

JVC

SERVICE MANUAL

LCD FLAT TELEVISION

LT-26WX84/T

BASIC CHASSIS

SB5



I'Art™ *Palette*
D.I.S.T.
Digital Image Scaling Technology
BBE

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SPECIFICATION

Items		Contents
Dimensions (W × H × D)		103.5cm × 64cm × 9.8cm
Mass		22 kg
TV RF System		CCIR (M)
Color System		NTSC
Sound System		BTSC (Multi Channel Sound)
TV Receiving Channels and Frequency	VHF Low VHF High UHF CATV	02ch~06ch : 54MHz~88MHz 07ch~13ch : 174MHz~216MHz 14ch~69ch : 470MHz~806MHz 54MHz~804MHz Low Band : 02~06, A-8 by 02~06&01 High Band : 07~13 by 07~13 Mid Band : A~I by 14~22 Super Band : J~W by 23~36 Hyper Band : W+1~W+28 by 37~64 Ultra Band : W+29~W+84 by 65~94, 100~125 Sub Mid Band : A4~A1 by 96~99
TV / CATV Total Channel		180 Channels
Intermediate Frequency	Video IF Sound IF	45.75 MHz 41.25 MHz (4.5MHz)
Color Sub Carrier		3.58 MHz
Power Input		AC120V , 60Hz
Power Consumption		155W (Max)
LCD panel		26-inch wide aspect (15:9)
Screen Size		Diagonal : 66cm (H:33.9cm × V : 56.6cm)
Display Pixels		Horizontal : 1280 dots × Vertical : 768 dots (W-XGA)
Audio Power Output		10W + 10W
Speaker		6.6cm, round type × 2 (Oblique corn)
Antenna terminal (VHF/UHF)		F-type connector, 75Ω unbalanced, coaxial
Video / Audio input Input-1/2/3	Component Video [Input-1] 1125i / 750p 525p / 525i S-Video [Input-1/2] Video Audio	RCA pin jack × 3 Y : 1V (p-p) (Sync signal: 0.35V(p-p), 3-value sync.), 75 Ω Pb/Pr : 0.35V(p-p), 75 Ω Y : 1V (p-p), Positive (Negative sync provided), 75 Ω Pb/Pr : 0.35V(p-p), 75 Ω Mini-DIN 4 pin × 2 Y: 1V (p-p), Positive (Negative sync provided), 75 Ω C: 0.286V (p-p) (Burst signal), 75 Ω 1V (p-p), Positive (Negative sync provided), 75 Ω, RCA pin jack × 3 500mV (rms), High impedance, RCA pin jack × 6 RCA pin jack × 3
Digital-in	Video Audio	DVI-D 24-pin connector × 1 (Digital-input terminal is not compatible with computer signal) 500mV (rms), Low impedance, RCA pin jack × 2
Monitor output	S-Video Video Audio	Mini-DIN 4 pin × 1 Y: 1V (p-p), Positive (Negative sync provided), 75 Ω C: 0.286V (p-p) (Burst signal), 75 Ω 1V (p-p), Positive (Negative sync provided), 75 Ω RCA pin jack × 1 500mV (rms), Low impedance, RCA pin jack × 2
Headphone		3.5mm stereo mini jack × 1
Remote Control Unit		RM-C13G (AA/R6/UM-3 battery × 2)

Design & specifications are subject to change without notice.

SECTION 1

PRECAUTION

1.1 SAFETY PRECAUTIONS

- (1) The design of this product contains special hardware, many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
- (2) Alterations of the design or circuitry of the products should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
- (3) Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. **Electrical components having such features are identified by shading on the schematics and by (Δ) on the parts list in Service manual.** The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of Service manual may cause shock, fire, or other hazards.
- (4) **Don't short between the LIVE side ground and ISOLATED (NEUTRAL) side ground or EARTH side ground when repairing.**
Some model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : ($\perp$) side GND, the ISOLATED (NEUTRAL) : ($\equiv$) side GND and EARTH : ($\oplus$) side GND.
Don't short between the LIVE side GND and ISOLATED (NEUTRAL) side GND or EARTH side GND and never measure the LIVE side GND and ISOLATED (NEUTRAL) side GND or EARTH side GND at the same time with a measuring apparatus (oscilloscope etc.). If above note will not be kept, a fuse or any parts will be broken.
- (5) If any repair has been made to the chassis, it is recommended that the PDP voltage setting should be checked or adjusted.
- (6) When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.

(7) Isolation Check (Safety for Electrical Shock Hazard)

After re-assembling the product, always perform an isolation check on the exposed metal parts of the cabinet (antenna terminals, video/audio input and output terminals, Control knobs, metal cabinet, screw heads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

a) Dielectric Strength Test

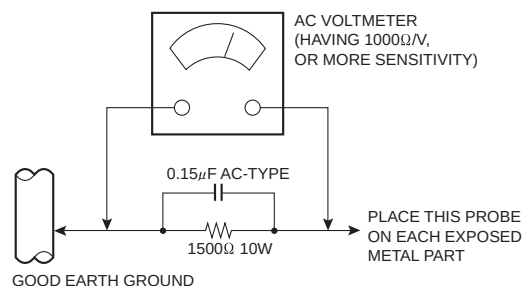
The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 3000V AC (r.m.s.) for a period of one second. (. . . Withstand a voltage of 1100V AC (r.m.s.) to an appliance rated up to 120V, and 3000V AC (r.m.s.) to an appliance rated 200V or more, for a period of one second.) This method of test requires a test equipment not generally found in the service trade.

b) Leakage Current Check

Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5mA AC (r.m.s.). However, in tropical area, this must not exceed 0.2mA AC (r.m.s.).

Alternate Check Method

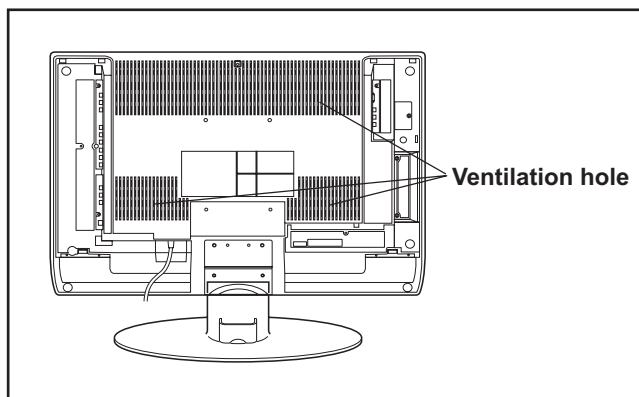
Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1000 Ω per volt or more sensitivity in the following manner. Connect a 1500 Ω 10W resistor paralleled by a 0.15 μ F AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.). Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.). However, in tropical area, this must not exceed 0.3V AC (r.m.s.). This corresponds to 0.2mA AC (r.m.s.).



1.2 INSTALLATION

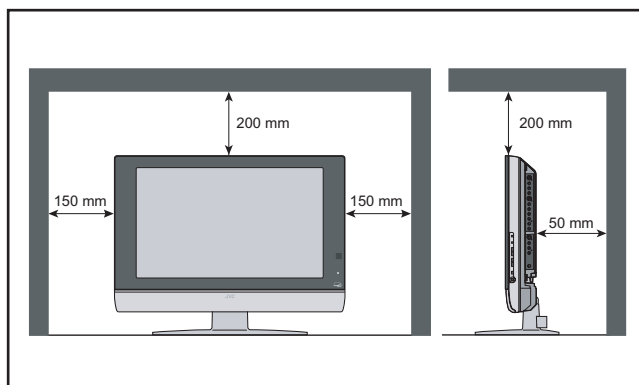
1.2.1 HEAT DISSIPATION

If the heat dissipation vent behind this unit is blocked, cooling efficiency may deteriorate and temperature inside the unit will rise. The temperature sensor that protects the unit will be activated when internal temperature exceeds the pre-determined level and power will be turned off automatically. Therefore, please make sure pay attention not to block the heat dissipation vent as well as the ventilation outlet behind the unit and ensure that there is room for ventilation around it.



1.2.2 INSTALLATION REQUIREMENTS

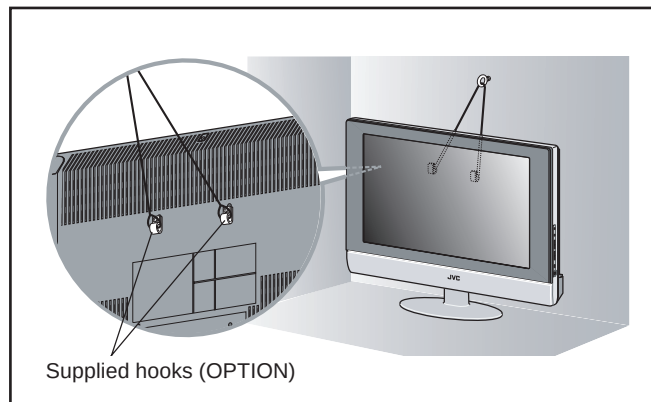
Ensure that the minimal distance is maintained, as specified below, between the unit with and the surrounding walls, as well as the floor etc. Install the unit on stable flooring or stands. Take precautionary measures to prevent the unit from tipping in order to protect against accidents and earthquakes.



1.2.3 INSTALLATION REQUIREMENTS

To ensure safety in an emergency such as an earthquake, and to prevent accidents, ensure that measures are taken to prevent the TV dropping or falling over.

Use the supplied screws to firmly attach the supplied hooks (OPTION) to the back of the TV, and use commercially available cord to fix the TV to rigid components such as walls and columns.



1.2.4 NOTES ON HANDLING

(1) WHEN TAKING UNIT OUT OF A PACKING CASE

When taking the unit out of a packing case, do not grasp the upper part of the unit. If you take the unit out while grasping the upper part, the LCD PANEL may be damaged because of a pressure. Instead of grasping the upper part, put your hands on the lower backside or sides of the unit.

(2) AS FOR PRESSING OR TOUCHING A SPEAKER

Be careful not to press the opening of the speaker in the lower part of the unit and around them since the decorative sheet on the surface of the openings may be deformed.

1.3 HANDLING LCD PANEL

1.3.1 PRECAUTIONS FOR TRANSPORTATION

When transporting the unit, pressure exerted on the internal LCD panel due to improper handling (such as tossing and dropping) may cause damages even when the unit is carefully packed. To prevent accidents from occurring during transportation, pay careful attention before delivery, such as through explaining the handling instructions to transporters.

Ensure that the following requirements are met during transportation, as the LCD panel of this unit is made of glass and therefore fragile:

(1) **USE A SPECIAL PACKING CASE FOR THE LCD PANEL**

When transporting the LCD panel of the unit, use a special packing case (packing materials). A special packing case is used when a LCD panel is supplied as a service spare part.

(2) **ATTACH PROTECTION SHEET TO THE FRONT**

Since the front (display part) of the panel is vulnerable, attach the protection sheet to the front of the LCD panel before transportation. Protection sheet is used when a LCD panel is supplied as a service spare part.

(3) **AVOID VIBRATIONS AND IMPACTS**

The unit may be broken if it is toppled sideways even when properly packed. Continuous vibration may shift the gap of the panel, and the unit may not be able to display images properly. Ensure that the unit is carried by at least 2 persons and pay careful attention not to exert any vibration or impact on it.

(4) **DO NOT PLACE EQUIPMENT HORIZONTALLY**

Ensure that it is placed upright and not horizontally during transportation and storage as the LCD panel is very vulnerable to lateral impacts and may break. During transportation, ensure that the unit is loaded along the traveling direction of the vehicle, and avoid stacking them on one another. For storage, ensure that they are stacked in 2 layers or less even when placed upright.

1.3.2 OPTICAL FILTER (ON THE FRONT OF THE LCD PANEL)

(1) **Avoid placing the unit under direct sunlight over a prolonged period of time. This may cause the optical filter to deteriorate in quality and color.**

(2) **Clean the filter surface by wiping it softly and lightly with a soft and lightly fuzz cloth (such as outing flannel).**

(3) **Do not use solvents such as benzene or thinner to wipe the filter surface. This may cause the filter to deteriorate in quality or the coating on the surface to come off. When cleaning the filter, usually use the neutral detergent diluted with water. When cleaning the dirty filter, use water-diluted ethanol.**

(4) **Since the filter surface is fragile, do not scratch or hit it with hard materials. Be careful enough not to touch the front surface, especially when taking the unit out of the packing case or during transportation.**

1.3.3 PRECAUTIONS FOR REPLACEMENT OF EXTERIOR PARTS

Take note of the following when replacing exterior parts (REAR COVER, FRONT PANEL, etc.):

(1) **Do not exert pressure on the front of the LCD panel (filter surface). It may cause irregular color.**

(2) **Pay careful attention not to scratch or stain the front of the LCD panel (filter surface) with hands.**

(3) **When replacing exterior parts, the front (LCD panel) should be placed facing downward. Place a mat, etc. underneath to avoid causing scratches to the front (filter surface).**

SECTION 2

SPECIFIC SERVICE INSTRUCTIONS

2.1 FEATURES

- New chassis design enable use of an interactive on screen control.
- MOTION COMPENSATION : With this function, the seamless reproduction of dynamic motion on the screen has been realized.
- Built-in 3 dimension Y/C separate circuit.
- Receive DTV broadcast (1125i / 750p / 525p / 525i)
- Built-in HDCP / Component (Y / Pb / Pr) input.
- Built-in Hyper Sound, BBE circuit.
- DIST is a digital high-definition image processing technology that converts various image input signals such as NTSC(480i), 480p, 720p, and 1080i into a format with the best resolution for a display device such as a plasma display panel, and displays high-definition images.

2.2 TECHNICAL INFORMATION

2.2.1 LCD PANEL

This unit uses the flat type panel LCD (Liquid Crystal Display) panel that occupies as little space as possible, instead of the conventional CRT (Cathode Ray Tube), as a display unit.

2.2.1.1 STRUCTURE

The LCD panel of the unit is constructed with the metal chassis that surrounds the panel unit and supports the LCD panel part and the backlight part to protect them.

The color filter glass and the TFT glass (thin film transistor) are inserted between the front polarizing filter and the rear polarizing filter. Liquid crystals are inserted between the color filter glass and the TFT glass. Since the gap between the two glasses is only a few μm , a spacer (bead) is inserted in the gap to retain the gap.

The backlight unit is placed behind the LCD panel. Since liquid crystals themselves do not emit light, the backlight as an external light source emits light to the LCD panel from behind through the diffuser.

Circuit boards for controlling the LCD panel and the backlight are attached around the back part of the LCD panel unit.

Since the unit has the two polarizing filter that are at right angles to each other, the unit adopts "normally black" mode, where light does not pass through the polarizing filter and the screen is black when no voltage is applied to the liquid crystals.

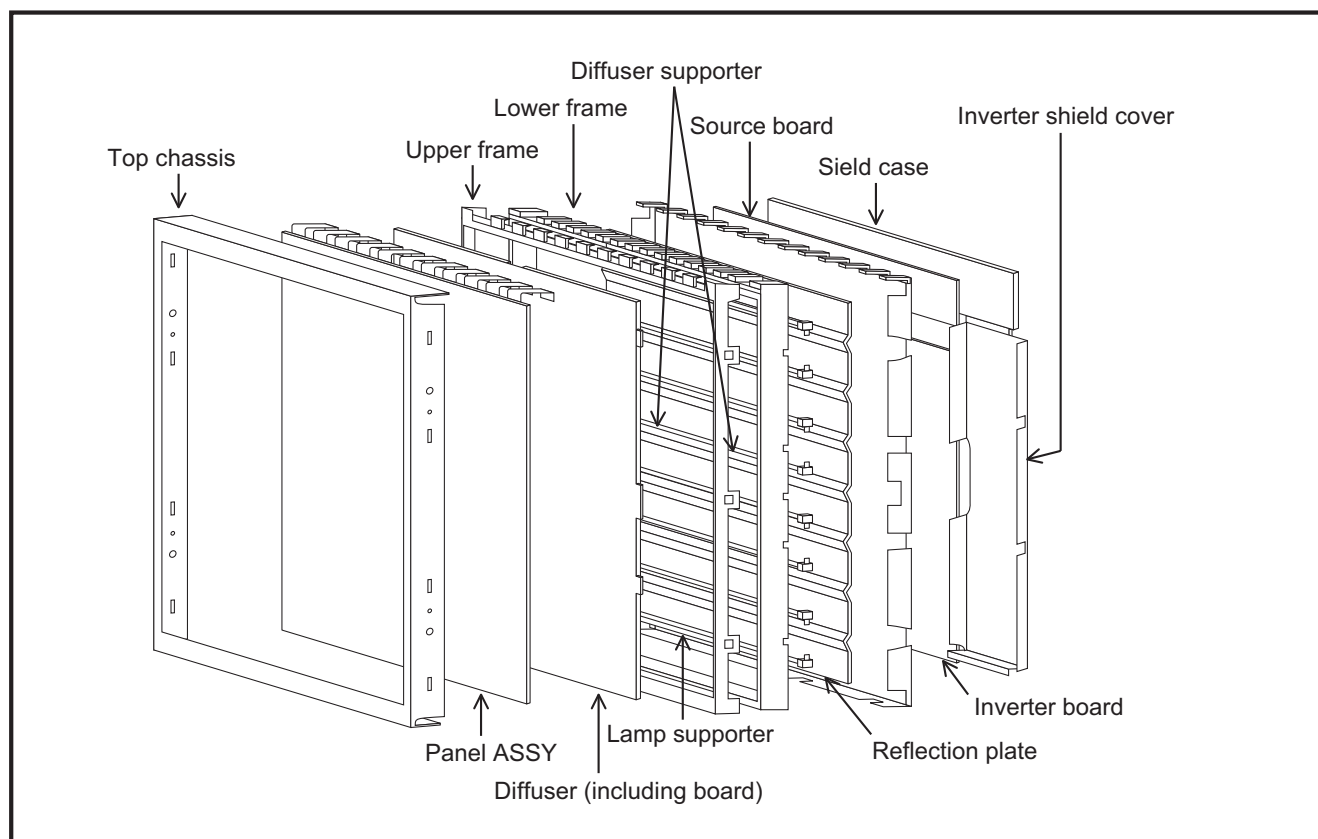


Fig.1 Structure of the LCD panel unit

2.2.1.2 SPECIFICATIONS

The following table shows the specifications of this unit.

Item	Specifications	Remarks
Maximum dimensions (W × H × D)	62.7cm × 38.9cm × 4.9cm	
Weight	8.0kg	
Effective screen size	Diagonal : 66cm (H:33.9cm × V : 56.6cm)	26V type
Aspect ratio	15:9	
Drive device/ system	a-Si-TFT, active matrix system	
Resolution	Horizontally 1280 × Vertically 768 × RGB <W-XGA>	2949120 dots in total
Pixel pitch (pixel size)	Horizontally:0.4425mm, Vertically:0.4425mm	
Displayed color	16777216 colors	256 colors for R, G, and B
Brightness	450cd/m ²	500cd/m ² at maximum
Contrast ratio	500:1	
Response time	16.7ms	
View angle	Vertically 170°, horizontally 170°	

2.2.1.3 PIXEL FAULT

There are three pixel faults - bright fault , dark fault and flicker fault - that are respectively defined as follows.

(1) BRIGHT FAULT

In this pixel fault, a cell that should not light originally is lighting on and off.

For checking this pixel fault, input ALL BLACK SCREEN and find out the cell that is lighting on and off.

(2) DARK FAULT

In this pixel fault, a cell that should light originally is not lighting or lighting with the brightness twice as brighter as originally lighting.

For checking this pixel fault, input 100% of each R/G/B colour and find out the cell that is not lighting.

(3) FLICKER FAULT

In the pixel fault, a cell that should light originally or not light originally is flashing on and off.

For checking this pixel fault, input ALL BLACK SCREEN signal or 100% of each RGB colour and find out the cell that is flashing on and off.

2.2.2 MAIN MICRO COMPUTER (CPU) FUNCTION

Pin No.	Pin name	I/O	Function
1	BS_RXD	O	Not used
2	MICON_V	I	Vertical sync for OSD / CLOSED CAPTION
3	LB_PRO	I	Low B protection detect [Detection : H]
4	NC	---	Not used
5	/RST	I	Reset [Reset : L]
6	HDMI_INT	I	Not used
7	/TEST	I	3.3V
8	OSD_YS	O	YS for OSD / CLOSED CAPTION
9	(DPCRST)	O	Not used
10	BS/DIN	O	Not used
11	(A_MU)(LED_5)	O	Not used
12	MICON_H	I	Horizontal sync for OSD / CLOSED CAPTION
13	(A_MU)(LED_4)	O	Not used
14	P46,OSDXI	---	Not used
15	P45,OSDXO	---	Not used
16	(SDA2)	I/O	Not used
17	AC_IN	I	AC power (60Hz) for time clock
18	(SCL2)	O	Not used
19	(TU_POW)	O	Not used
20	VCOI	I	LPF input
21	PDO	O	LPF output
22	/IP_RESET	O	Reset (L) [Reset : L]
23	OSD_YM	O	YM for OSD / CLOSED CAPTION
24	OSD_B	O	B signal output for OSD / CLOSED CAPTION
25	POW_LED	O	Lighting for power [Lighting : H]
26	OSD_G	O	G for OSD / CLOSED CAPTION
27	OSD_R	O	R for OSD / CLOSED CAPTION
28	VRE	I	Reference voltage
29	IP_ERR	I	AMDP program load
30	IREF	I	Reference current
31	COMP	I	Reference compare
32	AVDD	I	3.3V
33	CLL	O	Not used
34	VREFLS	I	Reference voltage (For SUB CCD)
35	SUB_CCD	I	Not used
36	NC	---	Not used
37	VSS	I	GND
38	MAIN_CCD	I	Not used
39	VREFHS	I	Standard voltage (For Main CCD)
40	CLH	I	Not used
41	VDD/VPP	I	3.3V
42	CLKSW1	O	IP clock switch [ON : L]
43	CLKSW2	O	IP clock switch [ON : L]
44	ON_TIM	O	Not used
45	SBO01	O	Port for writing on board

Pin No.	Pin name	I/O	Function
46	SBD01	I	Port for writing on board / Communication (XTD) for SUB CPU
47	SBT1	I	Port for writing on board / Communication (RTD) for SUB CPU
48	HP_VOL	O	Headpone volume control (0V-3.3V)
49	/BS_RESET	O	Not used
50	HDMI_ASW	O	Not used
51	BS1.5CTL	O	Not used
52	ODU_OUT	O	Not used
53	15/11_SW	O	Not used
54	ODU_PRO	O	Not used
55	BS_POW	---	Not used
56	BS3.3CTL	O	Not used
57	AFT2	I	Not used
58	/LOB_POW	O	Low B power control [Detection : H]
59	COMPULING	I	Not used
60	/POWERGOOD	I	Power condition check [ON : L]
61	MECHA_SW	I	Mechanical (POWER) swtich detection [Pushing : L]
62	/MAIN_POW	O	Main power control [ON : L]
63	NC	---	Not used
64	(B1_POW)	O	Not used
65	AFT1	---	Not used
66	(X_RAY)	I	GND
67	(EE_CDS)	I	GND
68	KEY2	I	Key scan data [ON : H]
69	KEY1	I	Key scan data [ON : H]
70	SCL1	O	I ² C bus clock (For Main memory)
71	SDA1	I/O	I ² C bus data (For Main memory)
72	REMO	I	Remote control data
73	(AP_REQ)(LED_2)	O	Not used
74	VSS	I	GND
75	OSC2	O	4MHz oscillation for system clock
76	OSC1	I	4MHz oscillation for system clock
77	VDD	I	3.3V
78	SCL0	O	I ² C bus clock (For general)
79	(AP_CLK)(LED_1)	O	Not used
80	SDA0	I/O	I ² C bus data (For general)
81	BSLK(D_CLOCK)	O	Not used
82	BS_TXD(D_DATA)	I	Not used
83	NC	---	Not used
84	P_MU	O	Picture muting [Muting : H]

2.2.3 SUB MICRO COMPUTER (CPU) FUNCTION

Pin No.	Pin name	I/O	Function
1	(SYSTEM0)	I	GND
2	(SYSTEM3)	I	GND
3	AVCC	-	5V
4	X2	-	Not used
5	X1	-	Not used
6	VCL	-	Internal down voltage
7	RES	I	Reset [Reset : L]
8	TEST	I	Operation test for SUB CPU
9	VSS	-	GND
10	OSC2	O	10MHz oscillation for system clock
11	OSC1	I	10MHz oscillation for system clock
12	VCC	-	5V
13	NC	O	Not used
14	NC	O	Not used
15	BL_D2	O	Back light 20ms delay for LCD panel [On:L]
16	BL_D1	O	Back light 10ms delay for LCD panel [On:L]
17	I2C_STOP	O	Not used
18	BL_ON	O	Back light reset for LCD panel [Reset:L]
19	NC	O	Not used
20	NC	O	Not used
21	NC	O	Not used
22	NC	O	Not used
23	SDA1	I/O	I ² C bus data (For Sub memory)
24	A.DIM	O	Not used
25	SCL1	O	I ² C bus clock (For Sub memory)
26	SDA0	I/O	I ² C bus data (For general)
27	SCL0	O	I ² C bus clock (For general)
28	NC	O	Not used
29	NC	O	Not used
30	NC	O	Not used
31	NC	O	Not used
32	NC	O	Not used
33	NC	O	Not used
34	NC	O	Not used
35	NMI	I	Port for writing on board [Writning:L]
36	NC	O	Not used
37	(HD)	I	Not used
38	NC	O	Not used
39	(REMO)	I	Not used
40	NC	O	Not used
41	P85	-/I	Not used
42	P86	-	Not used
43	P87	-	Not used
44	SCK3	O	Port for writing on board
45	RXD	I	Port for writing on board

Pin No.	Pin name	I/O	Function
46	TXD	O	Port for writing on board
47	(PROTECTOR0)	I	Not used
48	NC	O	Not used
49	RXD2	I	Port for communication (Main cpu)
50	TXD2	O	Port for communication (Main cpu)
51	NC	O	Not used
52	(ACTIVE)	I	Not used
53	VD	I	Vertical sync
54	(REC_DET)	I	Not used
55	(PSS)	I	Not used
56	(ALARM)	I	Not used
57	(SYSTEM2)	I	Not used
58	(SYSTEM1)	I	Not used
59	(PROTECTOR1)	I	Not used
60	(AMP_PRO2)	I	Not used
61	(AMP_PRO1)	I	Not used
62	EE_CDS	I	Not used
63	(KEY_IN1)	I	Not used
64	(KEY_IN2)	I	Not used

SECTION 3 DISASSEMBLY

3.1 DISASSEMBLY PROCEDURE

NOTE:

Since this model adopts a layer structure, follow the procedure below in disassembling this model.
Be careful enough not to damage or scratch parts.

3.1.1 REMOVING THE STAND

- (1) Remove the 2 screws [A], and remove the STAND COVER.
- (2) Remove the 4 screws [B], and remove the STAND.

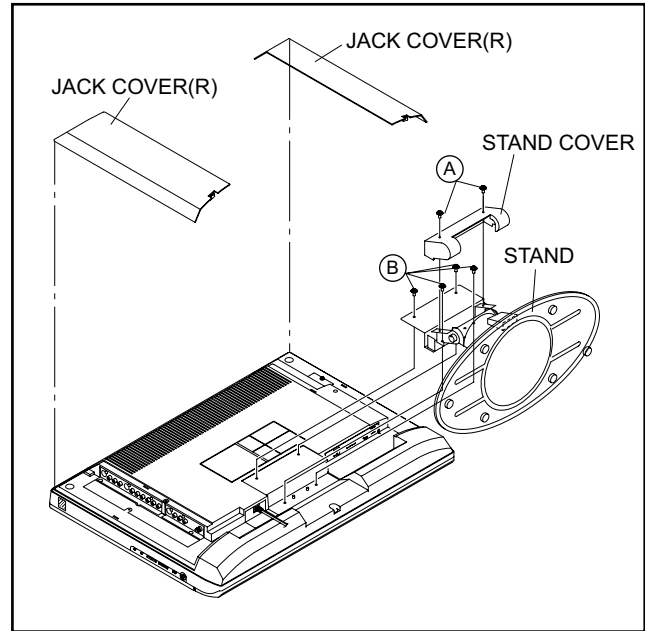


Fig.3-1-1

3.1.2 REMOVING THE REAR COVER

- Remove the STAND.
- (1) Remove the JACK COVER (R).
- (2) Remove the JACK COVER (L).
- (3) Remove the 7 screws [C], 3 screws [D], and 4 screws [E] (14 screws in total).
- (4) Remove the REAR COVER.

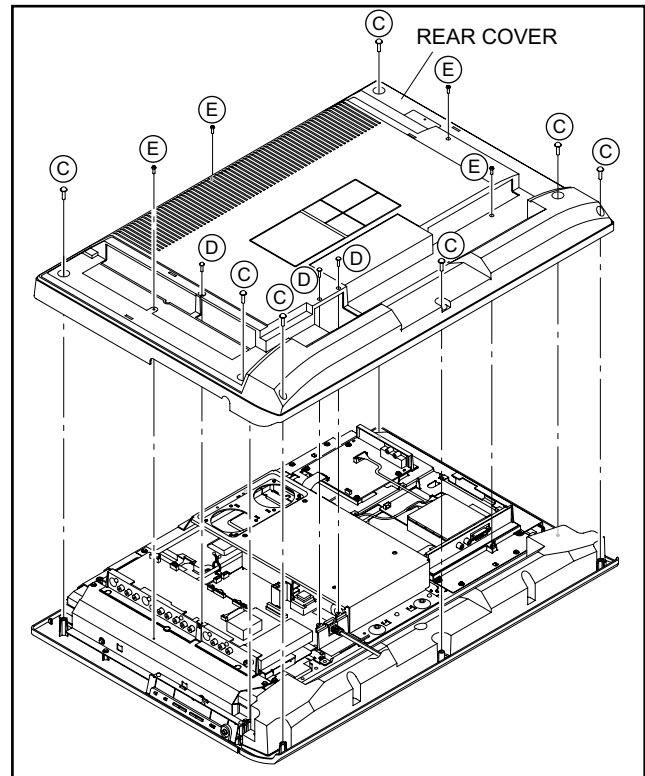


Fig.3-1-2

3.1.3 REMOVING THE FAN BRACKET / REGULATOR PWB / POWER CORD

- Remove the STAND.
- Remove the REAR COVER.
- (1) Pull out the wire of COOLING FAN (the connector [Y] of the POWER PWB).
- (2) Remove the 5 screws [F], and remove the FAN BRACKET.
- (3) Remove the REGULATOR PWB.
- (4) Pull out the POWER CORD.
- (5) Remove 1 screw [G], and remove the POWER CORD HOLDER.

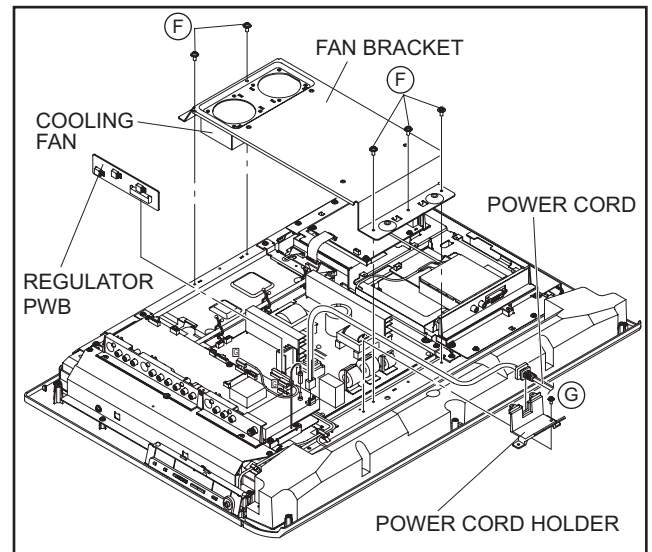


Fig.3-1-3

3.1.4 REMOVING THE RECEIVER PWB

- Remove the STAND.
- Remove the REAR COVER.
- (1) Remove the 3 screws [H] and 3 screws [J] (6 screws in total). Then, remove the TERMINAL BASE.
- (2) Remove the 6 screws [K], and remove the RECEIVER PWB.

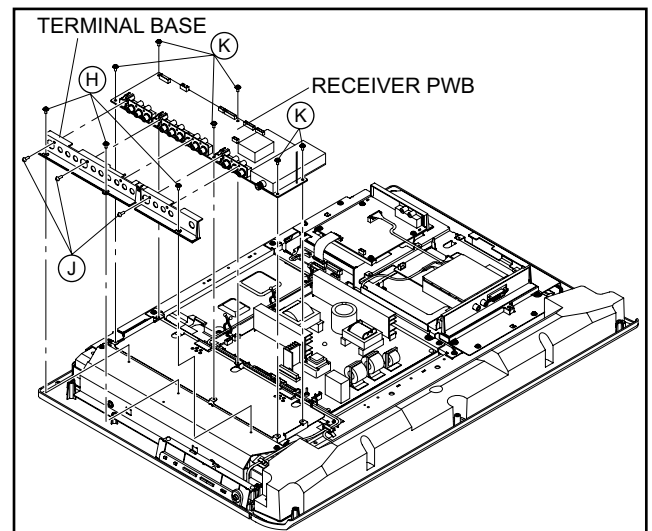


Fig.3-1-4

3.1.5 REMOVING THE FRONT CONTROL PWB CONTROL / FRONT SENSOR PWB

- Remove the STAND.
- Remove the REAR COVER.
- (1) Remove the 2 screws [L], and remove the CONTROL KNOB.
- (2) Remove the 3 screws [M], and remove the FRONT CONTROL PWB.
- (3) Remove the FRONT SENSOR PWB.

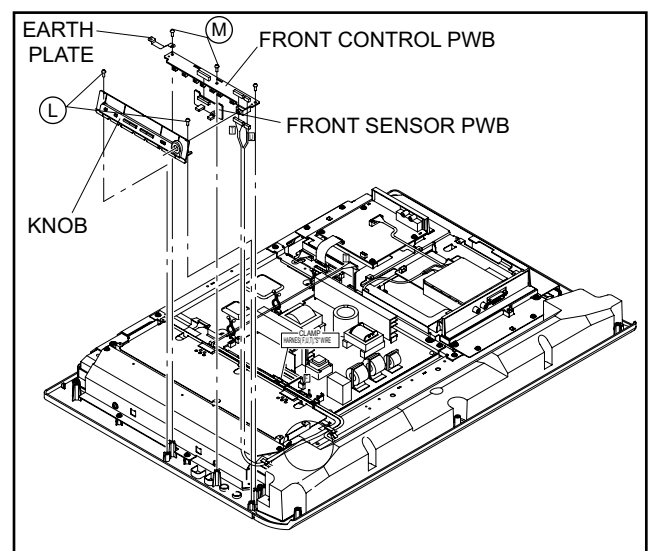


Fig.3-1-5

3.1.6 REMOVING THE VIDEO PWB / DIGITAL INPUT MODULE PWB

- Remove the STAND.
 - Remove the REAR COVER.
- (1) Remove the 1 screw [N] and 1 screw [P]. Then, remove the JACK BASE.
 - (2) Remove the 4 screws [Q], and remove the VIDEO PWB.
 - (3) Remove the 2 screws [R], and remove the DIGITAL INPUT MODULE BASE.
 - (4) Remove the 4 screws [S], and remove the DIGITAL INPUT MODULE PWB.

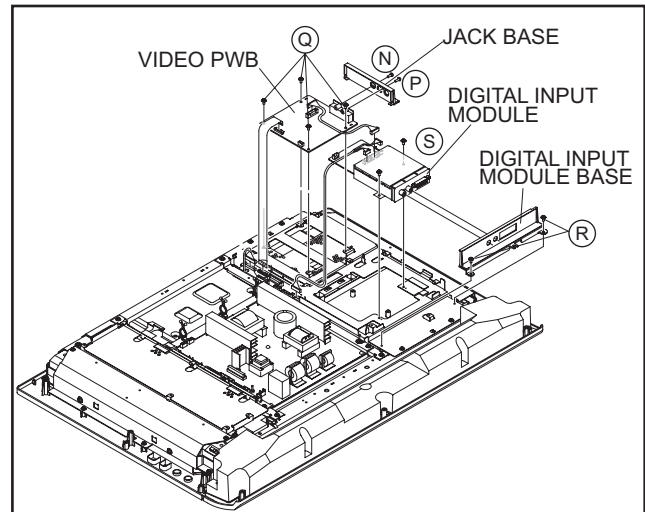
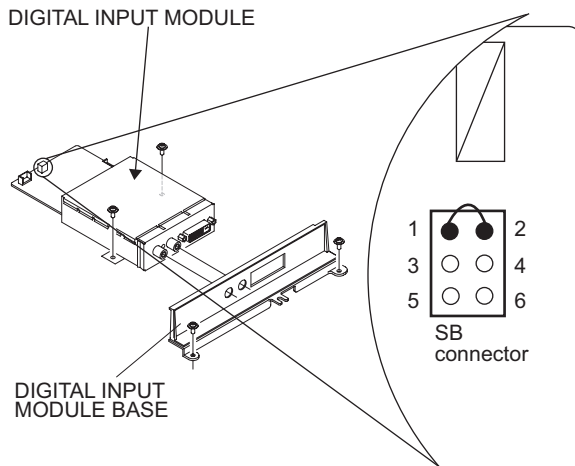


Fig.3-1-6

CAUTION AT DISASSEMBLY



- Prior to disassembly, unplug the power cord from the AC outlet without fail. (Turn the power "off".)
 - Short the SB connector [1] pin and [2] pin of the DIGITAL INPUT MODULE. (At the time of assembling)
 - Before the rear panel is inserted into the cabinet, release the short-circuit between the SB connector [1] pin and [2] pin of the DIGITAL INPUT MODULE.
 - After releasing the short-circuit between the SB connectors, do not turn the power on until the rear panel is inserted into the cabinet.
- * Negligence in carrying out the above steps may cause the inactivation of the TV.

3.1.7 REMOVING THE MI-COM & DIST MODULE PWB

- Remove the STAND.
 - Remove the REAR COVER.
 - DIGITAL INPUT MODULE PWB
- (1) Remove the 7 screws [T], and remove the VIDEO PWB BRACKET.
 - (2) Remove the 4 screws [U], and remove the MI-COM & DIST MODULE PWB from the VIDEO PWB BRACKET.

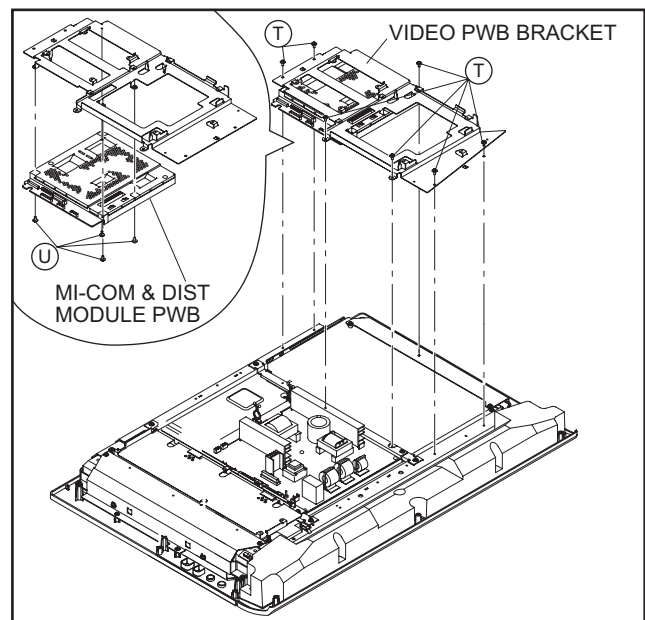


Fig.3-1-7

3.1.8 REMOVING THE POWER PWB

- Remove the STAND.
- Remove the REAR COVER.
- Remove the FAN BRACKET.
- Remove the POWER CORD.
- Remove the RECEIVER PWB.
 - (1) Remove the 4 screws [X], and remove the AV JACK BRACKET.
 - (2) Remove the 6 screws [Y], and remove the POWER PWB.
 - (3) Remove the 6 screws [Z], and remove the CHASSIS BASE.

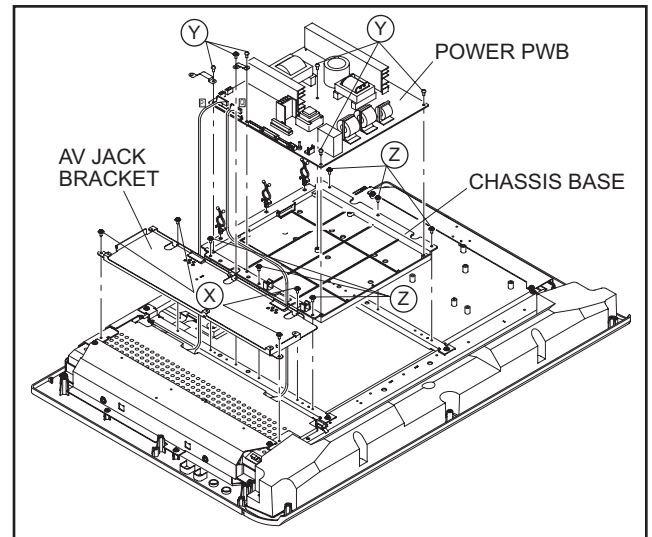


Fig.3-1-8

3.1.9 REMOVING THE SPEAKER

- Remove the STAND.
- Remove the REAR COVER.
- Remove the POWER CORD.
 - (1) Remove the 5 screws [a], and remove the SPEAKER BOX.

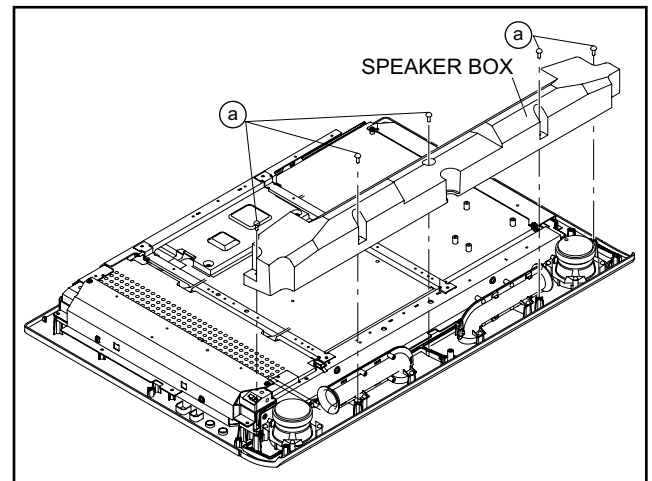


Fig.3-1-9A

- (2) Remove the 4 screws [b], and remove the SPEAKER (L / R).
- (3) Remove the 4 screws [c], and remove the DUCT COVER/ DUCT BASE.

NOTE:

Since the speaker is attached in a certain direction, attach the speaker in the same correct direction as it has been attached.

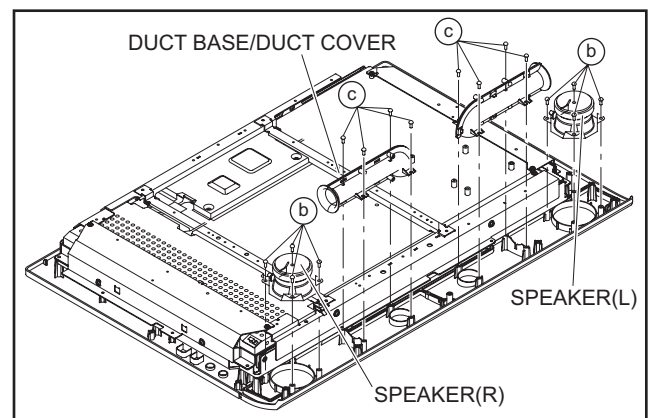


Fig.3-1-9B

3.1.10 REMOVING THE LCD PANEL UNIT

- Remove the STAND.
 - Remove the REAR COVER.
 - Remove the POWER CORD.
 - Remove the RECEIVER.
 - Remove the FRONT CONTROL PWB.
 - Remove the FRONT SENSOR PWB.
 - Remove the VIDEO PWB.
 - Remove the DIGITAL INPUT MODULE PWB.
 - Remove the MI-COM & DIST MODULE PWB.
 - Remove the POWER PWB.
- (1) Remove the 8 screws [d] and the 2 screws [e] (ten screws in total). Then, remove the LCD PANEL UNIT.

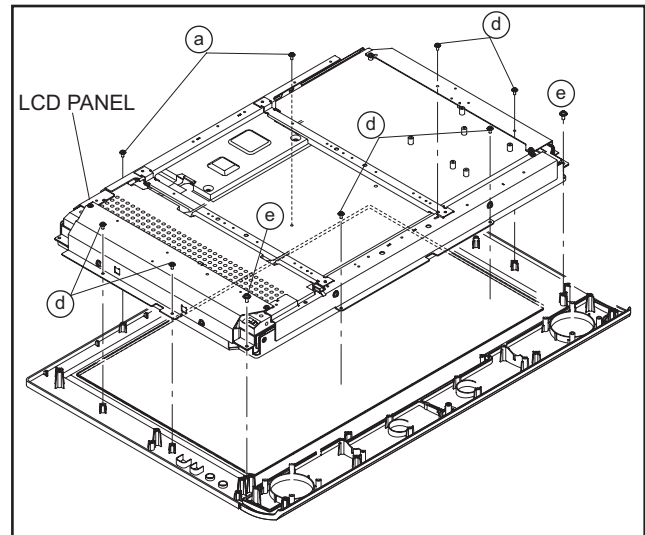


Fig.3-1-10A

- (2) Remove the 2 screws [f], and remove the CENTER FRAME (x2).

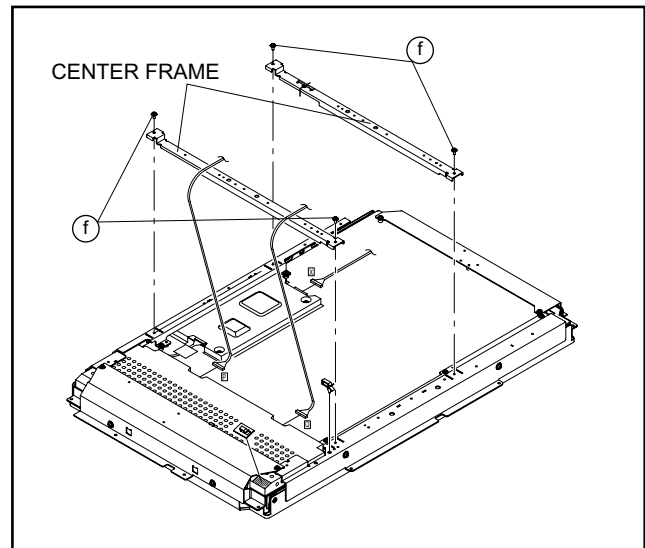


Fig.3-1-10B

- (3) Remove the 2 screws [g] and the 2 screws [h] (4 screws in total). Then, remove the FRAME (R).
- (4) Remove the 2 screws [g] and the 2 screws [h] (4 screws in total). Then, remove the FRAME (L).
- (5) Remove the 2 screws [j], and remove the TOP FRAME.
- (6) Remove the 3 screws [k] and the 2 screws [m] (5 screws in total). Then, remove the BOTTM FRAME.

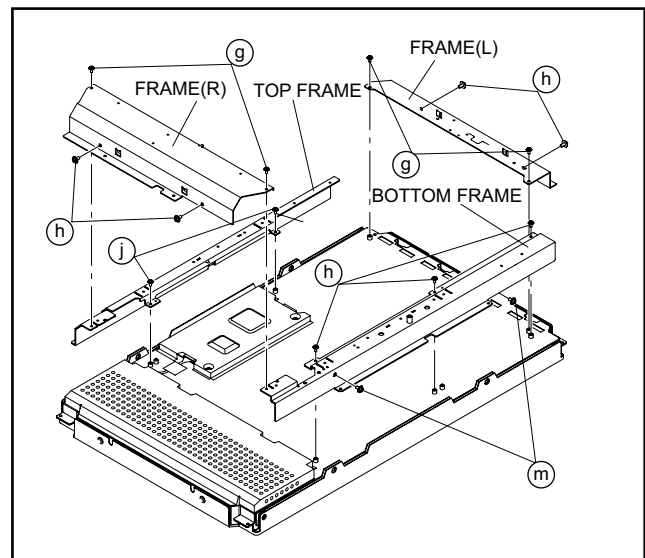


Fig.3-1-10c

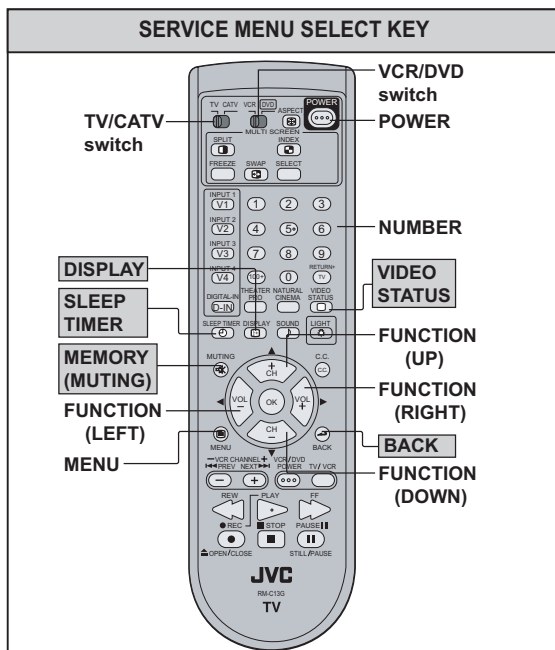
3.2 MEMORY IC REPLACEMENT

This memory IC stores data for proper operation of the video and deflection circuits.

When replacing, be sure to use an IC containing this (initial value) data.

3.2.1 MEMORY IC REPLACEMENT PROCEDURE

- (1) Power off
Switch off the power and disconnect the power cord from the wall outlet.
- (2) Replace the memory IC
Initial value must be entered into the new IC.
- (3) Power on
Connect the power cord to the wall outlet and switch on the power.
- (4) SERVICE MODE setting
Before entering the SERVICE MODE, confirm that the setting of TV/CATV SW of the REMOTE CONTROL UNIT is at the "TV" side and the setting of VCR/DVD SW of the REMOTE CONTROL UNIT is at the "VCR" side. If the switches have not been properly set, you cannot enter the SERVICE MODE.
 - a) Press [SLEEP TIMER] key and, while the indication of SLEEP TIMER 0 MIN is being displayed, press [DISPLAY] key and [VIDEO STATUS] key on the remote control unit (Fig.2) simultaneously.
 - b) The SERVICE MODE screen of Fig.1 is displayed.
 - c) Verify what to set in the SERVICE MODE, and set whatever is necessary (Fig.1).
Refer to the SERVICE ADJUSTMENT for setting.
 - d) Press the [BACK] key twice to return normal screen.
- (5) Receive channel setting
Refer to the OPERATING INSTRUCTIONS (USER'S GUIDE) and set the receive channels (Channels Preset) as described.
- (6) User settings
Check the user setting items according to after page.
Where these do not agree, refer to the OPERATING INSTRUCTIONS (USER'S GUIDE) and set the items as described.



SERVICE MENU

SERVICE MENU	
1. PICTURE/SOUND	7. PANEL
2. YC SEP	8. PP
3. WHITE BALANCE	9. IP
4. MEMORY SETUP	0. HDMI
5. DD/CM	
6.	

3.2.2 SERVICE ADJUSTMENT ITEM

Setting items	Settings	Item No.
1. PICTURE/SOUND (sound and picture setting)		
Sound circuits (A)	Fixed	A01~A27
Video circuits (S)	Adjust	S01~S99
Deflection circuits (D)	Fixed	D01~D32
Factory setting items (F)	Adjust	F01~F59
2. YC SEP (3-dimensional YC separation setting)		
	Adjust	YCM001~YCM185
	Fixed	YCS001~YCS114
3. WHITE BALANCE [Can not adjust]		
4. MEMORY SETUP (Memory data edit) [Do not adjust]		
5. RF AFC: AFC setting (Automatically set) [Do not adjust]		
6. DD/CM (Panel image processing setting)		
	Adjust	DDT01~DDT34
	Fixed	CMT01~CMT57
7. PANEL (Panel power limit control) [Do not adjust]		
	Fixed	PDA001~PDA012
8. PP (Multi-screen processing setting)		
	Adjust	ADM001~ADM034
	Fixed	PPA001~PPA008
	Fixed	PPB001~PPB036
	Fixed	PPC001~PPC008
	Fixed	PPD001~PPD025
9. IP (DIST processing setting) [Do not adjust]		
	Fixed	IPA001~IPA120
	Fixed	IPB001~IPB079
	Fixed	IPC001~IPC044
	Fixed	IPD001~IPD026
	Fixed	IPE001~IPE015
0. HDMI (Digital input process setting) [Do not adjust]		
	Fixed	HDM001~HDM080
	Fixed	RHD001~RHD170

3.2.3 SETTINGS OF FACTORY SHIPMENT

3.2.3.1 BUTTON OPERATION

Setting item	Setting position
INPUT	TV
CHANNEL	1
VOLUME	10
ASPECT	PANORAMA

3.2.3.2 REMOTE CONTROL DIRECT OPERATION

Setting item	Setting position
INPUT	TV
CHANNEL	CABLE-02
VOLUME	10
MUTING	OFF
DISPLAY	OFF
SOUND	AHS OFF
	BBE ON
	AHB ON
ASPECT	PANORAMA
OFF TIMER	OFF
VIDEO STATUS	DINAMIC
NATURAL CINEMA	AUTO

3.2.3.3 REMOTE CONTROL MENU OPERATION

(1) PICTURE ADJUSTMENT

Customers can adjust the picture setting of menu screen as their own like but the picture standard value during factory shipment is as below.

■ NTSC MODE

Setting item	PICTURE	BRIGHT	COLOR	TINT	DETAIL	COLOR TEMPERATURE	DIGI. NOISE CLEAR	COLOR MANAGEMENT
DINAMIC	+07	+05	00	00	+04	HIGH	OFF	VIVID
STANDARD	00	00	00	00	00	LOW	OFF	VIVID
GAME	-05	00	+05	00	-03	HIGH	OFF	VIVID
THEATER	00	00	00	00	00	HIGH	OFF	VIVID

■ HD MODE

Setting item	PICTURE	BRIGHT	COLOR	TINT	DETAIL	COLOR TEMPERATURE	DIGI. NOISE CLEAR	COLOR MANAGEMENT
DINAMIC	+04	+06	-08	00	+02	HIGH	OFF	VIVID
STANDARD	00	00	00	00	00	LOW	OFF	VIVID
GAME	-05	00	+05	00	00	HIGH	OFF	VIVID
THEATER	00	00	00	00	00	LOW	OFF	VIVID

(2) SOUND

Setting item	Setting position
TREBLE	00
BASS	00
BALANCE	00
MTS	STREO

(3) SETTINGS

Setting item	Setting position	Setting item	Setting position
POSITION ADJUSTMENT	Center	NOISE MUTING	ON
VIDEO STATUS	DYNAMIC	FRONT PANEL LOCK	OFF
XDS ID	ON	AUTO SHUT OFF	OFF
POWER INDICATOR	HIGH	DIGITAL-IN	SIZE-1
TV SPEAKER	ON	V-CHIP	OFF
AUDIO OUTPUT	FIX	AUTO DEMO	OFF
LANGUAGE	ENG	IMAGE SHIFT	STD
CLOSED CAPTION	OFF	V1 SMART INPUT	OFF

3.3 REPLACEMENT OF CHIP COMPONENT

3.3.1 CAUTIONS

- (1) Avoid heating for more than 3 seconds.
- (2) Do not rub the electrodes and the resist parts of the pattern.
- (3) When removing a chip part, melt the solder adequately.
- (4) Do not reuse a chip part after removing it.

3.3.2 SOLDERING IRON

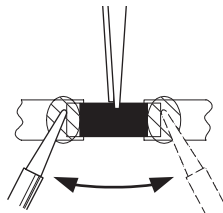
- (1) Use a high insulation soldering iron with a thin pointed end of it.
- (2) A 30w soldering iron is recommended for easily removing parts.

3.3.3 REPLACEMENT STEPS

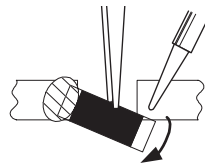
1. How to remove Chip parts

[Resistors, capacitors, etc.]

- (1) As shown in the figure, push the part with tweezers and alternately melt the solder at each end.



- (2) Shift with the tweezers and remove the chip part.

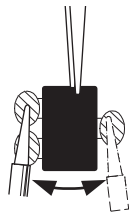


[Transistors, diodes, variable resistors, etc.]

- (1) Apply extra solder to each lead.



- (2) As shown in the figure, push the part with tweezers and alternately melt the solder at each lead. Shift and remove the chip part.



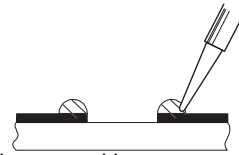
NOTE :

After removing the part, remove remaining solder from the pattern.

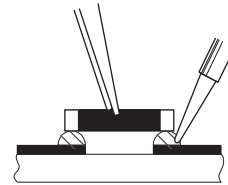
2. How to install Chip parts

[Resistors, capacitors, etc.]

- (1) Apply solder to the pattern as indicated in the figure.

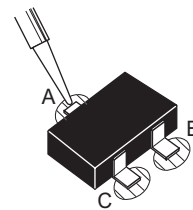


- (2) Grasp the chip part with tweezers and place it on the solder. Then heat and melt the solder at both ends of the chip part.

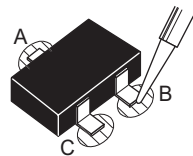


[Transistors, diodes, variable resistors, etc.]

- (1) Apply solder to the pattern as indicated in the figure.
- (2) Grasp the chip part with tweezers and place it on the solder.
- (3) First solder lead **A** as indicated in the figure.



- (4) Then solder leads **B** and **C**.



SECTION 4

ADJUSTMENT

4.1 ADJUSTMENT PREPARATION

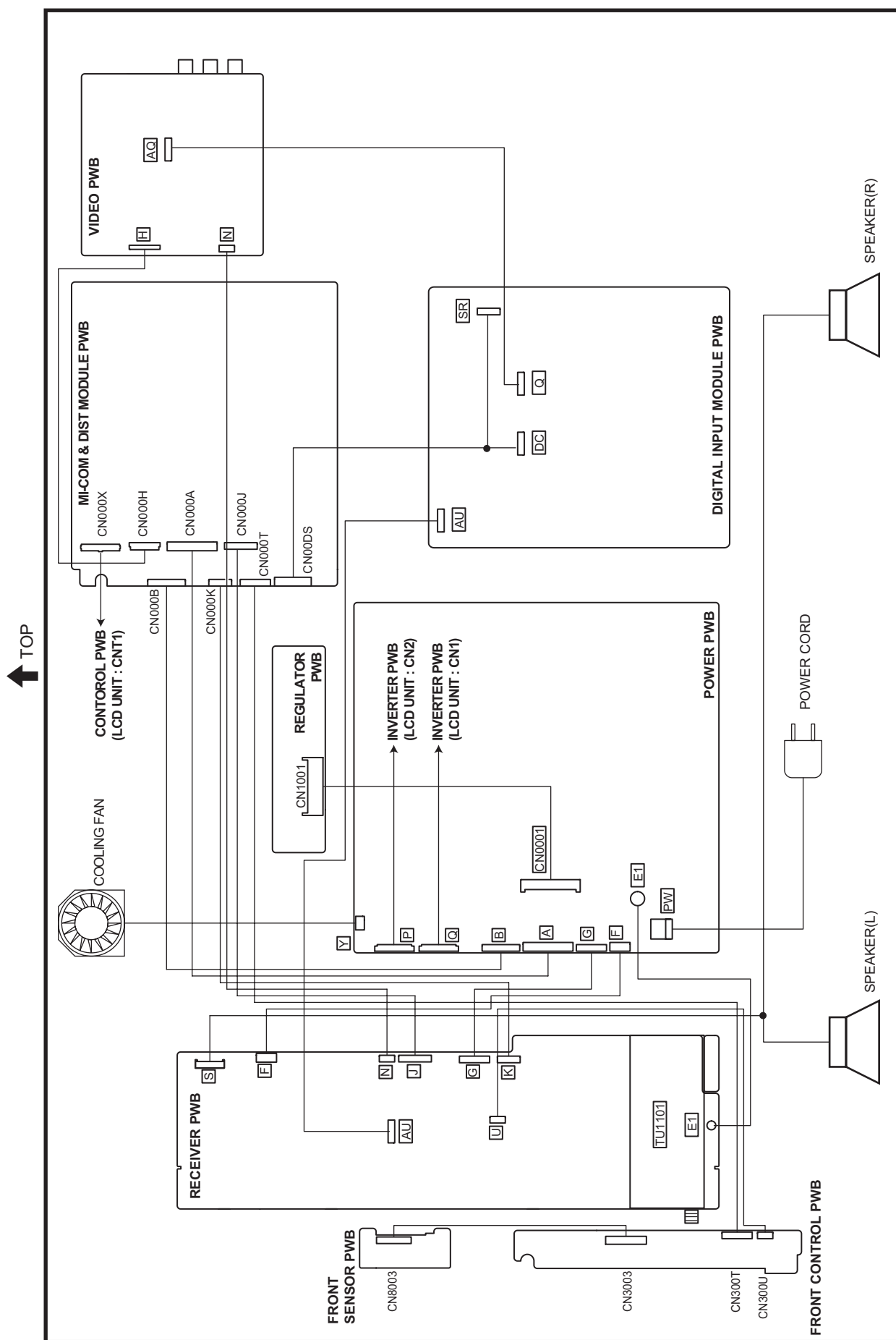
- (1) You can make the necessary adjustments for this unit with either the Remote Control Unit or with the adjustment tools and parts as given below.
- (2) Adjustment with the Remote Control Unit is made on the basis of the initial setting values, however, the new setting values which set the screen to its optimum condition may differ from the initial settings.
- (3) Make sure that AC power is turned on correctly.
- (4) Turn on the power for set and test equipment before use, and start the adjustment procedures after waiting at least 30 minutes.
- (5) Unless otherwise specified, prepare the most suitable reception or input signal for adjustment.
- (6) Never touch any adjustment setting value which are not specified in the list for this adjustment.
- (7) Presetting before adjustment
Unless otherwise specified in the adjustment instructions, preset the following functions with the remote control unit:

Setting item	Settings
VIDEO STATUS	STANDARD
BRIGHT / CONTRAST / COLOR / TINT	Center
COLOR TEMPERATURE	LOW
DIGI. NOISE CLEAR	OFF
COLOR MANEGMENT	STANDARD
NATURAL CINEMA	OFF
DIGITAL VNR	OFF
TREBLE / BASS / BALANCE	00
BBE	OFF
AHS	OFF
AHB	OFF

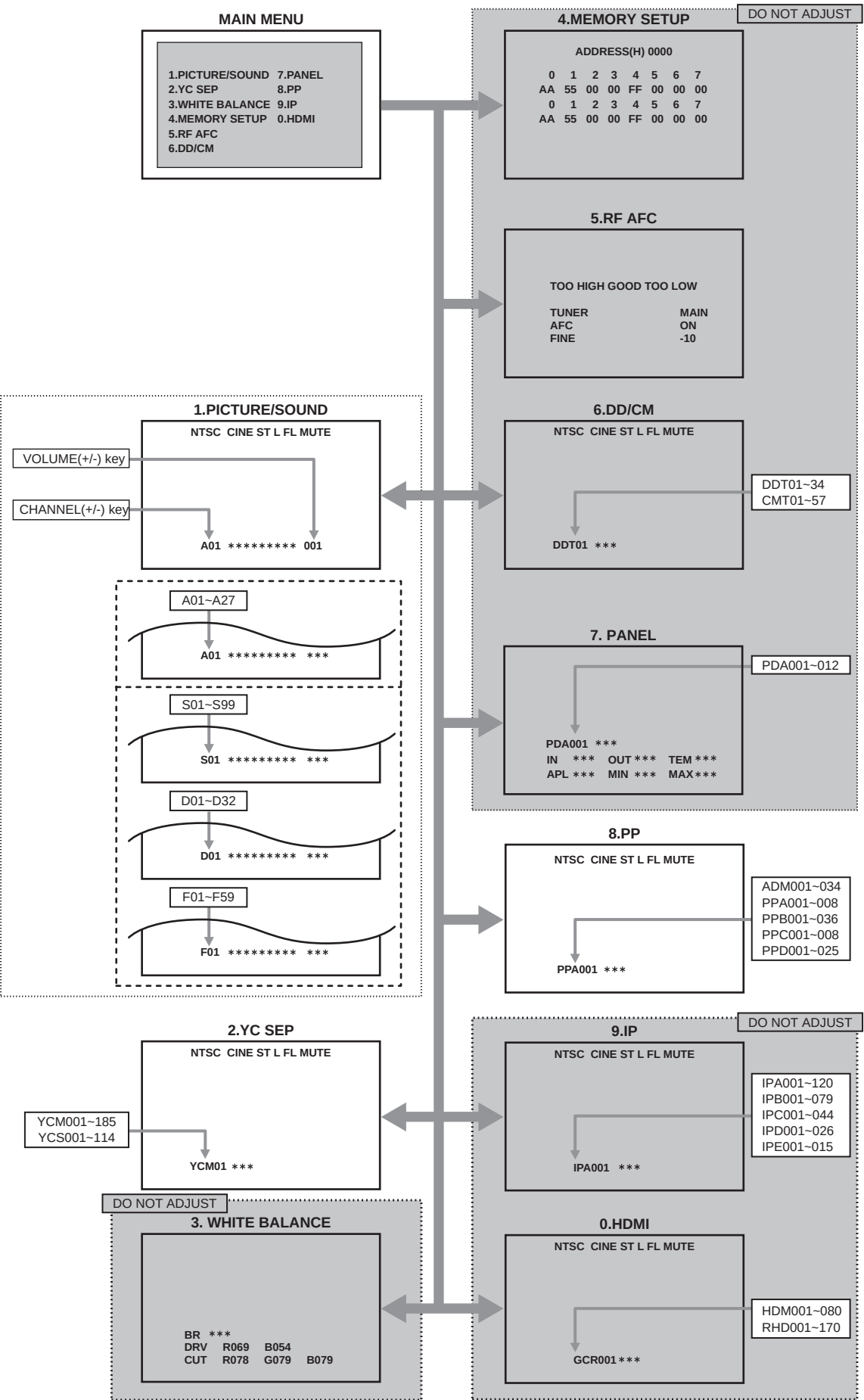
4.2 MEASURING INSTRUMENT AND FIXTURES

- (1) DC voltmeter (or digital voltmeter)
- (2) Oscilloscope
- (3) Signal generator (Pattern generator)
[NTSC / 525i / 525p / 750p / 1125i / DIGITAL]
- (4) TV audio multiplex signal generator
- (5) Remote control unit

4.3 ADJUSTMENT LOCATION & WIRING



4.4 BASIC OPERATION OF SERVICE MODE



4.4.1 TOOL OF SERVICE MODE OPERATION

Operate the SERVICE MODE with the REMOTE CONTROL UNIT.

4.4.2 SERVICE MODE ITEMS

In general, basic setting (adjustments) items or verifications are performed in the SERVICE MODE.

1.PICTURE / SOUND	This sets the setting values of the VIDEO, AUDIO and DEFLECTION circuits.
2.YC SEP	This is used when the YC separation circuit is adjusted.
3.WHITE BALANCE	This sets the setting values of the WHITE BALANCE. [Do not adjust]
4.MEMORY SETUP	This sets the setting values of the MEMORY ADDRESS. [Do not adjust]
5.RF AFC	This is used when the IF VCO is adjusted. [Do not adjust]
6.DD/CM	This sets the setting values of the panel image processing.
7.PANEL	This sets the setting values of the panel power limit control.
8.PP	This sets the setting value of the output of MULTI-PICTURE circuit.
9.IP	This sets the setting value of the DIST circuit. [Do not adjust]
0.HDMI	This sets the setting value of the DIGITAL INPUT MODULE circuit. [Do not adjust] .

4.4.3 HOW TO ENTER THE SERVICE MODE

NOTE:

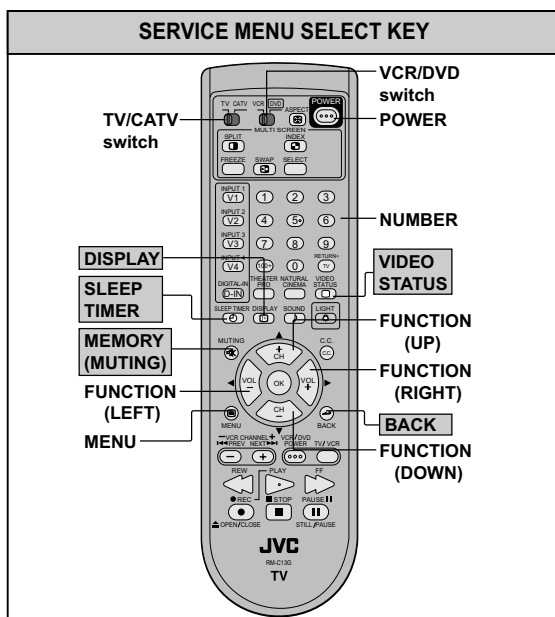
Ensure that the cursor (arrow) of the User Menu screen is pointing at Picture Control.

Before entering the SERVICE MODE, confirm that the setting of TV / CATV switch of the REMOTE CONTROL UNIT is at the "TV" side and the setting of VCR / DVD switch is at the "VCR" side. If the switches have not been properly set, you cannot enter the SERVICE MODE.

- (1) Set to 0 minutes using the [SLEEP TIMER] key.
- (2) Press the [VIDEO STATUS] key and [DISPLAY] key simultaneously, then enter the SERVICE MODE mode.
- (3) When the Main Menu is displayed, press any key of the [0] to [9] key to enter the corresponding menu mode.
*Press any of the [0] to [9] keys before the SERVICE MODE mode disappears.
- (4) Select the service item using the [CH +] / [CH -] key.
- (5) Set the value using the [VOL +] / [VOL -] key.
- (6) Press the [MUTING] key to save the value.

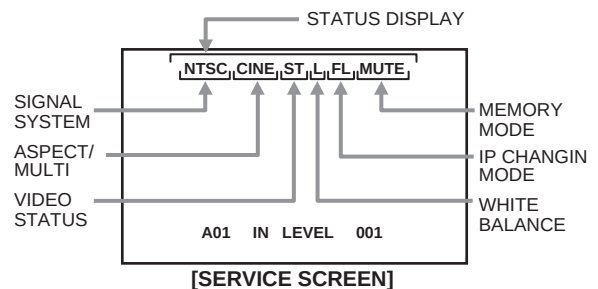
4.4.4 HOW TO EXIT THE SERVICE MODE

Press the [BACK] key to exit the Service mode.



4.4.5 DESCRIPTION OF STATUS DISPLAY

The status display on the upper part of the SERVICE MODE screen is common (to all models).



(1) SIGNAL SYSTEM

- NTSC : Composite, S-video (Y / C), RF, No signal.
- DVD : 525i (component)
- ED : 525p
- HD : 1125i
- 750p : 750p
- HED1 : DIGITAL 525p SIZE1
- HED2 : DIGITAL 525p SIZE2
- HHH : DIGITAL 1125i
- H750 : DIGITAL 750p

(2) ASPECT / MULTI

ONE SCREEN

- FULL : FULL
- PANO : PANORAMA
- CINE : CINEMA
- REGU : REGULAR

MULTI SCREEN

- M1 : One screen (for adjustment)
- M2-1 : SPLIT (4 : 3)
- M2-2 : SPLIT (16 : 9)
- M4 : POP
- M12 : INDEX

(3) VIDEO STATUS

ST : STANDARD
DA : DYNAMIC
TH : THEATER
GA : GAME

(4) WHITE BALANCE

H : HIGH
L : LOW

(5) IP CHANGING MODE

FL : FRAME
L1 : LINE
23 : COMPULSORY NATURAL CINEMA IN

(6) MEMORY MODE

MUTE : Press [MUTING] key
DIR : Change data then memory at the same time.

4.4.6 SERVICE MODE SETTING

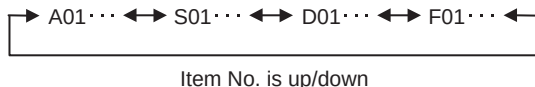
1. PICTURE/SOUND

AUDIO, VIDEO, DEFLECTION data adjustment.

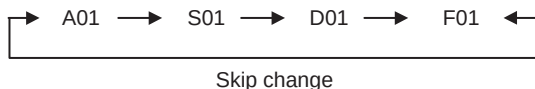
(1) SETTING ITEM No.

A : AUDIO
S : SIGNAL
D : DEFLECTION
F : FACTORY SETTING

- Press [CH+] / [CH-] key



- Press [SLEEP TIMER] key



(2) SETTING ITEM NAME

Describe setting item name

(3) SETTING VALUE

Set the setting value.

- Press [VOL+] / [VOL-] key
Set the setting value.
- Press [MUTING] key
Memorize the data.

NOTE:

Setting for any of the following items that is not included in the "ADJUSTMENT PROCEDURE" section found in the later part of this manual will not be performed in servicing.

2. YC SEP (3D Y/C separation setting)

[Do not change settings of items that are not included in the "ADJUSTMENT PROCEDURE" section.]

Sets output data to the 3D Y/C separation circuit.

- Press [CH+] / [CH-] key
For scrolling up/down the item codes.
- Press [VOL+] / [VOL-] key
For scrolling up/down the data values.

3. WHITE BALANCE (White balance setting)

[Setting for this item is not required in servicing.]

4. MEMORY SETUP (Memory setting)

[Do not change settings]

5. RF AFC

Setting for this item is not required in servicing.

6. DD/CM

[Do not change settings]

Adjustment of color management and device driver

7. PANEL (Panel power limit control)

[Do not change settings]

8. PP (Multi-screen processing setting)

[Do not change settings of items that are not included in the "ADJUSTMENT PROCEDURE" section.]

Sets output data to the multi-screen processing circuit.

- Press [CH+] / [CH-] key
For scrolling up/down the item codes.
- Press [VOL+] / [VOL-] key
For scrolling up/down the data values.

9. IP (DIST setting)

[Do not change settings]

Sets output data to the DIST circuit.

0. HDMI

[Do not change settings]

Sets output data to the DIGITAL INPUT circuit

4.5 INITIAL SETTING VALUES IN THE SERVICE MODE

- Perform fine-tuning based on the "initial values" using the remote control when in the Service mode.
- The "initial values" serve only as an indication rough standard and therefore the values with which optimal display can be achieved may be different from the default values. But, don't change the values that are not written in "ADJUSTMENT PROCEDURE". They are fixed values.

NOTE:

As for the items whose settings are "Fixed" in Table 1 in "3.3 MEMORY IC REPLACEMENT", the following tables show initial values in NTSC signal input mode. As for the items whose conditions of SETTING VALUE are not written in the following tables, the following tables show initial values in NTSC signal input mode.

4.5.1 [1.PICTURE/SOUND]

Item No.	Item	Variable range	Setting value
A01	(Not display)	000~007	001
A02	(Not display)	000~007	001
A03	(Not display)	000~007	001
A04	(Not display)	000~007	000
A05	(Not display)	000~015	003
A06	(Not display)	000~015	004
A07	(Not display)	000~015	006
A08	(Not display)	000~015	003
A09	(Not display)	000~007	006
A10	(Not display)	000~007	004
A11	(Not display)	000~063	063
A12	(Not display)	000~063	063
A13	(Not display)	000~003	000
A14	(Not display)	000~007	000

Item No.	Item	Variable range	Setting value
A15	(Not display)	000~003	000
A16	(Not display)	000~003	000
A17	(Not display)	000~003	000
A18	IN LEVEL	000~015	007
A19	LOW SEP	000~063	026
A20	HI SEP	000~063	063
A21	(Not display)	000~001	(Not used)
A22	(Not display)	000~001	(Not used)
A23	(Not display)	000~001	(Not used)
A24	(Not display)	000~001	(Not used)
A25	(Not display)	000~001	(Not used)
A26	(Not display)	000~001	(Not used)
A27	(Not display)	000~001	(Not used)

Item No.	Item	Variable range	Setting value							
			NTSC		525i		525p		750p/1125i	
			STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER
S01	COLOR	000~255	163	122	163	121	163	124	155	146
S02	TINAD	-127~128	000	000	000	000	000	000	000	000
S03	OF COLOR	-127~128	000	000	000	000	000	000	000	000
S04	OF TINAD	-127~128	000	000	000	000	000	000	000	000
S05	BRIG	000~255	048	060	048	060	048	060	036	043
S06	CONT	000~255	126	126	126	126	126	126	128	128
S07	OF BRIG	-127~128	000	000	000	000	000	000	000	000
S08	OF CONT	-127~128	000	000	000	000	000	000	000	000
S09	BYGN	000~255	133	117	125	116	125	116	147	118
S10	OF BYGN	-127~128	000	000	000	000	000	000	000	000
S11	RYAXIS	-127~128	+006	000	+006	000	+006	000	000	000
S12	MIX	000~003	000	000	000	000	000	000	001	001
S13	RDRV	000~255	255	255	255	255	255	255	246	246
S14	RDRV	-127~128	000	000	000	000	000	000	000	000
S15	GDRV	000~255	254	254	254	254	254	254	255	255
S16	GDRV	-127~128	000	-038	000	-038	000	-038	000	-027
S17	BDRV	000~255	255	255	255	255	255	255	225	225
S18	BDRV	-127~128	000	-043	000	-043	000	-043	000	-038
S19	CUTR	000~255	128	128	128	128	128	128	128	128

Item No.	Item	Variable range	Setting value							
			NTSC		525i		525p		750p/1125i	
			STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER
S20	OF CUTR	-127~128	000	+004	000	+004	000	+004	000	000
S21	CUTG	000~255	128	128	128	128	128	128	128	128
S22	OF CUTG	-127~128	000	000	000	000	000	000	000	000
S23	CUTB	000~255	128	128	128	128	128	128	128	128
S24	OF CUTB	-127~128	000	000	000	000	000	000	000	000
S25	CUTR	000~001	000	000	000	000	000	000	000	000
S26	CUTG	000~001	000	000	000	000	000	000	000	000
S27	CUTB	000~001	000	000	000	000	000	000	000	000
S28	BTHN	000~001	000	000	000	000	000	000	001	000
S29	BCALM	000~001	000	000	000	000	000	000	000	000
S30	BKAKOU	000~031	000	012	000	000	000	000	000	000
S31	BLIM	000~063	010	000	010	000	010	000	002	000
S32	BSTPO	000~063	050	063	050	063	050	063	018	063
S33	BKAKON	000~001	001	001	001	001	001	001	001	001
S34	WTHN	000~001	001	001	001	001	001	001	001	001
S35	WCALM	000~001	000	000	000	000	000	000	000	001
S36	WKAKOU	000~031	000	000	000	000	000	000	000	000
S37	WLIM	000~255	220	213	220	213	220	213	220	225
S38	WSTPO	000~063	050	036	050	036	050	036	050	050
S39	WPEAK	000~063	060	063	060	063	060	063	060	060
S40	WKAKON	000~001	001	001	001	001	001	001	001	001
S41	WGAINC	000~001	000	001	001	001	001	001	001	001
S42	GAINB	000~003	001	000	001	000	001	000	002	000
S43	SLIC	000~031	009	009	009	009	009	009	009	009
S44	APG	000~003	001	001	001	001	001	001	001	001
S45	GAINA	000~003	002	002	002	002	002	002	002	002
S46	(Not used)	000~015	015	015	015	015	015	015	015	015
S47	(Not used)	000~015	015	015	015	015	015	015	015	015
S48	DCTRAN	000~015	015	015	015	015	015	015	015	015

Item No.	Item	Variable range	Setting value	
			MULTI-SCREEN	ASPECT
			SPLIT	REGULAR
S49	HSTR	000~001	001	000
S50	HSTR	000~255	010	018
S51	HEND	000~001	000	000
S52	HEND	000~255	087	079
S53	VSTR	000~001	000	000
S54	VSTR	000~255	026	006
S55	VEND	000~001	000	000
S56	VEND	000~255	077	096
S57	BHSTR	000~255	000	000
S58	BHSTR	000~015	000	000
S59	BHEND	000~255	000	000

Item No.	Item	Variable range	Setting value	
			MULTI-SCREEN	ASPECT
			SPLIT	REGULAR
S60	BHEND	000~015	000	000

Data of the setting value is selected in the order of "SPLIT" and "REGULAR".

Item No.	Item	Variable range	Setting value					
			NTSC		525i/525p		750p/1125i	
			STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER
S61	PLPOL2	000~001	001	001	001	001	001	001
S62	PLEV2	000~127	016	016	016	016	016	016
S63	PLPOL1	000~001	000	000	000	000	000	000
S64	PLEV1	000~127	000	000	000	000	000	000

Item No.	Item	Variable range	Setting value							
			NTSC				525i/525p		750p/1125i	
			MULTI-SCREEN		ASPECT					
			SPLIT		REGULAR					
			STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER
S65	MODC	000~003	002	002	002	002	002	002	002	002
S66	RMC	000~003	003	003	001	003	000	003	003	003
S67	RGA	000~003	003	003	003	003	002	003	003	003
S68	CLIP	000~015	000	000	000	000	000	000	000	000
S69	COR	000~063	019	019	019	019	019	019	019	019

Item No.	Item	Variable range	Setting value
S70	TINTON	001~001	001
S71	DRIVER	000~255	240
S72	DRIVEG	000~255	240
S73	DRIVEB	000~255	255
S74	EECONT	000~031	000
S75	EEBRT	000~031	000
S76	EETBRT	-127~128	000
S77	EETCONT	-127~128	000
S78	PICMAX	000~255	255
S79	PICMIN	000~255	000
S80	BRTMAX	000~255	255
S81	BRTMIN	000~255	000
S82	COLMAX	000~255	255
S83	COLMIN	000~255	000
S84	PWMDIM	000~255	216
S85	ADIM	000~255	127
S86	(Not display)	000~255	127
S87	(Not display)	000~007	003
S88	APLGAIN	000~007	000
S89	APLLIM	000~255	000
S90	ABSGAIN	000~127	000
S91	BLKGAIN	000~007	007

Item No.	Item	Variable range	Setting value
S92	BLKLIM	000~031	031
S93	WHTGAIN	000~007	007
S94	WHTLIM	000~031	031
S95	DCSTART	000~255	035
S96	DCGAIN	000~015	006
S97	DCLIM	000~063	035
S98	(Not display)	000~001	000
S99	(Not display)	000~003	000

Item No.	Item	Variable range	Setting value
D01	(Not display)	000~001	000
D02	(Not display)	000~001	000
D03	(Not display)	000~001	000
D04	(Not display)	000~001	000
D05	(Not display)	000~001	000
D06	(Not display)	000~001	000
D07	(Not display)	000~001	000
D08	(Not display)	000~001	000
D09	(Not display)	000~001	000
D10	(Not display)	000~001	000
D11	(Not display)	000~001	000
D12	(Not display)	000~001	000
D13	(Not display)	000~001	000
D14	(Not display)	000~001	000
D15	(Not display)	000~001	000
D16	(Not display)	000~001	000
D17	(Not display)	000~001	000
D18	(Not display)	000~001	000
D19	(Not display)	000~001	000
D20	(Not display)	000~001	000
D21	(Not display)	000~001	000
D22	(Not display)	000~001	000
D23	(Not display)	000~001	000
D24	(Not display)	000~001	000
D25	(Not display)	000~001	000
D26	(Not display)	000~001	000
D27	(Not display)	000~001	000
D28	(Not display)	000~001	000
D29	(Not display)	000~001	000
D30	(Not display)	000~001	000
D31	(Not display)	000~001	000
D32	(Not display)	000~001	000

Item No.	Item	Variable range	Setting value
F01	(Not display)	000~255	001
F02	(Not display)	000~255	000
F03	(Not display)	000~255	000
F04	(Not display)	000~255	032
F05	CATVMAX	000~001	000
F06	(Not display)	000~001	002
F07	(Not display)	000~255	027
F08	(Not display)	000~255	000
F09	AUTOCSR1	000~015	002
F10	AUTOCSR2	000~015	004
F11	AUTOCSR3	000~015	004
F12	AUTOCSR4	000~015	005
F13	AUTOCSR5	000~015	006
F14	AUTOCSR6	000~015	007
F15	AUTOCSR7	000~015	007
F16	(Not display)	000~127	070
F17	(Not display)	000~001	000
F18	FIX DATA	000~001	000
F19	(Not display)	000~001	000
F20	(Not display)	000~255	005
F21	(Not display)	000~255	002
F22	(Not display)	000~001	000
F23	(Not display)	000~255	000
F24	(Not display)	000~255	098
F25	(Not display)	000~255	006
F26	(Not display)	000~255	040
F27	(Not display)	000~255	040
F28	(Not display)	000~001	000
F29	(Not display)	000~001	000
F30	(Not display)	000~001	000
F31	(Not display)	000~001	000
F32	(Not display)	000~001	000
F33	(Not display)	000~001	000
F34	(Not display)	000~001	000
F35	(Not display)	000~001	000
F36	(Not display)	000~001	000
F37	(Not display)	000~001	000
F38	(Not display)	000~001	000
F39	(Not display)	000~001	000
F40	(Not display)	000~001	000

Item No.	Item	Variable range	Setting value				
			NTSC	525i	525p	750p	1125i
F41	(Not display)	000~003	000	002	002	002	002
F42	(Not display)	000~001	000	000	000	000	000
F43	(Not display)	000~063	039	040	037	024	024

Item No.	Item	Variable range	Setting value
F44	(Not display)	000~001	000
F45	(Not display)	000~007	000
F46	OUT LV.	000~255	090
F47	LIMIT B	000~255	000
F48	LIMIT A	000~255	000
F49	(Not display)	000~255	128
F50	(Not display)	000~255	128
F51	(Not display)	000~255	128
F52	(Not display)	000~255	255
F53	(Not display)	000~001	000
F54	(Not display)	000~001	000
F55	(Not display)	000~001	255
F56	(Not display)	000~001	141
F57	(Not display)	000~001	000
F58	(Not display)	000~001	141
F59	(Not display)	000~001	001
F60	(Not display)	000~001	000
F61	(Not display)	000~001	000
F62	(Not display)	000~001	015
F63	ATT GAIN	000~001	001
F64	(Not display)	000~001	073
F65	(Not display)	000~001	001
F66	(Not display)	000~001	000
F67	(Not display)	000~001	070
F68	(Not display)	000~001	000
F69	(Not display)	000~001	000
F70	(Not display)	000~001	000

4.5.2 [2.YC SEP]

NOTE :

Initial setting value is reference value at following condition.

INPUT SIGNAL : NTSC
ASPECT : FULL
MULTI-SCREEN : SINGLE
VIDEO STATUS : STANDARD
COLOR TEMPERATURE : LOW

Item No.	Item	Variable range	Setting value
YCM001	(Not display)	000~001	000
YCM002	(Not display)	000~001	000
YCM003	(Not display)	000~001	000
YCM004	(Not display)	000~003	001
YCM005	(Not display)	000~255	239
YCM006	(Not display)	000~003	001
YCM007	(Not display)	000~255	239
YCM008	(Not display)	000~001	000
YCM009	(Not display)	000~003	000
YCM010	(Not display)	000~001	000
YCM011	(Not display)	000~001	000
YCM012	(Not display)	000~001	000
YCM013	(Not display)	000~001	000
YCM014	(Not display)	000~003	000
YCM015	(Not display)	000~001	000
YCM016	(Not display)	000~003	000
YCM017	(Not display)	000~001	001
YCM018	(Not display)	000~003	000
YCM019	(Not display)	000~001	000
YCM020	(Not display)	000~001	000
YCM021	(Not display)	000~003	002
YCM022	(Not display)	000~007	004
YCM023	(Not display)	000~001	001
YCM024	(Not display)	000~001	000
YCM025	(Not display)	000~015	005
YCM026	(Not display)	000~015	003
YCM027	(Not display)	000~003	000
YCM028	(Not display)	000~007	004
YCM029	(Not display)	000~007	006
YCM030	(Not display)	000~003	000
YCM031	(Not display)	000~001	000
YCM032	(Not display)	000~003	003
YCM033	(Not display)	000~001	001
YCM034	(Not display)	000~001	001
YCM035	(Not display)	000~255	096
YCM036	(Not display)	000~001	001
YCM037	(Not display)	000~003	001
YCM038	(Not display)	000~127	062

Item No.	Item	Variable range	Setting value
YCM039	(Not display)	000~127	068
YCM040	(Not display)	000~003	002
YCM041	(Not display)	000~063	016
YCM042	(Not display)	000~001	000
YCM043	(Not display)	000~001	000
YCM044	(Not display)	000~255	182
YCM045	(Not display)	000~001	000
YCM046	(Not display)	000~255	127
YCM047	(Not display)	000~001	001
YCM048	(Not display)	000~001	001
YCM049	(Not display)	000~001	001
YCM050	(Not display)	000~001	001
YCM051	(Not display)	000~001	000
YCM052	(Not display)	000~001	000
YCM053	(Not display)	000~001	000
YCM054	(Not display)	000~003	003
YCM055	(Not display)	000~003	003
YCM056	(Not display)	000~003	000
YCM057	(Not display)	000~001	000
YCM058	(Not display)	000~001	001
YCM059	(Not display)	000~001	001
YCM060	(Not display)	000~001	000
YCM061	(Not display)	000~001	001
YCM062	(Not display)	000~015	001
YCM063	(Not display)	000~015	005
YCM064	(Not display)	000~003	000
YCM065	(Not display)	000~063	060
YCM066	(Not display)	000~063	040
YCM067	(Not display)	000~063	025
YCM068	(Not display)	000~063	012
YCM069	(Not display)	000~063	036
YCM070	(Not display)	000~063	031
YCM071	(Not display)	000~127	031
YCM072	(Not display)	000~001	001
YCM073	(Not display)	000~001	001
YCM074	(Not display)	000~063	024
YCM075	(Not display)	000~001	000
YCM076	(Not display)	000~001	001
YCM077	(Not display)	000~063	010
YCM078	(Not display)	000~063	001
YCM079	(Not display)	000~255	000
YCM080	(Not display)	000~255	000
YCM081	(Not display)	000~255	000
YCM082	(Not display)	000~255	000

Item No.	Item	Variable range	Setting value
YCM083	(Not display)	000~001	001
YCM084	(Not display)	000~063	012
YCM085	(Not display)	000~001	000
YCM086	(Not display)	000~001	000
YCM087	(Not display)	000~063	028
YCM088	(Not display)	000~001	001
YCM089	(Not display)	000~031	000
YCM090	(Not display)	000~003	000
YCM091	(Not display)	000~015	000
YCM092	(Not display)	000~015	000
YCM093	(Not display)	000~015	003
YCM094	(Not display)	000~063	002
YCM095	(Not display)	000~255	050
YCM096	(Not display)	000~001	000
YCM097	(Not display)	000~063	032
YCM098	(Not display)	000~015	008
YCM099	(Not display)	000~015	005
YCM100	(Not display)	000~015	008
YCM101	(Not display)	000~015	005
YCM102	(Not display)	000~015	000
YCM103	(Not display)	000~015	002
YCM104	(Not display)	000~015	008
YCM105	(Not display)	000~015	006
YCM106	(Not display)	000~255	010
YCM107	(Not display)	000~255	032
YCM108	(Not display)	000~255	031
YCM109	(Not display)	000~255	064
YCM110	(Not display)	000~001	000
YCM111	(Not display)	000~001	001
YCM112	(Not display)	000~001	001
YCM113	(Not display)	000~001	001
YCM114	(Not display)	000~001	000
YCM115	(Not display)	000~001	001
YCM116	(Not display)	000~001	000
YCM117	(Not display)	000~001	000
YCM118	(Not display)	000~001	001
YCM119	(Not display)	000~001	000
YCM120	(Not display)	000~001	000
YCM121	(Not display)	000~003	003
YCM122	(Not display)	000~001	000
YCM123	(Not display)	000~255	000
YCM124	(Not display)	000~001	000
YCM125	(Not display)	000~255	002
YCM126	(Not display)	000~001	000
YCM127	(Not display)	000~001	001

Item No.	Item	Variable range	Setting value
YCM128	(Not display)	000~001	001
YCM129	(Not display)	000~001	001
YCM130	(Not display)	000~003	001
YCM131	(Not display)	000~255	046
YCM132	(Not display)	000~255	152
YCM133	(Not display)	000~255	055
YCM134	(Not display)	000~007	001
YCM135	(Not display)	000~255	136
YCM136	(Not display)	000~001	000
YCM137	(Not display)	000~001	001
YCM138	(Not display)	000~007	003
YCM139	(Not display)	000~255	141
YCM140	(Not display)	000~007	000
YCM141	(Not display)	000~255	014
YCM142	(Not display)	000~001	000
YCM143	(Not display)	000~007	005
YCM144	(Not display)	000~255	128
YCM145	(Not display)	000~001	000
YCM146	(Not display)	000~001	001
YCM147	(Not display)	000~001	001
YCM148	(Not display)	000~001	001
YCM149	(Not display)	000~001	000
YCM150	(Not display)	000~001	000
YCM151	(Not display)	000~255	136
YCM152	(Not display)	000~001	001
YCM153	(Not display)	000~001	001
YCM154	(Not display)	000~001	001
YCM155	(Not display)	000~003	000
YCM156	(Not display)	000~015	015
YCM157	(Not display)	000~015	004
YCM158	(Not display)	000~001	001
YCM159	(Not display)	000~127	004
YCM160	(Not display)	000~001	001
YCM161	(Not display)	000~031	000
YCM162	(Not display)	000~001	000
YCM163	(Not display)	000~015	003
YCM164	(Not display)	000~007	002
YCM165	(Not display)	000~031	016
YCM166	(Not display)	000~255	235
YCM167	(Not display)	000~003	000
YCM168	(Not display)	000~063	000
YCM169	(Not display)	000~015	003
YCM170	(Not display)	000~015	003
YCM171	(Not display)	000~007	000
YCM172	(Not display)	000~255	096

Item No.	Item	Variable range	Setting value
YCM173	(Not display)	000~007	003
YCM174	(Not display)	000~255	056
YCM175	(Not display)	000~001	000
YCM176	(Not display)	000~001	000
YCM177	(Not display)	000~255	022
YCM178	(Not display)	000~001	001
YCM179	(Not display)	000~001	000
YCM180	(Not display)	000~007	003
YCM181	(Not display)	000~003	001
YCM182	(Not display)	000~003	001
YCM183	(Not display)	000~003	001
YCM184	(Not display)	000~003	001
YCM185	(Not display)	000~255	000

Item No.	Item	Variable range	Setting value
YCS001	(Not display)	000~001	000
YCS002	(Not display)	000~001	000
YCS003	(Not display)	000~001	000
YCS004	(Not display)	000~003	001
YCS005	(Not display)	000~255	239
YCS006	(Not display)	000~003	001
YCS007	(Not display)	000~255	239
YCS008	(Not display)	000~001	000
YCS009	(Not display)	000~003	000
YCS010	(Not display)	000~001	000
YCS011	(Not display)	000~001	000
YCS012	(Not display)	000~001	000
YCS013	(Not display)	000~001	000
YCS014	(Not display)	000~003	000
YCS015	(Not display)	000~001	000
YCS016	(Not display)	000~003	000
YCS017	(Not display)	000~001	001
YCS018	(Not display)	000~003	000
YCS019	(Not display)	000~001	000
YCS020	(Not display)	000~001	000
YCS021	(Not display)	000~003	002
YCS022	(Not display)	000~007	004
YCS023	(Not display)	000~001	001
YCS024	(Not display)	000~001	000
YCS025	(Not display)	000~015	005
YCS026	(Not display)	000~015	003
YCS027	(Not display)	000~003	000
YCS028	(Not display)	000~007	004
YCS029	(Not display)	000~007	006
YCS030	(Not display)	000~003	000

Item No.	Item	Variable range	Setting value
YCS031	(Not display)	000~001	000
YCS032	(Not display)	000~003	003
YCS033	(Not display)	000~001	001
YCS034	(Not display)	000~001	001
YCS035	(Not display)	000~255	096
YCS036	(Not display)	000~001	001
YCS037	(Not display)	000~003	001
YCS038	(Not display)	000~127	062
YCS039	(Not display)	000~127	068
YCS040	(Not display)	000~003	002
YCS041	(Not display)	000~063	016
YCS042	(Not display)	000~001	000
YCS043	(Not display)	000~001	000
YCS044	(Not display)	000~255	160
YCS045	(Not display)	000~001	000
YCS046	(Not display)	000~255	111
YCS047	(Not display)	000~001	001
YCS048	(Not display)	000~031	000
YCS049	(Not display)	000~003	000
YCS050	(Not display)	000~015	000
YCS051	(Not display)	000~015	008
YCS052	(Not display)	000~015	001
YCS053	(Not display)	000~063	015
YCS054	(Not display)	000~255	020
YCS055	(Not display)	000~001	000
YCS056	(Not display)	000~063	025
YCS057	(Not display)	000~015	008
YCS058	(Not display)	000~015	005
YCS059	(Not display)	000~015	008
YCS060	(Not display)	000~015	005
YCS061	(Not display)	000~015	000
YCS062	(Not display)	000~015	002
YCS063	(Not display)	000~015	008
YCS064	(Not display)	000~015	006
YCS065	(Not display)	000~255	010
YCS066	(Not display)	000~255	032
YCS067	(Not display)	000~255	031
YCS068	(Not display)	000~255	089
YCS069	(Not display)	000~001	000
YCS070	(Not display)	000~001	001
YCS071	(Not display)	000~001	001
YCS072	(Not display)	000~001	001
YCS073	(Not display)	000~001	000
YCS074	(Not display)	000~001	001
YCS075	(Not display)	000~001	000

Item No.	Item	Variable range	Setting value
YCS076	(Not display)	000~001	000
YCS077	(Not display)	000~001	000
YCS078	(Not display)	000~001	000
YCS079	(Not display)	000~001	000
YCS080	(Not display)	000~003	003
YCS081	(Not display)	000~001	000
YCS082	(Not display)	000~255	000
YCS083	(Not display)	000~255	000
YCS084	(Not display)	000~007	000
YCS085	(Not display)	000~255	010
YCS086	(Not display)	000~001	001
YCS087	(Not display)	000~001	001
YCS088	(Not display)	000~001	000
YCS089	(Not display)	000~001	000
YCS090	(Not display)	000~255	136
YCS091	(Not display)	000~001	001
YCS092	(Not display)	000~001	001
YCS093	(Not display)	000~001	001
YCS094	(Not display)	000~003	000
YCS095	(Not display)	000~015	015
YCS096	(Not display)	000~015	002
YCS097	(Not display)	000~001	001
YCS098	(Not display)	000~127	007
YCS099	(Not display)	000~031	000
YCS100	(Not display)	000~001	000
YCS101	(Not display)	000~015	003
YCS102	(Not display)	000~007	002
YCS103	(Not display)	000~031	016
YCS104	(Not display)	000~255	235
YCS105	(Not display)	000~003	000
YCS106	(Not display)	000~063	000
YCS107	(Not display)	000~015	003
YCS108	(Not display)	000~015	003
YCS109	(Not display)	000~001	000
YCS110	(Not display)	000~003	001
YCS111	(Not display)	000~003	001
YCS112	(Not display)	000~003	001
YCS113	(Not display)	000~003	001
YCS114	(Not display)	000~255	000

4.5.3 [3.WHITE BALANCE]

NOTE :

Initial setting value is reference value at following condition.

INPUT SIGNAL : NTSC
 ASPECT : FULL
 MULTI-SCREEN : SINGLE
 VIDEO STATUS : STANDARD
 COLOR TEMPERATURE : LOW

Item No.	Item	Variable range	Setting value
BR	(Not display)	00000~238	000
DRV R	(Not display)	00000~255	000
DRV B	(Not display)	00000~255	000
CUT R	(Not display)	00000~255	000
CUT G	(Not display)	00000~255	000
CUT B	(Not display)	00000~255	000

4.5.4 [6.DD/CM]

Item No.	Item	Variable range	Setting value
DDT01	(Not display)	000~015	000
DDT02	(Not display)	000~255	000
DDT03	(Not display)	000~255	000
DDT04	(Not display)	000~255	255
DDT05	(Not display)	000~255	254
DDT06	(Not display)	000~255	255
DDT07	(Not display)	000~003	000
DDT08	(Not display)	000~255	032
DDT09	(Not display)	000~003	000
DDT10	(Not display)	000~255	000
DDT11	(Not display)	000~007	000
DDT12	(Not display)	000~255	115
DDT13	(Not display)	000~255	000
DDT14	(Not display)	000~003	002
DDT15	(Not display)	000~007	000
DDT16	(Not display)	000~255	187
DDT17	(Not display)	000~001	000
DDT18	(Not display)	000~001	000
DDT19	(Not display)	000~063	002
DDT20	(Not display)	000~015	014
DDT21	(Not display)	000~015	014
DDT22	(Not display)	000~015	002
DDT23	(Not display)	000~015	004
DDT24	(Not display)	000~001	000
DDT25	(Not display)	000~001	000
DDT26	(Not display)	000~001	000
DDT27	(Not display)	000~007	000
DDT28	(Not display)	000~255	127
DDT29	(Not display)	000~003	002

Item No.	Item	Variable range	Setting value
DDT30	(Not display)	000~001	000
DDT31	(Not display)	000~007	000
DDT32	(Not display)	000~255	000
DDT33	(Not display)	000~255	000
DDT34	(Not display)	000~255	033

Item No.	Item	Variable range	Setting value
CMT01	(Not display)	000~003	000
CMT02	(Not display)	000~OFF	090
CMT03	(Not display)	000~255	015
CMT04	(Not display)	000~255	030
CMT05	(Not display)	-032~+031	-010
CMT06	(Not display)	-128~+127	000
CMT07	(Not display)	-128~+127	+010
CMT08	(Not display)	-128~+127	+005
CMT09	(Not display)	-128~+127	000
CMT10	(Not display)	000~003	000
CMT11	(Not display)	000~OFF	160
CMT12	(Not display)	000~255	020
CMT13	(Not display)	000~255	020
CMT14	(Not display)	-032~+031	-005
CMT15	(Not display)	-128~+127	+005
CMT16	(Not display)	-128~+127	000
CMT17	(Not display)	-128~+127	000
CMT18	(Not display)	-128~+127	000
CMT19	(Not display)	000~003	000
CMT20	(Not display)	000~OFF	196
CMT21	(Not display)	000~255	025
CMT22	(Not display)	000~255	055
CMT23	(Not display)	-032~+031	000
CMT24	(Not display)	-128~+127	000
CMT25	(Not display)	-128~+127	+010
CMT26	(Not display)	-128~+127	+005
CMT27	(Not display)	-128~+127	+015
CMT28	(Not display)	000~003	001
CMT29	(Not display)	000~OFF	070
CMT30	(Not display)	000~255	035
CMT31	(Not display)	000~255	040
CMT32	(Not display)	-032~+031	000
CMT33	(Not display)	-128~+127	+002
CMT34	(Not display)	-128~+127	+015
CMT35	(Not display)	-128~+127	000
CMT36	(Not display)	-128~+127	+020
CMT37	(Not display)	000~255	064
CMT38	(Not display)	000~255	066

Item No.	Item	Variable range	Setting value
CMT39	(Not display)	000~255	085
CMT40	(Not display)	-128~+127	000
CMT41	(Not display)	-128~+127	+010
CMT42	(Not display)	000~001	000
CMT43	(Not display)	000~OFF	080
CMT44	(Not display)	000~001	001
CMT45	(Not display)	000~OFF	080
CMT46	(Not display)	000~001	000
CMT47	(Not display)	000~OFF	128
CMT48	(Not display)	000~001	000
CMT49	(Not display)	000~001	001
CMT50	(Not display)	-016~+015	000
CMT51	(Not display)	-016~+015	000
CMT52	(Not display)	000~001	000
CMT53	(Not display)	000~001	000
CMT54	(Not display)	000~003	000
CMT55	(Not display)	000~001	000
CMT56	(Not display)	000~001	001
CMT57	(Not display)	000~001	000

4.5.5 [7.PANEL] (*All the values are fixed values.)

Item No.	Item	Variable range	Setting value
PDA001	(Not display)	000~255	000
PDA002	(Not display)	000~255	000
PDA003	(Not display)	000~255	000
PDA004	(Not display)	000~255	000
PDA005	(Not display)	000~001	000
PDA006	(Not display)	000~001	000
PDA007	(Not display)	000~255	000
PDA008	(Not display)	000~255	000
PDA009	(Not display)	000~255	000
PDA010	(Not display)	000~255	000
PDA011	(Not display)	000~255	000
PDA012	(Not display)	000~127	000

4.5.6 [8.PP]

NOTE :

Initial setting value is reference value at following condition.

INPUT SIGNAL : NTSC
 ASPECT : FULL
 MULTI-SCREEN : SINGLE
 VIDEO STATUS : STANDARD
 COLOR TEMPERATURE : LOW

Item No.	Item	Variable range	Setting value
ADM001	(Not display)	000~OFF	0D6
ADM002	(Not display)	000~00F	007

Item No.	Item	Variable range	Setting value
ADM003	(Not display)	000~003	001
ADM004	(Not display)	000~007	005
ADM005	(Not display)	000~01F	016
ADM006	(Not display)	000~0FF	036
ADM007	(Not display)	000~0FF	08A
ADM008	(Not display)	000~0FF	020
ADM009	(Not display)	000~0FF	0FF
ADM010	(Not display)	000~0FF	0C6
ADM011	(Not display)	000~0FF	0FF
ADM012	(Not display)	000~07F	03B
ADM013	(Not display)	000~07F	031
ADM014	(Not display)	000~07F	044
ADM015	(Not display)	000~001	001
ADM016	(Not display)	000~001	001
ADM017	(Not display)	000~001	000
ADM018	(Not display)	000~001	001
ADM019	(Not display)	000~001	000
ADM020	(Not display)	000~001	000
ADM021	(Not display)	000~001	001
ADM022	(Not display)	000~001	000
ADM023	(Not display)	000~001	000
ADM024	(Not display)	000~001	001
ADM025	(Not display)	000~001	000
ADM026	(Not display)	000~001	001
ADM027	(Not display)	000~001	001
ADM028	(Not display)	000~001	001
ADM029	(Not display)	000~001	001
ADM030	(Not display)	000~01F	003
ADM031	(Not display)	000~001	001
ADM032	(Not display)	000~001	000
ADM033	(Not display)	000~001	001
ADM034	(Not display)	000~0FF	032

Item No.	Item	Variable range	Setting value
PPA001	(Not display)	000~255	040
PPA002	(Not display)	000~255	000
PPA003	(Not display)	000~255	05A
PPA004	(Not display)	000~255	000
PPA005	(Not display)	000~255	000
PPA006	(Not display)	000~255	001
PPA007	(Not display)	000~255	05A
PPA008	(Not display)	000~255	023

Item No.	Item	Variable range	Setting value
PPB001	(Not display)	000~031	000

Item No.	Item	Variable range	Setting value
PPB002	(Not display)	000~255	000
PPB003	(Not display)	000~255	000
PPB004	(Not display)	000~031	000
PPB005	(Not display)	000~255	000
PPB006	(Not display)	000~255	000
PPB007	(Not display)	000~031	000
PPB008	(Not display)	000~255	000
PPB009	(Not display)	000~255	000
PPB010	(Not display)	000~031	000
PPB011	(Not display)	000~255	000
PPB012	(Not display)	000~255	000
PPB013	(Not display)	000~031	000
PPB014	(Not display)	000~255	000
PPB015	(Not display)	000~255	000
PPB016	(Not display)	000~031	000
PPB017	(Not display)	000~255	000
PPB018	(Not display)	000~255	000
PPB019	(Not display)	000~031	000
PPB020	(Not display)	000~255	000
PPB021	(Not display)	000~255	000
PPB022	(Not display)	000~031	000
PPB023	(Not display)	000~255	000
PPB024	(Not display)	000~255	000
PPB025	(Not display)	000~031	000
PPB026	(Not display)	000~255	000
PPB027	(Not display)	000~255	000
PPB028	(Not display)	000~031	000
PPB029	(Not display)	000~255	000
PPB030	(Not display)	000~255	000
PPB031	(Not display)	000~031	000
PPB032	(Not display)	000~255	000
PPB033	(Not display)	000~255	000
PPB034	(Not display)	000~031	000
PPB035	(Not display)	000~255	000
PPB036	(Not display)	000~255	000

Item No.	Item	Variable range	Setting value
PPC001	(Not display)	000~255	000
PPC002	(Not display)	000~255	00E
PPC003	(Not display)	000~255	002
PPC004	(Not display)	000~001	000
PPC005	(Not display)	000~001	000
PPC006	(Not display)	000~001	000
PPC007	(Not display)	000~001	000
PPC008	(Not display)	000~001	000

Item No.	Item	Variable range	Setting value
PPC007	(Not display)	000~001	01C
PPC008	(Not display)	000~001	004

Item No.	Item	Variable range	Setting value
PPD001	(Not display)	000~255	008
PPD002	(Not display)	000~255	000
PPD003	(Not display)	000~255	019
PPD004	(Not display)	000~255	001
PPD005	(Not display)	000~255	09A
PPD006	(Not display)	000~255	000
PPD007	(Not display)	000~255	019
PPD008	(Not display)	000~255	001
PPD009	(Not display)	000~255	0B3
PPD010	(Not display)	000~255	000
PPD011	(Not display)	000~255	024
PPD012	(Not display)	000~255	001
PPD013	(Not display)	000~255	039
PPD014	(Not display)	000~255	000
PPD015	(Not display)	000~255	096
PPD016	(Not display)	000~255	001
PPD017	(Not display)	000~255	086
PPD018	(Not display)	000~255	000
PPD019	(Not display)	000~255	024
PPD020	(Not display)	000~255	001
PPD021	(Not display)	000~255	050
PPD022	(Not display)	000~255	000
PPD023	(Not display)	000~255	0AA
PPD024	(Not display)	000~255	001
PPD025	(Not display)	000~255	072

4.5.7 [9.IP] (*All the values are fixed values.)

NOTE :

Initial setting value is reference value at following condition.

INPUT SIGNAL : NTSC

ASPECT : FULL

MULTI-SCREEN : SINGLE

VIDEO STATUS : STANDARD

COLOR TEMPERATURE : LOW

Item No.	Item	Variable range	Setting value
IPA001	(Not display)	000~001	001
IPA002	(Not display)	000~063	015
IPA003	(Not display)	000~063	010
IPA004	(Not display)	000~063	015
IPA005	(Not display)	000~003	001
IPA006	(Not display)	000~003	001
IPA007	(Not display)	000~015	00F

Item No.	Item	Variable range	Setting value
IPA008	(Not display)	000~063	005
IPA009	(Not display)	000~063	000
IPA010	(Not display)	000~063	01F
IPA011	(Not display)	000~063	01F
IPA012	(Not display)	000~063	02F
IPA013	(Not display)	000~003	000
IPA014	(Not display)	000~003	000
IPA015	(Not display)	000~063	00F
IPA016	(Not display)	000~063	005
IPA017	(Not display)	000~001	001
IPA018	(Not display)	000~063	029
IPA019	(Not display)	000~001	001
IPA020	(Not display)	000~001	001
IPA021	(Not display)	000~063	015
IPA022	(Not display)	000~003	000
IPA023	(Not display)	000~063	004
IPA024	(Not display)	000~001	001
IPA025	(Not display)	000~001	001
IPA026	(Not display)	000~063	015
IPA027	(Not display)	000~003	000
IPA028	(Not display)	000~063	005
IPA029	(Not display)	000~063	000
IPA030	(Not display)	000~015	000
IPA031	(Not display)	000~007	000
IPA032	(Not display)	000~063	000
IPA033	(Not display)	000~001	000
IPA034	(Not display)	000~063	000
IPA035	(Not display)	000~001	001
IPA036	(Not display)	000~063	00D
IPA037	(Not display)	000~063	00D
IPA038	(Not display)	000~063	010
IPA039	(Not display)	000~003	001
IPA040	(Not display)	000~003	001
IPA041	(Not display)	000~015	00F
IPA042	(Not display)	000~063	005
IPA043	(Not display)	000~063	005
IPA044	(Not display)	000~063	00C
IPA045	(Not display)	000~063	00C
IPA046	(Not display)	000~063	00F
IPA047	(Not display)	000~003	001
IPA048	(Not display)	000~003	001
IPA049	(Not display)	000~015	00F
IPA050	(Not display)	000~063	008
IPA051	(Not display)	000~001	001
IPA052	(Not display)	000~063	008

Item No.	Item	Variable range	Setting value
IPA053	(Not display)	000~001	001
IPA054	(Not display)	000~001	001
IPA055	(Not display)	000~063	025
IPA056	(Not display)	000~003	000
IPA057	(Not display)	000~063	00A
IPA058	(Not display)	000~001	001
IPA059	(Not display)	000~001	001
IPA060	(Not display)	000~063	025
IPA061	(Not display)	000~003	000
IPA062	(Not display)	000~063	00A
IPA063	(Not display)	000~063	000
IPA064	(Not display)	000~015	000
IPA065	(Not display)	000~007	000
IPA066	(Not display)	000~063	000
IPA067	(Not display)	000~001	000
IPA068	(Not display)	000~063	000
IPA069	(Not display)	000~003	000
IPA070	(Not display)	000~255	000
IPA071	(Not display)	000~015	005
IPA072	(Not display)	000~255	0DC
IPA073	(Not display)	000~001	000
IPA074	(Not display)	000~001	000
IPA075	(Not display)	000~255	016
IPA076	(Not display)	000~001	000
IPA077	(Not display)	000~001	000
IPA078	(Not display)	000~001	000
IPA079	(Not display)	000~001	000
IPA080	(Not display)	000~001	000
IPA081	(Not display)	000~001	000
IPA082	(Not display)	000~001	000
IPA083	(Not display)	000~001	000
IPA084	(Not display)	000~001	000
IPA085	(Not display)	000~001	000
IPA086	(Not display)	000~001	000
IPA087	(Not display)	000~001	000
IPA088	(Not display)	000~001	000
IPA089	(Not display)	000~001	000
IPA090	(Not display)	000~001	000
IPA091	(Not display)	000~015	000
IPA092	(Not display)	000~255	000
IPA093	(Not display)	000~015	003
IPA094	(Not display)	000~255	0FF
IPA095	(Not display)	000~015	000
IPA096	(Not display)	000~255	000
IPA097	(Not display)	000~015	005

Item No.	Item	Variable range	Setting value
IPA098	(Not display)	000~255	0D3
IPA099	(Not display)	000~015	000
IPA100	(Not display)	000~255	000
IPA101	(Not display)	000~015	000
IPA102	(Not display)	000~255	000
IPA103	(Not display)	000~015	000
IPA104	(Not display)	000~255	000
IPA105	(Not display)	000~015	000
IPA106	(Not display)	000~255	000
IPA107	(Not display)	000~015	000
IPA108	(Not display)	000~255	080
IPA109	(Not display)	000~015	000
IPA110	(Not display)	000~255	040
IPA111	(Not display)	000~015	005
IPA112	(Not display)	000~255	040
IPA113	(Not display)	000~015	000
IPA114	(Not display)	000~255	0C0
IPA115	(Not display)	000~015	002
IPA116	(Not display)	000~255	0EF
IPA117	(Not display)	000~001	000
IPA118	(Not display)	000~001	000
IPA119	(Not display)	000~001	000
IPA120	(Not display)	000~001	000

Item No.	Item	Variable range	Setting value
IPB001	(Not display)	000~255	001
IPB002	(Not display)	000~255	00F
IPB003	(Not display)	000~015	000
IPB004	(Not display)	000~255	0B7
IPB005	(Not display)	000~015	002
IPB006	(Not display)	000~255	0C9
IPB007	(Not display)	000~015	002
IPB008	(Not display)	000~255	038
IPB009	(Not display)	000~015	001
IPB010	(Not display)	000~255	0AB
IPB011	(Not display)	000~015	001
IPB012	(Not display)	000~255	01C
IPB013	(Not display)	000~015	000
IPB014	(Not display)	000~255	08E
IPB015	(Not display)	000~015	000
IPB016	(Not display)	000~255	01D
IPB017	(Not display)	000~015	000
IPB018	(Not display)	000~255	01E
IPB019	(Not display)	000~015	000
IPB020	(Not display)	000~255	023

Item No.	Item	Variable range	Setting value
IPB021	(Not display)	000~015	000
IPB022	(Not display)	000~255	03E
IPB023	(Not display)	000~015	001
IPB024	(Not display)	000~255	07B
IPB025	(Not display)	000~015	000
IPB026	(Not display)	000~255	000
IPB027	(Not display)	000~015	004
IPB028	(Not display)	000~255	037
IPB029	(Not display)	000~015	000
IPB030	(Not display)	000~255	04C
IPB031	(Not display)	000~015	000
IPB032	(Not display)	000~255	000
IPB033	(Not display)	000~015	000
IPB034	(Not display)	000~255	000
IPB035	(Not display)	000~015	001
IPB036	(Not display)	000~255	02E
IPB037	(Not display)	000~001	000
IPB038	(Not display)	000~007	000
IPB039	(Not display)	000~015	000
IPB040	(Not display)	000~015	00F
IPB041	(Not display)	000~015	006
IPB042	(Not display)	000~255	000
IPB043	(Not display)	000~015	002
IPB044	(Not display)	000~255	038
IPB045	(Not display)	000~015	003
IPB046	(Not display)	000~255	000
IPB047	(Not display)	000~015	000
IPB048	(Not display)	000~255	0CA
IPB049	(Not display)	000~015	000
IPB050	(Not display)	000~255	0D0
IPB051	(Not display)	000~015	000
IPB052	(Not display)	000~255	000
IPB053	(Not display)	000~015	000
IPB054	(Not display)	000~255	000
IPB055	(Not display)	000~015	000
IPB056	(Not display)	000~255	0C4
IPB057	(Not display)	000~015	006
IPB058	(Not display)	000~255	040
IPB059	(Not display)	000~007	001
IPB060	(Not display)	000~003	000
IPB061	(Not display)	000~003	000
IPB062	(Not display)	000~001	000
IPB063	(Not display)	000~255	000
IPB064	(Not display)	000~255	080
IPB065	(Not display)	000~255	080

Item No.	Item	Variable range	Setting value
IPB066	(Not display)	000~001	000
IPB067	(Not display)	000~015	000
IPB068	(Not display)	000~015	000
IPB069	(Not display)	000~015	000
IPB070	(Not display)	000~015	00F
IPB071	(Not display)	000~255	000
IPB072	(Not display)	000~015	000
IPB073	(Not display)	000~255	000
IPB074	(Not display)	000~001	000
IPB075	(Not display)	000~001	000
IPB076	(Not display)	000~001	000
IPB077	(Not display)	000~015	009
IPB078	(Not display)	000~001	001
IPB079	(Not display)	000~255	042

Item No.	Item	Variable range	Setting value
IPC001	(Not display)	000~003	002
IPC002	(Not display)	000~255	0EA
IPC003	(Not display)	000~001	000
IPC004	(Not display)	000~001	000
IPC005	(Not display)	000~015	000
IPC006	(Not display)	000~255	000
IPC007	(Not display)	000~015	005
IPC008	(Not display)	000~255	0DB
IPC009	(Not display)	000~015	006
IPC010	(Not display)	000~255	071
IPC011	(Not display)	000~015	000
IPC012	(Not display)	000~255	000
IPC013	(Not display)	000~003	001
IPC014	(Not display)	000~001	000
IPC015	(Not display)	000~001	001
IPC016	(Not display)	000~255	0EE
IPC017	(Not display)	000~001	000
IPC018	(Not display)	000~127	000
IPC019	(Not display)	000~001	000
IPC020	(Not display)	000~127	000
IPC021	(Not display)	000~015	001
IPC022	(Not display)	000~255	03F
IPC023	(Not display)	000~003	002
IPC024	(Not display)	000~255	01E
IPC025	(Not display)	000~001	000
IPC026	(Not display)	000~127	00F
IPC027	(Not display)	000~001	000
IPC028	(Not display)	000~127	000
IPC029	(Not display)	000~001	001

Item No.	Item	Variable range	Setting value
IPC030	(Not display)	000~001	000
IPC031	(Not display)	000~001	000
IPC032	(Not display)	000~001	000
IPC033	(Not display)	000~001	001
IPC034	(Not display)	000~001	001
IPC035	(Not display)	000~001	000
IPC036	(Not display)	000~001	000
IPC037	(Not display)	000~001	000
IPC038	(Not display)	000~001	000
IPC039	(Not display)	000~001	000
IPC040	(Not display)	000~001	000
IPC041	(Not display)	000~001	000
IPC042	(Not display)	000~001	000
IPC043	(Not display)	000~001	000
IPC044	(Not display)	000~001	000

Item No.	Item	Variable range	Setting value
IPD001	(Not display)	000~255	040
IPD002	(Not display)	000~255	000
IPD003	(Not display)	000~255	000
IPD004	(Not display)	000~007	000
IPD005	(Not display)	000~255	01C
IPD006	(Not display)	000~007	000
IPD007	(Not display)	000~255	0E1
IPD008	(Not display)	000~001	000
IPD009	(Not display)	000~015	000
IPD010	(Not display)	000~255	012
IPD011	(Not display)	000~015	004
IPD012	(Not display)	000~255	0BB
IPD013	(Not display)	000~007	000
IPD014	(Not display)	000~007	000
IPD015	(Not display)	000~001	000
IPD016	(Not display)	000~001	000
IPD017	(Not display)	000~255	000
IPD018	(Not display)	000~007	000
IPD019	(Not display)	000~255	01D
IPD020	(Not display)	000~007	002
IPD021	(Not display)	000~255	0E6
IPD022	(Not display)	000~001	001
IPD023	(Not display)	000~015	001
IPD024	(Not display)	000~255	00E
IPD025	(Not display)	000~015	004
IPD026	(Not display)	000~255	0C0

Item No.	Item	Variable range	Setting value
IPE001	(Not display)	000~255	001
IPE002	(Not display)	000~255	002
IPE003	(Not display)	000~255	001
IPE004	(Not display)	000~255	002
IPE005	(Not display)	000~255	001
IPE006	(Not display)	000~255	002
IPE007	(Not display)	000~255	001
IPE008	(Not display)	000~255	002
IPE009	(Not display)	-128~+127	+005
IPE010	(Not display)	-128~+127	+006
IPE011	(Not display)	-128~+127	+005
IPE012	(Not display)	-128~+127	-005
IPE013	(Not display)	-128~+127	+0FB
IPE014	(Not display)	-128~+127	+005
IPE015	(Not display)	000~015	001

4.5.8 [0.HDMI] *All the values are fixed values.

Item No.	Item	Variable range	Setting value
HDM001	(Not display)	000~001	000
HDM002	(Not display)	000~001	000
HDM003	(Not display)	000~001	000
HDM004	(Not display)	000~001	000
HDM005	(Not display)	000~001	000
HDM006	(Not display)	000~003	000
HDM007	(Not display)	000~001	000
HDM008	(Not display)	000~001	000
HDM009	(Not display)	000~001	000
HDM010	(Not display)	000~001	000
HDM011	(Not display)	000~001	000
HDM012	(Not display)	000~001	000
HDM013	(Not display)	000~001	000
HDM014	(Not display)	000~001	000
HDM015	(Not display)	000~001	000
HDM016	(Not display)	000~255	000
HDM017	(Not display)	000~255	000
HDM018	(Not display)	000~255	000
HDM019	(Not display)	000~001	000
HDM020	(Not display)	000~255	000
HDM021	(Not display)	000~007	000
HDM022	(Not display)	000~063	000
HDM023	(Not display)	000~063	000
HDM024	(Not display)	000~063	000
HDM025	(Not display)	000~001	000
HDM026	(Not display)	000~003	000
HDM027	(Not display)	000~255	000

Item No.	Item	Variable range	Setting value
HDM028	(Not display)	000~003	000
HDM029	(Not display)	000~255	000
HDM030	(Not display)	000~003	000
HDM031	(Not display)	000~255	000
HDM032	(Not display)	000~003	000
HDM033	(Not display)	000~255	000
HDM034	(Not display)	000~003	000
HDM035	(Not display)	000~255	000
HDM036	(Not display)	000~255	000
HDM037	(Not display)	000~255	000
HDM038	(Not display)	000~255	000
HDM039	(Not display)	000~001	000
HDM040	(Not display)	000~001	000
HDM041	(Not display)	000~001	000
HDM042	(Not display)	000~255	000
HDM043	(Not display)	000~007	000
HDM044	(Not display)	000~003	000
HDM045	(Not display)	000~003	000
HDM046	(Not display)	000~001	000
HDM047	(Not display)	000~015	000
HDM048	(Not display)	000~255	000
HDM049	(Not display)	000~255	000
HDM050	(Not display)	000~015	000
HDM051	(Not display)	000~001	000
HDM052	(Not display)	000~001	000
HDM053	(Not display)	000~001	000
HDM054	(Not display)	000~001	000
HDM055	(Not display)	000~001	000
HDM056	(Not display)	000~001	000
HDM057	(Not display)	000~001	000
HDM058	(Not display)	000~001	000
HDM059	(Not display)	000~001	000
HDM060	(Not display)	000~001	000
HDM061	(Not display)	000~001	000
HDM062	(Not display)	000~001	000
HDM063	(Not display)	000~001	000
HDM064	(Not display)	000~001	000
HDM065	(Not display)	000~001	000
HDM066	(Not display)	000~001	000
HDM067	(Not display)	000~001	000
HDM068	(Not display)	000~031	000
HDM069	(Not display)	000~001	000
HDM070	(Not display)	000~001	000
HDM071	(Not display)	000~001	000
HDM072	(Not display)	000~001	000

Item No.	Item	Variable range	Setting value
HDM073	(Not display)	000~001	000
HDM074	(Not display)	000~031	000
HDM075	(Not display)	000~001	000
HDM076	(Not display)	000~001	000
HDM077	(Not display)	000~001	000
HDM078	(Not display)	000~001	000
HDM079	(Not display)	000~001	000
HDM080	(Not display)	000~001	000

Item No.	Item	Variable range	Setting value
RHD001	(Not display)	---	000
RHD002	(Not display)	---	000
RHD003	(Not display)	---	000
RHD004	(Not display)	---	000
RHD005	(Not display)	---	000
RHD006	(Not display)	---	000
RHD007	(Not display)	---	000
RHD008	(Not display)	---	000
RHD009	(Not display)	---	000
RHD010	(Not display)	---	000
RHD011	(Not display)	---	000
RHD012	(Not display)	---	000
RHD013	(Not display)	---	000
RHD014	(Not display)	---	000
RHD015	(Not display)	---	000
RHD016	(Not display)	---	000
RHD017	(Not display)	---	000
RHD018	(Not display)	---	000
RHD019	(Not display)	---	000
RHD020	(Not display)	---	000
RHD021	(Not display)	---	000
RHD022	(Not display)	---	000
RHD023	(Not display)	---	000
RHD024	(Not display)	---	000
RHD025	(Not display)	---	000
RHD026	(Not display)	---	000
RHD027	(Not display)	---	000
RHD028	(Not display)	---	000
RHD029	(Not display)	---	000
RHD030	(Not display)	---	000
RHD031	(Not display)	---	000
RHD032	(Not display)	---	000
RHD033	(Not display)	---	000
RHD034	(Not display)	---	000
RHD035	(Not display)	---	000

Item No.	Item	Variable range	Setting value
RHD036	(Not display)	---	000
RHD037	(Not display)	---	000
RHD038	(Not display)	---	000
RHD039	(Not display)	---	000
RHD040	(Not display)	---	000
RHD041	(Not display)	---	000
RHD042	(Not display)	---	000
RHD043	(Not display)	---	000
RHD044	(Not display)	---	000
RHD045	(Not display)	---	000
RHD046	(Not display)	---	000
RHD047	(Not display)	---	000
RHD048	(Not display)	---	000
RHD049	(Not display)	---	000
RHD050	(Not display)	---	000
RHD051	(Not display)	---	000
RHD052	(Not display)	---	000
RHD053	(Not display)	---	000
RHD054	(Not display)	---	000
RHD055	(Not display)	---	000
RHD056	(Not display)	---	000
RHD057	(Not display)	---	000
RHD058	(Not display)	---	000
RHD059	(Not display)	---	000
RHD060	(Not display)	---	000
RHD061	(Not display)	---	000
RHD062	(Not display)	---	000
RHD063	(Not display)	---	000
RHD064	(Not display)	---	000
RHD065	(Not display)	---	000
RHD066	(Not display)	---	000
RHD067	(Not display)	---	000
RHD068	(Not display)	---	000
RHD069	(Not display)	---	000
RHD070	(Not display)	---	000
RHD071	(Not display)	---	000
RHD072	(Not display)	---	000
RHD073	(Not display)	---	000
RHD074	(Not display)	---	000
RHD075	(Not display)	---	000
RHD076	(Not display)	---	000
RHD077	(Not display)	---	000
RHD078	(Not display)	---	000
RHD079	(Not display)	---	000
RHD080	(Not display)	---	000

Item No.	Item	Variable range	Setting value
RHD081	(Not display)	---	000
RHD082	(Not display)	---	000
RHD083	(Not display)	---	000
RHD084	(Not display)	---	000
RHD085	(Not display)	---	000
RHD086	(Not display)	---	000
RHD087	(Not display)	---	000
RHD088	(Not display)	---	000
RHD089	(Not display)	---	000
RHD090	(Not display)	---	000
RHD091	(Not display)	---	000
RHD092	(Not display)	---	000
RHD093	(Not display)	---	000
RHD094	(Not display)	---	000
RHD095	(Not display)	---	000
RHD096	(Not display)	---	000
RHD097	(Not display)	---	000
RHD098	(Not display)	---	000
RHD009	(Not display)	---	000
RHD100	(Not display)	---	000
RHD101	(Not display)	---	000
RHD102	(Not display)	---	000
RHD103	(Not display)	---	000
RHD104	(Not display)	---	000
RHD105	(Not display)	---	000
RHD106	(Not display)	---	000
RHD107	(Not display)	---	000
RHD108	(Not display)	---	000
RHD109	(Not display)	---	000
RHD110	(Not display)	---	000
RHD111	(Not display)	---	000
RHD112	(Not display)	---	000
RHD113	(Not display)	---	000
RHD114	(Not display)	---	000
RHD115	(Not display)	---	000
RHD116	(Not display)	---	000
RHD117	(Not display)	---	000
RHD118	(Not display)	---	000
RHD119	(Not display)	---	000
RHD120	(Not display)	---	000
RHD121	(Not display)	---	000
RHD122	(Not display)	---	000
RHD123	(Not display)	---	000
RHD124	(Not display)	---	000
RHD125	(Not display)	---	000

Item No.	Item	Variable range	Setting value
RHD126	(Not display)	---	000
RHD127	(Not display)	---	000
RHD128	(Not display)	---	000
RHD129	(Not display)	---	000
RHD130	(Not display)	---	000
RHD131	(Not display)	---	000
RHD132	(Not display)	---	000
RHD133	(Not display)	---	000
RHD134	(Not display)	---	000
RHD135	(Not display)	---	000
RHD136	(Not display)	---	000
RHD137	(Not display)	---	000
RHD138	(Not display)	---	000
RHD139	(Not display)	---	000
RHD140	(Not display)	---	000
RHD141	(Not display)	---	000
RHD142	(Not display)	---	000
RHD143	(Not display)	---	000
RHD144	(Not display)	---	000
RHD145	(Not display)	---	000
RHD146	(Not display)	---	000
RHD147	(Not display)	---	000
RHD148	(Not display)	---	000
RHD149	(Not display)	---	000
RHD150	(Not display)	---	000
RHD151	(Not display)	---	000
RHD152	(Not display)	---	000
RHD153	(Not display)	---	000
RHD154	(Not display)	---	000
RHD155	(Not display)	---	000
RHD156	(Not display)	---	000
RHD157	(Not display)	---	000
RHD158	(Not display)	---	000
RHD159	(Not display)	---	000
RHD160	(Not display)	---	000
RHD161	(Not display)	---	000
RHD162	(Not display)	---	000
RHD163	(Not display)	---	000
RHD164	(Not display)	---	000
RHD165	(Not display)	---	000
RHD166	(Not display)	---	000
RHD167	(Not display)	---	000
RHD168	(Not display)	---	000
RHD169	(Not display)	---	000
RHD170	(Not display)	---	000

4.6 ADJUSTMENT PROCEDURE

4.6.1 SETTING BEFORE ADJUSTMENT

- (1) Check the following settings before adjustment.

Item	setting value	contents
S19	128	R CUT OFF
S21	128	G CUT OFF
S23	128	B CUT OFF

- (2) Take note of initial values in the following table before adjustment. Then, set the values to adjustment setting values shown in the following table. After adjustment procedure, return the values to the initial values you have taken note of (except white balance adjustment).

The values can be set for each input signal (NTSC etc.), but the values are basically the same among the input signals.

Since the values are not adjusted for 525p/720p (because the values change according to the reference adjustment values), you do not have to take note of the values if unnecessary.

Item	Initial value NTSC	Initial value 525p	Initial value 1125i	Initial value 750p	setting value	contents
S13					255	R DRIVE
S15					255	G DRIVE
S17					255	B DRIVE

- (3) Unless otherwise specified in the adjustment instructions, preset the following functions with the remote control unit:

Setting item	Settings
VIDEO STATUS	STANDARD
BRIGHT / CONTRAST / COLOR / TINT	Center
COLOR TEMPERATURE	LOW
DIG. NOISE CLEAR	OFF
COLOR MANEGMENT	STANDARD
NATURAL CINEMA	OFF
DIGITAL VNR	OFF
TREBLE / BASS / BALANCE	00
BBE	OFF
AHS	OFF
AHB	OFF

NOTE:

Follow the order instructed in adjustment procedure.

4.6.2 VIDEO CIRCUIT

Item	Mesuring instrument	Test point	Adjustment part	Description
COMPONENT INPUT BLACK LEVEL	Remote control unit		[8.PP] ADM013: (NO DISPLAY) (G offset)	(1) Input 525i signal that shows brightness gradation with 0% black into a component input terminal. (2) Set "VIDEO STATUS" to STANDARD. (3) Set "ASPECT" to FULL. (4) Select "COLOR TEMPERATURE" to "LOW". (5) Select "1.PICTURE/SOUND" from the SERVICE MODE. (6) Set < F44 > (Picture control) to "001" and < F45 > (Picture control mode sw) to "000" to set Y ADJUST MAX MODE. (7) Set < F46 > (Output level upon detection), < F47 > (Minimum value upon detection), and < F48 > (Maximum value upon detection) to values as shown in the left table. (8) Press the [MUTING] key to memoirize the set value. (9) Select "8.PP" from the SERVICE MODE. (10) Adjust < ADM013 > (G OFFSET) to set the 0% black part on the upper half of the screen to maximum brightness. (Fig.2) (11) Add reference offset value "0" to the < ADM013 > (G OFFSET) value. (12) Press the [MUTING] key to memoirize the set value. (13) Select "1.PICTURE/SOUND" from the SERVICE MODE. (14) Check the black level. Adjust the black level again if it is not proper. (15) Set < F44 > (Picture control) to "001" to cancel Y ADJUST MAX MODE. (16) Press the [MUTING] key to memoirize the set value. (17) Input 1125i signal. (18) Repeat steps (5) to (15) above. (19) Press the [MUTING] key to memoirize the set value.
	Signal generator		[1. PICTURE/SOUND] S13: RDRV (R DRIVE) S15: GDRV (G DRIVE) S17: BDRV (B DRIVE) S19: CUTR (R CUTOFF) S21: CUTG (G CUTOFF) S23: CUTB (B CUTOFF) F44: (NO DISPLAY) (Picture control) F45: (NO DISPLAY) (Picture control mode sw) F46: OUT LV. (Output level upon detection) F47: LMT BTM (Minimum value upon detection) F48: LMT TOP (Maximum value upon detection)	

Item No.	Setting value	Adjustment item
F46	090	Output level upon detection
F47	016	Minimum value upon detection
F48	016	Maximum value upon detection

Adjust the 0% black to maximum brightness

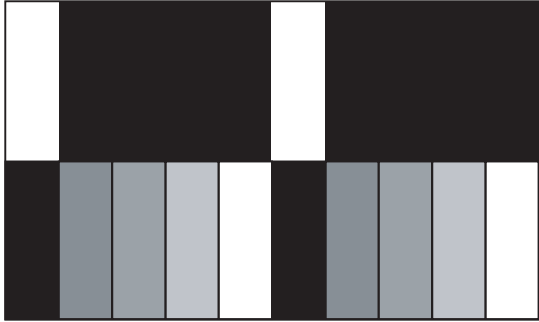


Fig.2

Item	Mesuring instrument	Test point	Adjustment part	Description
COMPONENT INPUT A-D CONVERTER GAIN	Remote control unit		[8.PP] ADM010: (NO DISPLAY) (G GAIN)	(1) Input 525i 100% all-white signal into a component input terminal. (2) Set "VIDEO STATUS" to STANDARD. (3) Set "ASPECT" to FULL. (4) Select "COLOR TEMPERATURE" to "LOW". (5) Select "1.PICTURE/SOUND" from the SERVICE MODE. (6) Set < F44 > (Picture control) to "001" and < F45 > (Picture control mode sw) to "000" to set Y ADJUST MAX MODE. (7) Set < F46 > (Output level upon detection), < F47 > (Minimum value upon detection), and < F48 > (Maximum value upon detection) to values as shown in the left table. (8) Press the [MUTING] key to memoirize the set value. (9) Select "8.PP" from the SERVICE MODE. (10) Adjust < ADM010 > (G GAIN) to set the upper half of the screen to maximum brightness. (Fig.3) (11) Press the [MUTING] key to memoirize the set value. (12) Check the black level. Perform the "BLACK LEVEL Adjustment" again if the adjusted value is not proper. (13) Select "1.PICTURE/SOUND" from the SERVICE MODE. (14) Set < F44 > (Picture control) to "000" to cancel Y ADJUST MAX MODE. (15) Press the [MUTING] key to memoirize the set value. (16) Input 1125i signal. (17) Repeat steps (5) to (14) above. (18) Press the [MUTING] key to memoirize the set value.
	Signal generator		[1. PICTURE/SOUND] S13: RDRV (R DRIVE) S15: GDRV (G DRIVE) S17: BDRV (B DRIVE) S19: CUTR (R CUTOFF) S21: CUTG (G CUTOFF) S23: CUTB (B CUTOFF) F44: (NO DISPLAY) (Picture control) F45: (NO DISPLAY) (Picture control mode sw) F46: OUT LV. (Output level upon detection) F47: LMT BTM (Minimum value upon Detection) F48: LMT TOP (Maximum value upon detection)	

Item No.	Setting value	Adjustment item
F46	090	Output level upon detection
F47	220	Minimum value upon detection
F48	220	Maximum value upon detection

Adjust this part to maximum brightness.

Fig.3

Item	Mesuring instrument	Test point	Adjustment part	Description
COMPONENT INPUT A-D CONVERTER OFFSET	Remote control unit		[8.PP] ADM012: (NO DISPLAY) (R OFFSET) ADM014: (NO DISPLAY) (B OFFSET)	(1) Input 525i component 30% all-white signal into a component input terminal. (2) Set "VIDEO STATUS" to STANDARD. (3) Set "ASPECT" to FULL. (4) Select "COLOR TEMPERATURE" to "LOW". (5) Select "1.PICTURE/SOUND" from the SERVICE MODE. (6) Set < F44 > (Picture control) to "001" and < F45 > (Picture control mode sw) to "003" to set the chrominance adjustment zero mode. (7) Set < F46 > (Output level upon detection), < F47 > (Minimum value upon detection), and < F48 > (Maximum value upon detection) to values as shown in the left table. (8) Press the [MUTING] key to memoirize the set value. (9) Select "8.PP" from the SERVICE MODE. (10) Change the value of < ADM014 > (B OFFSET) from the initial value in the range of ± 5 to set the upper half of the screen magenta. (11) Adjust < ADM012 > (R OFFSET) to change the upper half of the screen from magenta to blue. (12) Take a note of the value of < ADM012 > (R OFFSET) adjusted in (11). (13) Change the value of < ADM012 > (R OFFSET) from the value that you have taken note of in the range of ± 5 to set the upper half of the screen magenta. (14) Adjust < ADM014 > (B OFFSET) to change the upper half of the screen from magenta to red. (15) Return the value of < ADM012 > (R OFFSET) to the value that you have taken note of in (12). (16) Press the [MUTING] key to memoirize the set value. (17) Set the SPLIT screen mode. (18) Input monochrome signal such as cross hatch both to the right and the left screen. (19) Set < ADM012 > (R OFFSET) and < ADM014 > (B OFFSET) to the same values as in single-screen mode. (20) Press the [MUTING] key to memoirize the set value. (21) Set < F44 > (Picture control) to "000" to cancel the chrominance adjustment zero mode. (22) Input 1125i 30% all-white signal. (23) Repeat steps (5) to (21) above. (24) Press the [MUTING] key to memoirize the set value.
	Signal generator		[1. PICTURE/SOUND] S13: RDRV (R DRIVE) S15: GDRV (G DRIVE) S17: BDRV (B DRIVE) S19: CUTR (R CUTOFF) S21: CUTG (G CUTOFF) S23: CUTB (B CUTOFF) F44: (NO DISPLAY) (Picture control) F45: (NO DISPLAY) (Picture control mode sw) F46: OUT LV. (Output level upon detection) F47: LMT BTM (Minimum value upon detection) F48: LMT TOP (Maximum value upon detection)	

Item No.	Setting value	Adjustment item
F46	090	Output level upon detection
F47	000	Minimum value upon detection
F48	000	Maximum value upon detection

Change the color in this part.

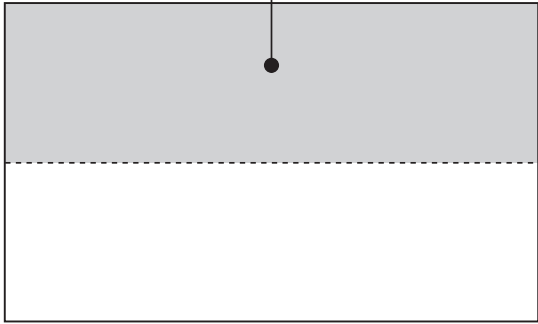


Fig.4

Item	Mesuring instrument	Test point	Adjustment part	Description
COMPOSITE INPUT BLACK LEVEL	Remote control unit Signal generator		[2. YC SEP] YCM131: (NO DISPLAY) (BRIGHTNESS) [1. PICTURE/SOUND] S13: RDRV (R DRIVE) S15: GDRV (G DRIVE) S17: BDRV (B DRIVE) S19: CUTR (R CUTOFF) S21: CUTG (G CUTOFF) S23: CUTB (B CUTOFF) F44: (NO DISPLAY) (Picture control) F45: (NO DISPLAY) (Picture control mode sw) F46: OUT LV. (Output level upon detection) F47: LMT BTM (Minimum value upon detection) F48: LMT TOP (Maximum value upon detection)	(1) Input NTSC signal that shows brightness gradation with 0% black. (2) Set "VIDEO STATUS" to STANDARD. (3) Set "ASPECT" to FULL. (4) Select "COLOR TEMPERATURE" to "LOW". (5) Select "1.PICTURE/SOUND" from the SERVICE MODE. (6) Set < F44 > (Picture control) to "001" and < F45 > (Picture control mode sw) to "000" to set Y ADJUST MAX MODE. (7) Set < F46 > (Output level upon detection), < F47 > (Minimum value upon detection), and < F48 > (Maximum value upon detection) to values as shown in the left table. (8) Select "2. YC SEP" from the SERVICE MODE. (9) Adjust < YCM131 > (BRIGHTNESS) so that 0% part of gradation is the brightest. (Fig. 6) (10) Press the [MUTING] key to memoirize the set value. (11) Select "1.PICTURE/SOUND" from the SERVICE MODE. (12) Set < F44 > (Picture control) to "000" to cancel Y ADJUST MAX MODE. (13) Press the [MUTING] key to memoirize the set value.

Item No.	Setting value	Adjustment item
F46	090	Output level upon detection
F47	016	Minimum value upon detection
F48	016	Maximum value upon detection

Adjust so that 0% black is the brightest.

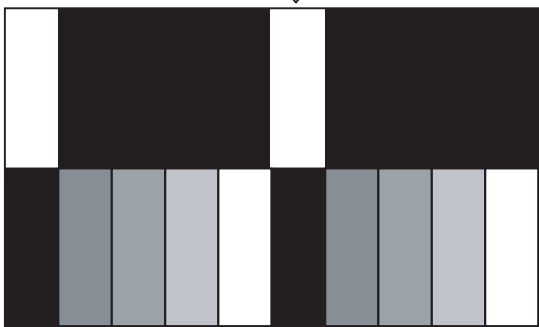


Fig.5

Item	Mesuring instrument	Test point	Adjustment part	Description
COMPOSITE INPUT A-D CONVERTER OFFSET	Remote control unit		[2. YC SEP] YCM132: (NO DISPLAY) (CONTRAST)	(1) Input a signal that shows brightness gradation with 75% white. (2) Set "VIDEO STATUS" to STANDARD. (3) Set "ASPECT" to FULL. (4) Select "COLOR TEMPERATURE" to "LOW". (5) Select "1.PICTURE/SOUND" from the SERVICE MODE. (6) Set < F44 > (Picture control) to "001" and <F45 > (Picture control mode sw) to "000" to set Y ADJUST MAX MODE. (7) Set < F46 > (Output level upon detection), < F47 > (Minimum value upon detection), and < F48 > (Maximum value upon detection) to values as shown in the left table. (8) Select "2.YC SEP" from the SERVICE MODE. (9) Adjust < YCM132 > (CONTRAST) so that the 75% white of gradation is white. (Fig.7) (10) Press the [MUTING] key to memoirize the set value. (11) Check the black level adjusted in composite input black level adjustment. Perform the "Composite input black level Adjustment" again if the adjusted value is not proper. (12) Perform (9) and (10) if you readjust the black level in (11). (13) Select "1.PICTURE/SOUND" from the SERVICE MODE. (14) Set < F44 > (Picture control) to "000" to cancel Y ADJUST MAX MODE. (15) Press the [MUTING] key to memoirize the set value.
	Signal generator		[1. PICTURE/SOUND] S13: RDRV (R DRIVE) S15: GDRV (G DRIVE) S17: BDRV (B DRIVE) S19: CUTR (R CUTOFF) S21: CUTG (G CUTOFF) S23: CUTB (B CUTOFF) F44: (NO DISPLAY) (Picture control) F45: (NO DISPLAY) (Picture control mode sw) F46: OUT LV. (Output level upon detection) F47: LMT BTM (Minimum value upon detection) F48: LMT TOP (Maximum value upon detection)	

Item No.	Setting value	Adjustment item
F46	090	Output level upon detection
F47	165	Minimum value upon detection
F48	165	Maximum value upon detection

Adjust so that 75%" white is the brightest.

Adjust so that 75%" white is the brightest.

Fig.6

Item	Mesuring instrument	Test point	Adjustment part	Description
SUB-SCREEN BLACK LEVEL	Remote control unit		[8. PP] ADM013: (NO DISPLAY) (G offset)	(1) Input NTSC signal that shows brightness gradation with 0% black into both the right and the left screen. (2) Set "VIDEO STATUS" to STANDARD. (3) Set "ASPECT" to FULL. (4) Select "COLOR TEMPERATURE" to "LOW". (5) Set SPLIT screen mode. (6) Select "1.PICTURE/SOUND" from the SERVICE MODE for the right screen. (7) Set < F44 > (Picture control) to "001" and <F45 > (Picture control mode sw) to "000" to set Y ADJUST MAX MODE. (8) Set < F46 > (Output level upon detection), < F47 > (Minimum value upon detection), and < F48 > (Maximum value upon detection) to values as shown in the left table. (9) Press the [MUTING] key to memoirize the set value. (10) Select "8.PP" from the SERVICE MODE. (11) Adjust < ADM013 > (G OFFSET) to set the 0% black part on the upper right half of the screen to the same color as on the upper left half of the screen. (Fig.9) (12) Press the [MUTING] key to memoirize the set value. (13) Select "1.PICTURE/SOUND" from the SERVICE MODE. (14) Set < F44 > (Picture control) to "000" to cancel Y ADJUST MAX MODE (15) Press the [MUTING] key to memoirize the set value.
	Signal generator		[1. PICTURE/SOUND] S13: RDRV (R DRIVE) S15: GDRV (G DRIVE) S17: BDRV (B DRIVE) S19: CUTR (R CUTOFF) S21: CUTG (G CUTOFF) S23: CUTB (B CUTOFF) F44: (NO DISPLAY) (Picture control) F45: (NO DISPLAY) (Picture control mode sw) F46: OUT LV. (Output level upon detection) F47: LMT BTM (Minimum value upon detection) F48: LMT TOP (Maximum value upon detection)	

Item No.	Setting value	Adjustment item
F46	090	Output level upon detection
F47	016	Minimum value upon detection
F48	016	Maximum value upon detection

SPLIT screen mode

Set the 0% black part in this part to the same black color as on the left screen.

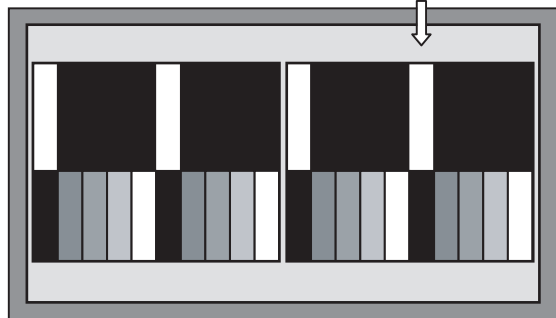


Fig.7

Item	Mesuring instrument	Test point	Adjustment part	Description
SUB-SCREEN A-D CONVERTER GAIN	Remote control unit		[8. PP] ADM010: (NO DISPLAY) (G GAIN)	(1) Input NTSC signal that shows brightness gradation with 75% white into both the right and the left screen. (2) Set "VIDEO STATUS" to STANDARD. (3) Set "ASPECT" to FULL. (4) Select "COLOR TEMPERATURE" to "LOW". (5) Set SPLIT screen mode. (6) Select "1.PICTURE/SOUND" from the SERVICE MODE for the right screen. (7) Set < F44 > (Picture control) to "001" and <F45 > (Picture control mode sw) to "000" to set Y ADJUST MAX mode. (8) Set < F46 > (Output level upon detection), < F47 > (Minimum value upon detection), and < F48 > (Maximum value upon detection) to values as shown in the left table. (9) Press the [MUTING] key to memoirize the set value. (10) Select "8.PP" from the SERVICE MODE. (11) Adjust < ADM010 > (G OFFSET) so that the 75% white part on the upper right part of the screen is white. (Fig.8) (12) Press the [MUTING] key to memoirize the set value. (13) Check the black level adjusted in "SPLIT screen BLACK LEVEL adjustment". Adjust the black level of SUB SCREEN again if it is not proper. (14) Select "1.PICTURE/SOUND" from the SERVICE MODE. (15) Set < F44 > (Picture control) to "000" to cancel Y ADJUST MAX MODE. (16) Press the [MUTING] key to memoirize the set value.
	Signal generator		[1. PICTURE/SOUND] S13: RDRV (R DRIVE) S15: GDRV (G DRIVE) S17: BDRV (B DRIVE) S19: CUTR (R CUTOFF) S21: CUTG (G CUTOFF) S23: CUTB (B CUTOFF) F44: (NO DISPLAY) (Picture control) F45: (NO DISPLAY) (Picture control mode sw) F46: OUT LV. (Output level upon detection) F47: LMT BTM (Minimum value upon detection) F48: LMT TOP (Maximum value upon detection)	

Item No.	Setting value	Adjustment item
F46	090	Output level upon detection
F47	168	Minimum value upon detection
F48	168	Maximum value upon detection

SPLIT screen mode

Adjust so that 75%" white is the brightest.

Adjust so that 75%" white is the brightest.

Fig.8

Item	Mesuring instrument	Test point	Adjustment part	Description
WHITE BALANCE (HIGHLIGHT)	Remote control unit Signal generator		[1. PICTURE/SOUND] S13: RDRV (R DRIVE) S15: GDRV (G DRIVE) S17: BDRV (B DRIVE) S19: CUTR (R CUTOFF) S21: CUTG (G CUTOFF)	(1) Input NTSC 75% all-white signal. (2) Set "VIDEO STATUS" to STANDARD. (3) Set "ASPECT" to FULL. (4) Select "COLOR TEMPERATURE" to "LOW". (5) Select "1.PICTURE/SOUND" from the SERVICE MODE. (6) Fix one of < S13 > (R DRIVE), < S15 > (G DRIVE), or < S17 > (B DRIVE). Lower the two that are not fixed so that the all-white screen is equally white throughout. Set one or more of < S13 >, < S15 >, and < S17 > to "255". (7) Check that white balance is properly tracked from lowlight to highlight. (8) Press the [MUTING] key to memoirze the set value. (9) Input 1125i 75% all-white signal. (10) Repeat steps (5) to (8) above. (11) Input 525i all-white signal. (12) Repeat steps (5) to (8) above.

SECTION 5 TROUBLESHOOTING

5.1 SELF-DIAGNOSIS FEATURE

5.1.1 OUTLINE

This unit comes with the "Self-diagnosis" feature, which checks the operational state of the circuit and displays/saves it during failure. Diagnosis is performed when power is turned on, and information input to the main microcomputer is monitored at all time. Diagnosis is displayed in 2 ways via screen display and LED flashes. Failure detection is based on input state of I²C bus and the various control lines connected to the main microcomputer.

5.1.2 HOW TO ENTER THE SELF-DIAGNOSIS DISPLAY MODE

Before entering the Self-diagnosis Display mode, confirm that the setting of TV / CATV SW of the REMOTE CONTROL UNIT is at the "TV" side and the setting of VCR / DVD SW is at the "VCR" side. If the switches have not been properly set, you cannot enter the Self-diagnosis Display mode.

- (1) Press the [SLEEP TIMER] key and set it to 30 minutes.
- (2) Press the [VIDEO STATUS] key and [DISPLY] key simultaneously, then enter the TEST MODE.
- (3) Press the [4] key (Self-diagnosis Display mode) before the service mode screen disappears.
- (4) Press the [MTS] key to enter Page 2 of the Self-diagnosis Display mode.

*Use the [MTS] key to toggle between Page 1 and Page 2.

NOTE:

The remote control unit attached to this set does not contain the [MTS] key. To perform the procedure (4), use a remote control unit that contains the [MTS] key.

5.1.3 HOW TO EXIT THE SELF-DIAGNOSIS DISPLAY MODE

To Save Failure History:

Turn off the power by unplugging the AC power cord plug when in the self-diagnosis display mode.

To Clear (Reset) Failure History:

Turn off the power by pressing the [POWER] key on the remote control unit when in the self-diagnosis display mode.

5.1.4 FAILURE HISTORY

Failure history can be counted up to 9 times for each item. When the number exceeds 9, display will remain as 9. Failure history will be stored in the memory unless it has been deleted.

NOTE:

Only SYNC (with/without sync signals) will be neither counted nor stored.

5.1.5 POINTS TO NOTE WHEN USING THE SELF-DIAGNOSIS FEATURE

In addition to circuit failures (abnormal operation), the following cases may also be diagnosed as "Abnormal" and displayed and counted as "NG".

- (1) Temporary defective transmissions across circuits due to pulse interruptions
- (2) Misalignment in the on/off timing of power for I²C bus (VCC) when turning on/off the main power.

Diagnosis may be impeded if a large number of items are displayed as "NG". As such, start self-diagnosis check only after 3 seconds in the case of receivers and 5 seconds in the case of panels upon turning on the power. If recurrences are expected, ensure to clear (reset) the failure history and record the new diagnosis results.

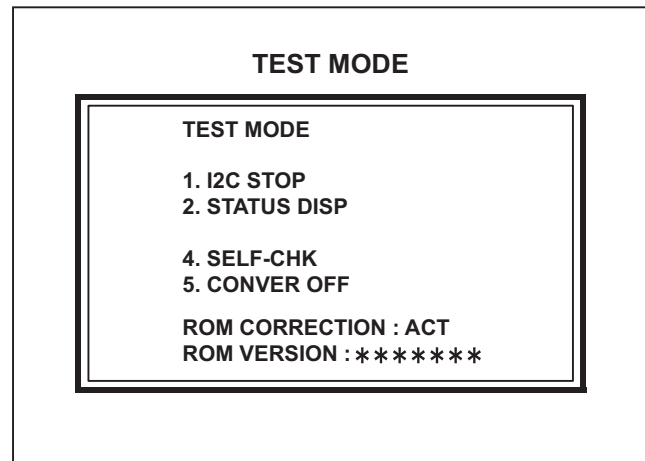


Fig.1

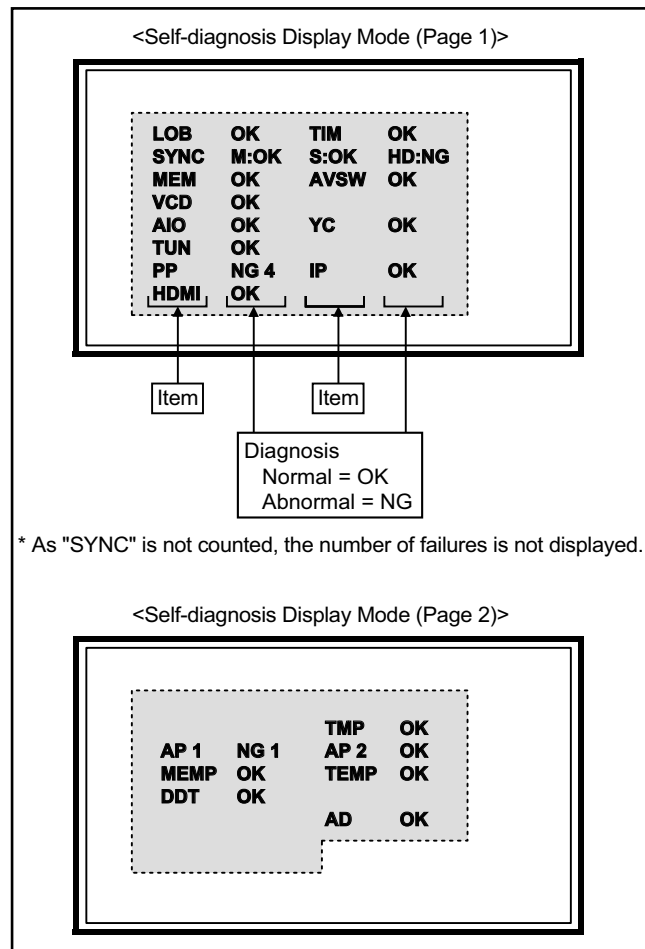


Fig.2

5.1.6 DETAILS

Self-diagnosis is performed for the following items:

• PAGE 1

Item	Display	Description of detection	Diagnosis signal (line)	Means of detection
LOW B LINE SHORT PROTECTION	LOB	Was Low B line short protector activated? No. of times short circuit protection is triggered [POWER PWB] (3.3V / LCD 5V / 9V / 13V / AVCC)	PROTECTOR	Detection starts 3 seconds upon power on Turns off power if NG is detected within 200ms
TIMER	TIM	Did power supply frequency fluctuated from: 50Hz → 60Hz 60Hz → 50Hz Number of counts [POWER PWB (PC9001)]	AC	Regularly detects power supply frequency by AC pulse counts and monitors frequency fluctuations other than instances immediately after reset
WITH / WITHOUT SYNC SIGNALS	SYNC	Are there synchronized signals? HD: Color difference synchronized signals M: Main Synchronized signals S: Sub-synchronized signals [IC1211]	SDA	Checks whether there are synchronized signal in video signal
MEMORY	MEM	Is ACK returned during I ² C transmission? [IC1703]	SDA	Monitors upon every I ² C transmission and counts if ACK is not returned
AV SWITCH	AVSW	Same as above [IC1301]	SDA	Same as above
VIDEO CHROMA	VCD	Same as above [IC7301]	SDA	Same as above
AUDIO PROCESSING	AIO	Same as above [IC6501]	SDA	Same as above
3D Y/C SEPARATION	YC	Same as above [IC3001]	SDA	Same as above
RF TUNER	TUN	Same as above [TU1101]	SDA	Same as above
MULTI-SCREEN PROCESSING	PP	Is ACK returned during I ² C transmission?	SDA	Monitors upon every I ² C transmission and counts if ACK is not returned
DIST PROCESSING	IP	Same as above [IC201]	SDA	Same as above
HDMI	HDMI	Not used (Only display)	----	----

• PAGE 2

Item	Display	Description of detection	Diagnosis signal (line)	Means of detection
DEFECTIVE AUDIO OUTPUT PART	AP1	Detects short and abnormal temperature in audio circuit. [IC6641]	SDA	Detection starts 3 seconds upon power on. Performs detection every 16ms. If NG lasts for 300ms, audio output part is defective. Controls [/AMP_RST] to [L]→(0.5S)→[H]. Monitors again, and turns off power if the defect is not corrected within 3 seconds.
	AP2	Fault load of audio output part.. [IC6641]		
DEVICE DRIVE COLOR MANAGEMENT	DDT	Is ACK returned during I ² C transmission? [IC401]	SDA	Monitors upon every I ² C transmission and counts if ACK is not returned.
A-D CONVERTER	AD	Is ACK returned during I ² C transmission? [IC001]	SDA	Monitors upon every I ² C transmission and counts if ACK is not returned.

5.1.7 DISPLAY METHOD WHEN RASTER IS NOT AVAILABLE

When raster is not displayed due to failure of the set, the POWER LED light will flash to indicate the failure mode. Trigger for forced shutdown of power is stored and displayed.

Trigger of error	Display	LED flash cycle of display unit
LOW B LINE SHORT PROTECTION	LOB	Blue every 1.0 sec
DEFECTIVE AUDIO OUTPUT PART	AP1	Blue every 0.1 sec
	AP2	Blue every 0.5 sec

Details on Operation

Power of TV will be turned off when NG is detected for LOW B short Protection". "POWER LED" will start flashing immediately after power is turned off and power of tuner and panel cannot be turned on upon shutdown until the AC plugs are disconnected once and reconnected.



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