—/100–102
AUTO EDIT SET UP/F1/108
MANUAL EDIT SET UP/F1/91
AUTO EDIT/F7/99, 101

INDEX

[E]

Menu/function keys/pages

Editing: Editing channel selection during automatic editing	INSERT AUTO EDIT CH SELECT/F1–F7, F9–F12/106
Editing channel selection during manual editing	INSERT MANUAL EDIT CH SELECT/F1–F7, F9–F12/89
Editing mode selection during automatic editing	AUTO EDIT/F9/99
Editing mode selection during manual editing	MANUAL EDIT/F9/87
Postroll time setting	AUTO EDIT SET UP/F6/108
Preroll time selection	HOME SET UP/F11/19
	AUTO EDIT SET UP/F5/108, 111
Preview audio signal selection	AUTO EDIT SET UP/F3/108
Preview video signal selection	AUTO EDIT SET UP/F2/108
React time (operation delay compensation time) setting	AUTO EDIT SET UP/F7/108
Timing selection	MANUAL EDIT SET UP/F1/91
	AUTO EDIT SET UP/F1/108
VTR (player) to be operated selection	AUTO EDIT/F5/99
VTR (player/recorder) to be operated selection	AUTO EDIT/F6/99
EJECT button LED lighting condition selection	OPERATION ENGINEER SET UP/F1/137
ENV/recording envelope display	MANUAL EDIT SET UP/—/94
Error rate: Level display switching	RF TEST/F2/141
	SERVO TEST/F5/149
	RF TEST/F1/141
Measurement time selection	

[F]

Fade: During automatic editing	AUTO EDIT SET UP/F12, F13/109
During manual editing	MANUAL EDIT SET UP/F12, F13/92, 97
During playback	AUDIO OUT SET UP/F4/63, 65
FF/REW maximum speed setting	INTERFACE SET UP/F5/113
Field playback/frame playback switching	HOME SET UP/F2/18
Files: Call	USER SET UP/F1/125, 128
Copy	USER SET UP/—/129
Delete	USER SET UP/F3/125, 128
File call at power-on	USER SET UP/F5/125, 128
Lock	USER SET UP/F9/125, 127
Password	USER SET UP/F10/125, 126
Save	USER SET UP/F2/125, 126
Update	USER SET UP/—/127
Flash freeze screen output	HOME/F2/14

[H]

Head cleaning	RF TEST/F13/141
---------------	-----------------

INDEX

[I]

IC card
Input signal selection
Insert editing: Automatic editing
 Editing channel selection
 (during automatic editing)
 Editing channel selection
 (during manual editing)
 Manual editing
Internal signal generator signal selection

Menu/function keys/pages

TEST/F13/143, 155–162
VIDEO IN/F1, F13/23
AUTO EDIT/F9, F12/99

INSERT AUTO EDIT CH SELECT/F1–F7,
F9–F12/106

INSERT MANUAL EDIT CH SELECT/F1–F7,
F9–F12/90
MANUAL EDIT/F9, F12/87
VIDEO IN/F2, F12/23

[J]

JOG/VAR mode audio digital processing
Jog/variable field playback/frame playback

AUDIO OUT SET UP/F3/63
HOME SET UP/F2/18

[K]

Key touch tone selection

PANEL SET UP/F1/119

[L]

Last edit (all data input last) call
Last EX (edit data input last) call
Level meter peak hold: Audio input
 Audio output
Level meter scale switching: Audio input
 Audio output
Loading: Cassette size selection
 Loading operation test without use of tape
Local mode: Audio level adjustment
 Key operation selection
 Monitor adjustment
 Tracking adjustment
 Video level adjustment

AUTO EDIT/F2/99, 102
AUTO EDIT/F1/99, 102
AUDIO IN SET UP/F6/54
AUDIO OUT SET UP/F6/63
AUDIO IN SET UP/F6/54
AUDIO OUT SET UP/F6/63
MECHA TEST/F3/151
MECHA TEST/F1/151
PANEL SET UP (OP MAP LOCAL) /F2/124
PANEL SET UP (OP MAP LOCAL) /F5/124
PANEL SET UP (OP MAP LOCAL) /F4/124
PANEL SET UP (OP MAP LOCAL) /F3/124
PANEL SET UP (OP MAP LOCAL) /F1/124

[M]

Manual editing
Menu screen transition tables
Mode connector correlation table
Monitor connector: Switching mixed signals to be output
 Volume adjustment of audio signals
 to be output

MANUAL EDIT/F12/87
—/—/4–6
INTERFACE SET UP/—/115
AUDIO OUT MONITOR/F11–F12/61

AUDIO OUT MONITOR/F7/61

[O]

OP MAP setting method: Local
Remote
Operation messages
Operation time display
Output signal (TAPE/EE) switching

Menu/function keys/pages

PANEL SET UP (LOCAL) /—/124
PANEL SET UP (REMOTE) /—/121, 122
—/—/176, 177
TEST/—/138
HOME/F1/14

[P]

PB fade ON/OFF
P_B level adjustment

PB OUT (output audio characteristics at playback start)
Peak hold: Audio input value
Audio output value
Player 1/player 2 selection
Player sync
Player/recorder selection
P_R level adjustment

Preroll time selection

Preview audio signal selection
Preview video signal selection
Programmed play function setting

AUDIO OUT SET UP/F4/63, 65
VIDEO OUT HD/F2/25
VIDEO OUT SD/F2/31
AUDIO OUT SET UP/F5/63
AUDIO IN SET UP/F6/54
AUDIO OUT SET UP/F6/63
AUTO EDIT/F5/99
AUTO EDIT SET UP/F4/108
AUTO EDIT/F6/99
VIDEO OUT HD/F3/25
VIDEO OUT SD/F3/31
HOME SET UP/F11/19
AUTO EDIT SET UP/F5/108, 110
MULTI CUE SET UP/F13/86
AUTO EDIT SET UP/F3/108
AUTO EDIT SET UP/F2/108
HOME SET UP/F3–F4/18, 21

[R]

React time (operation delay compensation time) setting
REC INHIBIT selection: During editing
During recording
Recording inhibit mode selection
Reference selection
Remote mode: Audio level adjustment
Eject key operation enable
Key operation selection
Monitor adjustment
Operation of all functions enable/disable
Tracking adjustment
Video level adjustment
Remote: 50P parallel ON/OFF
RS-232C parameter setting
RS-422A P2 bus selection
RS-422A-connected VTR ON/OFF
RF adjusted value display

AUTO EDIT SET UP/F7/108
MANUAL EDIT SET UP/—/93, 94
HOME/F13/15
HOME/F13/15
—/—/20
PANEL SET UP (OP MAP REMOTE) /F2/121
PANEL SET UP (OP MAP REMOTE) /F7/121
PANEL SET UP (OP MAP REMOTE) /F5/121
PANEL SET UP (OP MAP REMOTE) /F4/121
PANEL SET UP (OP MAP REMOTE) /F6/121
PANEL SET UP (OP MAP REMOTE) /F3/121
PANEL SET UP (OP MAP REMOTE) /F1/121
INTERFACE SET UP/F3/113
INTERFACE SET UP/F2/113, 116
INTERFACE SET UP/F1/113, 115
AUTO EDIT/F3/99
RF TEST/F11–F12/141, 143

[S]

Search dial: Jog speed selection, maximum
 Shuttle clutch point setting
 Shuttle maximum speed selection
 Variable clutch point setting

 Variable speed selection, maximum

 Sensor operation check
 Software version display
 Split editing
 Standby mode duration selection
 Standby OFF mode: Output signal switching

 Tape mode setting
 Still mode duration selection
 Superimposing: Character selection
 Error messages ON/OFF
 Position changes
 Sync play ON/OFF
 System error messages

Menu/function keys/pages

PANEL SET UP/F3/119
 PANEL SET UP/F4–F5/119
 PANEL SET UP/F6/119
 MULTI CUE SET UP/F9/86
 PANEL SET UP/F13/119
 MULTI CUE SET UP/F10/86
 PANEL SET UP/F12/119
 MECHA TEST/F5/145
 TEST/—/139
 AUTO EDIT/F10/99
 HOME SET UP/F13/19
 AUDIO OUT SET UP STATE/66, 67
 VIDEO OUT SET UP STATE/28, 29
 HOME SET UP/F6/18
 HOME SET UP/F12/19
 TC/CHR/F13/72
 TC/CHR/F12/72, 74
 TC/CHR/—/73
 HOME SET UP/F1/18
 —/—/174, 175

[T]

Tape position indicator
 Test front: Key check
 Panel
 Time code: Color frame bit addition
 Drop/non-drop frame selection
 Initial value setting
 Internal/external input selection
 LTC selection
 Readout mode selection
 REC RUN/FREE RUN selection
 Slave lock mode ON/OFF
 Superimposing ON/OFF
 TC channel ON/OFF
 TC/UB switching
 Time code value holding
 VITC selection
 Time data: Reset
 TC/CTL switching
 Tracking adjustment

AUTO EDIT/—/100
 TEST FRONT/F2/151, 153, 154
 TEST FRONT/F1/151, 152
 TC/CHR/F6/72
 TC/CHR/F5/71
 HOME/—/11
 TC/CHR/F1/71
 TC/CHR SET UP/F13/77
 TC/CHR/F10/72
 TC/CHR/F4/71
 TC/CHR/F2/71
 TC/CHR/F11/72
 INSERT MANUAL EDIT CH SELECT/F7/89
 HOME/F5/14
 HOME/F7/14
 TC/CHR SET UP/F10, F12/77
 HOME/F6/14
 HOME/F4/14
 MANUAL EDIT SET UP/F10/91, 95, 96
 AUTO EDIT SET UP/F10/109
 SERVO TEST/F10/149

INDEX

[U]

User bit: List of settings
Slave lock mode setting
User bit value display
User files: Automatic file call at power-on
Call
Copy
Delete
Lock
Password
Save
Update

Menu/function keys/pages

TC/CHR/—/75
TC/CHR/F2/71
HOME/F5/14
USER SET UP/F5/125, 128
USER SET UP/F1/125, 128
USER SET UP/—/129
USER SET UP/F3/125, 128
USER SET UP/F9/125, 127
USER SET UP/F10/125, 126
USER SET UP/F2/125, 126
USER SET UP/—/127

[V]

V/A control parameters
Variable memory
Video channel ON/OFF

Video input: Input signal bypass
Signal selection

Video output: Black level adjustment
TAPE/EE switching in each mode

INTERFACE SET UP/F4/113, 116
AUTO EDIT/F4/99, 103, 104
INSERT MANUAL (AUTO) EDIT CH SELECT/F1/
89, 106
VIDEO IN/F1, F13/23
VIDEO OUT SD/F1/31
VIDEO OUT HD/F4/25
VIDEO OUT SD/F4/31
AUDIO OUT SET UP STATE/66, 67
VIDEO OUT SET UP STATE/—/71, 72

[Y]

Y level adjustment

VIDEO OUT HD/F1/25

Panasonic

PANASONIC BROADCAST & TELEVISION SYSTEMS COMPANY
DIVISION OF MATSUSHITA ELECTRIC CORPORATION OF AMERICA

Executive Office:

3330 Cahuenga Blvd W., Los Angeles, CA 90068 (323) 436-3500

EASTERN ZONE:

One Panasonic Way 4E-7, Secaucus, NJ 07094 (201) 348-7621

Southeast Region:

1225 Northbrook Parkway, Ste 1-160, Suwanee, GA 30024 (770) 338-6835

Central Region:

1707 N Randall Road E1-C-1, Elgin, IL 60123 (847) 468-5200

WESTERN ZONE:

3330 Cahuenga Blvd W., Los Angeles, CA 90068 (323) 436-3500

Government Marketing Department:

52 West Gude Drive, Rockville, MD 20850 (301) 738-3840

Broadcast PARTS INFORMATION & ORDERING:

9:00 a.m.–5:00 p.m. (EST) (800) 334-4881/24 Hr. Fax (800) 334-4880

Emergency after hour parts orders (800) 334-4881

TECHNICAL SUPPORT:

Emergency 24 Hour Service (800) 222-0741

Panasonic Canada Inc.

5770 Ambler Drive, Mississauga, Ontario L4W 2T3 (905) 624-5010

Panasonic de Mexico S.A. de C.V.

Av angel Urraza Num. 1209 Col. de Valle 03100 Mexico, D.F. (52) 1 951 2127

Panasonic Sales Company

Division of Matsushita Electric of Puerto Rico Inc.

San Gabriel Industrial Park, 65th Infantry Ave., Km. 9.5, Carolina, Puerto Rico 00630 (787) 750-4300

Panasonic Broadcast Europe

Panasonic Broadcast Europe Ltd.

West Forest Gate, Wellington Road, Wokingham, Berkshire RG40 2AQ U.K. Tel: 0118 902 9200

Panasonic Broadcast Europe GmbH

Hagenauer Str. 43, 65203 Wiesbaden-Biebrich Deutschland Tel: 49-611-1816-0