

JVC

SERVICE MANUAL

COLOR TELEVISION

AV-32S565 /Y,
AV-32S575 /Y,
AV-32S585 /Y

BASIC CHASSIS

SC2



[AV-32S565]

[AV-32S575]
[AV-32S585]

I'Art PRO
D.I.S.T.
Digital Image Scaling Technology
HIGH DEFINITION TELEVISION
HDTV
MONITOR
BBE
HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

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SPECIFICATION

Items		Contents		
		AV-32S565	AV-32S575	AV-32S585
Dimensions (W × H × D)		87.7cm × 69.9cm × 56.5cm (34-5/8" × 27-5/8" × 22-1/4")	93.9cm × 68.5cm × 57.0cm (37" × 27" × 22-1/2")	
Mass		66.0 kg (145.2 lbs)	65.0 kg (143.1 lbs)	
TV RF System		CCIR (M)		
Color System		NTSC		
Sound System		BTSC (Multi Channel Sound)		
Teletext System		Closed caption (T1-T4 / CC1-CC4)		
TV Receiving Channels and Frequency	VHF Low	02ch to 06ch : 54MHz to 88MHz		
	VHF High	07ch to 13ch : 174MHz to 216MHz		
	UHF	14ch to 69ch : 470MHz to 806MHz		
	CATV	54MHz to 804MHz		
		Low Band : 02 to 06, A-8 by 02 to 06&01		
		High Band : 07 to 13 by 07 to 13		
		Mid Band : A to I by 14 to 22		
		Super Band : J to W by 23 to 36		
		Hyper Band : W+1 to W+28 by 37 to 64		
		Ultra Band : W+29 to W+84 by 65 to 94, 100 to 125		
		Sub Mid Band : A4 to A1 by 96 to 99		
TV / CATV Total Channel		180 Channels		
Intermediate Frequency	Video IF	45.75 MHz		
	Sound IF	41.25 MHz (4.5MHz)		
Color Sub Carrier		3.58 MHz		
Power Input		AC120V, 60Hz		
Power Consumption		215W		
Picture Tube (Visible size)		80cm (32") (Diagonally), H: 49.6cm × W: 65.6cm (H: 19-5/8" × W: 25-7/8")		
High Voltage		32kV(+1kV/-1.3kV) (at zero beam current)		
Speaker		5cm × 12cm (2" × 4-3/4"),	6.5cm × 13cm (2-1/2" × 5"), Oval type × 2	
		Oval type × 2		
Audio Power Output		7.5W + 7.5W	10W + 10W	
Antenna terminal (VHF/UHF)		F-type connector, 75Ω unbalanced, coaxial		
Video / Audio input [INPUT-1/2/3/4]	Component Video [INPUT-1/2]	RCA pin jack × 6		
	1080i / 720p	Y : 1V (p-p) (Sync signal: 0.35V(p-p), 3-value sync.), 75 Ω Pb/Pr : ±0.35V(p-p), 75 Ω		
	480p / 480i	Y : 1V (p-p), Positive (Negative sync provided), 75 Ω Cb/Cr : ±0.7V(p-p), 75 Ω		
	S-Video [INPUT-1/3/4]	Mini-DIN 4 pin × 3 Y: 1V (p-p), Positive (Negative sync provided), 75 Ω C: 0.286V (p-p) (Burst signal), 75 Ω		
	Video Audio	1V (p-p), Positive (Negative sync provided), 75 Ω, RCA pin jack × 4 500mV (rms), High impedance, RCA pin jack × 8		
Digital input	Video/Audio (Digital)	---	HDMI jack × 1 (Digital-input terminal is not compatible with picture signals of computer signal)	
	Audio (Analog)	---	RCA pin jack × 2, 500mV(rms) (-4dBs), high impedance	
Audio output	Variable	RCA pin jack × 2 More than 0 to 1000mV (rms) (+2.2dBs) [AV-32S575 / AV-32S585]		
	Fix	500mV(rms), (-4dBs), low impedance (400Hz when modulated 100%)		
Subwoofer output		---	RCA pin jack × 1 More than 0 to 1000mV (rms) (+2.2dBs), low impedance (100Hz when modulated 100%)	
Center channel input		---	RCA pin jack × 1, 500mV(rms) (-4dBs), high impedance	
AV compulink III		---		3.5mm mini jack × 1
Remote Control Unit		RM-C1257G (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) **Use isolation transformer when hot chassis.**
The chassis and any sub-chassis contained in some products are connected to one side of the AC power line. An isolation transformer of adequate capacity should be inserted between the product and the AC power supply point while performing any service on some products when the HOT chassis is exposed.
- (5) **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.
- (6) If any repair has been made to the chassis, it is recommended that the B1 setting should be checked or adjusted (See B1 POWER SUPPLY check).
- (7) The high voltage applied to the picture tube must conform with that specified in Service manual. Excessive high voltage can cause an increase in X-Ray emission, arcing and possible component damage, therefore operation under excessive high voltage conditions should be kept to a minimum, or should be prevented. If severe arcing occurs, remove the AC power immediately and determine the cause by visual inspection (incorrect installation, cracked or melted high voltage harness, poor soldering, etc.). To maintain the proper minimum level of soft X-Ray emission, components in the high voltage circuitry including the picture tube must be the exact replacements or alternatives approved by the manufacturer of the complete product.
- (8) Do not check high voltage by drawing an arc. Use a high voltage meter or a high voltage probe with a VTVM. Discharge the picture tube before attempting meter connection, by connecting a clip lead to the ground frame and connecting the other end of the lead through a 10k Ω 2W resistor to the anode button.
- (9) 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.

(10) 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 1100V 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

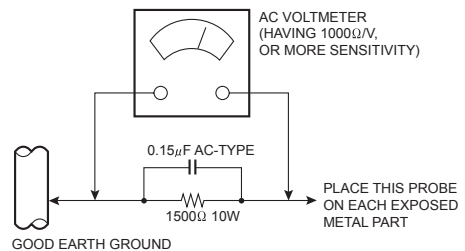
Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known 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

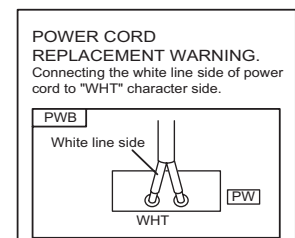
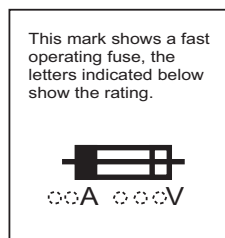
Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1000 Ω per volt or more sensitivity in the following manner. Connect a 1500 Ω 10W resistor paralleled by a 0.15 μ F AC-type capacitor between an exposed metal part 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.).



(11) High voltage hold down circuit check.

After repair of the high voltage hold down circuit, this circuit shall be checked to operate correctly. See item "How to check the high voltage hold down circuit".



SECTION 2

SPECIFIC SERVICE INSTRUCTIONS

2.1 FEATURES

D.I.S.T. (Digital Image Scaling Technology)

This system uses line interpolation to double the number of scanning lines and achieve high resolution, flicker-free picture.

SMART CAPTION [AV-32S585]

Smart caption will appear when you press the MUTING button, only on channels where the broadcast contains CLOSED CAPTION information.

SMART SOUND [AV-32S575 / AV-32S585]

Decreases high sound levels, giving a regulated sound level.

FLAT SQUARE CRT

It became legible from any position by CRT with few reflection and reflect lumps on the flat screen.

DIGITAL COMB FILTER

By the 3D digital comb filter, the refreshed image can be seen.

VIDEO STATUS

Expression of a favorite screen can be chosen by the VIDEO STATUS function.

[STANDARD ↔ DYNAMIC ↔ THEATER ↔ GAME]

DIGITAL INPUT [AV-32S575 / AV-32S585]

Digital-in will display when any picture signal (480i/ 480p, 720p/ 1080i) in Digital-in is displayed.

V-CHIP

Since the V-CHIP is built in, it can choose, view and listen to a healthy program.

MTS STEREO

The voice multiplex function of the MTS system is built in. (MTS = Multi channel Television Sound system)

NATURAL CINEMA

Watching the movie or animation, press the Natural Cinema to adjust the out line of the images to make thin more sharp.

BBE [AV-32S575 / AV-32S585]

High definition audio adds natural, clear and extraordinary sound quality to any program.

VIDEO INPUT LABEL [AV-32S565 / AV-32S575]

This function is used to label video input connections for the onscreen displays.

A.H.S. [AV-32S575 / AV-32S585]

Adds a more spacious surround sound. Music gives basic effect and Movie for more effect.

HYPER SURROUND [AV-32S565]

Creates a deep, three-dimensional sound effect by channeling the audio through the TV's front-firing speakers.

2.2 MAIN DIFFERENCE LIST

Item	AV-32S565	AV-32S575	AV-32S585
FRONT CABINET COLOR	SILVER	←	SILVER / GRAY
POWER LED	GREEN	BLUE	←
BBE	NO	YES	←
SURROUND	HYPER SURROUND	A.H.S	←
SMART SOUND	NO	YES	←
SMART CAPTION	NO	←	YES
CHANNEL LABEL	YES	←	NO
VIDEO INPUT LABEL	YES	←	NO
XDS ID DISPLAY	NO	YES	←
INTERACTIVE PLUG IN MENU	NO	YES	←
CENTER CHANNEL INPUT	NO	YES	←
SUBWOOFER OUTPUT	NO	YES	←
AUDIO OUTPUT	FIX	VARIABLE / FIX	←
DIGITAL INPUT	NO	YES (HDMI)	←
AV COMPULINK III	NO	←	YES

2.3 TECHNICAL INFORMATION

2.3.1 MAIN MICRO COMPUTER (CPU) FUNCTION

Pin No.	Pin name	I/O	Function	Pin No.	Pin name	I/O	Function
1	BS_RXD	-	Not used	43	P74	-	Not used
2	/MICON_V	I	V. sync for OSD	44	ON_TIM	-	Not used
3	LB_PRO	I	Low B protect detection [Detect: H]	45	SBO0	-	Not used
4	NC	-	Not used	46	SBD0	-	Not used
5	/RST	I	CPU reset [Reset: L]	47	SBT1	I	Use for on board writing [for factory]
6	FORMAT_EDGE	O	NC	48	TS_PC_DET	-	Not used
7	/TEST	O	Operation test for CPU	49	SRQ	-	Not used
8	OSD_YS	I	Ys (blanking) for OSD	50	BS1.5CTL	-	Not used
9	SDA4	I/O	Data for Inter IC control (for DIST)	51	EE_ABL	-	Not used
10	SYNCSEL	O	Not used	52	ABL/ACL	O	ABL/ACL control
11	A_MU	O	Audio muting [Muting: H]	53	CHROMA	I	Not used
12	/MICON_H	O	H. sync for OSD	54	DC_COTL	I	Black level DC reproduce control
13	M_MU	O	NC	55	FMT1	-	Not used
14	OSDXI	O	Keep for OSD oscillation	56	FMT2	-	Not used
15	OSDXO	O	Keep for OSD oscillation	57	AFC_1	I	Sub AFT voltage
16	SDA2	I/O	Data for Inter IC control (for MTS)	58	/LOB_POW	O	Low B power control [Power on: L]
17	AC_IN	I	AC(60Hz) for timer clock	59	COMPLINK	I/O	AV compulink III control
18	SCL2	O	Clock for Inter IC control (for MTS)	60	/POWERGOOD	I	Power condition check
19	TU_POW	-	Not used	61	/MECA_ON	O	Power SW interrupt [Pushing:L]
20	VCOI	I	LPF	62	/MAIN_POW	I	Main power control [Power on: L]
21	PDO	I	LPF	63	NC	-	Not used
22	/IP_RESET	I	Reset for DIST [Reset: L]	64	/B1_POW	O	B1 power control [Power on: L]
23	OSD_YM	I	YM (transparence) for OSD	65	C/N	I	Main AFT voltage
24	OSD_B	O	Blue for OSD	66	X_RAY_M	I	X-ray protect detection [Protect: 0.7V]
25	POWER_LED	O	Lighting for POWER LED [Lighting: H]	67	EE_CDS	-	Not used
26	OSD_G	O	Green for OSD	68	KEY2	I/O	Key scan for front key (CH+ Vol-/+)
27	OSD_R	O	Red for OSD	69	KEY1	O	Key scan for front key (Menu CH-)
28	VREF	I	Reference voltage for OSD	70	SCL1	O	Clock for Inter IC control (for Memory)
29	IP_ERR	I	AMDP program load error detection [Detect: L]	71	SDA1	I/O	Data for Inter IC control (for Memory)
30	IREF	O	Reference current for OSD	72	REMO	I	Remote control [No input: H]
31	COMP	O	Phase adjust for OSD	73	POW_DET	-	Not used
32	AVDD	I	+3.3V	74	VSS	-	GND
33	CLL	O	For low clamp level	75	OSC2	O	System clock oscillation (4MHz)
34	VREFLS	I	Reference voltage in for sub CCD	76	OSC1	I	System clock oscillation (4MHz)
35	SUB_CCD	I	Composite video for sub CCD	77	VDD	I	+3.3V
36	NC	-	Not used	78	SCL0	O	Clock for Inter IC control (for Generally)
37	VSS	-	GND	79	VOUTENB	-	Not used
38	MAIN_CCD	O	Composite video for main CCD	80	SDA0	I/O	Data for Inter IC control (for Generally)
39	VREFHS	O	Reference voltage for main CCD	81	P57	-	Not used
40	CLH	O	For high clamp level	82	BS_TXD	-	Not used
41	VDD/VPP	I	+3.3V	83	BS_TXD	-	Not used
42	SCL4	O	Clock for Inter IC control (for DIST)	84	P_MUTE	O	Picture muting [Muting: H]

SECTION 3 DISASSEMBLY

3.1 DISASSEMBLY PROCEDURE [AV-32S565]

3.1.1 REMOVING THE REAR COVER

- Unplug the power plug.
 - (1) Remove the 14 screws **[A]** as shown in Fig.2.
 - (2) Remove the REAR COVER toward you.

NOTE:

When reinstalling the REAR COVER, carefully push it inward after inserting the chassis into the REAR COVER groove.

3.1.2 REMOVING THE SPEAKER

- Remove the REAR COVER.
 - (1) Remove the 2 screws **[C]** as shown in Fig.2, then remove the SPEAKER HOLDER.
 - (2) Remove the 2 screws **[D]** as shown in Fig.2, then remove the SPEAKER.
 - (3) Follow the same steps when removing the other hand SPEAKER.

3.1.3 REMOVING THE AV TERMINAL BOARD

- Remove the REAR COVER.
 - (1) Remove the 3 screws **[B]** as shown in Fig.2.
 - (2) Withdraw the AV TERMINAL BOARD toward you.

3.1.4 REMOVING THE CHASSIS

- Remove the REAR COVER.
 - (1) Slightly raise the both sides of the CHASSIS by hand and remove the 2 claws under the both sides of the CHASSIS from the front cabinet.
 - (2) Withdraw the CHASSIS backward.
(If necessary, remove the wire clamps, connectors etc.)

3.1.5 REMOVING THE CONTROL BASE

- Remove the REAR COVER.
Remove the CHASSIS.
 - (1) While pushing down the claws **[b]** as shown in Fig.1.
 - (2) Remove the CONTROL BASE in the arrow direction marked **[c]**.
(If necessary, remove the wire clamps, connectors etc.)

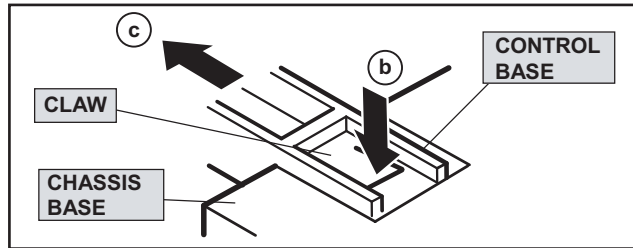


Fig.1

3.1.6 CHECKING THE PW BOARD

- To check the PW Board from backside.
 - (1) Pull out the CHASSIS. (Refer to REMOVING THE CHASSIS).
 - (2) Erect the CHASSIS vertically with the HVT side facing up so that you can easily check the back side of the PW Board.

CAUTION:

- When erecting the CHASSIS, be careful so that there will be no contact with other PWB.
- Before turning the power on, make sure that the CRT earth wire and other connectors are properly connected.

3.1.7 WIRE CLAMPING AND CABLE TYING

- (1) Be sure to clamp the wire.
- (2) Never remove the cable tie used for tying the wires together.
Should it be inadvertently removed, be sure to tie the wires with a new cable tie.

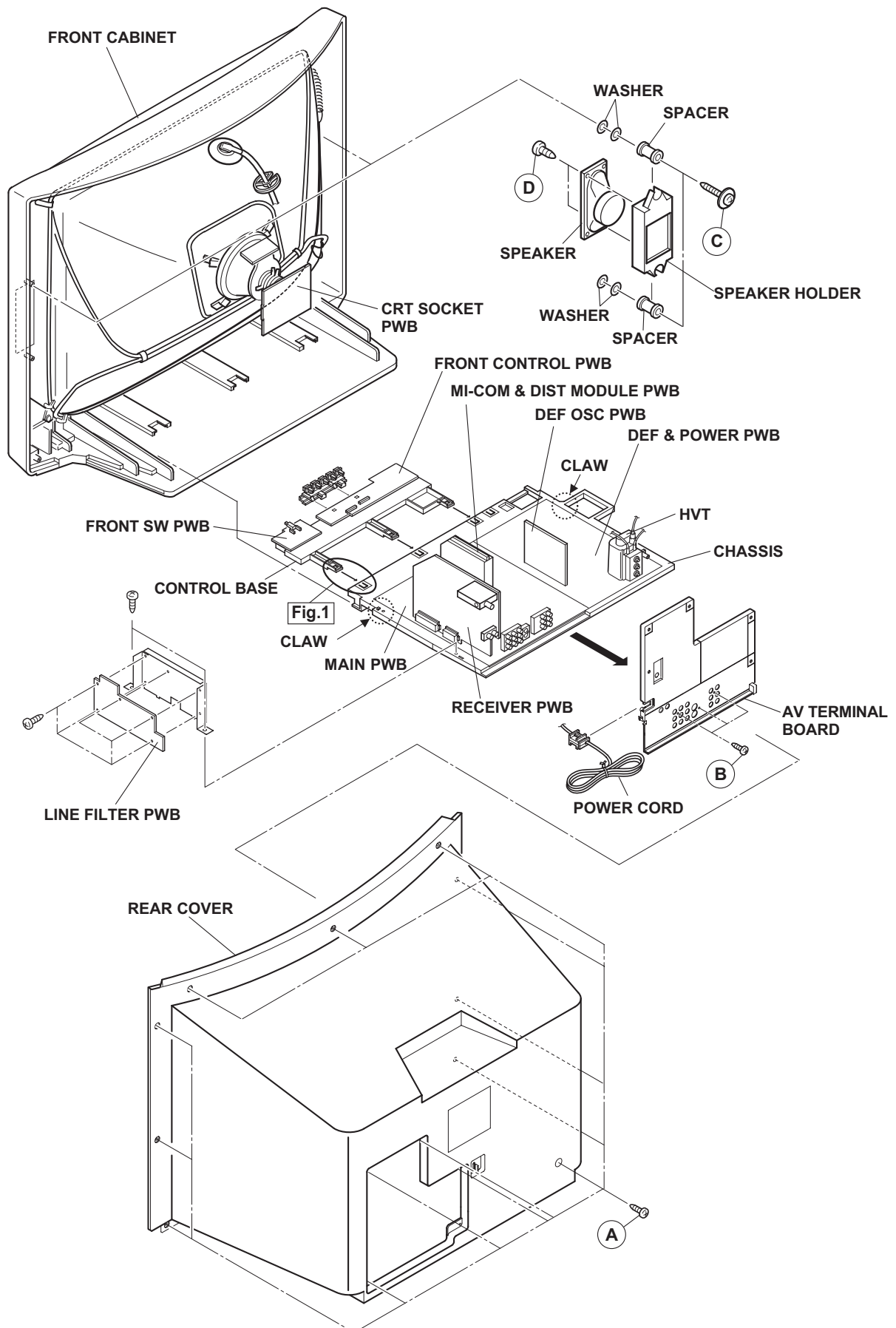


Fig.2

3.2 DISASSEMBLY PROCEDURE [AV-32S575 / AV-32S585]

3.2.1 REMOVING THE REAR COVER

- Unplug the power plug.
 - (1) Remove the 13 screws **[A]** as shown in Fig.4.
 - (2) Remove the REAR COVER toward you.

NOTE:

When reinstalling the REAR COVER, carefully push it inward after inserting the chassis into the REAR COVER groove.

3.2.2 REMOVING THE SPEAKER

- Remove the REAR COVER.
 - (1) Remove the 2 screws **[D]** as shown in Fig.4, then remove the SPEAKER toward you.
 - (2) Follow the same steps when removing the other hand SPEAKER.

3.2.3 REMOVING THE AV TERMINAL BOARD

- Remove the REAR COVER.
 - (1) Remove the 4 screws **[B]** and 1 screw **[C]** as shown in Fig.4.
 - (2) Withdraw the AV TERMINAL BOARD toward you.

3.2.4 REMOVING THE CHASSIS

- Remove the REAR COVER.
 - (1) Slightly raise the both sides of the CHASSIS by hand and remove the 2 claws under the both sides of the CHASSIS from the front cabinet.
 - (2) Withdraw the CHASSIS backward.
(If necessary, remove the wire clamps, connectors etc.)

3.2.5 REMOVING THE CONTROL BASE

- Remove the REAR COVER.
Remove the CHASSIS.
 - (1) While pushing down the claws **[b]** as shown in Fig.3.
 - (2) Remove the CONTROL BASE in the arrow direction marked **[c]**.
(If necessary, remove the wire clamps, connectors etc.)

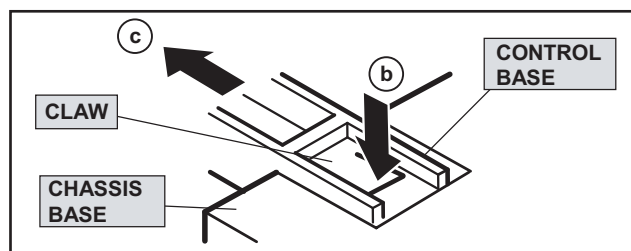


Fig.3

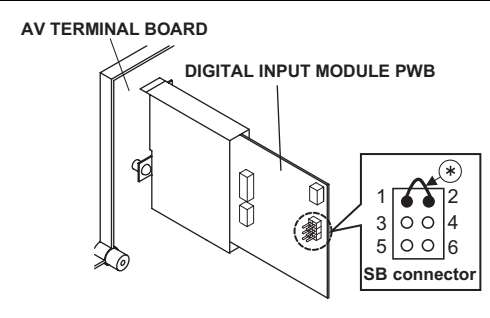
3.2.6 REMOVING THE DIGITAL INPUT MODULE PWB

- Remove the REAR COVER
- Remove the AV TERMINAL BOARD.
 - (1) Remove the 1 screw **[F]** and 1 screw **[G]** as shown in Fig.4.
 - (2) Remove the DIGITAL INPUT MODULE PWB.

NOTE:

If necessary, take off the wire clamps, connectors etc.

CAUTION AT DISASSEMBLY



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

3.2.7 CHECKING THE PW BOARD

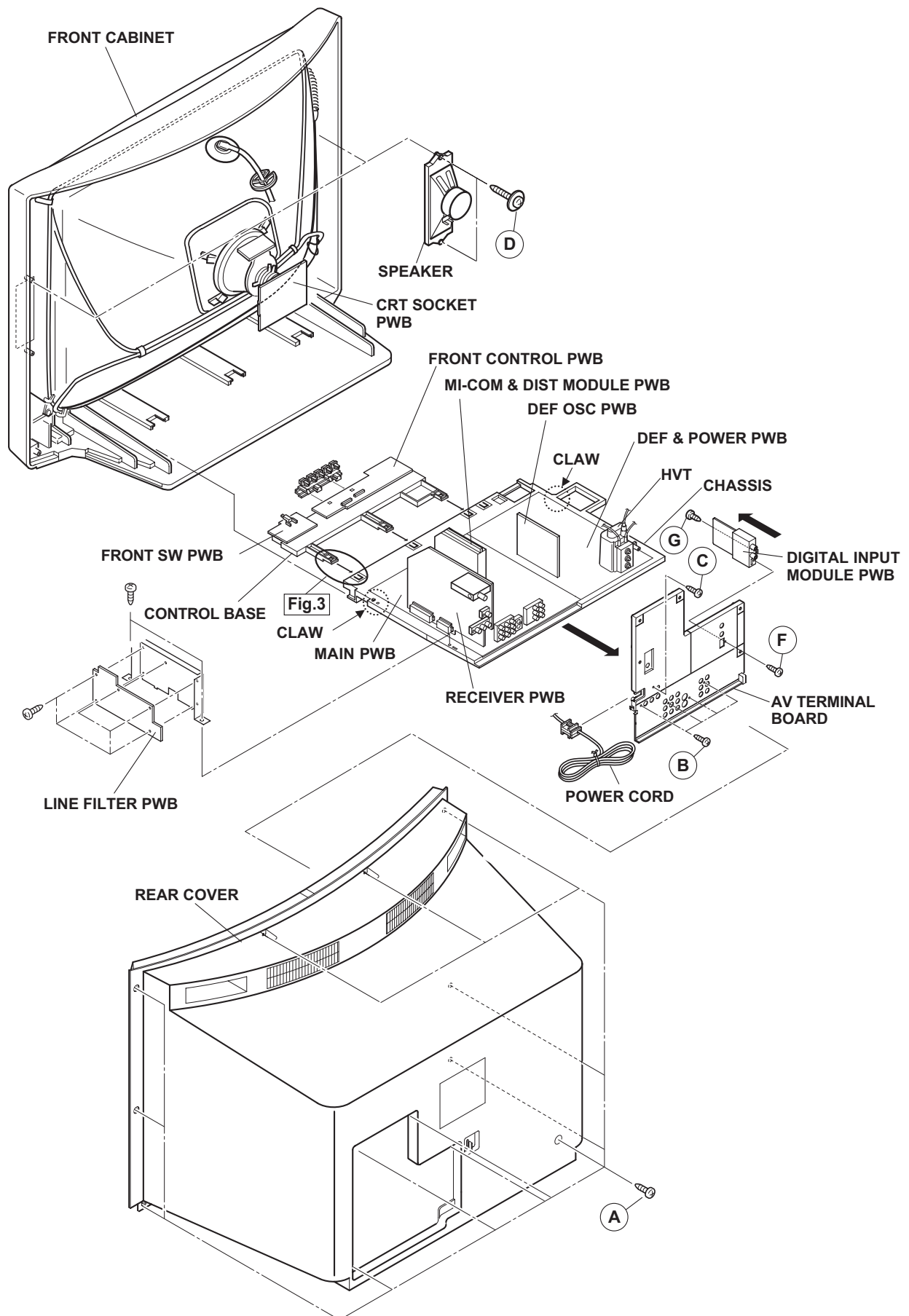
- To check the PW Board from backsid.
 - (1) Pull out the CHASSIS. (Refer to REMOVING THE CHASSIS).
 - (2) Erect the CHASSIS vertically with the HVT side facing up so that you can easily check the back side of the PW Board.

CAUTION:

- When erecting the CHASSIS, be careful so that there will be no contact with other PWB.
- Before turning the power on, make sure that the CRT earth wire and other connectors are properly connected.

3.2.8 WIRE CLAMPING AND CABLE TYING

- (1) Be sure to clamp the wire.
- (2) Never remove the cable tie used for tying the wires together.
Should it be inadvertently removed, be sure to tie the wires with a new cable tie.



3.2.9 REMOVING THE CRT

NOTE:

- Replacement of the CRT should be performed by 2 or more persons.
 - After removing the REAR COVER, CHASSIS etc.,
- (1) Putting the CRT change table on soft cloth, the CRT change table should also be covered with such soft cloth (shown in Fig. 3).
 - (2) While keeping the surface of CRT down, mount the TV set on the CRT change table balanced will as shown in Fig. 3.
 - (3) Remove 4 screws marked by arrows with a box type screwdriver as shown in Fig. 4.

NOTE:

Since the cabinet will drop when screws have been removed, be sure to support the cabinet with hands.

- (4) After 4 screws have been removed, put the cabinet slowly on cloth (At this time, be carefully so as not to damage the front surface of the cabinet) shown in Fig. 5.

NOTE:

- The CRT should be assembled according to the opposite sequence of its dismantling steps.
- The CRT change table should preferably be smaller than the CRT surface, and its height be about 35cm.

CAUTION FOR DEGAUSSING WORKS

Whenever degaussing works are required due to distorted images and colors caused by the replacement of the CRT or other external magnetic forces, self-degaussing (internal degaussing) should be carried out without fail instead of degaussing the monitor from the outside.

Because of the characteristics of the CRT used in this monitor, the distorted images and colors may worsen if degaussing the monitor from the outside has been performed.

Even if external degaussing works have been carried out, self-degaussing should be performed by turning the power on the monitor.

When you want to perform self-degaussing of the monitor whose power is already turned on, turn off the power and wait for about 10 minutes before turning the power on the monitor again for self-degaussing.

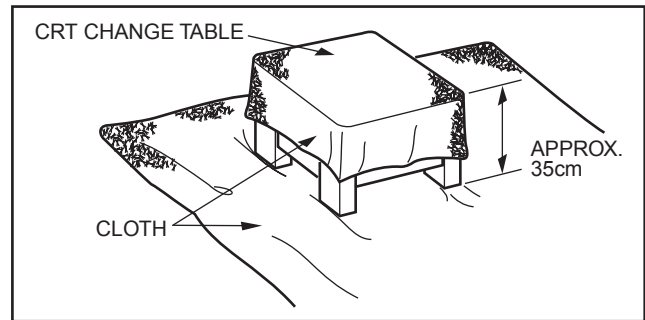


Fig.3

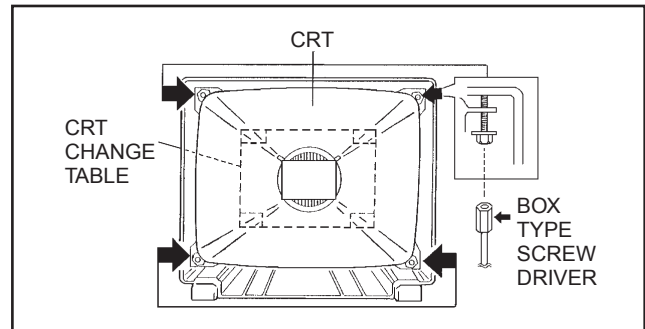


Fig.4

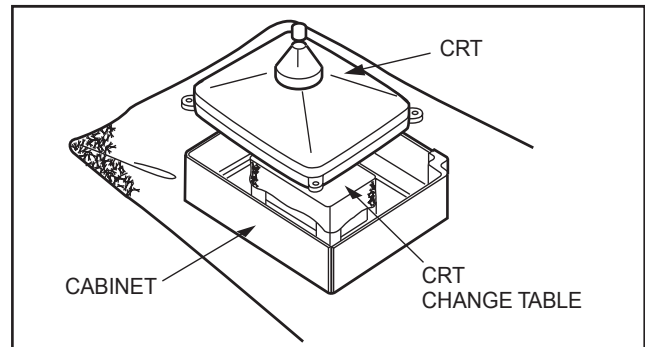


Fig.5

COATING OF SILICON GREASE FOR ELECTRICAL INSULATION ON THE CRT ANODE CAP SECTION.

Subsequent to replacement of the CRT and HV transformer or repair of the anode cap, etc. by dismantling them, be sure to coat silicon grease for electrical insulation as shown in Fig.6. Wipe around the anode button with clean and dry cloth. (Fig.6) Coat silicon grease on the section around the anode button. At this time, take care so that any silicon greases do not stick to the anode button. (Fig.7)

Silicon grease product No. KS - 650N

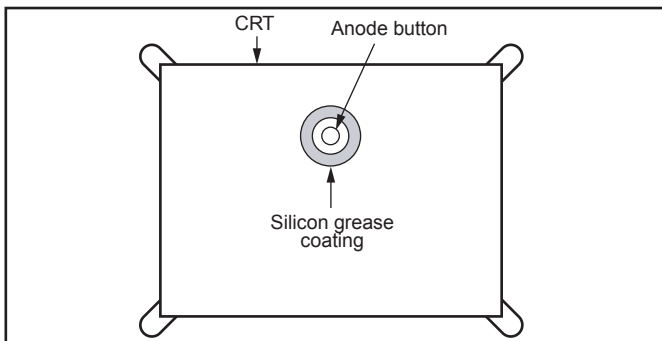


Fig.6

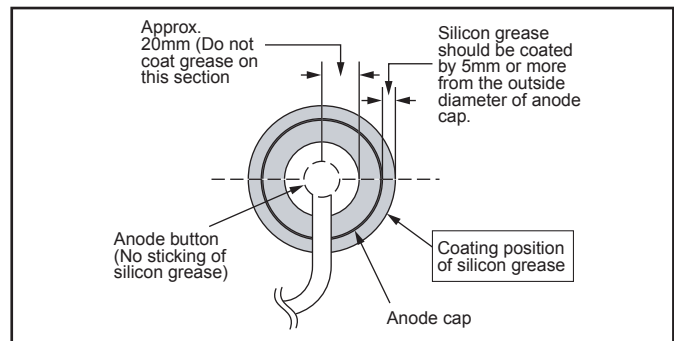


Fig.7

3.3 MEMORY IC REPLACEMENT

- This model uses the memory IC.
- This memory IC stores data for proper operation of the video and drive circuits.
- When replacing, be sure to use an IC containing this (initial value) data.

3.3.1 MEMORY IC REPLACEMENT PROCEDURE

1. POWER OFF

Switch off the power and disconnect the power plug.

2. REPLACE THE MEMORY IC

Be sure to use the memory IC written with the initial setting values.

3. POWER ON

Connect the power plug to the AC outlet and switch on the power.

4. RECEIVING CHANNEL SETTING

Refer to the OPERATING INSTRUCTIONS and set the receive channels (Channels Preset) as described.

5. USER SETTING

Check the user setting items according to the given in page later. Where these do not agree, refer to the OPERATING INSTRUCTIONS and set the items as described.

6. SERVICE MODE SETTING

Verify what to set in the SERVICE MODE, and set whatever is necessary. Refer to the INITIAL SETTING VALUE OF SERVICE MODE.

3.3.2 SERVICE ADJUSTMENT ITEM

SERVICE MODE MAIN MENU

- | | |
|-----------------|--------|
| 1.PICTURE/SOUND | 7. |
| 2.YC SEP | 8.IP |
| 3.WHITE BALANCE | 9.DSD |
| 4.MEMORY SETUP | 0.HDMI |
| 5.RF AFC | |
| 6. | |

Setting items	Settings	Item No.
1. PICTURE/SOUND (Video / Audio setting)		
Audio circuits (A)	Adjust	A01 to A27
Video circuits (S)	Adjust	S01 to S99
Deflection circuits (D)	Adjust	D01 to D32
Factory setting items (F)	Fixed	F01 to F70
2. YC SEP (3D YC separation setting) [Do not adjust]		
	Fixed	YCM001 to YCM185
	Fixed	YCS001 to YCS018
3. WHITE BALANCE (White balance adjustment)		
	Adjust	BR DRV R DRV B CUT R CUT G CUT B
4. MEMORY SETUP (Memory data edit) [Do not adjust]		
5. RF AFC (AFC setting) [Do not adjust]		
	Fixed	---
8. IP (DIST processing setting) [Do not adjust]		
	Fixed	IPA001 to IPA042
9. DSD (Digital super detail setting) [Do not adjust]		
	Fixed	DSA001 to DSA053
	Fixed	DSB001 to DSB053
	Fixed	DSC001 to DSC044
	Fixed	DSD001 to DSD017
0. HDMI (Digital input processing setting) [Do not adjust]		
	Fixed	HDM001 to HDM080
	Fixed	RHD001 to RHD170

3.3.3 SETTINGS OF FACTORY SHIPMENT

3.3.3.1 BUTTON OPERATION

Setting item	Setting position
POWER	Off
CHANNEL	CABLE-02
VOLUME	10

3.3.3.2 REMOTE CONTROL DIRECT OPERATION

Setting item		Setting position
INPUT		TV
CHANNEL		CABLE-02
VOLUME (Normal)		10
VOLUME (Center CH in mode)		10 [AV-32S575/AV-32S585]
MUTING		OFF
DISPLAY		OFF
ASPECT		4:3
OFF TIMER		OFF
THEATER PRO		OFF
VIDEO STATUS		DYNAMIC
CLOSED CAPTION		OFF
SOUND	A.H.S	OFF [AV-32S575/AV-32S585]
	HYPER SORROUND	OFF [AV-32S565]
	BBE	ON [AV-32S575/AV-32S585]
	SMART SOUND	OFF [AV-32S575/AV-32S585]
PIP	SELECT (SAUCE)	VIDEO 1
	TWIN (POSITION)	Left bottom

3.3.3.3 REMOTE CONTROL MENU OPERATION

1. SOUND ADJUST

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

2. CLOCK / TIMERS

Setting item	Setting position
SET CLOCK	OFF
ON / OFF TIMER	OFF

3. INITIAL SETUP

Setting item	Setting position
DIGITAL-IN	SIZE 1 [AV-32S575/AV-32S585]
DIGITAL-AUDIO	DIGITAL [AV-32S575/AV-32S585]
CENTER CH INPUT	OFF [AV-32S575/AV-32S585]
AUDIO OUT	FIX [AV-32S575/AV-32S585]
TV SPEAKER	ON
NOISE MUTING	ON
FRONT PANEL LOCK	OFF
V1 SMART INPUT	OFF [AV-32S575/AV-32S585]
VIDEO INPUT LABEL	All blank [AV-32S575/AV-32S585]
LANGUAGE	ENG.
CLOSED CAPTION	OFF (CC1,T1)
AUTO SHUT OFF	OFF
TILT CORRECTION	Center
V-CHIP	OFF
XDS ID	ON [AV-32S575/AV-32S585]
AUTO DEMO	OFF

4. PICTURE ADJUST

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	DIG. NOISE CLEAR	VSM
STANDARD	00	00	00	00	00	LOW	OFF	ON
DINAMIC	+30	00	00	00	+03	HIGH	OFF	ON
THEATER	-10	00	00	00	00	HIGH	OFF	ON
GAME	00	00	00	00	0	HIGH	OFF	ON

< HD MODE >

Setting item	PICTURE	BRIGHT	COLOR	TINT	DETAIL	COLOR TEMPERATURE	DIG. NOISE CLEAR	VSM
STANDARD	00	00	00	00	00	LOW	OFF	ON
DINAMIC	+30	00	00	00	00	HIGH	OFF	ON
THEATER	-10	00	00	00	00	LOW	OFF	ON
GAME	00	00	00	00	00	HIGH	OFF	ON

3.4 REPLACEMENT OF CHIP COMPONENT

3.4.1 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.

3.4.2 SOLDERING IRON

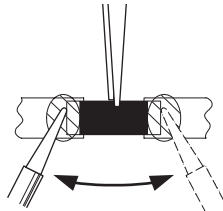
- (1) Use a high insulation soldering iron with a thin pointed end of it.
- (2) A 30w soldering iron is recommended for easily removing parts.

3.4.3 REPLACEMENT STEPS

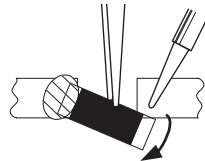
1. How to remove Chip parts

[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.

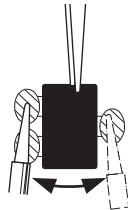


[Transistors, diodes, variable resistors, etc.]

- (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.



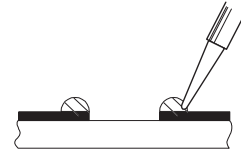
NOTE :

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

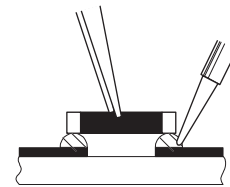
2. How to install Chip parts

[Resistors, capacitors, etc.]

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

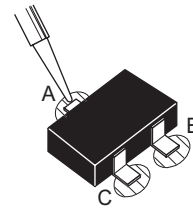


- (2) Grasp the chip part with tweezers and place it on the solder. Then heat and melt the solder at both ends of the chip part.

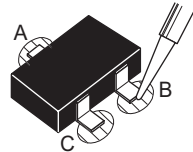


[Transistors, diodes, variable resistors, etc.]

- (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) There are 2 ways of adjusting this TV : One is with the **REMOTE CONTROL UNIT** and the other is the conventional method using adjustment parts and components.
- (2) The adjustment using the **REMOTE CONTROL UNIT** is made on the basis of the initial setting values. The setting values which adjust the screen to the optimum condition can be different from the initial setting values.
- (3) Make sure that connection is correctly made AC to AC power source.
- (4) Turn on the power of the TV and measuring instruments for warning up for at least 30 minutes before starting adjustments.
- (5) If the receive or input signal is not specified, use the most appropriate signal for adjustment.
- (6) Never touch the parts (such as variable resistors, transformers and condensers) not shown in the adjustment items of this service adjustment.

4.2 PRESET SETTING BEFORE ADJUSTMENTS

Unless otherwise specified in the adjustment items, preset the following functions with the REMOTE CONTROL UNIT.

Item	Preset value
VIDEO STATUS	STANDARD
TINT, COLOR, PICTURE, BRIGHT, DETAIL	Center (00)
COLOR TEMPERATURE	LOW
DIG. NOISE CLEAR	OFF
NATURAL CINEMA	AUTO
BASS, TREBLE, BALANCE	Center (00)
A.H.S [AV-32S575/AV-32S585]	OFF
HYPER SORROUND [AV-32S565]	OFF
BBE	ON
AUDIO OUT [AV-32S575/AV-32S585]	FIX
ASPECT	4 : 3

4.3 MEASURING INSTRUMENT AND FIXTURES

- DC voltmeter (or digital voltmeter)
- Oscilloscope
- Frequency counter
- Signal generator (Pattern generator)
[NTSC (480i) / 480p / 720p / 1080i / DIGITAL]
- TV audio multiplex signal generator
- Remote control unit

4.4 ADJUSTMENT ITEMS

■ CHECK ITEM

- B1 VOLTAGE check
- HIGH VOLTAGE HOLD DOWN CIRCUIT check

■ FOCUS

- FOCUS adjustment

■ HORIZONTAL FREQUENCY

- H. FREQUENCY adjustment

■ DEFLECTION CIRCUIT

- V. POSITION / V. SIZE / V. LINEARITY adjustment
- H. POSITION / H. SIZE / SIDE PIN / TRAPEZIUM adjustment

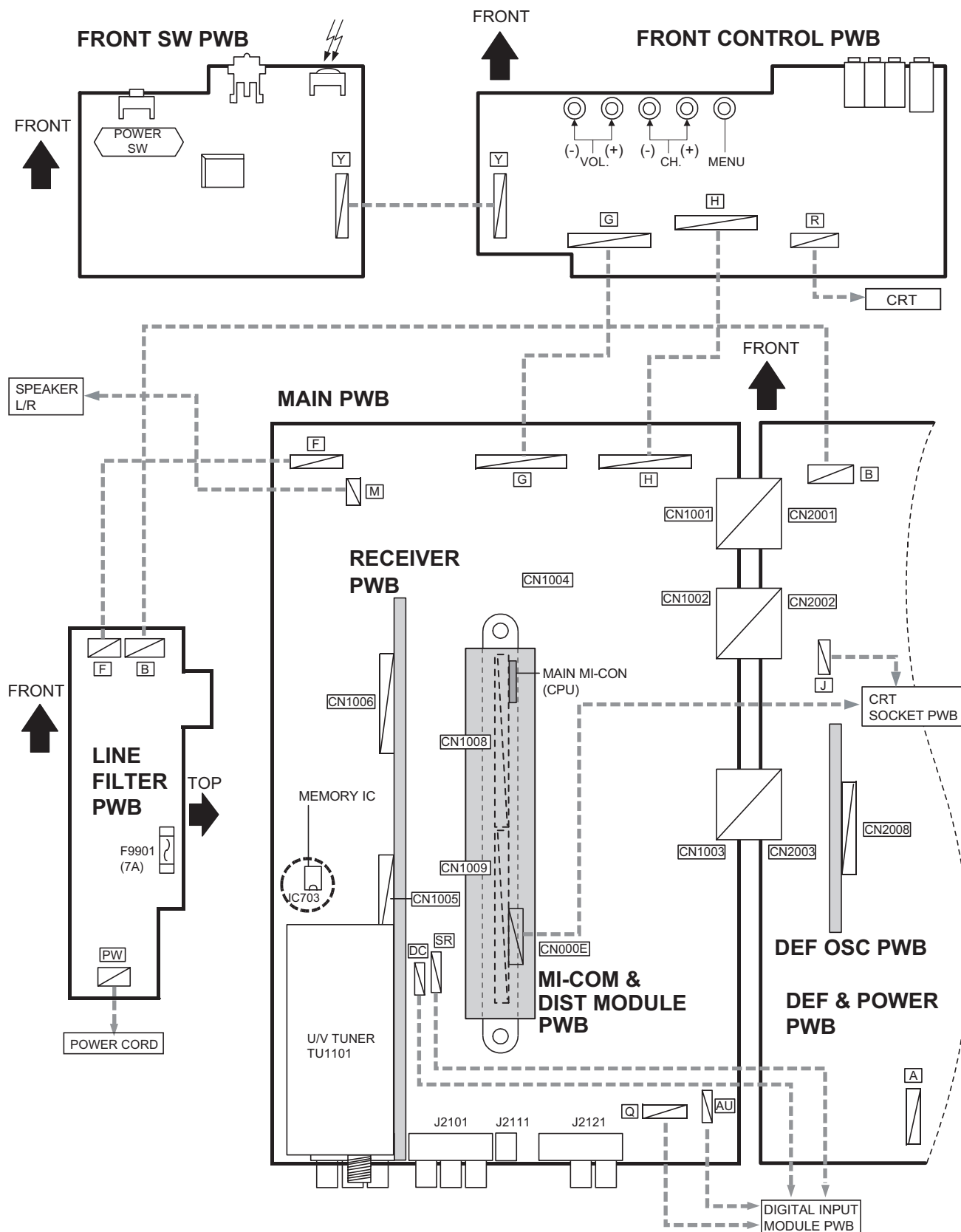
■ VIDEO CIRCUIT

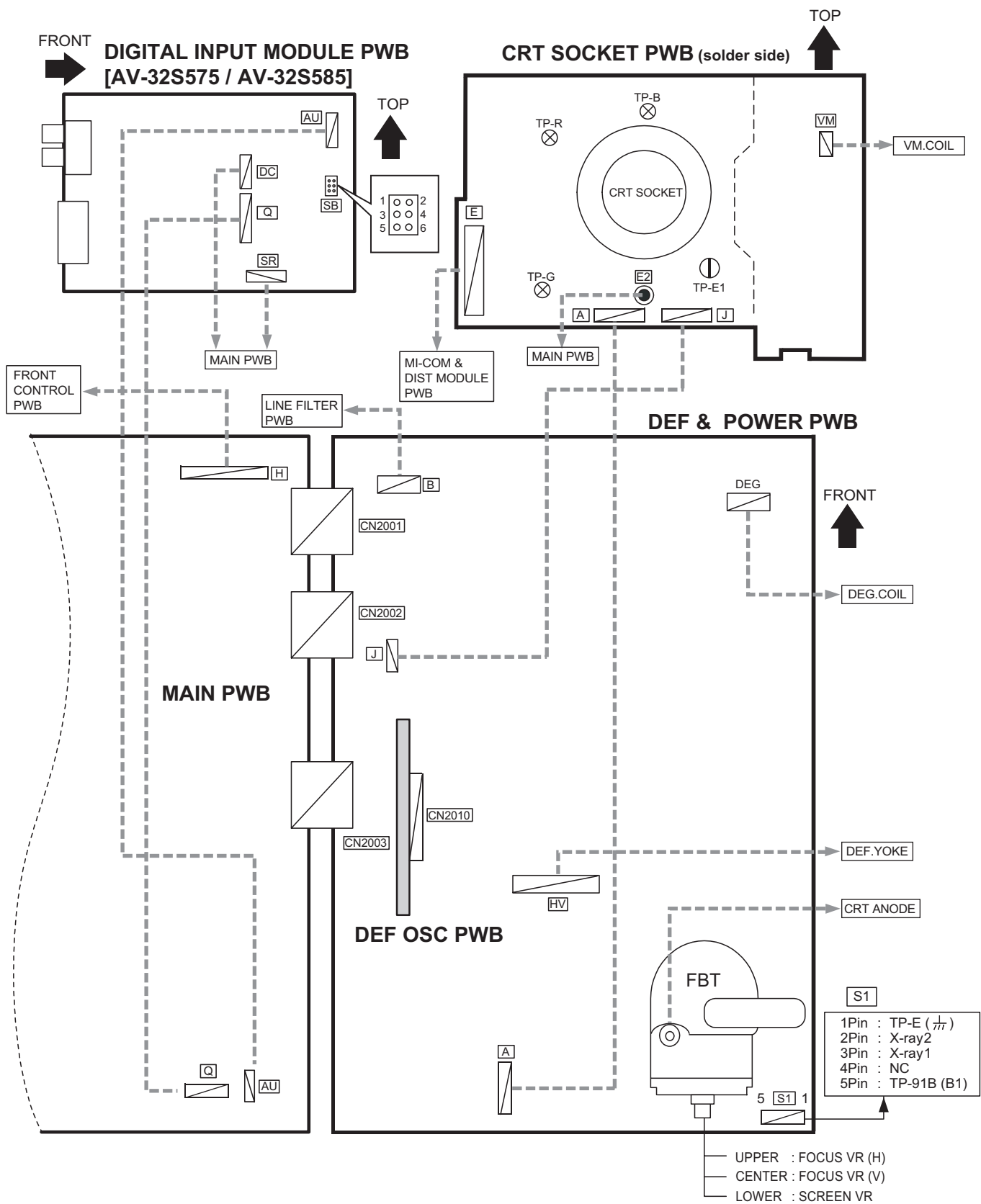
- WHITE BALANCE(High Light & Low Light) adjustment
- SUB BRIGHT adjustment
- SUB CONTRAST adjustment
- SUB COLOR / SUB TINT / B-Y GAIN (1) adjustment
- SUB COLOR / SUB TINT / B-Y GAIN (2) adjustment

■ MTS CIRCUIT

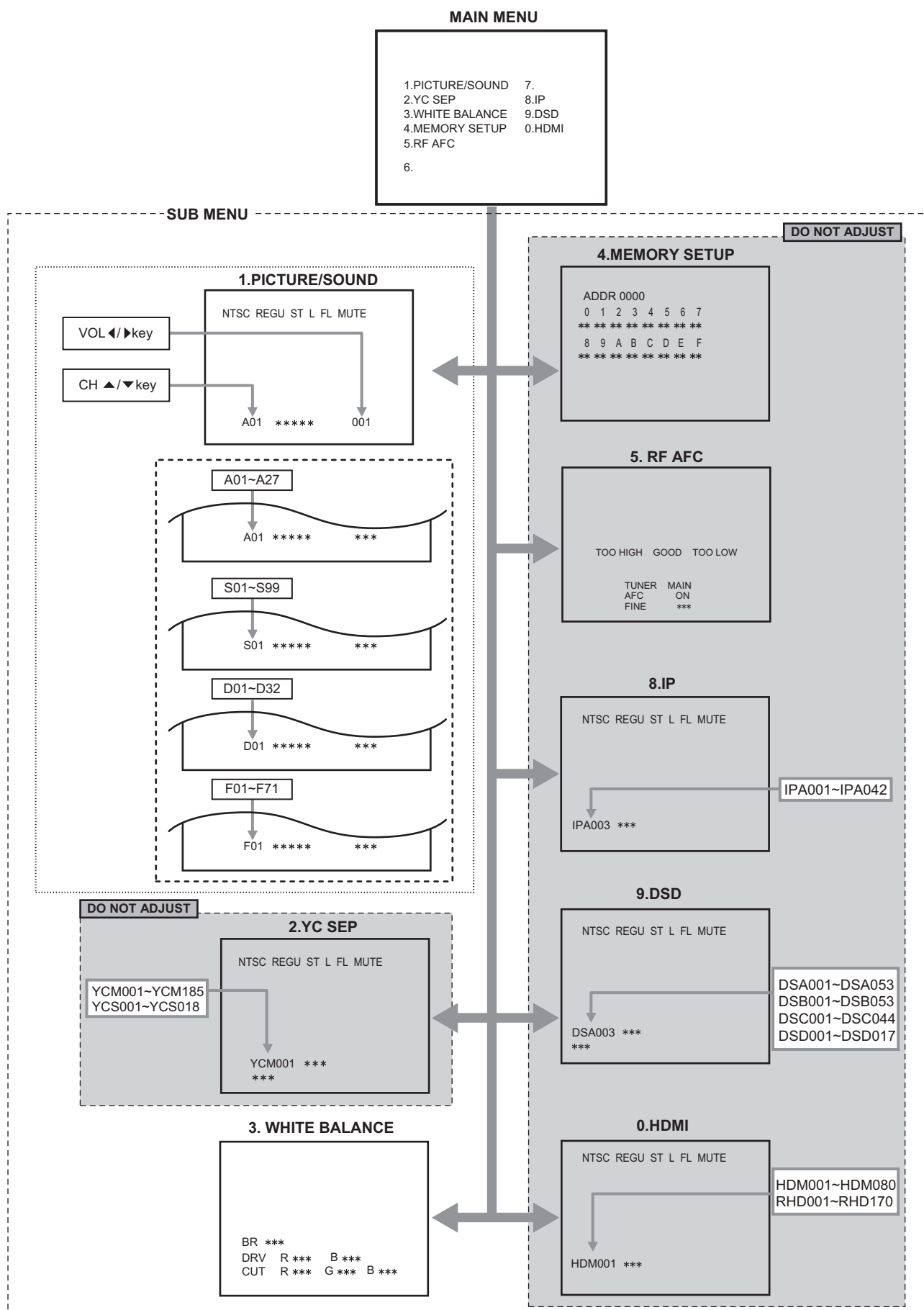
- MTS INPUT LEVEL adjustment
- MTS SEPARATION adjustment

4.5 ADJUSTMENT LOCATIONS / WIRING





4.6 BASIC OPERATION OF SERVICE MODE



4.6.1 TOOL OF SERVICE MODE OPERATION

Operate the SERVICE MODE with the REMOTE CONTROL UNIT.

4.6.2 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 / Deflection circuits.
2.YC SEP	This is used when the YC separation circuit is adjusted. [Do not adjust]
3.WHITE BALANCE	This sets the setting values of the WHITE BALANCE.
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]
8.IP	This sets the setting value of the DIST circuit. [Do not adjust]
9.DSD	This sets the setting value of the DSD (Digital super detail) circuit. [Do not adjust]
0.HDMI	This sets the setting value of the Digital input circuit. [Do not adjust] .

4.6.3 HOW TO ENTER THE SERVICE MODE

- (1) Set the SLEEP TIMER 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 sub menu mode.

NOTE:

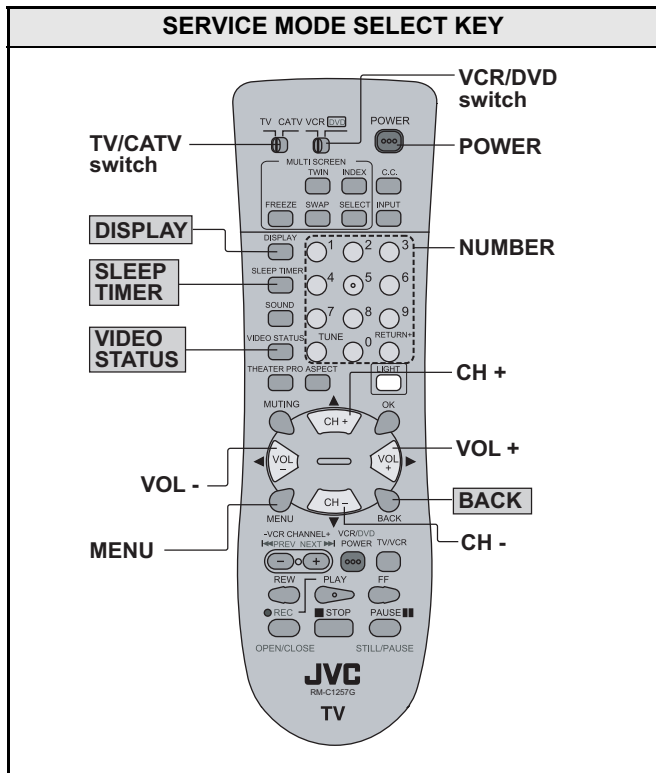
Before entering the SERVICE MODE, confirm that the setting of TV / CATV switch of the REMOTE CONTROL UNIT is at the "TV" side and the setting of VCR / DVD switch is at the "VCR" side. If the switches have not been properly set, you cannot enter the SERVICE MODE.

4.6.4 HOW TO STORE OF SETTING VALUE

When adjustment is completed, press the [MUTING] key to memorize the adjustment value. If not to do it, adjustment data is not memorized to the memory IC. And if exit the adjustment mode before memorize the data, the adjustment value which you change is canceled.

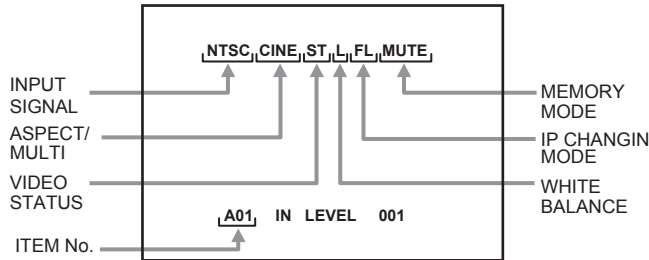
4.6.5 HOW TO EXIT THE SERVICE MODE

Press the [BACK] key to exit the SERVICE MODE.



4.6.6 DESCRIPTION OF STATUS DISPLAY

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



(1) INPUT SIGNAL

NTSC : Composite, S-video (Y / C), RF, No signal.
DVD : 480i (component)
ED : 480p
HD : 1080i
750p : 720p
HDVD : DIGITAL 480i
HED1 : DIGITAL 480p SIZE1
HED2 : DIGITAL 480p SIZE2
HHD : DIGITAL 1080i
H750 : DIGITAL 720p

(2) ASPECT / MULTI

SINGLE SCREEN

REGU : 4 : 3 screen mode
FULL : 16 : 9 screen mode
PANO : V STRETCH screen mode

MULTI SCREEN

M12 : Index screen mode

(3) VIDEO STATUS

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

(4) WHITE BALANCE

H : HIGH
L : LOW

(5) IP CHANGING MODE

```

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

```

(6) MEMORY MODE

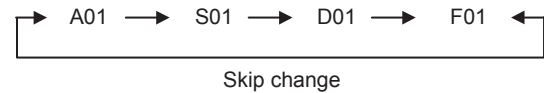
MUTE : Press [MUTING] key
DIR : Store the data to the memory at the same time.

4.6.7 SERVICE MODE SETTING

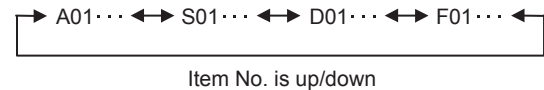
1. PICTURE / SOUND

Audio, video and deflection circuit adjustment.

- Press [SLEEP TIMER] key
For skip the adjustment item.



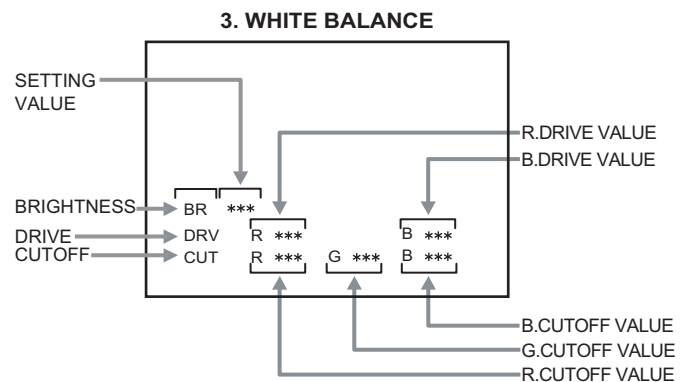
- Press [CH+] / [CH-] key
For scrolling up/down the adjustment item.



- Press [VOL+] / [VOL-] key
For scrolling up/down the data values.
- Press [MUTING] key
For memorize the data values.

3. WHITE BALANCE

White balance data adjustment.



DRIVE

```
[2] key      : DRIVE R is up
[5] key      : DRIVE R is down
[3] key      : DRIVE B is up
[6] key      : DRIVE R is down
```

CUTOFF

[7] key : CUTOFF G is up
 [TUNE] key : CUTOFF G is down
 [8] key : CUTOFF R is up
 [0] key : CUTOFF R is down
 [9] key : CUTOFF B is up
 [RETURN+] key : CUTOFF B is down

4.7 INITIAL SETTING VALUE OF SERVICE MODE

- (1) Adjustment of the SERVICE MODE is made on the basis of the initial setting values. however, the new setting values which displays on the screen in its optimum condition may differ from the initial setting value.
- (2) Do not change the initial setting values of the items not listed in "ADJUSTMENT PROCEDURE".
- (3) "---" is impossible to adjust.

4.7.1 [1.PICTURE/SOUND]

Item No.	Item	Variable range	Setting value
A01	IN LEVEL	000 to 015	008
A02	LOW SEP	000 to 063	035
A03	HI SEP	000 to 015	020
A04	BBE BASS	-128 to +127	+006
A05	BBE TRE	-128 to +127	+006
A06	SURROUND	000 to 001	000
A07	BASS OFS	-128 to +127	000
A08	TRE OFS	-128 to +127	+006 [AV-32S565] -002 [AV-32S575] -002 [AV-32S585]
A09	AHS MVE	-128 to +127	000
A10	AHS MSC	-128 to +127	000
A11	(Not display)	000 to 001	000
A12	(Not display)	000 to 001	000
A13	(Not display)	000 to 001	000
A14	(Not display)	000 to 001	000
A15	(Not display)	000 to 001	000
A16	(Not display)	000 to 001	000
A17	(Not display)	000 to 001	000
A18	(Not display)	000 to 001	000
A19	(Not display)	000 to 001	000
A20	(Not display)	000 to 001	000
A21	(Not display)	000 to 001	000
A22	(Not display)	000 to 001	000
A23	(Not display)	000 to 001	000
A24	(Not display)	000 to 001	000
A25	(Not display)	000 to 001	000
A26	(Not display)	000 to 001	000
A27	(Not display)	000 to 001	000

Item No.	Item	Variable range	Setting value	
			4:3	16:9
D01	V.SIZE	000 to 127	088	048
D02	EW	000 to 063	015	014
D03	H.SIZE	000 to 063	056	051
D04	V.SCORE	000 to 063	028	027
D05	V.LINE	000 to 063	035	036
D06	V.CENT	000 to 063	030	030
D07	EW.TRAP	000 to 063	030	029
D08	BOT.CORN	000 to 015	010	009
D09	TOP.CORN	000 to 015	009	009
D10	V.EHT	000 to 007	003	003
D11	H.EHT	000 to 007	002	001
D12	(Not display)	000 to 007	005	005
D13	(Not display)	000 to 015	000	000
D14	H.CENTER	000 to 255	152	152
D15	H.FREQ	000 to 255	194	194
D16	(Not display)	000 to 127	070	070
D17	(Not display)	000 to 003	000	000
D18	(Not display)	000 to 001	000	000
D19	(Not display)	000 to 001	000	000
D20	(Not display)	000 to 001	000	000
D21	(Not display)	000 to 001	000	000
D22	(Not display)	000 to 001	000	000
D23	(Not display)	000 to 001	000	000
D24	(Not display)	000 to 001	000	000
D25	(Not display)	000 to 001	000	000
D26	(Not display)	000 to 001	000	000
D27	(Not display)	000 to 001	000	000
D28	(Not display)	000 to 001	000	000
D29	(Not display)	000 to 001	000	000
D30	(Not display)	000 to 001	000	000
D31	(Not display)	000 to 001	000	000
D32	(Not display)	000 to 001	000	000

Item No.	Item	Variable range	Setting value							
			NTSC		480i		480p		720p / 1080i	
			STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER
S01	COLOR	000 to 255	074	084	079	081	083	082	069	073
S02	TINT	000 to 255	071	070	067	068	065	070	077	065

Item No.	Item	Variable range	Setting value							
			NTSC				480i / 480p			
			4 : 3		16 : 9		4 : 3		16 : 9	
			STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER
S03	BRIGHT	000 to 255	126	124	---	---	125	125	---	---
S04	CONTRAST	000 to 127	086	041	---	---	084	042	---	---

Item No.	Item	Variable range	Setting value			
			720p / 1080i			
			4 : 3		16 : 9	
			STANDARD	THEATER	STANDARD	THEATER
S03	BRIGHT	000 to 255	---	---	123	124
S04	CONTRAST	000 to 127	---	---	079	042

Item No.	Item	Variable range	Setting value							
			NTSC		480i		480p		720p / 1080i	
			STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER
S05	O MTX SW	000 to 003	000	000	000	000	000	000	000	000
S06	INPUT SW	000 to 003	001	001	001	001	001	001	000	000
S07	B-Y	000 to 063	016	019	014	020	011	016	012	020
S08	R-Y	000 to 015	007	000	007	002	007	002	007	003
S09	G-YMATRI	000 to 003	002	003	001	003	001	003	002	002

Item No.	Item	Variable range	Setting value							
			NTSC				480i			
			STANDARD		THEATER		STANDARD		THEATER	
			HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW
S10	DRIVE R	000 to 255	---	149	---	---	---	146	---	---
S11	(Not display)	-128 to 127	+006	---	+011	+018	+011	---	+010	+016
S12	DRIVE B	000 to 255	---	144	---	---	---	156	---	---
S13	(Not display)	-128 to 127	+005	---	-011	-24	+011	---	-017	-032

Item No.	Item	Variable range	Setting value							
			480p				720p / 1080i			
			STANDARD		THEATER		STANDARD		THEATER	
			HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW
S10	DRIVE R	000 to 255	—	—	—	—	—	146	—	—
S11	(Not display)	-128 to +127	-004	+001	+011	+014	+006	—	+012	+016
S12	DRIVE B	000 to 255	—	—	—	—	—	146	—	—
S13	(Not display)	-128 to +127	-003	-009	-021	-034	+007	—	-014	-031

Item No.	Item	Variable range	Setting value					
			NTSC		480i / 480p		720p / 1080i	
			STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER
S14	CUTOFF R	000 to 255	227	---	227	---	227	---
S15	(Not display)	-128 to +127	---	-004	---	-006	---	-007
S16	CUTOFF G	000 to 255	227	---	227	---	227	---
S17	(Not display)	-128 to +127	---	-003	---	+001	---	-004
S18	CUTOFF B	000 to 255	227	---	227	---	227	---
S19	(Not display)	-128 to +127	---	+007	---	+001	---	+007
S20	CUTOFSWR	000 to 003	001	---	001	---	001	---
S21	CUTOFSWG	000 to 003	001	---	001	---	001	---
S22	CUTOFSWB	000 to 003	001	---	001	---	001	---

Item No.	Item	Variable range	Setting value					
			NTSC		480i		OTHERS	
			STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER
S23	DC CTL	000 to 255	255	000	000	000	000	000

Item No.	Item	Variable range	Setting value
S24	RGBLIMIT	000 to 015	000

Item No.	Item	Variable range	Setting value		
			NTSC	480i	OTHERS
S25	BL STRT	000 to 015	015	013	014
S26	BL GAIN	000 to 015	004	002	004
S27	YGM LVL	000 to 015	003	007	008
S28	YGM GAIN	000 to 015	015	015	015
S29	YWD STRT	000 to 015	000	001	001
S30	YWD GAIN	000 to 015	005	004	005

Item No.	Item	Variable range	Setting value							
			NTSC		480i		480p		720p / 1080i	
			STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER
S31	COL OFST	000 to 255	---	---	---	---	---	---	---	---
S32	TNT OFST	000 to 255	---	---	---	---	---	---	---	---

Item No.	Item	Variable range	Setting value							
			NTSC				480i / 480p			
			4 : 3		16 : 9		4 : 3		16 : 9	
			STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER
S33	BRT OFST	-128 to +127	---	---	000	000	---	---	000	000
S34	CNT OFST	-128 to +127	---	---	-008	-004	---	---	-008	-004

Item No.	Item	Variable range	Setting value			
			720p / 1080i			
			4 : 3 (HD ZOOM)		16 : 9	
			STANDARD	THEATER	STANDARD	THEATER
S33	BRT OFST	-128 to +127	000	000	---	---
S34	CNT OFST	-128 to +127	+008	+004	---	---

Item No.	Item	Variable range	Setting value	
			STANDARD	THEATER
S35	DCTR N SW	000 to 001	000	001
S36	BL OFF	000 to 001	000	001
S37	YGM OFF	000 to 001	000	001
S38	ABL OFF	000 to 001	000	000
S39	ACL OFF	000 to 001	000	000

Item No.	Item	Variable range	Setting value
S40	BLCNT LK	000 to 001	000
S41	YGCNT LK	000 to 001	000
S42	DCTR N PL	000 to 001	000
S43	ABL GAIN	000 to 015	015
S44	ABL STRT	000 to 015	015
S45	ACL GAIN	000 to 015	015
S46	ACL STRT	000 to 015	000

Item No.	Item	Variable range	Setting value			
			STANDARD	DYNAMIC	THEATER	GAME
S47	ACL EERG	000 to 255	255	255	255	255

Item No.	Setting item	Variable range	Setting value
S48	CHRM GM	000 to 255	255
S49	OSDR DC	000 to 127	064
S50	OSDB DC	000 to 127	064
S51	BLK OFF	000 to 001	000

Item No.	Item	Variable range	Setting value	
			STANDARD	THEATER
S52	CNT UNDR	-128 to +127	-041	-027
S53	CNT UPPR	-128 to +127	+015	+015
S54	BRT UNDR	-128 to +127	-017	-017

Item No.	Setting item	Variable range	Setting value
S55	EETH BRT	-128 to +127	000
S56	EETH CNT	-128 to +127	000
S57	BREE CNT	000 to 031	008
S58	DKEE CNT	000 to 031	015
S59	DREE BRT	000 to 127	004
S60	BREE ACL	000 to 255	093
S61	DKEE ACL	000 to 255	108
S62	VMOFF DE	-128 to +127	+002
S63	VM LOW	-128 to +127	-020
S64	VM MID	-128 to +127	-010
S65	VM HIGH	-128 to +127	+010
S66	VM L-	-128 to +127	-022
S67	VM LH	-128 to +127	-019
S68	VM MH	-128 to +127	-016
S69	VM M+	-128 to +127	000
S70	(Not display)	000 to 001	000
S71	(Not display)	000 to 001	000
S72	(Not display)	000 to 001	000
S73	(Not display)	000 to 001	000
S74	(Not display)	000 to 001	000
S75	(Not display)	000 to 001	000
S76	(Not display)	000 to 001	000
S77	(Not display)	000 to 001	000
S78	(Not display)	000 to 001	000
S79	(Not display)	000 to 001	000
S80	(Not display)	000 to 001	000
S81	(Not display)	000 to 001	000
S82	(Not display)	000 to 001	000
S83	(Not display)	000 to 001	000
S84	(Not display)	000 to 001	000
S85	(Not display)	000 to 001	000
S86	(Not display)	000 to 001	000
S87	(Not display)	000 to 001	000
S88	(Not display)	000 to 001	000
S89	(Not display)	000 to 001	000
S90	(Not display)	000 to 001	000
S91	(Not display)	000 to 001	000
S92	(Not display)	000 to 001	000
S93	(Not display)	000 to 001	000
S94	(Not display)	000 to 001	000
S95	(Not display)	000 to 001	000
S96	(Not display)	000 to 001	000
S97	(Not display)	000 to 001	000
S98	(Not display)	000 to 001	000
S99	(Not display)	000 to 001	000

Item No.	Setting item	Variable range	Setting value
F01	E 1	000 to 255	---
F02	E 2	000 to 255	---
F03	(Not display)	000 to 255	127
F04	CATVMAX	000 to 001	001
F05	(Not display)	000 to 255	048 [AV-32S565] 242 [AV-32S575] 202 [AV-32S585]
F06	(Not display)	000 to 255	010 [AV-32S565] 122 [AV-32S575] 122 [AV-32S585]
F07	(Not display)	000 to 255	003 [AV-32S565] 015 [AV-32S575] 015 [AV-32S585]
F08	(Not display)	000 to 255	000
F09	AUTOSCR 1	000 to 015	000
F10	AUTOSCR 2	000 to 015	000
F11	AUTOSCR 3	000 to 015	000
F12	AUTOSCR 4	000 to 015	000
F13	AUTOSCR 5	000 to 015	000
F14	AUTOSCR 6	000 to 015	000
F15	AUTOSCR 7	000 to 015	000
F16	(Not display)	000 to 127	070
F17	(Not display)	000 to 001	000
F18	FIX DATA	000 to 001	000
F19	(Not display)	000 to 001	000
F20	(Not display)	000 to 255	005
F21	(Not display)	000 to 255	002
F22	(Not display)	000 to 001	000
F23	(Not display)	000 to 255	000
F24	(Not display)	000 to 255	141
F25	(Not display)	000 to 255	006
F26	(Not display)	000 to 255	040
F27	(Not display)	000 to 255	040
F28	(Not display)	000 to 001	000
F29	(Not display)	000 to 001	000
F30	(Not display)	000 to 001	000
F31	(Not display)	000 to 001	000
F32	ATT V	000 to 001	000
F33	ATT U	000 to 001	000
F34	ATT C	000 to 001	000
F35	(Not display)	000 to 001	000
F36	(Not display)	000 to 001	000
F37	(Not display)	000 to 001	000
F38	DC1	000 to 001	000
F39	DC4	000 to 001	000
F40	DC5	000 to 001	000
F41	SS LV	000 to 003	000

Item No.	Setting item	Variable range	Setting value
F42	SS CP	000 to 001	000
F43	SS HDP	000 to 063	039
F44	(Not display)	000 to 001	000
F45	(Not display)	000 to 001	000
F46	(Not display)	000 to 001	000
F47	(Not display)	000 to 001	000
F48	(Not display)	000 to 001	000
F49	(Not display)	000 to 001	001
F50	(Not display)	000 to 001	001
F51	(Not display)	000 to 015	011
F52	(Not display)	000 to 063	040
F53	(Not display)	-128 to +127	000
F54	(Not display)	000 to 255	030
F55	(Not display)	000 to 255	000
F56	(Not display)	000 to 255	188
F57	(Not display)	000 to 255	105
F58	(Not display)	000 to 255	077
F59	(Not display)	000 to 001	001
F60	(Not display)	000 to 001	127
F61	(Not display)	000 to 001	000 [AV-32S565] 001 [AV-32S575] 001 [AV-32S585]
F62	(Not display)	000 to 001	000
F63	(Not display)	-128 to +127	+001
F64	(Not display)	-128 to +127	-001
F65	(Not display)	-128 to +127	+010
F66	(Not display)	000 to 007	000
F67	(Not display)	000 to 003	002
F68	(Not display)	000 to 255	126
F69	(Not display)	000 to 001	000 [AV-32S565] 001 [AV-32S575] 001 [AV-32S585]
F70	(Not display)	000 to 001	000

4.7.2 [2.YC SEP] (*All the values are fixed values)

NOTE :

Initial setting value is reference value at following condition.

INPUT SIGNAL : NTSC
 ASPECT : 4 : 3
 MULTI-SCREEN : SINGLE
 VIDEO STATUS : STANDARD
 COLOR TEMPERATURE : LOW

Item No.	Item name	Variable range	Setting value
YCM001	(Not display)	000 to 001	000
YCM002	(Not display)	000 to 001	000
YCM003	(Not display)	000 to 001	000
YCM004	(Not display)	000 to 003	001
YCM005	(Not display)	000 to 255	239
YCM006	(Not display)	000 to 003	001
YCM007	(Not display)	000 to 255	239
YCM008	(Not display)	000 to 001	000
YCM009	(Not display)	000 to 003	000
YCM010	(Not display)	000 to 001	000
YCM011	(Not display)	000 to 001	000
YCM012	(Not display)	000 to 001	000
YCM013	(Not display)	000 to 001	000
YCM014	(Not display)	000 to 003	000
YCM015	(Not display)	000 to 001	000
YCM016	(Not display)	000 to 003	001
YCM017	(Not display)	000 to 001	001
YCM018	(Not display)	000 to 003	000
YCM019	(Not display)	000 to 001	000
YCM020	(Not display)	000 to 001	000
YCM021	(Not display)	000 to 003	002
YCM022	(Not display)	000 to 007	004
YCM023	(Not display)	000 to 001	001
YCM024	(Not display)	000 to 001	000
YCM025	(Not display)	000 to 007	005
YCM026	(Not display)	000 to 015	003
YCM027	(Not display)	000 to 003	000
YCM028	(Not display)	000 to 007	003
YCM029	(Not display)	000 to 007	002
YCM030	(Not display)	000 to 003	001
YCM031	(Not display)	000 to 001	000
YCM032	(Not display)	000 to 003	003
YCM033	(Not display)	000 to 001	001
YCM034	(Not display)	000 to 001	000
YCM035	(Not display)	000 to 255	096
YCM036	(Not display)	000 to 001	001
YCM037	(Not display)	000 to 003	001
YCM038	(Not display)	000 to 127	062
YCM039	(Not display)	000 to 127	073

Item No.	Item name	Variable range	Setting value
YCM040	(Not display)	000 to 003	002
YCM041	(Not display)	000 to 063	016
YCM042	(Not display)	000 to 001	000
YCM043	(Not display)	000 to 001	000
YCM044	(Not display)	000 to 255	241
YCM045	(Not display)	000 to 001	000
YCM046	(Not display)	000 to 255	165
YCM047	(Not display)	000 to 001	001
YCM048	(Not display)	000 to 001	001
YCM049	(Not display)	000 to 001	001
YCM050	(Not display)	000 to 001	001
YCM051	(Not display)	000 to 001	001
YCM052	(Not display)	000 to 001	000
YCM053	(Not display)	000 to 001	001
YCM054	(Not display)	000 to 003	003
YCM055	(Not display)	000 to 003	003
YCM056	(Not display)	000 to 003	000
YCM057	(Not display)	000 to 001	000
YCM058	(Not display)	000 to 001	001
YCM059	(Not display)	000 to 001	001
YCM060	(Not display)	000 to 001	000
YCM061	(Not display)	000 to 001	001
YCM062	(Not display)	000 to 015	001
YCM063	(Not display)	000 to 015	004
YCM064	(Not display)	000 to 001	000
YCM065	(Not display)	000 to 063	060
YCM066	(Not display)	000 to 063	040
YCM067	(Not display)	000 to 063	025
YCM068	(Not display)	000 to 063	012
YCM069	(Not display)	000 to 063	036
YCM070	(Not display)	000 to 063	031
YCM071	(Not display)	000 to 127	031
YCM072	(Not display)	000 to 001	001
YCM073	(Not display)	000 to 001	001
YCM074	(Not display)	000 to 063	024
YCM075	(Not display)	000 to 001	000
YCM076	(Not display)	000 to 001	001
YCM077	(Not display)	000 to 063	010
YCM078	(Not display)	000 to 063	001
YCM079	(Not display)	000 to 255	000
YCM080	(Not display)	000 to 255	000
YCM081	(Not display)	000 to 255	000
YCM082	(Not display)	000 to 255	000
YCM083	(Not display)	000 to 001	001
YCM084	(Not display)	000 to 063	012

Item No.	Item name	Variable range	Setting value
YCM085	(Not display)	000 to 001	000
YCM086	(Not display)	000 to 001	000
YCM087	(Not display)	000 to 063	028
YCM088	(Not display)	000 to 001	001
YCM089	(Not display)	000 to 031	000
YCM090	(Not display)	000 to 003	000
YCM091	(Not display)	000 to 015	000
YCM092	(Not display)	000 to 015	000
YCM093	(Not display)	000 to 015	002
YCM094	(Not display)	000 to 063	000
YCM095	(Not display)	000 to 255	035
YCM096	(Not display)	000 to 001	001
YCM097	(Not display)	000 to 063	063
YCM098	(Not display)	000 to 015	008
YCM099	(Not display)	000 to 015	005
YCM100	(Not display)	000 to 015	008
YCM101	(Not display)	000 to 015	005
YCM102	(Not display)	000 to 015	000
YCM103	(Not display)	000 to 015	002
YCM104	(Not display)	000 to 015	008
YCM105	(Not display)	000 to 015	006
YCM106	(Not display)	000 to 255	010
YCM107	(Not display)	000 to 255	032
YCM108	(Not display)	000 to 255	031
YCM109	(Not display)	000 to 255	064
YCM110	(Not display)	000 to 001	000
YCM111	(Not display)	000 to 001	001
YCM112	(Not display)	000 to 001	001
YCM113	(Not display)	000 to 001	001
YCM114	(Not display)	000 to 001	000
YCM115	(Not display)	000 to 001	001
YCM116	(Not display)	000 to 001	000
YCM117	(Not display)	000 to 001	000
YCM118	(Not display)	000 to 001	001
YCM119	(Not display)	000 to 001	000
YCM120	(Not display)	000 to 001	000
YCM121	(Not display)	000 to 003	003
YCM122	(Not display)	000 to 001	000
YCM123	(Not display)	000 to 255	026
YCM124	(Not display)	000 to 001	000
YCM125	(Not display)	000 to 255	025
YCM126	(Not display)	000 to 001	000
YCM127	(Not display)	000 to 001	001
YCM128	(Not display)	000 to 001	001
YCM129	(Not display)	000 to 001	001

Item No.	Item name	Variable range	Setting value
YCM130	(Not display)	000 to 003	001
YCM131	(Not display)	000 to 255	050
YCM132	(Not display)	000 to 255	154
YCM133	(Not display)	000 to 255	055
YCM134	(Not display)	000 to 007	001
YCM135	(Not display)	000 to 255	136
YCM136	(Not display)	000 to 001	000
YCM137	(Not display)	000 to 001	001
YCM138	(Not display)	000 to 007	003
YCM139	(Not display)	000 to 255	089
YCM140	(Not display)	000 to 007	000
YCM141	(Not display)	000 to 255	252
YCM142	(Not display)	000 to 001	001
YCM143	(Not display)	000 to 007	005
YCM144	(Not display)	000 to 255	128
YCM145	(Not display)	000 to 001	000
YCM146	(Not display)	000 to 001	001
YCM147	(Not display)	000 to 001	001
YCM148	(Not display)	000 to 001	001
YCM149	(Not display)	000 to 001	000
YCM150	(Not display)	000 to 001	000
YCM151	(Not display)	000 to 255	136
YCM152	(Not display)	000 to 001	001
YCM153	(Not display)	000 to 001	001
YCM154	(Not display)	000 to 001	001
YCM155	(Not display)	000 to 003	000
YCM156	(Not display)	000 to 015	015
YCM157	(Not display)	000 to 015	004
YCM158	(Not display)	000 to 001	001
YCM159	(Not display)	000 to 127	004
YCM160	(Not display)	000 to 001	000
YCM161	(Not display)	000 to 031	000
YCM162	(Not display)	000 to 001	000
YCM163	(Not display)	000 to 015	003
YCM164	(Not display)	000 to 007	002
YCM165	(Not display)	000 to 031	016
YCM166	(Not display)	000 to 255	235
YCM167	(Not display)	000 to 003	000
YCM168	(Not display)	000 to 063	000
YCM169	(Not display)	000 to 015	003
YCM170	(Not display)	000 to 015	003
YCM171	(Not display)	000 to 007	000
YCM172	(Not display)	000 to 255	096
YCM173	(Not display)	000 to 007	003
YCM174	(Not display)	000 to 255	056

Item No.	Item name	Variable range	Setting value
YCM175	(Not display)	000 to 001	000
YCM176	(Not display)	000 to 001	000
YCM177	(Not display)	000 to 255	022
YCM178	(Not display)	000 to 001	001
YCM179	(Not display)	000 to 001	000
YCM180	(Not display)	000 to 007	004
YCM181	(Not display)	000 to 063	001
YCM182	(Not display)	000 to 003	001
YCM183	(Not display)	000 to 003	001
YCM184	(Not display)	000 to 003	001
YCM185	(Not display)	000 to 255	000

Item No.	Item name	Variable range	Setting value
YCS001	(Not display)	000 to 063	031
YCS002	(Not display)	000 to 063	018
YCS003	(Not display)	000 to 031	004
YCS004	(Not display)	000 to 031	014
YCS005	(Not display)	000 to 031	014
YCS006	(Not display)	000 to 015	007
YCS007	(Not display)	000 to 015	007
YCS008	(Not display)	000 to 015	004
YCS009	(Not display)	000 to 015	008
YCS010	(Not display)	000 to 003	001
YCS011	(Not display)	000 to 003	001
YCS012	(Not display)	000 to 001	000
YCS013	(Not display)	000 to 001	000
YCS014	(Not display)	000 to 003	000
YCS015	(Not display)	000 to 003	000
YCS016	(Not display)	000 to 001	000
YCS017	(Not display)	000 to 003	001
YCS018	(Not display)	000 to 001	000

4.7.3 [3.WHITE BALANCE]

NOTE :

Initial setting value is reference value at following condition.

INPUT SIGNAL : NTSC
ASPECT : 4 : 3
MULTI-SCREEN : SINGLE
VIDEO STATUS : STANDARD
COLOR TEMPERATURE : LOW

Item No.	Item name	Variable range	Setting value
BR	(Not display)	000 to 255	127
DRV R	(Not display)	000 to 255	149
DRV B	(Not display)	000 to 255	144
CUT R	(Not display)	000 to 255	031
CUT G	(Not display)	000 to 255	031
CUT B	(Not display)	000 to 255	031

4.7.4 [8.IP] (*All the values are fixed values)

NOTE :

Initial setting value is reference value at following condition.

INPUT SIGNAL : NTSC
ASPECT : 4 : 3
MULTI-SCREEN : SINGLE
VIDEO STATUS : STANDARD
COLOR TEMPERATURE : LOW

Item No.	Item name	Variable range	Setting value
IPA001	(Not display)	000 to 0FF	0D0
IPA002	(Not display)	000 to 0FF	000
IPA003	(Not display)	000 to 0FF	000
IPA004	(Not display)	000 to 0FF	05E
IPA005	(Not display)	000 to 01F	001
IPA006	(Not display)	000 to 0FF	037
IPA007	(Not display)	000 to 00F	000
IPA008	(Not display)	000 to 0FF	000
IPA009	(Not display)	000 to 00F	000
IPA010	(Not display)	000 to 0FF	080
IPA011	(Not display)	000 to 00F	002
IPA012	(Not display)	000 to 0FF	02B
IPA013	(Not display)	000 to 00F	002
IPA014	(Not display)	000 to 0FF	000
IPA015	(Not display)	000 to 00F	002
IPA016	(Not display)	000 to 0FF	080
IPA017	(Not display)	000 to 00F	001
IPA018	(Not display)	000 to 0FF	000
IPA019	(Not display)	000 to 00F	001
IPA020	(Not display)	000 to 0FF	080
IPA021	(Not display)	000 to 00F	000
IPA022	(Not display)	000 to 0FF	016
IPA023	(Not display)	000 to 00F	000
IPA024	(Not display)	000 to 0FF	017

Item No.	Item name	Variable range	Setting value
IPA025	(Not display)	000 to 00F	000
IPA026	(Not display)	000 to 0FF	019
IPA027	(Not display)	000 to 00F	000
IPA028	(Not display)	000 to 0FF	01B
IPA029	(Not display)	000 to 00F	000
IPA030	(Not display)	000 to 0FF	01D
IPA031	(Not display)	000 to 00F	000
IPA032	(Not display)	000 to 0FF	000
IPA033	(Not display)	000 to 00F	000
IPA034	(Not display)	000 to 0FF	010
IPA035	(Not display)	000 to 00F	000
IPA036	(Not display)	000 to 0FF	000
IPA037	(Not display)	000 to 00F	00F
IPA038	(Not display)	000 to 0FF	010
IPA039	(Not display)	000 to 00F	000
IPA040	(Not display)	000 to 00F	000
IPA041	(Not display)	000 to 0FF	011
IPA042	(Not display)	000 to 00F	000

4.7.5 [9.DSD] (*All the values are fixed values)

NOTE :

Initial setting value is reference value at following condition.

INPUT SIGNAL : NTSC
ASPECT : 4 : 3
MULTI-SCREEN : SINGLE
VIDEO STATUS : STANDARD
COLOR TEMPERATURE : LOW

Item No.	Item name	Variable range	Setting value
DSA001	(Not display)	000 to 03F	014
DSA002	(Not display)	000 to 03F	023
DSA003	(Not display)	000 to 03F	026
DSA004	(Not display)	000 to 003	000
DSA005	(Not display)	000/001	000
DSA006	(Not display)	000 to 003	002
DSA007	(Not display)	000 to 03F	008
DSA008	(Not display)	000/001	001
DSA009	(Not display)	000 to 03F	00C
DSA010	(Not display)	000/001	001
DSA011	(Not display)	000/001	001
DSA012	(Not display)	000 to 03F	007
DSA013	(Not display)	000 to 03F	012
DSA014	(Not display)	000 to 03F	02D
DSA015	(Not display)	000 to 003	002
DSA016	(Not display)	000/001	001
DSA017	(Not display)	000 to 003	000
DSA018	(Not display)	000 to 03F	000

Item No.	Item name	Variable range	Setting value
DSA019	(Not display)	000/001	001
DSA020	(Not display)	000 to 03F	000
DSA021	(Not display)	000/001	001
DSA022	(Not display)	000 to 03F	01A
DSA023	(Not display)	000/001	001
DSA024	(Not display)	000 to 03F	016
DSA025	(Not display)	000/001	001
DSA026	(Not display)	000 to 03F	000
DSA027	(Not display)	000/001	001
DSA028	(Not display)	000 to 03F	00D
DSA029	(Not display)	000/001	001
DSA030	(Not display)	000/001	001
DSA031	(Not display)	000 to 03F	020
DSA032	(Not display)	000/001	000
DSA033	(Not display)	000 to 003	000
DSA034	(Not display)	000 to 03F	008
DSA035	(Not display)	000/001	001
DSA036	(Not display)	000/001	001
DSA037	(Not display)	000 to 03F	020
DSA038	(Not display)	000/001	000
DSA039	(Not display)	000 to 003	000
DSA040	(Not display)	000 to 03F	008
DSA041	(Not display)	000/001	001
DSA042	(Not display)	000/001	001
DSA043	(Not display)	000/001	001
DSA044	(Not display)	000 to 03F	020
DSA045	(Not display)	000/001	000
DSA046	(Not display)	000 to 003	003
DSA047	(Not display)	000 to 03F	024
DSA048	(Not display)	000/001	001
DSA049	(Not display)	000 to 03F	000
DSA050	(Not display)	000/001	001
DSA051	(Not display)	000 to 03F	008
DSA052	(Not display)	000/001	001
DSA053	(Not display)	000/001	001

Item No.	Item name	Variable range	Setting value
DSB001	(Not display)	000 to 03F	---
DSB002	(Not display)	000 to 03F	---
DSB003	(Not display)	000 to 03F	---
DSB004	(Not display)	000 to 003	---
DSB005	(Not display)	000 to 003	---
DSB006	(Not display)	000 to 003	---
DSB007	(Not display)	000 to 03F	---
DSB008	(Not display)	000/001	---

Item No.	Item name	Variable range	Setting value
DSB009	(Not display)	000 to 03F	---
DSB010	(Not display)	000/001	---
DSB011	(Not display)	000/001	---
DSB012	(Not display)	000 to 03F	---
DSB013	(Not display)	000 to 03F	---
DSB014	(Not display)	000 to 03F	---
DSB015	(Not display)	000 to 003	---
DSB016	(Not display)	000/001	---
DSB017	(Not display)	000 to 003	---
DSB018	(Not display)	000 to 03F	---
DSB019	(Not display)	000/001	---
DSB020	(Not display)	000 to 03F	---
DSB021	(Not display)	000/001	---
DSB022	(Not display)	000 to 03F	---
DSB023	(Not display)	000/001	---
DSB024	(Not display)	000 to 03F	---
DSB025	(Not display)	000/001	---
DSB026	(Not display)	000 to 03F	---
DSB027	(Not display)	000/001	---
DSB028	(Not display)	000 to 03F	---
DSB029	(Not display)	000/001	---
DSB030	(Not display)	000/001	---
DSB031	(Not display)	000 to 03F	---
DSB032	(Not display)	000/001	---
DSB033	(Not display)	000 to 003	---
DSB034	(Not display)	000 to 03F	---
DSB035	(Not display)	000/001	---
DSB036	(Not display)	000/001	---
DSB037	(Not display)	000 to 03F	---
DSB038	(Not display)	000/001	---
DSB039	(Not display)	000 to 003	---
DSB040	(Not display)	000 to 03F	---
DSB041	(Not display)	000/001	---
DSB042	(Not display)	000/001	---
DSB043	(Not display)	000/001	---
DSB044	(Not display)	000 to 03F	---
DSB045	(Not display)	000/001	---
DSB046	(Not display)	000 to 003	---
DSB047	(Not display)	000 to 03F	---
DSB048	(Not display)	000/001	---
DSB049	(Not display)	000 to 03F	---
DSB050	(Not display)	000/001	---
DSB051	(Not display)	000 to 03F	---
DSB052	(Not display)	000/001	---
DSB053	(Not display)	000/001	---

Item No.	Item name	Variable range	Setting value
DSC001	(Not display)	000 to 00F	008
DSC002	(Not display)	000 to 0FF	098
DSC003	(Not display)	000 to 03F	01C
DSC004	(Not display)	000 to 003	000
DSC005	(Not display)	000 to 0FF	000
DSC006	(Not display)	000/001	000
DSC007	(Not display)	000/001	000
DSC008	(Not display)	000/001	000
DSC009	(Not display)	000 to 00F	000
DSC010	(Not display)	000 to 0FF	000
DSC011	(Not display)	000 to 00F	00F
DSC012	(Not display)	000 to 0FF	0FF
DSC013	(Not display)	000 to 00F	000
DSC014	(Not display)	000 to 0FF	000
DSC015	(Not display)	000 to 00F	00F
DSC016	(Not display)	000 to 0FF	0FF
DSC017	(Not display)	000 to 00F	000
DSC018	(Not display)	000 to 0FF	04A
DSC019	(Not display)	000 to 0FF	000
DSC020	(Not display)	000 to 0FF	09E
DSC021	(Not display)	000 to 00F	001
DSC022	(Not display)	000 to 0FF	0B8
DSC023	(Not display)	000 to 00F	001
DSC024	(Not display)	000 to 0FF	0ED
DSC025	(Not display)	000 to 00F	000
DSC026	(Not display)	000 to 0FF	080
DSC027	(Not display)	000 to 00F	000
DSC028	(Not display)	000 to 0FF	040
DSC029	(Not display)	000 to 00F	005
DSC030	(Not display)	000 to 0FF	040
DSC031	(Not display)	000 to 00F	000
DSC032	(Not display)	000 to 0FF	0C0
DSC033	(Not display)	000 to 00F	000
DSC034	(Not display)	000 to 0FF	080
DSC035	(Not display)	000 to 00F	000
DSC036	(Not display)	000 to 0FF	040
DSC037	(Not display)	000 to 00F	005
DSC038	(Not display)	000 to 0FF	040
DSC039	(Not display)	000 to 00F	000
DSC040	(Not display)	000 to 0FF	0C0
DSC041	(Not display)	000 to 00F	004
DSC042	(Not display)	000 to 0FF	07B
DSC043	(Not display)	000/001	000
DSC044	(Not display)	000/001	000

Item No.	Item name	Variable range	Setting value
DSD001	(Not display)	000 to 255	001
DSD002	(Not display)	000 to 255	002
DSD003	(Not display)	000 to 255	001
DSD004	(Not display)	000 to 255	002
DSD005	(Not display)	000 to 255	001
DSD006	(Not display)	000 to 255	002
DSD007	(Not display)	000 to 255	001
DSD008	(Not display)	000 to 255	002
DSD009	(Not display)	-128 to +127	+001
DSD010	(Not display)	-128 to +127	000
DSD011	(Not display)	-128 to +127	+002
DSD012	(Not display)	-128 to +127	+002
DSD013	(Not display)	-128 to +127	-001
DSD014	(Not display)	-128 to +127	+004
DSD015	(Not display)	0001 to 0FF1	05C1
DSD016	(Not display)	0001 to 0FF1	08B1
DSD017	(Not display)	0001 to 0FF1	0E21

4.7.6 [0.HDMI] (*All the values are fixed values)

NOTE :

Initial setting value is reference value at following condition.

INPUT SIGNAL : 480p(HDMI)
ASPECT : 4 : 3
MULTI-SCREEN : SINGLE
VIDEO STATUS : STANDARD
COLOR TEMPERATURE : LOW

Item No.	Item name	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	001
HDM006	(Not display)	000 to 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 to 255	000
HDM017	(Not display)	000 to 255	000
HDM018	(Not display)	000 to 255	000
HDM019	(Not display)	000/001	001

Item No.	Item name	Variable range	Setting value
HDM020	(Not display)	000 to 255	000
HDM021	(Not display)	000 to 007	000
HDM022	(Not display)	000 to 063	006
HDM023	(Not display)	000 to 063	006
HDM024	(Not display)	000 to 063	006
HDM025	(Not display)	000 to 001	000
HDM026	(Not display)	000 to 003	000
HDM027	(Not display)	000 to 255	180
HDM028	(Not display)	000 to 003	000
HDM029	(Not display)	000 to 255	192
HDM030	(Not display)	000 to 003	000
HDM031	(Not display)	000 to 255	212
HDM032	(Not display)	000 to 003	000
HDM033	(Not display)	000 to 255	191
HDM034	(Not display)	000 to 003	001
HDM035	(Not display)	000 to 255	012
HDM036	(Not display)	000 to 255	026
HDM037	(Not display)	000 to 255	001
HDM038	(Not display)	000 to 255	012
HDM039	(Not display)	000/001	001
HDM040	(Not display)	000/001	001
HDM041	(Not display)	000/001	000
HDM042	(Not display)	000 to 255	001
HDM043	(Not display)	000 to 007	003
HDM044	(Not display)	000 to 003	000
HDM045	(Not display)	000 to 003	000
HDM046	(Not display)	000/001	001
HDM047	(Not display)	000 to 015	007
HDM048	(Not display)	000 to 255	000
HDM049	(Not display)	000 to 255	000
HDM050	(Not display)	000 to 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	001
HDM058	(Not display)	000/001	000
HDM059	(Not display)	000/001	001
HDM060	(Not display)	000/001	000
HDM061	(Not display)	000/001	001
HDM062	(Not display)	000/001	001
HDM063	(Not display)	000/001	000
HDM064	(Not display)	000/001	000

Item No.	Item name	Variable range	Setting value
HDM065	(Not display)	000/001	001
HDM066	(Not display)	000/001	000
HDM067	(Not display)	000/001	001
HDM068	(Not display)	000/001	004
HDM069	(Not display)	000/001	000
HDM070	(Not display)	000/001	001
HDM071	(Not display)	000/001	000
HDM072	(Not display)	000/001	000
HDM073	(Not display)	000/001	000
HDM074	(Not display)	000/001	008
HDM075	(Not display)	000/001	001
HDM076	(Not display)	000/001	001
HDM077	(Not display)	000/001	001
HDM078	(Not display)	000/001	001
HDM079	(Not display)	000/001	001
HDM080	(Not display)	000/001	001

Item No.	Item name	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

Item No.	Item name	Variable range	Setting value
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
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

Item No.	Item name	Variable range	Setting value
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
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
RHD099	(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

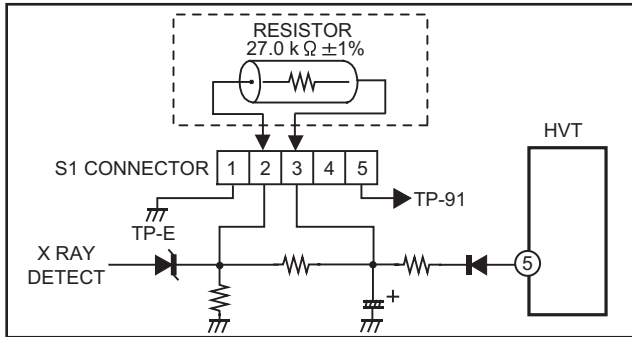
Item No.	Item name	Variable range	Setting value
RHD118	(Not display)	---	000
RHD119	(Not display)	---	000
RHD120	(Not display)	---	000
RHD121	(Not display)	---	000
RHD122	(Not display)	---	000
RHD123	(Not display)	---	000
RHD124	(Not display)	---	000
RHD125	(Not display)	---	000
RHD126	(Not display)	---	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

Item No.	Item name	Variable range	Setting value
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

4.8 ADJUSTMENT PROCEDURE

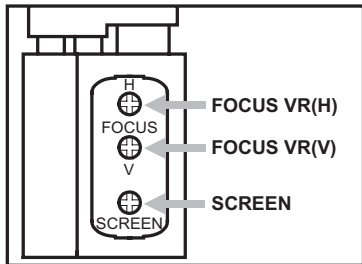
4.8.1 CHECK ITEM

Item	Measuring instrument	Test point	Adjustment part	Description
B1 VOLTAGE	Signal generator DC voltmeter	S1 connector 1-pin: TP-E 5-pin: TP-91 [POWER & DEF PWB]		(1) Receive the black and white signal (color off). (2) Connect the DC voltmeter to the TP-E and TP-91(B1) of S1 connector. (3) Confirm that the voltage is DC140V±2.5V.
HIGH VOLTAGE HOLD DOWN	Resistor [27.0kΩ±1%]	S1 connector 2-pin : X-RAY2 3-pin : X-RAY1 [POWER & DEF PWB]		- After repairing the high voltage hold down circuit. This circuit shall be checked to operate correctly. (1) Turn the power switch to on. (2) Refer to the figure, connect the resistor 27.0kΩ ±1% between S1 connector 2-pin and 3-pin. (3) Make sure that the screen picture disappears. (4) Disconnect the power plug. (5) Remove the resistor. (6) Again connect the power plug. (7) Turn the power switch to on. (8) Make sure that the normal picture is displayed on the screen.



4.8.2 FOCUS

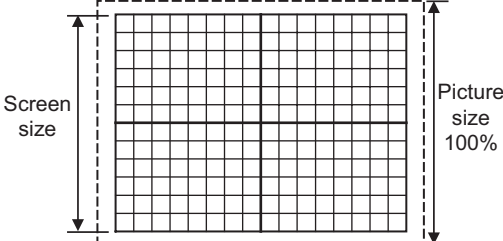
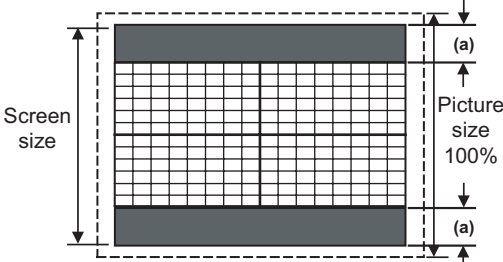
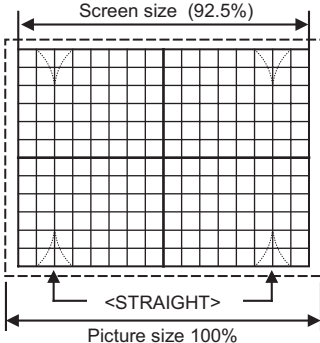
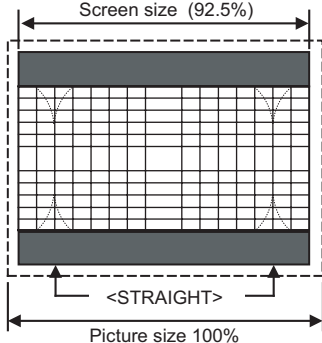
Item	Measuring instrument	Test point	Adjustment part	Description
FOCUS	Signal generator Remote control unit		FOCUS VR(H) FOCUS VR(V) [HVT]	(1) Receive the cross-hatch signal. (2) While watching the screen, adjust the FOCUS VR(H) to make the horizontal lines as fine and sharp as possible. (3) Then adjust the FOCUS VR(V) to make the vertical lines as fine and sharp as possible. (4) Make sure that when the screen is darkened, the lines remain in good focus.

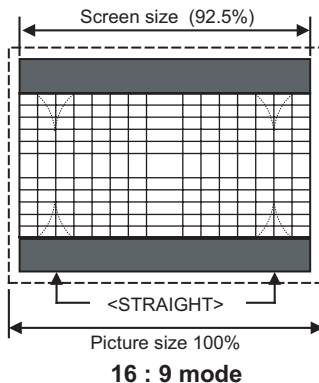
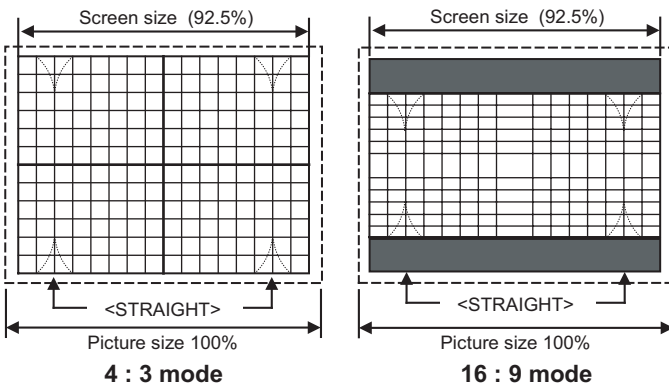
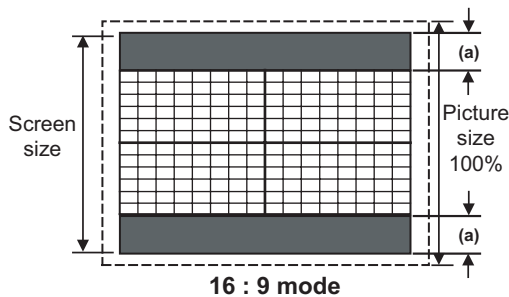
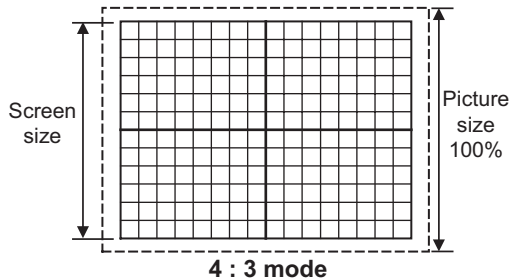


4.8.3 HORIZONTAL FREQUENCY

Item	Measuring instrument	Test point	Adjustment part	Description
H. FREQUENCY	Signal generator Remote control unit		[1.PICTURE/SOUND] D15: H. FREQ. D18: (Not display) (DEF RST OUT)	(1) Receive the any broadcast. (2) Select 1.PICTURE/SOUND from the SERVICE MODE. (3) Preset the value from 0 to 1 for the < D18 > (DEF RST OUT). (4) Adjust the < D15 >(H. FREQ.) so that an optimum horizontal synchronization is obtained. (5) Press [MUTING] key to memorize the set value. (6) Set the ASPECT to 16 : 9 mode. (7) Memorize the same value on 16 : 9 mode as will. (8) After adjustment, return the value from 1 to 0 for the < D18 >. (9) Press the [MUTING] key to memorize the set value.

4.8.4 DEFLECTION CIRCUIT

Item	Measuring instrument	Test point	Adjustment part	Description								
V. POSITION / V. SIZE / V. LINEARITY	Signal generator		[1.PICTURE/SOUND] D01: V. SIZE D05: V. LINE D06: V. CENT	(1) Receive the crosshatch signal. (2) Select 1.PICTURE/SOUND from the SERVICE MODE. (3) Adjust the < D06 > (V.CENT) so that the vertical center of the picture comes to the vertical center of the screen. (4) Adjust the < D01 > (V.SIZE) to became the screen size to 91.5% of the vertical picture size. (5) Adjust the < D05 > (V. LINE) so that the crosshatch screen become true square at the portion of top, middle and bottom. (6) Press the [MUTING] key to memorize the set value. (7) Set the ASPECT to 16:9 mode. (8) The following offset values are added to D01, D05 and D06. <table><tr><th>Setting item</th><th>Offset value</th></tr><tr><td>D01: V. SIZE</td><td>-38</td></tr><tr><td>D05: V. LINE</td><td>-1</td></tr><tr><td>D06: V. CENT</td><td>-1</td></tr></table> (9) Press the [MUTING] key to memorize the set value. (10) Confirm that the blanking height of (a) in the figure is 60mm. (11) If it is different, readjust each settings. NOTE: • Do not adjust the (D04) < V.S-CORRECTION >.	Setting item	Offset value	D01: V. SIZE	-38	D05: V. LINE	-1	D06: V. CENT	-1
	Setting item	Offset value										
D01: V. SIZE	-38											
D05: V. LINE	-1											
D06: V. CENT	-1											
Screen size  Picture size 100% 4 : 3 mode Screen size  Picture size 100% 16 : 9 mode												
H. POSITION / H. SIZE / SIDE PIN / TRAPEZIUM	Signal generator		[1.PICTURE/SOUND] D02: EW D03: H. SIZE D07: EW. TRAP D08: BOT. CORN D09: TOP. CORN D14: H. CENTER	(1) Receive the crosshatch pattern. (2) Select 1.PICTURE/SOUND from the SERVICE MODE. (3) Adjust the < D14 > (H.CENTER) so that the horizontal center of the crosshatch agree with the horizontal center of the screen. (4) Adjust the < D03 > (H. SIZE) to become the screen size to 92.5% of the horizontal picture size. (5) Adjust the < D02 > (EW TRAP) to the vertical lines become straight.. (6) If the corner pincushions are too bad, adjust the < D09 > (TOP. CORN), < D08 > (BOT. CORN) and < D07 > (EW. TRAP) to get exact corner pincushion of the crosshatch pattern. (7) Press the [MUTING] key to memorize the set value. (8) Set the ASPECT to 16:9 screen mode. (9) The following offset values are added to D02. <table><tr><th>Setting item</th><th>Offset value</th></tr><tr><td>D02: EW</td><td>-5</td></tr></table> (10) Press the [MUTING] key to memorize the set value. (11) If adjustment is different, readjust each mode. NOTE: • Confirm the H. position and if it is different, readjust the H. position again. Repeat the adjustment of the H. size and side pincushion.	Setting item	Offset value	D02: EW	-5				
	Setting item	Offset value										
D02: EW	-5											
Screen size (92.5%)  Picture size 100% 4 : 3 mode Screen size (92.5%)  Picture size 100% 16 : 9 mode												



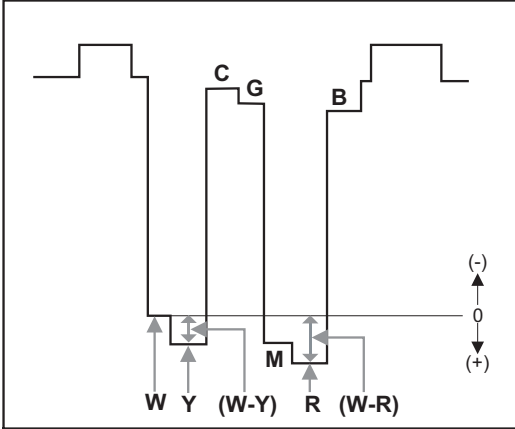
4.8.5 VIDEO CIRCUIT

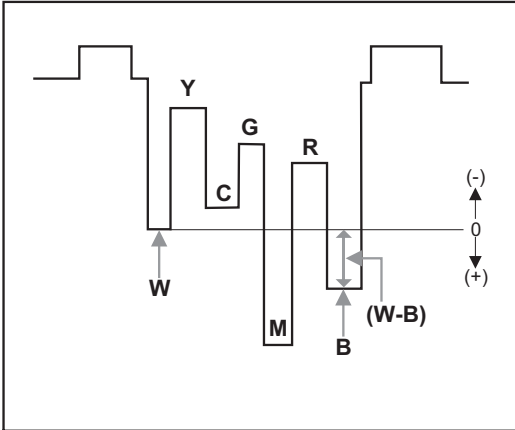
Item	Measuring instrument	Test point	Adjustment part	Description
WHITE BALANCE (LOW LIGHT)	Signal generator Remote control unit		[1.PICTURE/SOUND] S14: CUTOFR S16: CUTOFG S18: CUTOFB [3.WHITE BALANCE] SCREEN VR [FBT]	(1) Input the black and white signal (color off). (2) Set the VIDEO STATUS to STANDARD. (3) Set the COLOR TEMPERATURE to LOW. (4) Select 1.PICTURE/SOUND from the SERVICE MODE. (5) Set the initial setting values of the < S14 > (CUTOFF R), < S16 > (CUTOFF G), < S18 > (CUTOFF B). (6) Return to the main menu in SERVICE MODE. (7) Select the 3.WHITE BALANCE from SERVICE MODE. (8) Display the horizontal line by pressing the [1] key. (9) Turn the SCREEN VR all the way to the left, then turn it gradually clockwise until either one of the red, blue or green color is faintly visible. (10) Adjust the two colors which did not appear until the single horizontal line that is displayed becomes white using the [7], [8], [9], [TUNE] and [RETURN+] keys. (11) Press the [MUTING] key to memorize the set value. (12) Press the [4] key to release the horizontal line mode. (13) If there is a gap with the setting values, repeat the steps 7. to 12. for readjustment. (14) Input the 480i component video signal. (15) Repeat the steps 7. to 13. as above. (16) Input the 1080i component video signal. (17) Repeat the steps 7. to 13. as above.
REMOTE CONTROL UNIT H.LINE ON ① ② ③ H.LINE OFF ④ ⑤ ⑥ G CUTOFF▲ ⑦ R CUTOFF▲ ⑧ B CUTOFF▲ ⑨ G CUTOFF▼ TUNE R CUTOFF▼ ⑩ B CUTOFF▼ RETURN+				
WHITE BALANCE (HIGH LIGHT)	Signal generator Remote control unit		[1.PICTURE/SOUND] S10: DRIVE R S12: DRIVE B [3.WHITE BALANCE]	(1) Input the black and white signal (color off). (2) Set the VIDEO STATUS to STANDARD. (3) Set the COLOR TEMPERATURE to LOW. (4) Select 1.PICTURE/SOUND from the SERVICE MODE. (5) Set the initial setting values of the < S10 > (DRIVE R) and < S12 > (DRIVE B). (6) Return to the main menu in SERVICE MODE. (7) Select the 3.WHITE BALANCE from SERVICE MODE. (8) Adjust the screen until it becomes white using the [2], [3], [5] and [6] keys. (9) Press the [MUTING] key to memorize the set value. (10) Make sure that the WHITE BALANCE tracking from the LOW-LIGHT through the HIGH-LIGHT has been properly done. [When the black and white signal (color off) is received, the natural white should be visible.] (11) Input the 480i component video signal to COMPONENT VIDEO terminal. (12) Repeat the steps 7. to 9. as above. (13) Input the 1080i component video signal to COMPONENT VIDEO terminal. (14) Repeat the steps 7. to 9. as above. (15) If there is a gap with the initial setting values, repeat the steps 7. to 9. for readjustment.
REMOTE CONTROL UNIT ① R DRIVE▲ ② B DRIVE▲ ③ ④ R DRIVE▼ ⑤ B DRIVE▼ ⑥ ⑦ ⑧ ⑨ TUNE ⑩ RETURN+				

Item	Measuring instrument	Test point	Adjustment part	Description
SUB BRIGHT	Remote control unit		[1.PICTURE/SOUND] S03: BRIGHT	(1) Receive the color bar signal. (2) Set the VIDEO STATUS to STANDARD. (3) Set the COLOR TEMPERATURE to LOW. (4) Select 1.PICTURE/SOUND from the SERVICE MODE. (5) Set the initial setting value of the < S03 > (BRIGHT). (6) If the brightness is not the best with initial setting value, make fine adjustment of the < S03 > until you get the best brightness. (7) Press the [MUTING] key to memorize the set value. (8) Set the VIDEO STATUS to THEATER. (9) Set the COLOR TEMPERATURE to HIGH. (10) Repeat the steps 4. to 7. as above. (11) Input the 480i component color bar signal. (12) Repeat the steps 2. to 10. as above. (13) Input the 1080i component color bar signal. (14) Repeat the steps 2. to 7. as above. (15) Set the VIDEO STATUS to THEATER. (16) Repeat the steps 3. to 7. as above.
SUB CONTRAST	Remote control unit		[1.PICTURE/SOUND] S04: CONTRAST	(1) Receive the NTSC color bar signal. (2) Set the VIDEO STATUS to STANDARD. (3) Set the COLOR TEMPERATURE to LOW. (4) Select 1.PICTURE/SOUND from the SERVICE MODE. (5) Set the initial setting value of the < S04 > (CONTRAST). (6) If the contrast is not the best with the initial setting value, make fine adjustment of the < S04 > until you get the optimum contrast. (7) Press the [MUTING] key to memorize the set value. (8) Set the VIDEO STATUS to THEATER. (9) Set the COLOR TEMPERATURE to HIGH. (10) Repeat the steps 4. to 7. as above. (11) Input the 480i component color bar signal. (12) Repeat the steps 2. to 10. as above. (13) Input the 1080i component color bar signal. (14) Repeat the steps 2. to 7. as above. (15) Set the VIDEO STATUS to THEATER. (16) Repeat the steps 3. to 7. as above.

Item	Measuring instrument	Test point	Adjustment part	Description
SUB COLOR / SUB TINT / B-Y GAIN (1)	Signal generator Remote control unit		[1.PICTURE/SOUND] S01: COLOR S02: TINT S07: B-Y	Method of adjustment without measuring instrument (1) Receive the composite NTSC color bar signal. (2) Set the VIDEO STATUS to STANDARD. (3) Set the COLOR TEMPERATURE to LOW. (4) Select 1.PICTURE/SOUND from the SERVICE MODE. (5) Set the initial setting values of the < S01 > (COLOR) and < S02 > (TINT). (6) If the color or tint is not the best with the initial setting values, make fine adjustment until you get the best color or the best tint. (7) Set the initial setting values of the < S07 > (B-Y). (8) If the color bar is not clearly with the initial setting value, make fine adjustment until you get the clearly color bar. (9) Press the [MUTING] key to memorize the set value. (10) Set the VIDEO STATUS to THEATER. (11) Set the COLOR TEMPERATURE to HIGH. (12) Repeat the steps 4. to 9. as above. (13) Input the 480i component color bar signal to COMPONENT VIDEO terminal. (14) Repeat the steps 2. to 12. as above. (15) Input the 480p component color bar signal to COMPONENT VIDEO terminal. (16) Repeat the steps 2. to 12. as above. (17) Input the 1080i component color bar signal to COMPONENT VIDEO terminal. (18) Repeat the steps 2. to 9. as above. (19) Set the VIDEO STATUS to THEATER. (20) Set the COLOR TEMPERATURE to LOW. (21) Repeat the steps 4. to 9. as above.

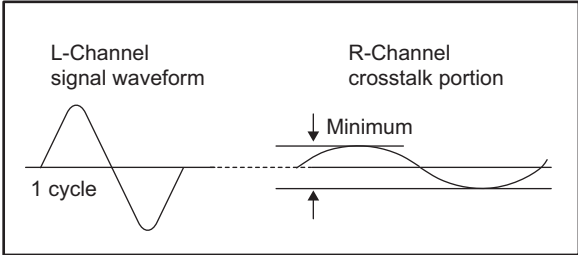
Item	Measuring instrument	Test point	Adjustment part	Description
SUB COLOR / SUB TINT / B-Y GAIN (2)	Signal generator Oscilloscope Remote control unit	TP-R TP-B TP-E [CRT SOCKET PWB]	[1.PICTURE/SOUND] S01: COLOR S02: TINT S07: B-Y	Method of adjustment using measuring instrument (1) Receive the composite NTSC color bar (75% white) signal. (2) Set the VIDEO STATUS to STANDARD. (3) Set the COLOR TEMPERATURE to LOW. (4) Select 1.PICTURE/SOUND from the SERVICE MODE. (5) Connect the oscilloscope between TP-R and TP-E. (6) Adjust the < S01 > (COLOR) and < S02 > (TINT) to be the following setting value A [V]. (7) Connect the oscilloscope between TP-B and TP-E. (8) Adjust the < S07 > (B-Y) to be setting value C [V] . (9) Press the [MUTING] key to memorize the set value. (10) Set the VIDEO STATUS to THEATER. (11) Set the COLOR TEMPERATURE to HIGH. (12) Adjust the < S01 > and < S02 > to be the following setting value B [V]. (13) Adjust the < S07 > to be setting value D [V]. (14) Press the [MUTING] key to memorize the set value. (15) Input the 480i component color bar signal to COMPONENT VIDEO terminal. (16) Repeat the steps 2. to 14. as above. (17) Input the 480p component color bar signal to COMPONENT VIDEO terminal. (18) Repeat the steps 2. to 14. as above. (19) Input the 1080i component color bar signal to COMPONENT VIDEO terminal. (20) Repeat the steps 2. to 9. as above. (21) Set the VIDEO STATUS to THEATER. (22) Set the COLOR TEMPERATURE to LOW. (23) Repeat the steps 12. to 14. as above. NOTE: - Confirm that the low-light is not different after adjusting COLOR, TINT and B-Y. If it is green or magenta, adjust the low-light again. - If the readjustment is carried out, set the off set values again.





Setting value	A		B		C	D
	STANDARD		THEATER		STANDARD	THEATER
	(W-R)	(W-Y)	(W-R)	(W-Y)	(W-B)	(W-B)
	S01	S02	S01	S02	S07	S07
NTSC(4:3)	+40V	+12V	+22V	0V	+10V	+10V
480i(4:3)	+36V	+15V	+15V	+3V	+1V	+1V
480p(4:3)	+42V	+17V	+19V	+3V	+1V	-1V
1080i (16:9)	+27V	+4V	+15V	+5V	-13V	-4V

4.8.6 MTS CIRCUIT

Item	Measuring instrument	Test point	Adjustment part	Description
MTS INPUT LEVEL	Remote control unit		[1.PICTURE/SOUND] A01: IN LEVEL	(1) Receive the any broadcast. (2) Select the 1.PICTURE/SOUND from the SERVICE MODE. (3) Select the < A01 > (IN LEVEL). (4) Set the intal setting value of the < A01 >. (5) Press the [MUTING] key to memorize the set value.
MTS SEPARATION	TV audio multiplex signal generator Oscilloscope Remote control unit	R OUT L OUT [AUDIO OUT]	[1.PICTURE/SOUND] A02: LOW SEP A03: HI SEP	(1) Input the stereo L signal (300Hz) from the TV audio multiplex signal generator to the antenna terminal. (2) Connect an oscilloscope to L OUT pin of the AUDIO OUT, and display one cycle portion of the 300Hz signal. (3) Change the connection of the oscilloscope to R OUT pin of the AUDIO OUT, and enlarge the voltage axis. (4) Select 1.PICTURE/SOUND from the SERVICE MODE. (5) Set the initial setting value of the < A02 > (LOW SEP). (6) Adjust the < A02 > so that the stroke element of the 300Hz signal will become minimum. (7) Change the signal to 3kHz, and similarly adjust the < A03 > (HI SEP). (8) Press the [MUTING] key to memorize the set value.
				

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.

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 ignored 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.

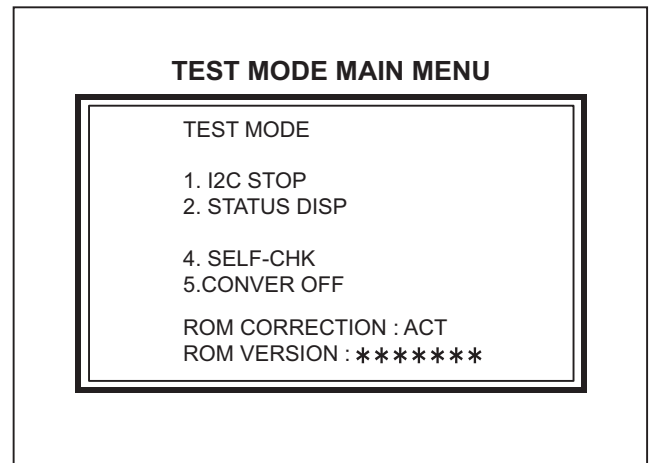


Fig.1

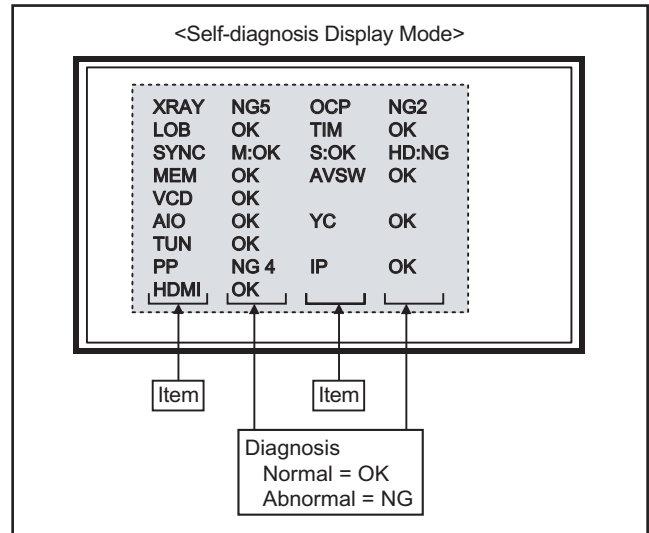


Fig.2

5.1.6 DETAILS

Self-diagnosis is performed for the following items:

Check Item	Indication	Details of detection	Method of detection
X-ray protection	XRAY	-----	There is its OSD. However the XRAY self-check is not active.(No counting)
B1 over-current protection	OCP	B1 over-current is detected. Q2971 (POWER & DEF PWB)	At about 3 seconds after the power is turned on, the self-check function starts. If NG is detected for 200ms, the power is turned off automatically.
Low B short protection	LOB	Operation of low B short protection circuit. 5V: Q1961 9V: Q1962 (MAIN PWB)	At about 3 seconds after the power is turned on, the self-check function starts. If NG is detected for 200ms, the power is turned off automatically.
CRT neck protection		Operation of CRT neck protection circuit. Q2401 (POWER & DEF PWB)	At about 3 seconds after the power is turned on, the self-check function starts. If NG is detected for 1.5s, the power is turned off automatically.
Timer (clock)	TIM	The power frequency is changed as follows: 50Hz→60Hz / 60Hz→50Hz IC1701 (MI-COM & DIST MODULE PWB)	Periodically check the power frequency by counting the AC pulse and monitor whether or not the frequency is changed except for the time immediately after resetting.
Presence or absence of synchronized signal	SYNC	Presence of synchronized signal. HD: Component input / M: NTSC main / S: NTSC sub IC1301 (MI-COM & DISTMODULE PWB)	When entering the self-check mode, "OK" is shown. While running the mode with picture signal, if the synchronized signal is disappeared, "NG" is shown.
Main memory	MEM	ACK is returned when I ² C traffic is carried out. IC1703 (memory) (MAIN PWB)	The state is monitored every time when I ² C traffic is carried out. Then the state is counted as a failure if ACK is not returned.
AV switch	AVSW	Ditto IC1501 (MAIN PWB)	Ditto
Video process	VCD	Ditto IC1301 (MAIN PWB)	Ditto
Audio	AIO	Ditto IC1140 (RECEIVER PWB)	Ditto
3D YC separation	YC	Ditto IC3001 (MI-COM & DIST MODULE PWB)	Ditto
RF tuner	TUN	Ditto TU1101 (RECEIVER PWB)	Ditto
Multi screen	PP	Ditto IC1001 (MI-COM & DIST MODULE PWB)	Ditto
DIST process	IP	Ditto IC1001 (MI-COM & DIST MODULE PWB)	Ditto
DVI (Digital input) process	HDMI	Ditto IC7001 (DIGITAL INPUT MODULE PWB)	Ditto

5.1.7 DISPLAY METHOD WHEN RASTER IS NOT AVAILABLE

The self-check results are shown on the following LED display.

Method of indication when the raster is not displayed.

Each failure is shown by turning LED on and off at the specified intervals.

- For B1 over-current protection, CRT neck protection and Low B short protection, the power of the TV is turned off, if NG is detected. Immediately after the power is turned off, POWER LED will be turning on and off. When the power is turned off, you cannot turn the power on again until the AC plug is taken out and put in again.

Item	POWER LED ON / OFF intervals
B1 over-current protection	Tuningon and off at 1-second intervals
Low B short protection	Tuningon and off at 2-second intervals
CRT neck protection	Tuningon and off at 3-second intervals

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