

Panasonic[®]

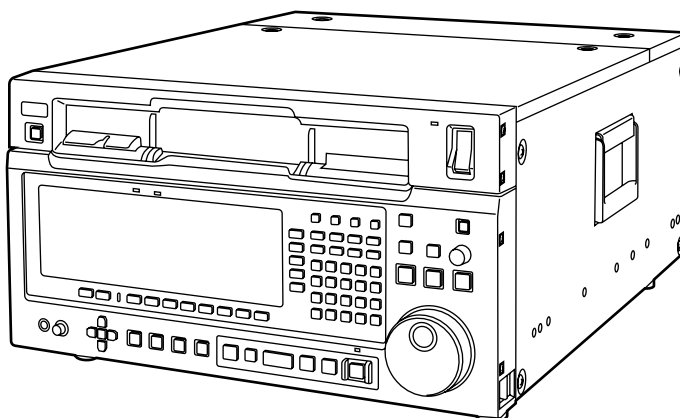
Operating Instructions

Multi Format Digital HD Video Cassette Recorder

Model No. **AJ-HD3700BP**
(Supplement 2)

Model No. **AJ-HD3700AP**
(Supplement 3)

Model No. **AJ-HD3700HP**
(Supplement 6)



Overview of changes and additions

This supplement describes the changes and additions to the operating instructions for the multi format digital HD video cassette recorders AJ-HD3700B, AJ-HD3700A and AJ-HD3700H due to the introduction of the 2K SYSTEM mode. For information on upgrading, contact the dealer where you purchased the product.

New changes and additions

Item concerned	Change/addition	Page in the operating instructions			Page in this supplement
		AJ-HD3700B	AJ-HD3700A	AJ-HD3700H	
HOME	<ul style="list-style-type: none"> • SYSTEM Status display • TAPE Status display • VIN/OUT Status display Status display in 2K SYSTEM mode added.	Software section, Page 7	Software section, Page 7	Software section, Page 7	4
SETUP	F9 (2K) key. 2K SETUP function added.	Software section, Pages 5, 121	Software section, Pages 5, 116	Software section, Pages 5, 111	3, 5
VIDEO IN	F2 (INT SG) key. Alternatives in 2K SYSTEM mode added.	Software section, Pages 22, 23	Software section, Pages 22, 23	Software section, Pages 22, 23	6
MULTI CUE SET UP	F10 (MAX SP.) key. Maximum value of variable speed in 2K SYSTEM mode changed.	Software section, Pages 95, 96	Software section, Pages 90, 91	Software section, Pages 85, 86	7
PANEL SET UP	F12 (VAR MAX SP.) key. Maximum value of variable speed in 2K SYSTEM mode changed.	Software section, Pages 128, 129	Software section, Pages 123, 124	Software section, Pages 118, 119	8
SYSTEM SET UP	F3 (VIDEO) key. Settings in 2K SYSTEM mode added. F10 (COLOR SPACE) key. Input formats (color space) in 2K SYSTEM mode added.	Software section, Pages 140 to 143	Software section, Pages 135 to 138	Software section, Pages 130 to 133	9, 10
2K SET UP	2K SYSTEM mode setting menus added.	—	—	—	11
TEST	Addition of code to INSTALLED SOFTWARE ID for indicating that 2K SYSTEM mode is supported	Software section, Page 151	Software section, Page 146	Software section, Page 138	12
2K error messages	Error messages for 2K SYSTEM mode added.	—	—	—	13, 14

Listed below are the software versions necessary to support these changes and additions.

	FRONT	SYS CON	AV
HD3700B	FP-2.00.- or higher	M1-2.00.- or higher	M1-2.00.- or higher
HD3700A	FP-2.00.- or higher	M1-2.00.- or higher	M1-2.00.- or higher
HD3700H	FP-0.15.- or higher	M1-2.00.- or higher	M1-0.22.- or higher

● Limitations in 2K SYSTEM mode

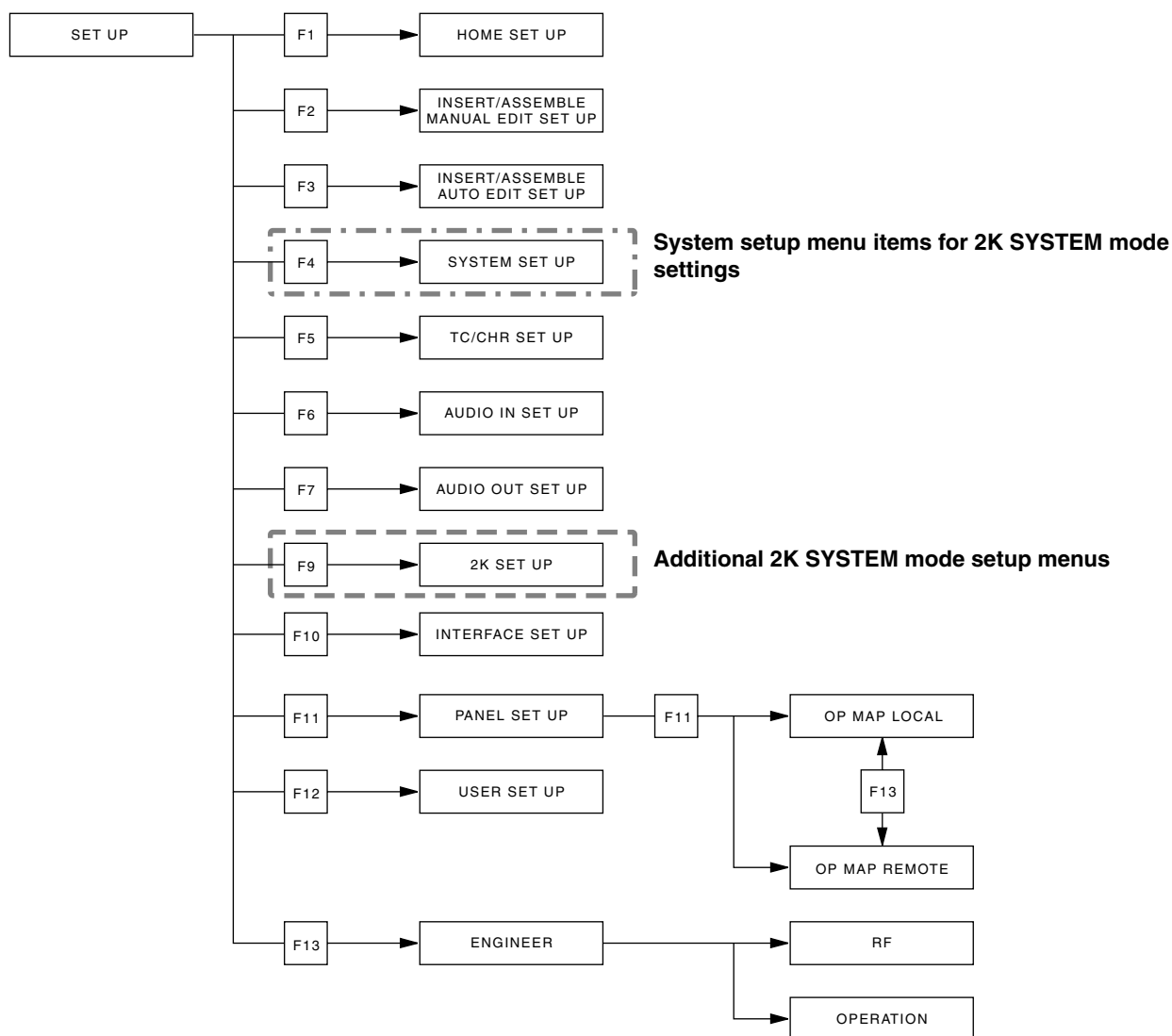
In 2K SYSTEM mode, some menu items, such as settings for SD mode only, cannot be selected. For menu items unavailable in 2K SYSTEM mode, refer to the lists described on page 15 and subsequent pages. When the 2K system mode is set, the following I/O connectors are disabled or output errors occur.

- SD REF IN • SD REF OUT • HD REF OUT • VIDEO OUT • SD SDI IN
- SD SDI OUT • SD SDI MONITOR • HD SDI MONITOR • V/A CONTROL

● Switching method to the 2K system mode

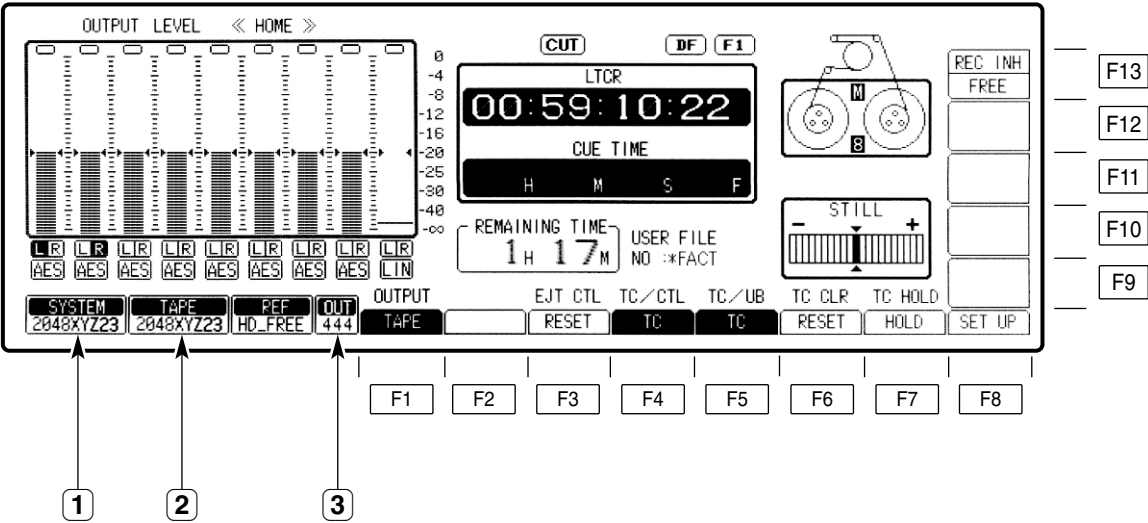
To switch to the 2K system mode, select “2048 (PsF)” or “1920 (PsF)” in F3 (VIDEO) in SYSTEM SET UP menu. (page 10)

Menus added in the 2K system mode settings



HOME menu

This menu is displayed by pressing the following key: HOME



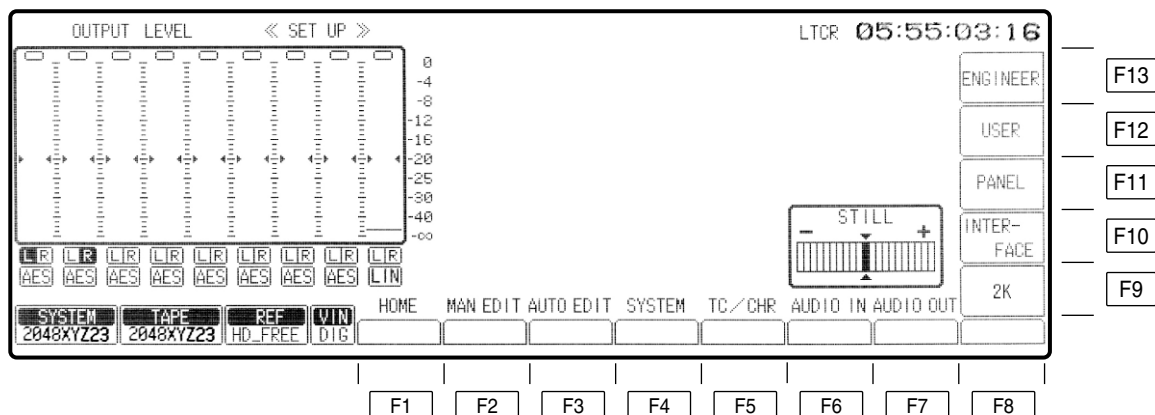
- 1 SYSTEM STATUS Display Area** Displays 2K SYSTEM mode set in SYSTEM SET UP menu.
- 2 TAPE STATUS Display Area** Displays FORMAT ID of 2K SYSTEM mode recorded on tape.
- 3 VIN STATUS Display Area** In 2K SYSTEM mode, this alternately displays VIN and the SAMPLING value set in 2K SET UP, such as “444” and “422” as OUT STATUS, at intervals of approximately 2 seconds (only in the HOME menu).

☐ 2K system mode and 2K system mode TAPE ID to be displayed

2K SYSTEM MODE /TAPE ID	SYSTEM FREQUENCY	H SAMPLE	COLOR SPACE
2048RGB23	23.98 Hz	2048	RGB
2048RGB24	24 Hz	2048	RGB
2048XYZ23	23.98 Hz	2048	XYZ
2048XYZ24	24 Hz	2048	XYZ
1920RGB23	23.98 Hz	1920	RGB
1920RGB24	24 Hz	1920	RGB
1920XYZ23	23.98 Hz	1920	XYZ
1920XYZ24	24 Hz	1920	XYZ

SET UP menu

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



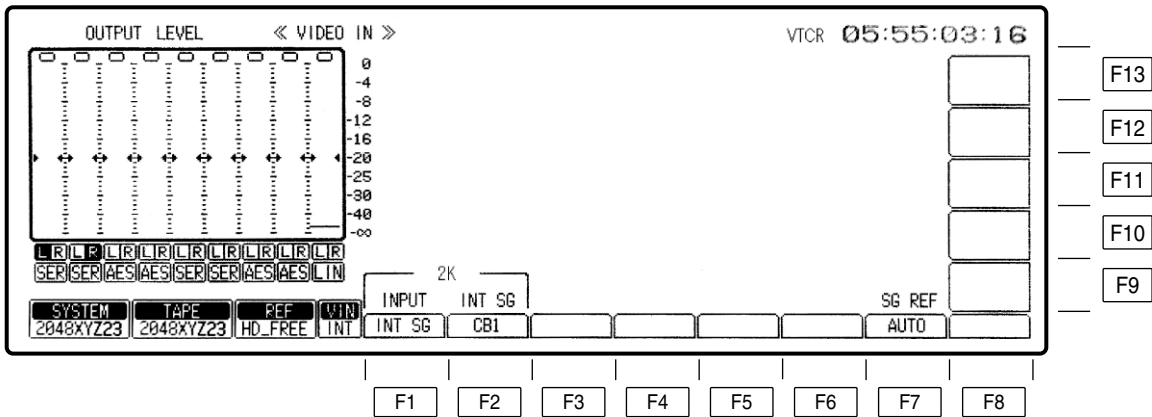
Key	Key designation	Description
F1	HOME	Transfers the VTR to the HOME SET UP menu screen.
F2	MAN EDIT	Transfers the VTR to the INSERT/ASSEMBLE MANUAL EDIT SET UP menu screen.
F3	AUTO EDIT	Transfers the VTR to the INSERT/ASSEMBLE AUTO EDIT SET UP menu screen.
F4	SYSTEM	Transfers the VTR to the SYSTEM 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	2K * ²	Transfers the VTR to the 2K SET UP menu screen.
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 * ¹	Transfers the VTR to the ENGINEER SET UP menu screen.

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

***2 Additional menu item.**

VIDEO IN menu

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

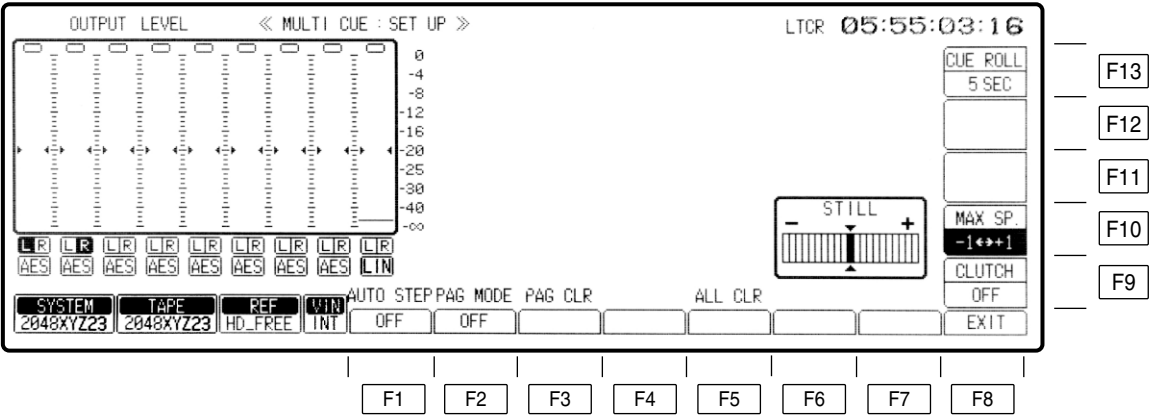


Key	Key designation	Description
F2	INT SG For selecting the type of HD internal signals.	<In 2K SYSTEM mode> CB2: Selects the 75% color bar signal.(RGB) Selects the color bar-2 signal.(XYZ) CB1: Selects the 100% color bar signal.(RGB) Selects the color bar-1 signal.(XYZ) BLACK: Selects the full-black signal. WHITE: Selects the full-white signal.

The underlining indicates the default setting.

MULTI CUE SET UP menu

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

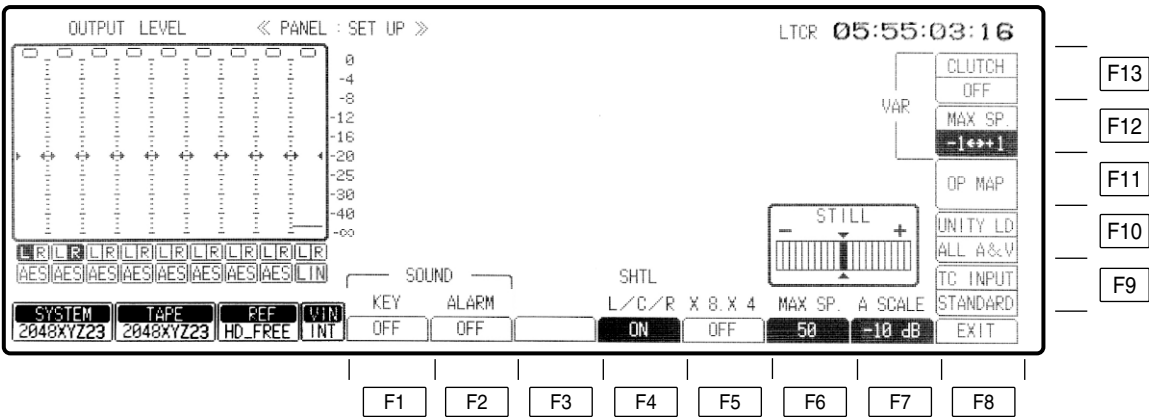


Key	Key designation	Description
F10	MAX SP. For setting the maximum tape speed in the VAR mode.	<In 2K SYSTEM mode> <u>-1 ↔ +1</u> : Tape speed in the range of -1 to +1. <u>0 ↔ +1</u> : Tape speed in the range of 0 to +1.

The underlining indicates the default setting.

PANEL SET UP menu

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



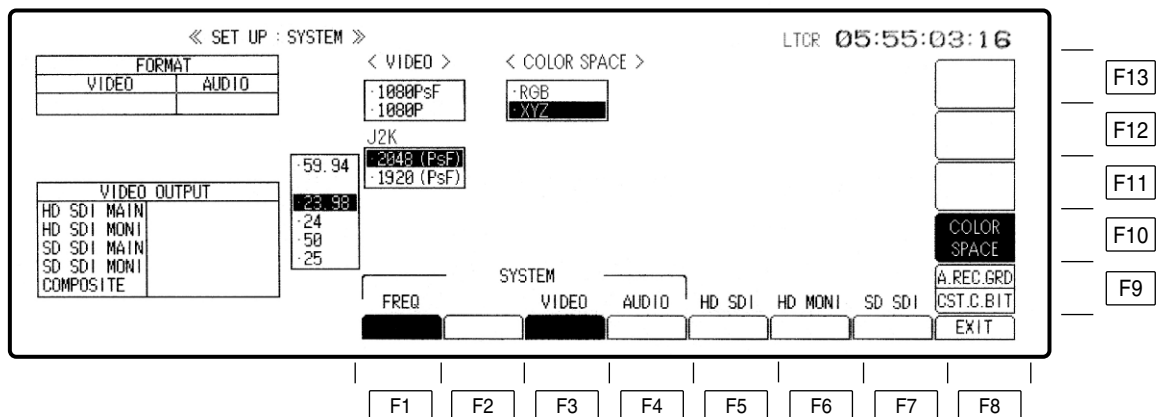
Key	Key designation	Description
F12	VAR MAX SP.	<In 2K SYSTEM mode>
	Variable maximum speed.	<u>-1</u> ↔ +1: Speed range from -1× to +1×.
		0 ↔ +1: Speed range from 0× to +1×.

The underlining indicates the default setting.

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.



SYSTEM SET UP menu (Refer to the setting flowchart and output status tables on pages 144 and 145.)

As indicated in the procedures below, select the system frequency, video recording format, audio recording format, and output formats for the output connectors to set the system format.

Key	Key designation	Description
F1	FREQ* For selecting the SYSTEM Frequency.	<p>For selecting the system frequency.</p> <p>When the F1 key is pressed, the frequency selection window is opened. The frequency can now be selected using the cursor keys.</p> <p>59.94: The 59.94 Hz system is selected.</p> <p>23.98: The 23.98 Hz system is selected.</p> <p>24: The 24 Hz system is selected.</p> <p>50: The 50 Hz system is selected.</p> <p>25: The 25 Hz system is selected.</p> <p>The selection is entered by pressing the ENT key.</p> <p>When the frequency setting has been selected, the video recording format selection window is opened.</p> <p>When the 23.98 or 24 setting has been selected, the selection window which is 2K SYSTEM Format setting of H Sample is opened.</p>
F3	VIDEO For selecting the video recording format.	<p>For selecting the video recording format.</p> <p>When the F3 key is pressed, the video recording format selection window is opened. Use the cursor keys to select the format.</p> <p>In a set system frequency of “23.98” or “24”, select the format in the following menu.</p> <p>1080PsF: The 1080PsF recording format is selected.</p> <p>1080p: The 1080p recording format is selected.</p> <p>2048 (PsF): The 2K system format of 2048 (PsF) 4:4:4 is selected.</p> <p>1920 (PsF): The 2K system format of 1920 (PsF) 4:4:4 is selected.</p> <p>To enter the selection, press the ENT key.</p> <p>When the 1920 (PsF) or 2048 (PsF) setting has been selected, the COLOR SPACE selection window is opened.</p>
F5	HD SDI (When the 2K system mode is selected, this is displayed in the window but cannot be selected or set.)	
F6	HD MONI (When the 2K system mode is selected, this is displayed in the window but cannot be selected or set.)	
F7	SD SDI (When the 2K system mode is selected, this is displayed in the window but cannot be selected or set.)	
F10	COLOR SPACE	<p>For selecting the color space used when 2K SYSTEM mode is selected.</p> <p>RGB: RGB color space is selected.</p> <p>XYZ: XYZ color space is selected.</p>

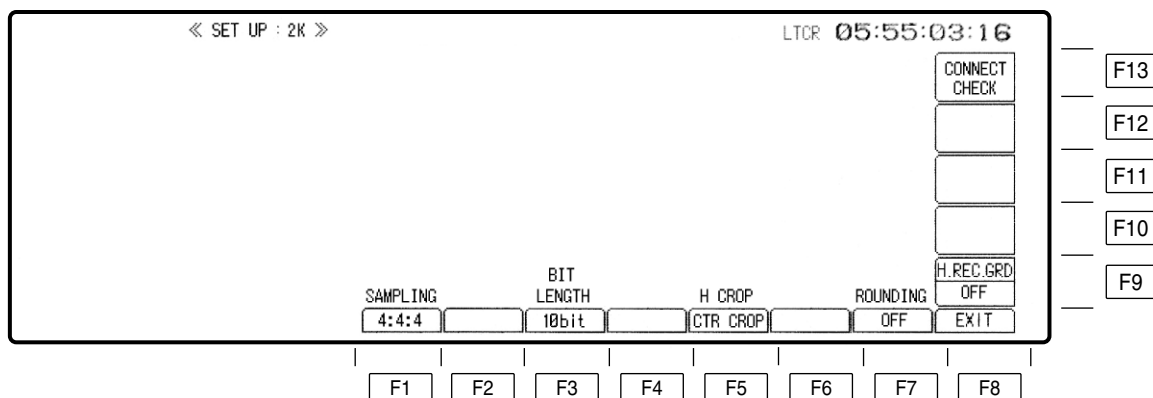
The underlining indicates the default setting.

* 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.

2K SET UP menu

This menu is displayed by pressing the following keys: **SET UP** → **F9**



Key	Key designation	Description
F1	SAMPLING	For selecting the sampling format for DUAL Link SDI_OUT output signals. This works by pressing the F button at the same time. 4:4:4: Output sampling format of 4:4:4 is selected. 4:2:2: Output sampling format of 4:2:2 is selected.
F2	—	
F3	BIT LENGTH (This item is displayed only when “4:4:4” is selected in F1 (SAMPLING).)	For selecting the bit length of the output signal based on 4:4:4. 10bit: 10-bit processing is selected. 12bit: 12-bit processing is selected.
F4	—	
F5	H CROP (This item is displayed when F3 (VIDEO) in the SYSTEM SET UP menu is set to “2048 (PsF)”.)	For selecting the Crop format in the monitor output of 2048 mode. CTR CROP: Side_Crop is selected. R CROP: Right_Crop is selected. L CROP: Left_Crop is selected.
F6	—	
F7	ROUNDING (This is displayed in the setup described on the right.)	When selecting an output sampling format of “4:4:4” for F1 (SAMPLING) and “10bit” for F3 (BIT LENGTH), or selecting an output sampling format of “4:2:2” for F1 (SAMPLING), decide whether or not to perform Dynamic Rounding and select one of the following: OFF: Dynamic Rounding is not performed. ON: Dynamic Rounding is performed.
F8	EXIT	Returns the VTR to the SET UP menu screen.
F9	H. REC. GRD	When the system settings in SYSTEM SET UP differ from the input signal in the H Sample, decide whether or not to record and select one of the following. OFF: Recording is performed. (Recording is based on the value set for H Sample in the system settings.) ON: Recording is prohibited.
F10–F12	—	
F13	CONNECT CHECK	The LED for the AJ-HDP2000 blinks (for the regular SYSTEM connection) only when the F13 key is pressed continuously. When using several AJ-HD3700 B/A/H and AJ-HDP2000 units, this can be used to check which unit connects to which counterpart.

The underlining indicates the default setting.

TEST menu

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

A code indicating that 2K SYSTEM mode is supported was added to INSTALLED SOFTWARE ID.

« TEST »		LTCR 05:55:03:16	
OPERATION TIME OPERATION : 6016 HOURS HEAD ROTATION : 1037 HOURS TAPE TRAVEL : 777 HOURS THREADING : 7554 TIMES POWER ON : 14308 TIMES		SERIAL NO. : A0TMA0020 UDC BOARD NOT INSTALLED	
SOFTWARE VERSION FRONT : FP- 2 00.- AV : M1- 2 00.- SYSCON : M1- 2 00.- SERVO : M1- 0.03.-		INSTALLED SOFTWARE ID AJ-HD3700AP-M1 (3) AJ-HD3700AP-M2 (1) AJ-HD3700AP-2K (1)	
RF AUDIO MECHA SYSTEM FRONT SERVO		IC CARD	
F1 F2 F3 F4 F5 F6 F7 F8		F13 F12 F11 F10 F9	

□ INSTALLED SOFTWARE ID

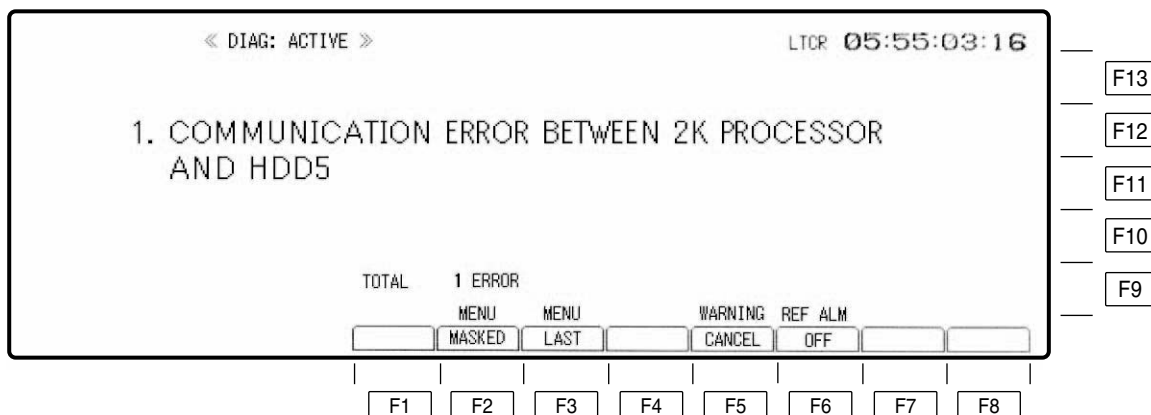
AJ-HD3700BP-2K (1)	< For AJ-HD3700B >
AJ-HD3700AP-2K (1)	< For AJ-HD3700A >
AJ-HD3700HP-2K (1)	< For AJ-HD3700H >

The code "(1)" displayed at the end indicates that 2K SYSTEM mode is supported.

When "(0)" or nothing is displayed and 2K SYSTEM mode is required, contact your dealer to upgrade the model.

2K error messages

Error messages in the 2K system mode are added. In the event of an abnormal condition, an error message is displayed in the window of the unit. In this case, follow any instructions included in the description. If any errors are generated, the front LED (ALARM, 2048 or 1920) of the AJ-HDP2000 lights or blinks (at normal speed or high speed).



Message	Error description	AJ-HDP2000	
		ALARM LED	2048 or 1920 LED
2K FAN STOP	The fan for the AJ-HDP2000 stops. (Contact the nearest dealer.)	⊙	—
2K NO REMOTE	Rear SERVICE SW of the AJ-HDP2000 is not in the OFF position.	⊙	—
RECORDED FORMAT UNMATCH (NO J2K TAPE)	TAPE is not compressed in J2K format.	—	●
RECORDED FORMAT UNMATCH	There is a mismatch between SYSTEM FORMAT of the unit selected in settings and FORMAT of TAPE. (2048/1920, XYZ/RGB)	—	○
RECORDED RATE UNMATCH OUTPUT FRAME FREQUENCY	There is a mismatch between the output frame frequency and the frame frequency recorded on the tape.	—	—
CONCEAL V IN 2K	An error occurs in 2K reproduction data and the CONCEAL function works.	—	—
NO SERIAL DATA INPUT FROM HDD5	Compressed SERIAL DATA (HD SDI) from AJ-HD3700B/A/H main unit is not linked.	—	—
NO 2K FORMAT SERIAL DATA INPUT	In 2K SYSTEM mode, the compressed SERIAL DATA from AJ-HD3700B/A/H main unit is not a J2K compression signal.	—	—
CRC ERROR IN SERIAL DATA INPUT FROM HDD5	A CRC error occurs in SERIAL DATA (HD SDI) signals from AJ-HD3700B/A/H main unit to AJ-HDP2000.	○	—
NO EXTERNAL HD REF IN 2K	HD REF IN is not connected. Signals other than 1920 × 1080 (HD) tri-level sync signal are transmitted to HD REF IN.	—	—

* If any warnings are generated while ERR/FMT or ERR are set in TC/CHR menu F13 (EX SUPER), “2K PROC ERROR” is displayed on SUPER of the Monitor OUT output.

⊙: Lighting
●: Fast Flashing
○: Flashing
△: Flashing with some setting

2K error messages

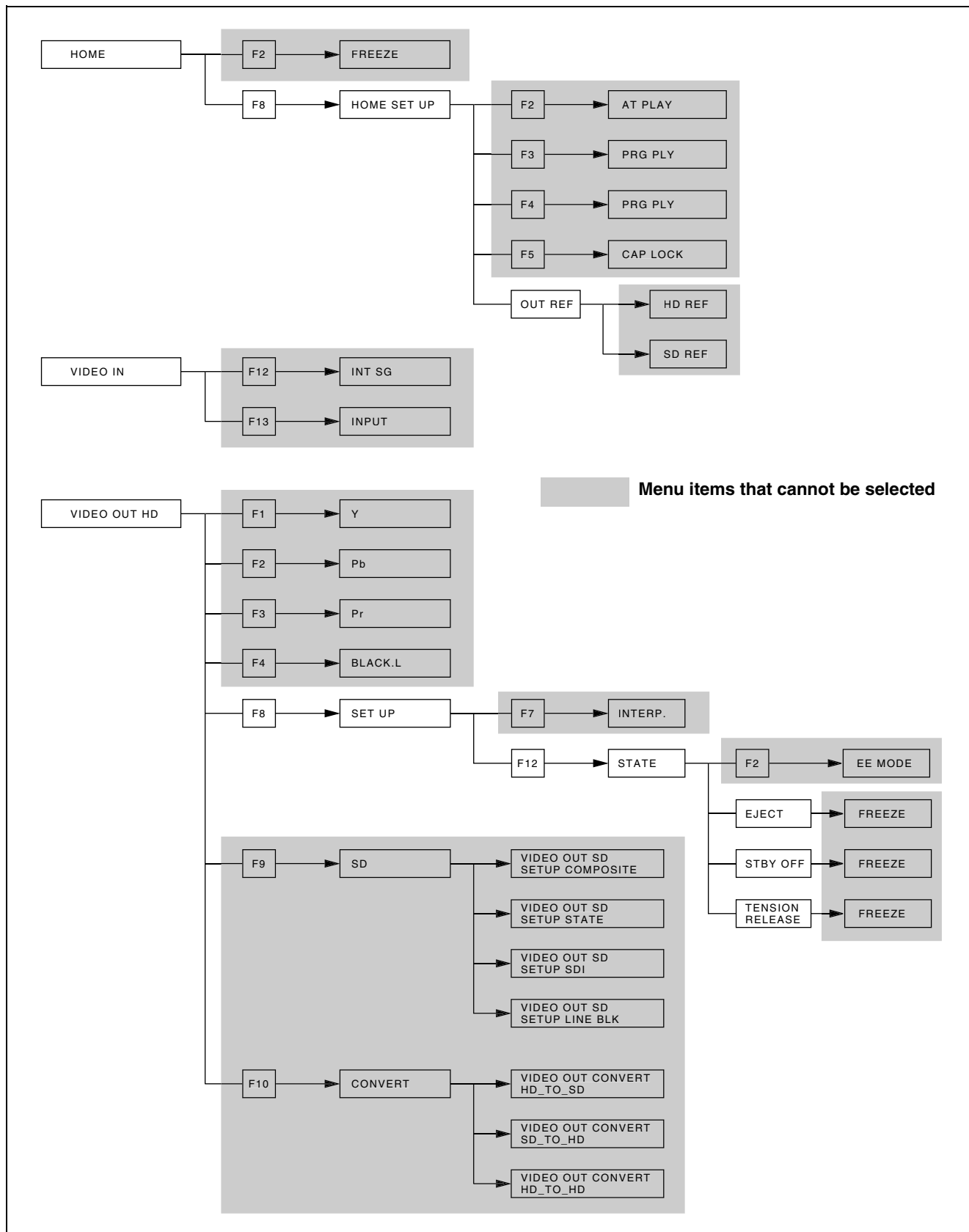
Message	Error description	AJ-HDP2000	
		ALARM LED	2048 or 1920 LED
REF IN SIGNAL UNMATCH SYSTEM FREQUENCY	There is a mismatch in frame frequency between the SYSTEM set value and REF IN.	—	—
OUT OF RANGE OF SYSTEM PHASE BETWEEN REF AND INPUT	There is a large phase difference between the input signal and REF IN.	△ (w/o OUTREF: INPUT)	—
INPUT SIGNAL UNMATCH SYSTEM FREQUENCY	There is a mismatch in frame frequency between the SYSTEM set value and the input signal.	○	—
COMMUNICATION ERROR BETWEEN 2K PROCESSOR AND HDD5	A communication failure occurs between AJ-HDP2000 and AJ-HD3700B/A/H. Check that the connection between AJ-HDP2000 and AJ-HD3700B/A/H is correct.	—	—
NO DUAL LINK CHA 2K INPUT	There is no input signal to Dual-Link IN Ach. The format of the input signals to Dual-Link IN Ach is outside the specifications.	—	—
NO DUAL LINK CHB 2K INPUT	There is no input signal to Dual-Link IN Bch. The format of the input signals to Dual-Link IN Bch is outside the specifications.	—	—
SUBSTANDARD TIMING DIFFERENCE IN DUAL LINK 2K INPUT	The timing-phase difference of Dual-Link IN A/ Bch is outside the specifications (≤ 100 ns)	○	—
CRC ERROR IN DUAL LINK CHA 2K INPUT	A CRC error occurs in signals on Dual-Link IN Ach.	○	—
CRC ERROR IN DUAL LINK CHB 2K INPUT	A CRC error occurs in signals on Dual-Link IN Bch.	○	—
UNMATCH H SAMPLE BETWEEN INPUT SIGNAL AND SYSTEM	There is a mismatch in H SAMPLE between the SYSTEM set value and the input signal.	—	○
DUAL LINK CHA 2K ASSIGNMENT IS CHB	On Dual-Link IN Ach, Bch is added to the Channel Assignment information in PAYLOAD of the input signals.	—	—
DUAL LINK CHB 2K ASSIGNMENT IS CHA	On Dual-Link IN Bch, Ach is added to the Channel Assignment information in PAYLOAD of the input signals.	—	—
DUAL LINK 2K INPUT FORMAT ASSIGNMENT IS NOT PsF	On Dual-Link IN A/Bch, the input signal format of the PAYLOAD information is not PsF.	—	—
D_LINK 2K INPUT COLOR SPACE ASSIGNMENT UNMATCH SYSTEM	On Dual-Link IN A/Bch, color space information of the input PAYLOAD signals does not match the SYSTEM settings for the unit.	—	—

* If any warnings are generated while ERR/FMT or ERR are set in TC/CHR menu F13 (EX SUPER), “2K PROC ERROR” is displayed on SUPER of the Monitor OUT output.

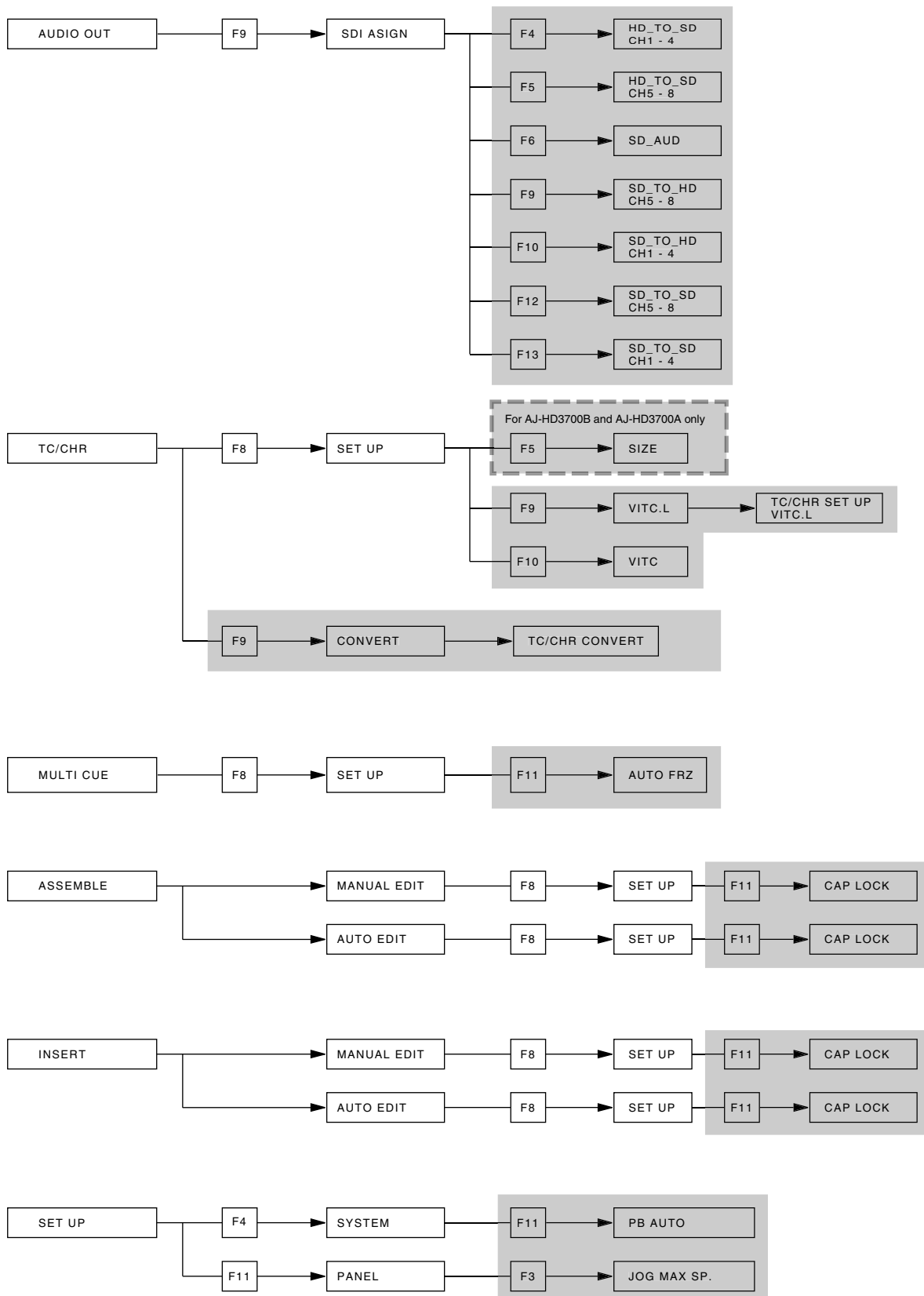
◎: Lighting
 ●: Fast Flashing
 ○: Flashing
 △: Flashing with some setting

Menu items unavailable in 2K SYSTEM mode

In “Menu screen transitions” described on page 4 of each operation instructions for the AJ-HD3700B, AJ-HD3700A, and AJ-HD3700H, the following menu items cannot be selected.

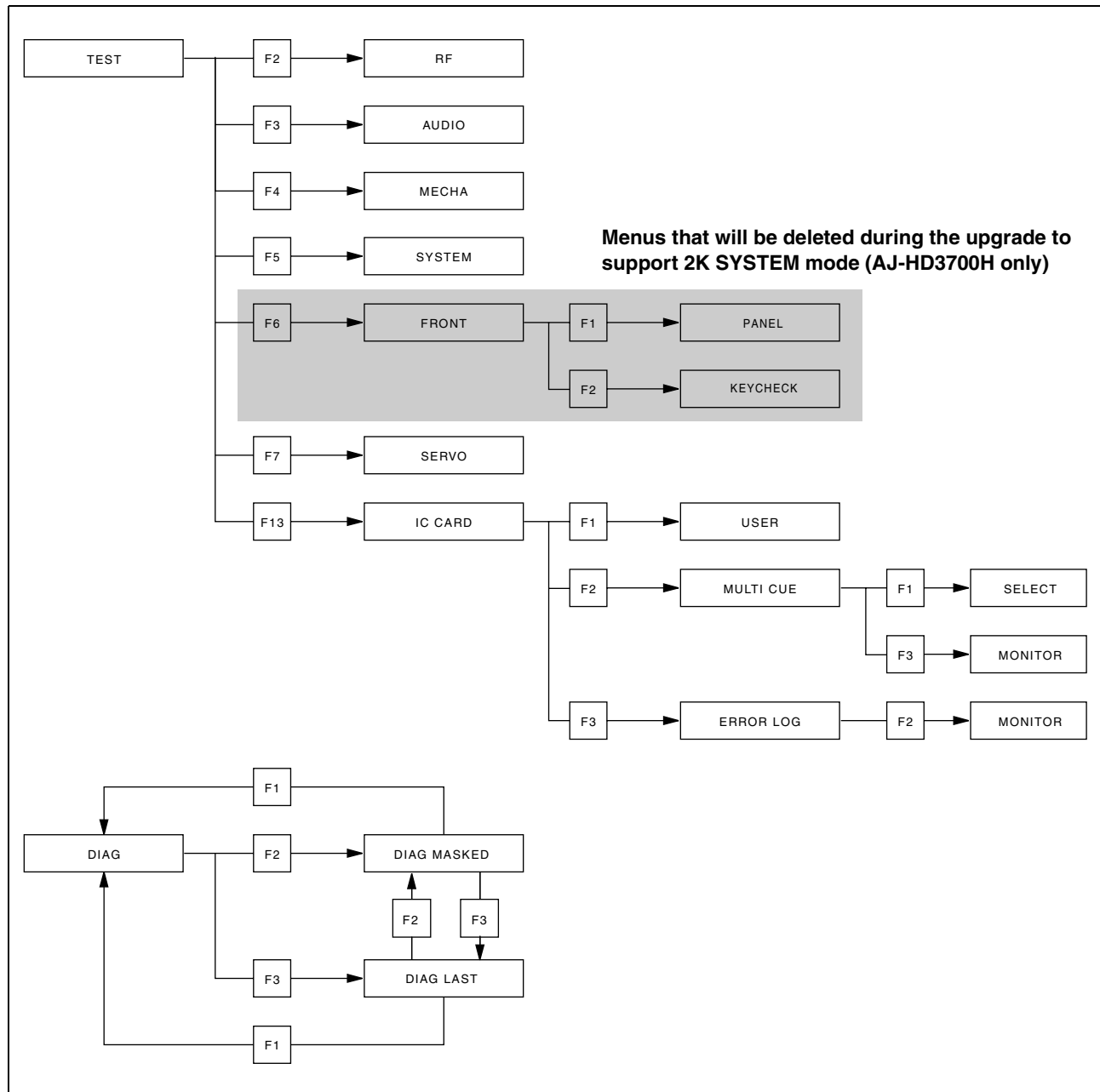


Menu items that cannot be selected



Menus not available on the AJ-HD3700H

For the AJ-HD3700H upgraded to support 2K SYSTEM mode, two menus (the TEST FRONT PANEL menu and the TEST FRONT KEYCHECK menu) in the hierarchy below F6 (FRONT) of the TEST menu are deleted.





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