

JVC

SERVICE MANUAL

FLAT COLOUR TELEVISION

**AV-29SS26,
AV-29SX76/G**

BASIC CHASSIS
CW3

InteriArt
MaxxBass®

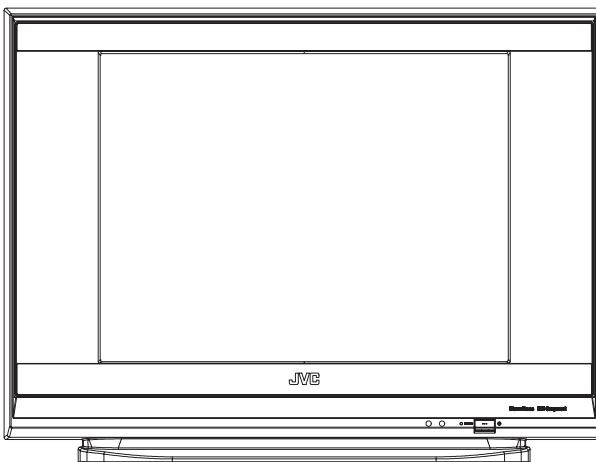


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SPECIFICATION

Items		Contents	
		AV-29SS26	AV-29SX76/G
Dimensions (W × H × D)		81.0 cm × 61.6 cm × 39.4 cm	
Mass		44 kg	
TV RF System		B, G, I, D, K, M	
Colour System		PAL / SECAM / NTSC 3.58 / NTSC 4.43	
Stereo System		A2 (B/G) / NICAM (B/G, I, D/K)	PB STEREO
Teletext System		FLOF (Fastext) WST (World Standard System)	
Receiving Frequency	VHF Low	46.25MHz - 140.25MHz (AS0 - S6)	
	VHF High	147.25MHz - 423.25MHz (S7 - S36)	
	UHF	431.25MHz - 863.25MHz (S37 - C57)	
	CATV	Mid (X - Z+2, S1 - S10) / Super (S11 - S20) / Hyper (S21 - S41) bands	
Intermediate Frequency	VIF	38.0MHz (B, G, I, D, K, M)	
	SIF	32.26 MHz (5.74 MHz: B), 32.15MHz (5.85 MHz: G), 31.45 MHz (6.55 MHz: I) 31.75 MHz (6.5 MHz: D), 32.15MHz (5.85 MHz: K), 33.5MHz (4.5MHz : M)	
Colour Sub Carrier	PAL	4.43 MHz	
	SECAM	4.40625 MHz / 4.25 MHz	
	NTSC	3.58 MHz / 4.43 MHz	
Power Input		AC110 V - AC240 V, 50 Hz/60 Hz	
Power Consumption		191W (Max) / 129W (Avg)	
Picture Tube		29-inch, aspect ratio 4 : 3, flat square type, tinted	
High Voltage		30.5 kV +1 kV / -1.5kV	
Speaker		6.5 cm × 13 cm, oval type × 2	
Audio Power Output		10 W + 10 W (Rated power output)	
Aerial Input		75 Ω unbalanced, coaxial	
Video / Audio Input-1/2/3	Component Video [VIDEO-2]	RCA pin jack × 3 Y:1V(p-p), positive (negative sync), 75Ω Cb/Cr:0.7V(p-p), 75Ω	
	S-Video [VIDEO-1]	Mini-DIN 4 pin × 1 Y: 1V(p-p), positive (negative sync provided), 75Ω C: 0.286V(p-p) (Burst signal), 75Ω	
	Video	1V(p-p), negative sync, 75Ω, RCA pin jack × 3	
	Audio	500mV(rms) (-4dBs), high impedance, RCA pin jack × 6	
Video / Audio Output	Video	1V(p-p), 75Ω, RCA pin jack × 1	
	Audio	500mV(rms)(-4dBs), Low impedance, RCA pin jack × 2	
Headphone jack		3.5 mm stereo mini jack × 1	
Remote Control Unit		RM-C1286 (UM-3/AA/R6 dry cell battery × 2)	RM-C1285 (UM-3/AA/R6 dry cell battery × 2)

Design and specifications subject to change without notice.

SECTION 1

PRECAUTION

1.1 SAFETY PRECAUTIONS

- (1) The design of this product contains special hardware, many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
- (2) Alterations of the design or circuitry of the products should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
- (3) Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. **Electrical components having such features are identified by shading on the schematics and by (Δ) on the parts list in Service manual.** The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of Service manual may cause shock, fire, or other hazards.
- (4) **Don't short between the LIVE side ground and ISOLATED (NEUTRAL) side ground or EARTH side ground when repairing.**
Some model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (⊥) side GND, the ISOLATED (NEUTRAL) : (≠) side GND and EARTH : (⊕) side GND.
Don't short between the LIVE side GND and ISOLATED (NEUTRAL) side GND or EARTH side GND and never measure the LIVE side GND and ISOLATED (NEUTRAL) side GND or EARTH side GND at the same time with a measuring apparatus (oscilloscope etc.). If above note will not be kept, a fuse or any parts will be broken.
- (5) If any repair has been made to the chassis, it is recommended that the B1 setting should be checked or adjusted (See B1 VOLTAGE).
- (6) 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.
- (7) 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 10kΩ 2W resistor to the anode button.

(8) 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.

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

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

a) Dielectric Strength Test

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

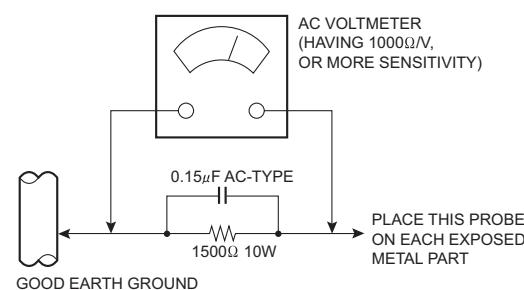
b) Leakage Current Check

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

Alternate Check Method

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



SECTION 2

SPECIFIC SERVICE INSTRUCTIONS

2.1 FEATURES

DVD PICTURE MODE

This function can enhance the picture quality of DVD. The screen can be made sharp or soft by this setting.

AUTO SIGNAL DETECT

When input DVD signal to VIDEO-2, detect the input signal and change the input mode to VIDEO-2 automatically.

CINEMA SURROUND

This function can enjoy an enhanced sound for wider audience.

PICTURE MODE

This function can adjust the picture settings automatically. There are BRIGHT, STANDARD and SOFT in the PICTURE MODE.

RETURN +

This function can set a channel frequently view to the Return Channel and you can view that channel at any time with one-touch.

AI ECO SENSOR

This function can adjust TV screen contrast according to the brightness of your room.

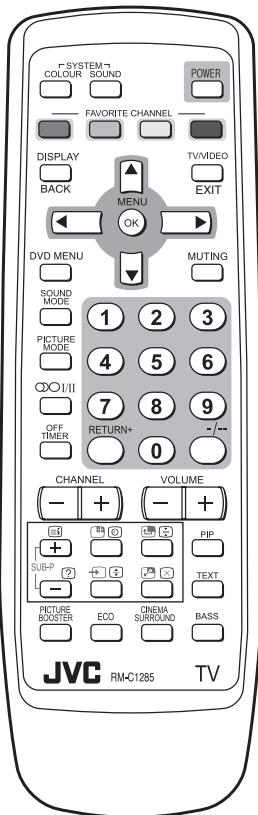
MaxxBass

MaxxBass enhances bass sound that cannot be reproduced by normal speakers to be heard by our ears.

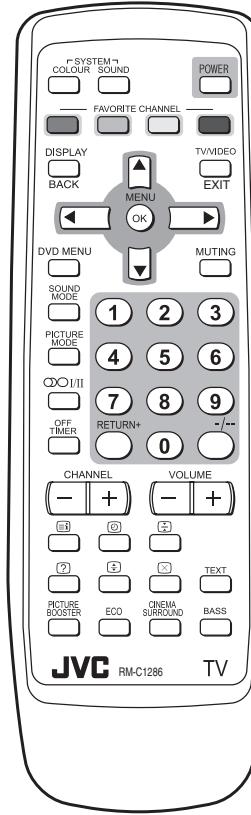
2.2 MAIN DIFFERENCE LIST

Item	AV-29SS26	AV-29SX76/G
OSD Language	Eng, Chi, Rus, Mal, Ind	Eng, Ara, Fre, Per, Rus
PIP Function	NO	YES
MAIN PWB	SCW-1941A-H2	SCW-1947A-H2
REMOTE CONTROL UNIT	RM-C1286	RM-C1285

2.3 REMOTE CONTROL UNIT



<RM-C1285>



<RM-C1286>

2.4 TECHNICAL INFORMATION

2.4.1 MAIN MI-COM (CPU) PIN FUNCTION

Pin No.	Pin name	I/O	Function	Pin No.	Pin name	I/O	Function
1	VssP2	-	GND	65	SVM	O	Not used
2	VssC4	-	GND	66	FbiSo	I	Flyback input/sandcastle output
3	V1.8C4	I	1.8V (Digital)	67	Hout	O	Horizontal output
4	V3.3A3	I	3.3V	68	VssComb	-	GND
5	VrefP_Sdac	I	3.3V (Positive)	69	V5Comb	I	5V
6	VrefN_Sdac	-	GND	70	Vin/R2/Pr	I	PIP R input
7	VrefP_Sdac	I	3.3V (Negative)	71	Uin/B2/Pb	I	PIP B input
8	VrefN_Sdac	-	GND	72	Yin/G2/Y	I	PIP G input
9	VrefP_Sdac	I	3.3V (Positive)	73	Ysync	I	Not used
10	XtalIn	I	24.576MHz for system clock	74	Yout	O	Not used
11	XtalOut	O	24.576MHz for system clock	75	Uout/INSSW2	I	YUV insertion input
12	VssA1	-	GND	76	NC	O	Not used
13	NECK	I	V-guard input/ I/O switch	77	INSSW3	I	YUV insertion input
14	CONT	I	1.8V regulator control	78	R3/Pr	I	Component PR input (Video-2)
15	V5P1	I	+5V	79	G3/Y	I	Component Y input (Video-2)
16	Ph2	-	Phase-2 filter	80	B3/Pb	I	Component PB input (Video-2)
17	Ph1	-	Phase-1 filter	81	Gnd3	-	GND
18	Gnd1	-	GND	82	V5P3	I	5V
19	SecPll	-	SECAM PLL decoupling	83	BCL	I	Beam current limiter input
20	Dec8G	-	Bandgap decoupling	84	BLKIN	I	Black current input
21	EW	O	East-West drive output	85	Rout	O	R output
22	VDRB-	O	Vertical drive B output	86	Gout	O	G output
23	VDRA+	O	Vertical drive A output	87	Bout	O	B output
24	Vif1	I	Video IF input 1	88	V3.3A1	I	3.3V
25	Vif2	I	Video IF input 2	89	RefAdN	-	GND
26	Vsc	-	Vertical sawtooth capacitor	90	V3.3RefAdP	I	3.3V (Positive)
27	Iref	I	Reference current input	91	RefAd	I	3.3/2V
28	GndIF	-	GND	92	GndA	-	GND
29	Sif1	I	Sound IF input 1	93	V1.8A	I	1.8V
30	Sif2	I	Sound IF input 2	94	V3.3A2	I	3.3V
31	AGC	O	Tuner AGC output	95	VssADC	-	GND
32	EHT	I	EHT/overtoltage protection input	96	V1.8ADC	I	1.8V
33	Ssif/RefIn/Avl/RefOut	O	Automatic Volume Levelling/ sound IF input / subcarrier reference output / external reference signal input for I signalmixer for DVB operation	97	REMOTE	I	Remote control
34	L3	I	Audio-L3 input (left signal)	98	PW_LED	I	POWER LED control
35	R3	I	Audio-R3 input (right signal)	99	PW_LED	I	POWER LED control
36	L-OUT	O	Audio L output	100	V1.8C2	I	1.8V
37	R-OUT	O	Audio R output	101	VssC2	-	GND
38	DecsDem	-	Decoupling sound demodulator	102	TIMER	-	Not used
39	QssO/AmO/AudeEm	O	QSS intercarrier output / AM output / deemphasis / (front-end audio out)	103	TIMER	-	Not used
40	Gnd2	-	GND	104	VER_PROTECT	O	X-ray protect
41	Plif	-	IF-PLL loop filter	105	S_REDUCE	O	Sound control
42	SifAgc	-	AGC sound IF	106	P00/I2SDI1	O	Not used
43	IfVo/FmRo/DvbO	O	Not used	107	POWER	O	SUB POWER control
44	NC	O	Not used	108	SCL1	I	I2C bus clock
45	V8AudioSwitches	I	8V	109	SDA1	I/O	I2C bus data
46	AgcSif	-	AGC capacitor second sound IF	110	V3.3P	I	3.3V
47	V5P2	I	5V	111	ROTATION	O	Rotation
48	V-OUT	O	Video output	112	3.58/OTHER	O	NTSC 3.58 detection
49	L1	I	Audio-L1 input	113	A_MUTE	O	Audio muting
50	R1	I	Audio-R1 input	114	4.5/OTHER	O	NTSC 4.43 detection
51	V3	I	Video V3 input	115	PROT	I	Protect
52	C4	I	Not used	116	ECO_IN	I	ECO sensor level detection
53	Audio2InL	I	Not used	117	V1.8C1	I	1.8V (Digital)
54	Audio2InR	I	Not used	118	DecV1V8	I	1.8V
55	V2/Y	I	Video V2 input	119	KEY_IN	I	Key scan data
56	L2	I	Audio L2 input (Left signal)	120	VDO-DET	I	Video DET input
57	R2	I	Audio R2 input (right signal)	121	VSSC1+P1	-	Digital GND
58	Y3/Cvbs	I	S-Video Y1 input	122	S_V_DET	I	S-Video DET input
59	C1	I	S-Video C1 input	123	P25/PWM4	O	GTVA_reset
60	AudioLsL	O	Audio L output for audio power amplifier	124	V1.8C3	I	1.8V (Digital)
61	AudioLsR	O	Audio R output for audio power amplifier	125	VssC3	-	GND
62	HP-L	O	Not used	126	P12/Int2	I	External interrupt
63	HP-R	O	Not used	127	SDA0	I/O	I2C bus data (for memory)
64	CVBSO/PIP	O	CVBS / PIP output	128	SCL0	I	I2C bus clock (for memory)

SECTION 3

DISASSEMBLY

3.1 DISASSEMBLY PROCEDURE

3.1.1 REMOVING THE REAR COVER

- Unplug the power cord.
- (1) Remove the 15 screws [A] as shown in Fig.1.
- (2) Withdraw the REAR COVER toward you.

CAUTION:

When reinstalling the rear cover, carefully push it inward after inserting the MAIN PWB into the REAR COVER groove.

3.1.2 REMOVING THE CHASSIS (CHASSIS BASE AND CONTROL BASE)

- Remove the REAR COVER.
 - (1) Slightly raise the both sides of the CHASSIS by hand and remove the 2 claws [B] under the CHASSIS from the front cabinet as shown in Fig.1.
 - (2) Withdraw the CHASSIS backward.
 - (If necessary, take off the wire clamp, connectors etc.)

NOTE:

When conducting a check with power supplied, be sure to confirm that the CRT earth wire is connected to the CRT SOCKET PWB and the MAIN PWB.

3.1.3 REMOVING THE AV BOARD

- Remove the REAR COVER.
 - (1) Remove the 2 screws [C] as shown in Fig.1.
 - (2) When you pull out the AV BOARD in the direction of arrow [D] as shown in Fig.1, it can be removed.

3.1.4 REMOVING THE CONTROL BASE

- Remove the REAR COVER.
- Remove the CHASSIS.
 - (1) While pushing down the 1 claw [E] as shown in Fig. 2 and pull out the CONTROL BASE in the direction of arrow [F] as shown in Fig. 2, the control base can be removed.
 - (If necessary, take off the wire, connectors etc.)

3.1.5 REMOVING THE SPEAKER

- Remove the REAR COVER.
 - (1) Remove the 2 screws [G] as shown in Fig.1.
 - (2) Withdraw the SPEAKER backward.
 - (3) Follow the same steps when removing the other hand SPEAKER.

3.1.6 REMOVING THE FRONT CONTROL PWB(2/2)

- Remove the REAR COVER.
 - (1) Remove the 4 screws [H] as shown in Fig.1.
 - (2) Withdraw the FRONT CONTROL PWB(2/2).

3.1.7 CHECKING THE MAIN PW BOARD

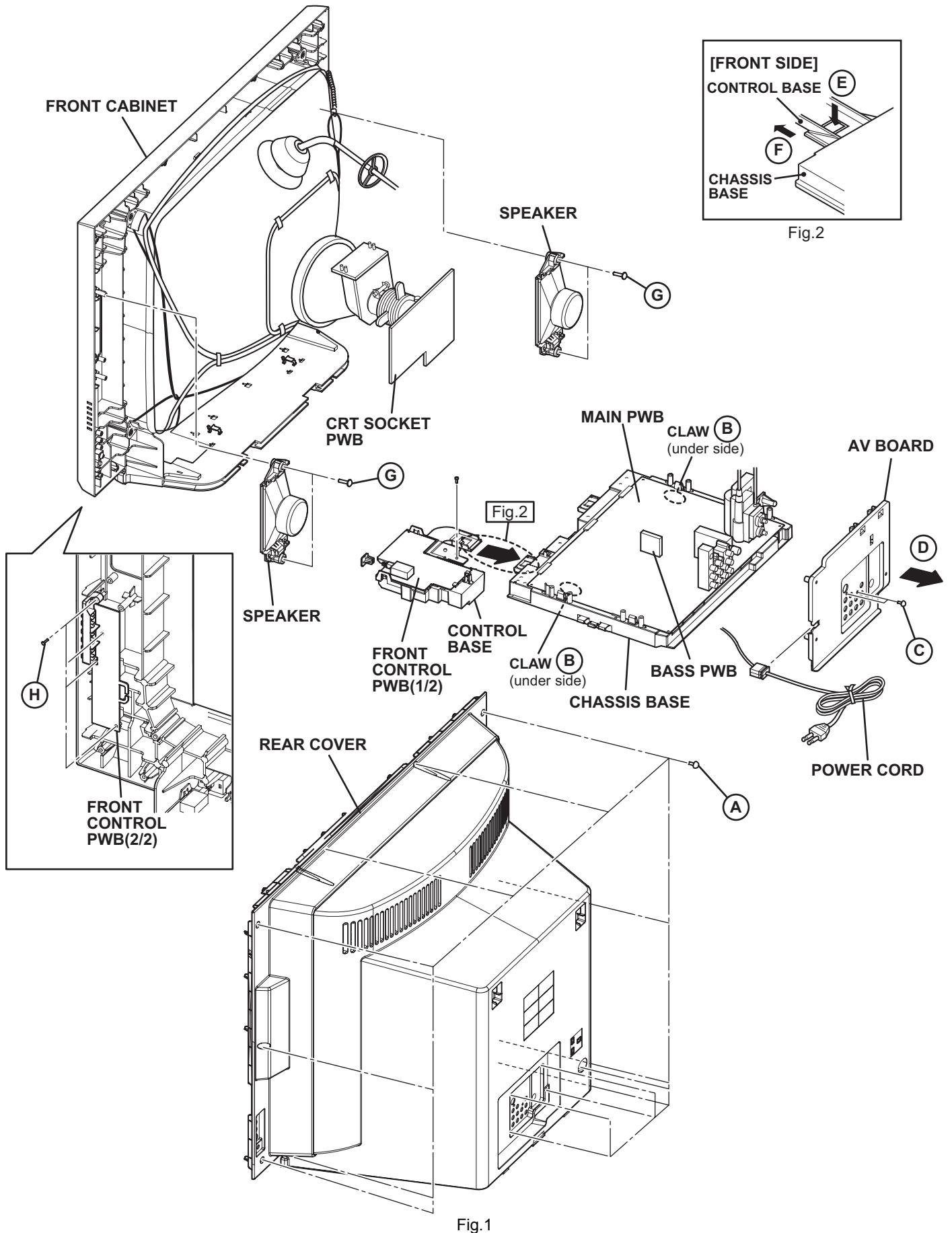
- To check the back side of the MAIN PWB.
 - (1) Pull out the CHASSIS and CONTROL BASE. (Refer to the procedure described in REMOVING THE CHASSIS)
 - (2) Put the CHASSIS in upright position with the MAIN PWB's solder side faced to the right. The FBT must be positioned on top. (Viewed from the rear)
 - (3) Put the CONTROL PWBS in an appropriate position, taking care not giving tension to the ribbon cables that connect to the MAIN PWB.

CAUTIONS:

- Use insulating materials, if necessary, to avoid possible electrical contacts between PWBS and expose terminals, etc.
- Before turning on power, make sure that the CRT earth wire and other connectors are properly connected.
- When repairing, connect the DEG. COIL to the DEG. connector on the MAIN PWB.

3.1.8 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 MEMORY IC REPLACEMENT

- This model uses the memory IC.

Memory IC: IC702 on MAIN PWB

The memory IC memorizes data for correctly operating the video and deflection circuits. When replacing the memory IC, be sure to use the same type IC written with the initial values of data. In other words, use the specific IC listed in "PRINTED WIRING BOARD PARTS LIST". For its mounting location, refer to "ADJUSTMENT LOCATIONS".

3.2.1 MEMORY IC REPLACEMENT PROCEDURE

1. Power off

Switch off the power and disconnect the power plug from the AC outlet.

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. System constant check and setting

* It must not adjust without signal.

- (1) Press the [DISPLAY] key and the [PICTURE MODE] key of the REMOTE CONTROL UNIT simultaneously.
- (2) The SERVICE MODE screen of Fig. 1 will be displayed.
- (3) While the SERVICE MODE is displayed, press the [DISPLAY] key and the [PICTURE MODE] key simultaneously, and the SYSTEM CONSTANT SET screen of Fig. 2 will be displayed.
- (4) Check the setting values of the SYSTEM CONSTANT SET. If the value is different, select the setting item with the [MENU ▲/▼] key, and set the correct value with the [MENU ◀/▶] key.
- (5) Press the [OK] key to memorize the setting value.
- (6) Press the [DISPLAY] key twice, and return to the normal screen.

5. Receiving channel setting

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

6. User settings

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.

7. SERVICE MODE setting

Verify what to set in the SERVICE MODE, and set whatever is necessary (Fig.1).

Refer to the SERVICE ADJUSTMENT for setting.

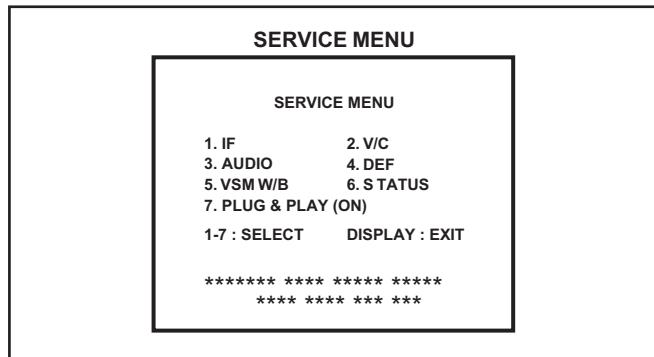
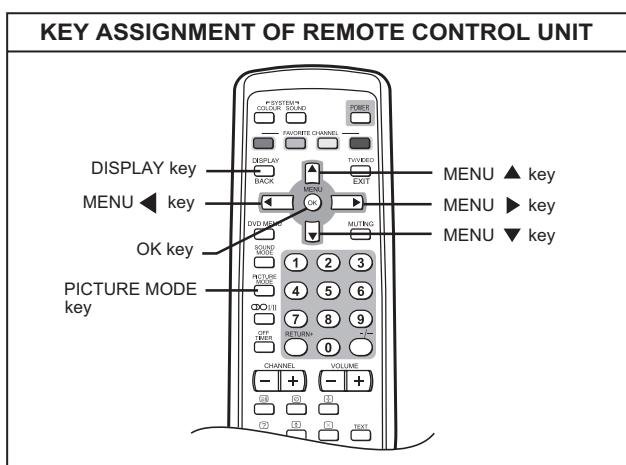


Fig.1

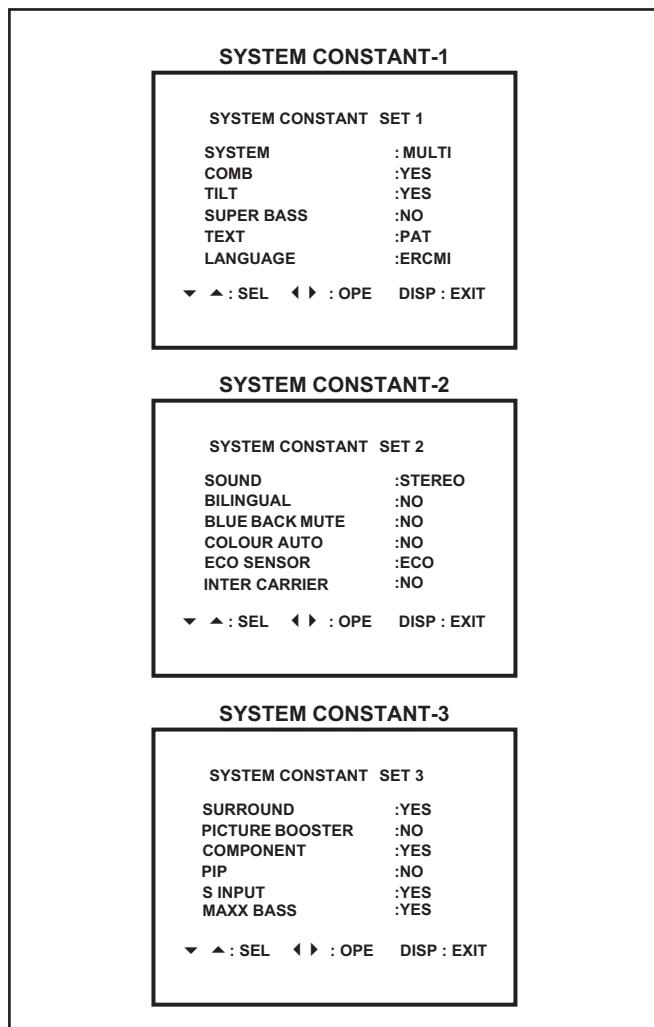


Fig.2

3.2.2 SYSTEM CONSTANT SETTING

Setting item	Setting value	
	AV-29SS26	AV-29SX76/G
SYSTEM	MULTI	←
COMB	YES	←
TILT	YES	←
SUPER BASS	NO	←
TEXT	PAT	←
LANGUAGE	E/R/C/M/I	E/R/A/P/F
SOUND	STEREO	PB
BILINGUAL	NO	←
BLUE BACK MUTE	NO	←
COLOUR AUTO	NO	YES
ECO SENSOR	ECO	←
INTER CARRIER	NO	←
SURROUND	YES	←
PICTURE BOOSTER	NO	←
COMPONENT	YES	←
PIP	NO	YES
S INPUT	YES	←
MAXX BASS	YES	←

3.2.3 SETTINGS OF FACTORY SHIPMENT

3.2.3.1 BUTTON OPERATION

Setting item	Setting position
POWER	Off
CHANNEL	PR 1
VOLUME	15

3.2.3.2 REMOTE CONTROL DIRECT OPERATION

Setting item	Setting position
CHANNEL	PR1
VOLUME	15
PICTURE MODE	BRIGHT
DISPLAY	Indicated
TV/VIDEO	TV
CINEMA SURROUND	OFF

3.2.3.3 REMOTE CONTROL MENU OPERATION

(1) PICTURE SETTING

Setting item	Setting position
PICTURE MODE	BRIGHT
CONTRAST / BRIGHT / SHARP / COLOUR / TINT	Centre
WHITE BALANCE	COOL
VNR	AUTO

(2) SOUND SETTING

Setting item	Setting position
STEREO I/II	STEREO SOUND
AI VOLUME	OFF
SOUND MODE	MUSIC
BALANCE	Centre
CINEMA SURROUND	OFF
MAXX BASS	OFF

(3) FEATURE SETTING

Setting item	Setting position
DVD MENU	
AUTO SIGNAL DETECT	ON
DVD PICTURE MODE	OFF
DVD THEATER STATUS	OFF
DVD SOUND MODE	THEATER
ON TIMER	OFF
OFF TIMER	OFF
CHILD LOCK	OFF
COMPRESS (16:9)	OFF
AI ECO SENSOR	OFF

(4) INSTALL SETTING

Setting item	Setting position
AUTO PROGRAM	TV channel automatically set
EDIT/MANUAL	PRESET CH only
COLOUR SYSTEM	PAL
LANGUAGE	ENGLISH
TEXT LANGUAGE	GROUP1 [AV-29SS26] GROUP4 [AV-29SX76/G]
VIDEO-2 SETTING	COMPONENT
BLUE BACK	ON
BEEP	ON

3.2.4 SERVICE MODE SETTING ITEMS

Setting item	Setting value
1. IF	1. VCO 2. DELAY POINT
2. V / C	1. SCREEN (READ DATA) 2. CUTOFF / CUT OFF THEATER (B/G) 3. WDR (R/G/B) 4. BRIGHT (TV/VDO 1/2/3) 5. CONT. (TV/VDO 1/2/3) 6. COLOUR (TV/VDO 1/2/3) 7. TINT (TV/VDO 1/2/3 /THEATER) 8. SHARP (TV/VDO 1/2/3) 9. Y DELAY (TV/VDO 1/2/3/S-VDO) 10. TINT DVD (TV/VDO/THEATER) 11. AMP T.SHARP (TV/VDO) 12. TWIN CONT (TV/VDO)
3. AUDIO [Do not adjust]	1. DCXO ADJ 2. NICAM lower ERRLIMIT 3. NICAM upper ERRLIMIT 4. A2 ID THR 5. MENU EQUALIZER
4. DEF	1. V-SHIFT 2. V-SLOPE 3. V-SIZE 4. H-CENT 5. H-SIZE 6. TRAPEZ 7. EW-PIN 8. COR-UP 9. COR-LO 10. ANGLE 11. BOW 12. V-S.CR 13. V-LIN 14. V-ZOOM
5. VSM PRESET	1. BRIGHT 2. CONT 3. COLOUR 4. SHARP 5. HUE 1. R DRIVE 2. G DRIVE 3. B DRIVE
6. STATUS [Dispaly only]	---
7. PLUG & PLAY(ON) [Dispaly only]	---

3.3 REPLACEMENT OF CHIP COMPONENT

3.3.1 CAUTIONS

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

3.3.2 SOLDERING IRON

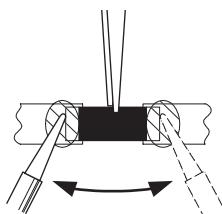
- (1) Use a high insulation soldering iron with a thin pointed end of it.
- (2) A 30w soldering iron is recommended for easily removing parts.

3.3.3 REPLACEMENT STEPS

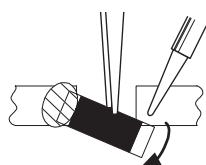
1. How to remove Chip parts

[Resistors, capacitors, etc.]

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

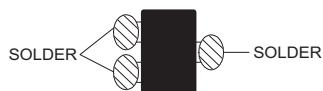


- (2) Shift with the tweezers and remove the chip part.

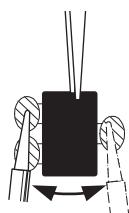


[Transistors, diodes, variable resistors, etc.]

- (1) Apply extra solder to each lead.



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



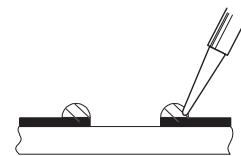
NOTE :

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

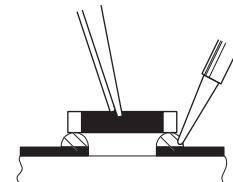
2. How to install Chip parts

[Resistors, capacitors, etc.]

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

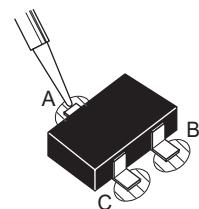


- (2) Grasp the chip part with tweezers and place it on the solder. Then heat and melt the solder at both ends of the chip part.

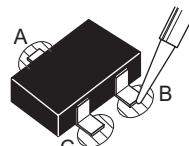


[Transistors, diodes, variable resistors, etc.]

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



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



SECTION 4 ADJUSTMENT

4.1 ADJUSTMENT PREPARATION

- (1) 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 warming 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 ADJUSTMENT

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

Item	Preset value
PICTURE MODE(VSM)	BRIGHT
VNR	OFF
AI ECO SENSOR	OFF
BALANCE	Centre
BASS / TREBLE / BALANCE	Centre
CINEMA SURROUND	OFF

4.3 MEASURING INSTRUMENT AND FIXTURES

- (1) DC voltmeter (or digital voltmeter)
- (2) Oscilloscope
- (3) HV voltmeter
- (4) Signal generator
(Pattern generator : PAL/NTSC)
- (5) Remote control unit

4.4 ADJUSTMENT ITEMS

■ CHECK ITEMS

- B1 VOLTAGE check
- HIGH VOLTAGE check
- IF VCO check

■ TUNER / IF CIRCUIT

- DELAY POINT (AGC) adjustment

■ FOCUS

- FOCUS adjustment

■ DEFLECTION CIRCUIT

- V.SLOPE adjustment
- V.POSITION adjustment
- V.SIZE adjustment
- H.POSITION adjustment
- H.SIZE adjustment
- SIDE PIN adjustment
- TRAPEZIUM adjustment
- V. LINEARITY adjustment
- CORNER adjustment
- H. PARALLEL adjustment
- H.BOW adjustment

■ VIDEO CIRCUIT

- WHITE BALANCE adjustment
- SUB BRIGHT adjustment
- SUB CONTRAST adjustment
- SUB COLOUR adjustment
- SUB TINT adjustment

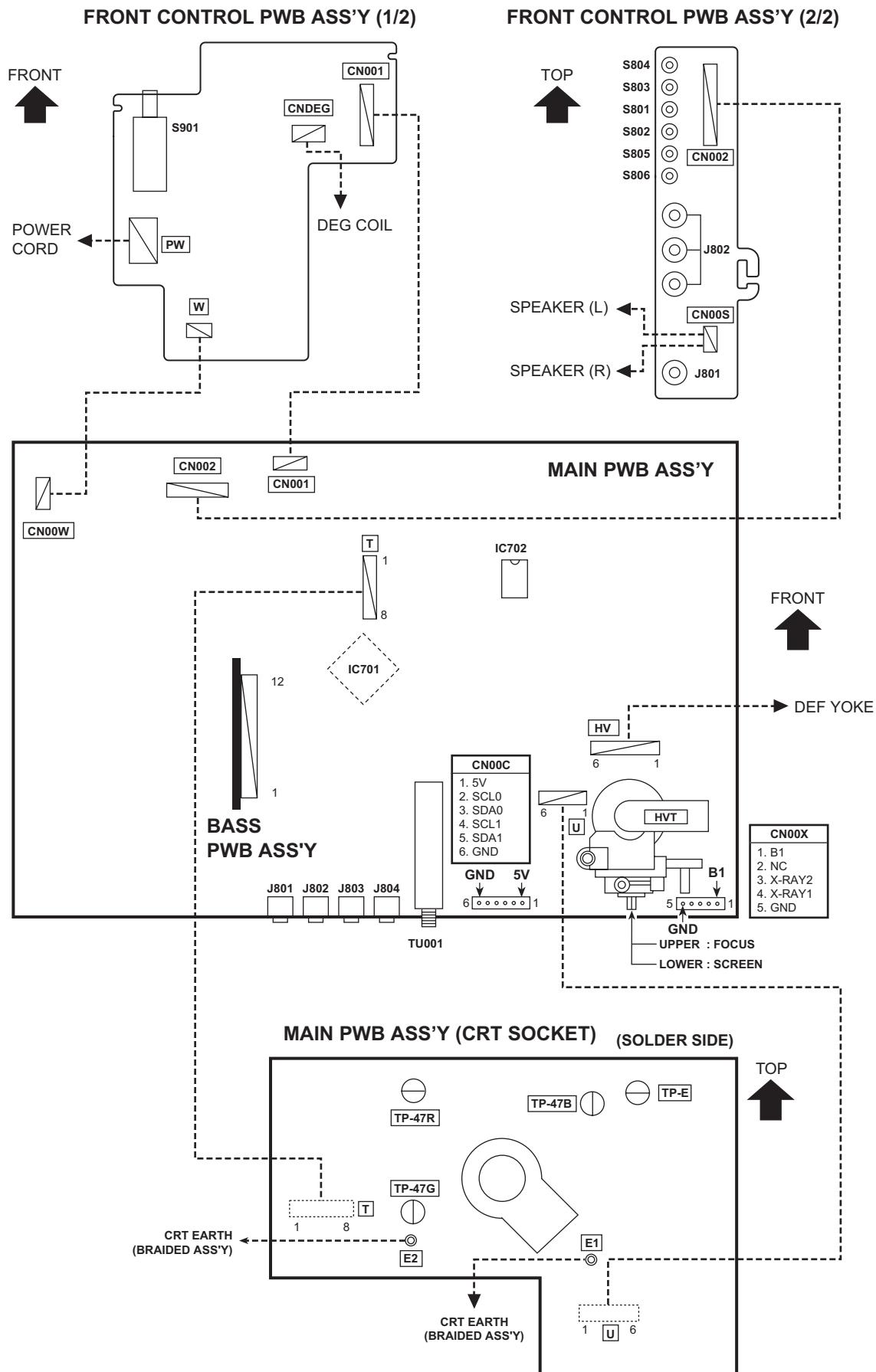
■ VSM PRESET SETTING

- VSM PRESET

■ PURITY AND CONVERGENCE

- PURITY adjustment
- STATIC CONVERGENCE adjustment
- DYNAMIC CONVERGENCE adjustment

4.5 ADJUSTMENT LOCATION



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

With the SERVICE MODE, various adjustments can be made, and they are broadly classified in the following items of settings.

1.IF	This mode adjusts the setting values of the IF circuit.
2. V/C	This mode adjusts the setting values of the VIDEO circuit.
3.AUDIO	This mode adjusts the setting values of the multiplicity AUDIO circuit. [Do not adjust]
4. DEF	This mode adjusts the setting values of the DEFLECTION circuit for each aspect mode given below.
5.VSM PRESET	This mode adjusts the initial setting values of BRIGHT, STANDARD and SOFT. (VSM : Video Status Memory)
6.STATUS	It is no requirement to adjustment. [Do not adjust]
7.PLUG & PLAY (ON)	This mode adjusts the setting values of the PIP circuit. [Do not adjust]

4.6.3 BASIC OPERATION IN SERVICE MODE

4.6.3.1 HOW TO ENTER THE SERVICE MODE

- (1) Press the [DISPLAY] key and the [PICTURE MODE] key simultaneously, then enter the SERVICE MODE.
- (2) When the main menu is displayed, press any key of the [7] to [9] key to enter the corresponding sub menu mode.

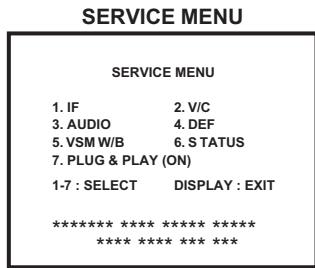


Fig.1

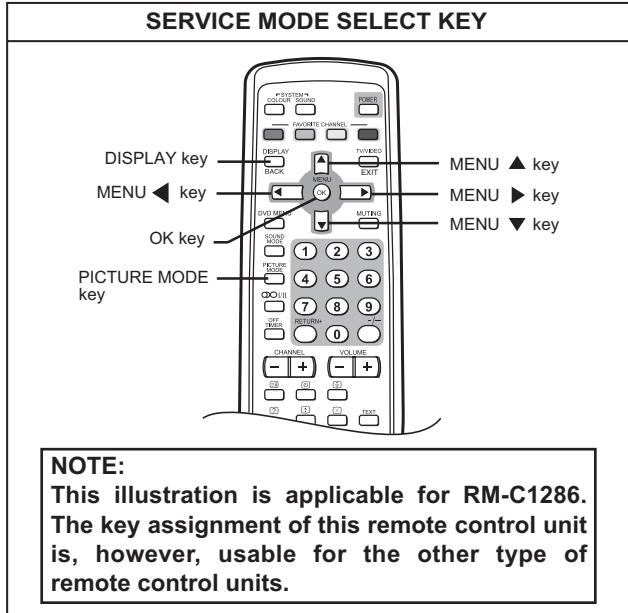


Fig.2

4.6.3.2 SETTING METHOD

■ 1.IF

- [1. VCO] : It must not adjust without signal
 - (1) [1] key
Select 1.IF.
 - (2) [1] key
Select 1.VCO(CW).
Check the arrow position between the ABOVE REF. and BELOW REF.
 - (3) [DISPLAY] key
Return to the SERVICE MODE main menu screen.

■ 2. V/C, 4. DEF

- (1) [2], [4] key
Select one from 2. V/C, 4. DEF.
- (2) [MENU ▲/▼] key
Select setting items.
- (3) [MENU ▲/▼] key
Set the setting values of the setting items.

■ 5.VSM W/B

- (1) [5] key
Select 5.VSM W/B.
- (2) [OK] key
Select setting items.
- (3) [MENU ▲/▼] key
Set the setting values of the setting items.

4.6.3.3 MEMORIZE THE ADJUSTMENT DATA

When Mnt is completed, press the [OK] key to memorize the adjustment value. If not to do so, the data is not memorized to the memory IC. And if exit the adjustment mode before to memorize the data, the adjustment value which you have changed will be canceled.

4.6.3.4 RELEASE OF SERVICE MODE

After completing the setting, return to the SERVICE MODE, then again press the [DISPLAY] key.

4.6.4 SERVICE MODE FLOW CHART

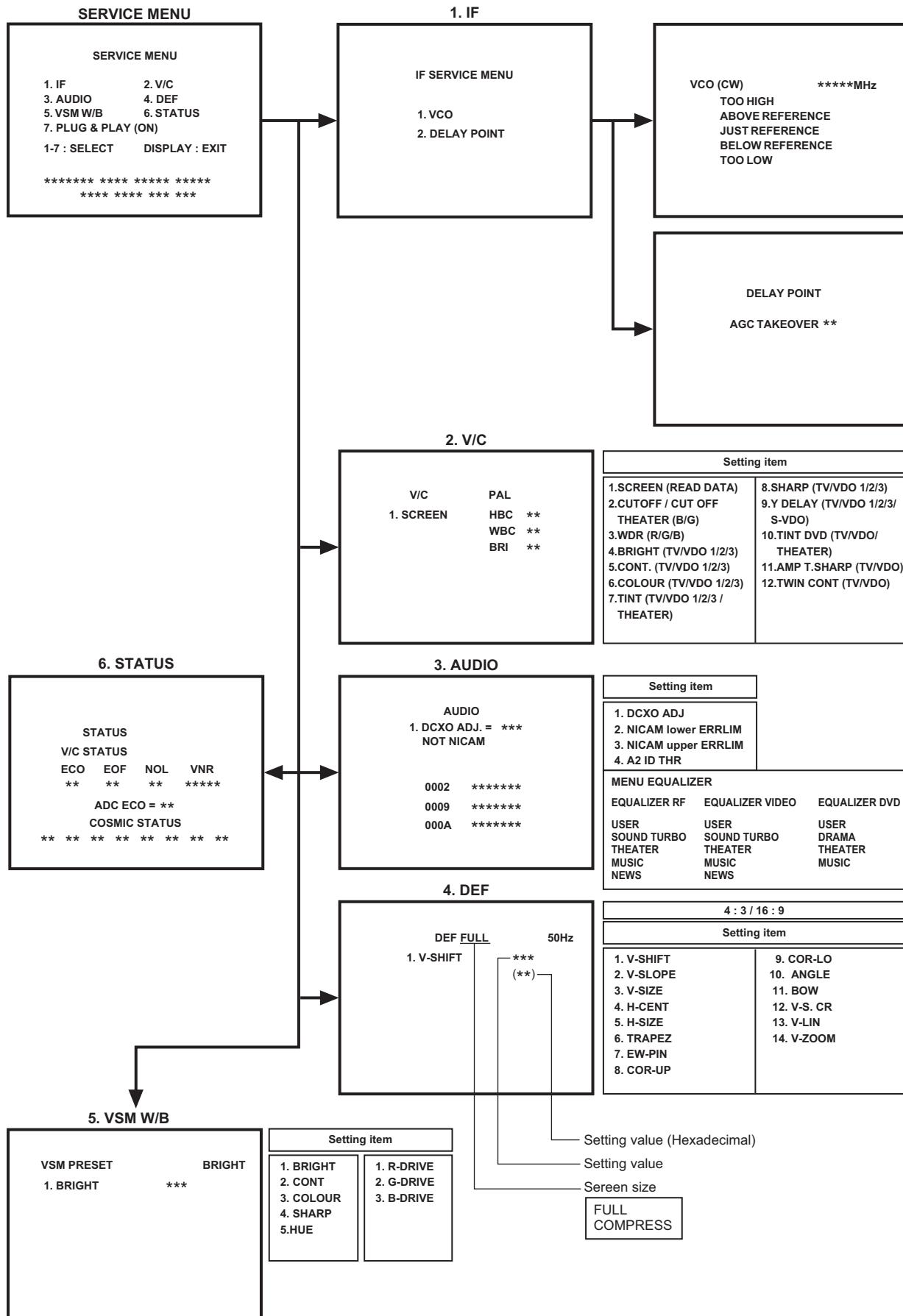


Fig.3

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 set the screen in its optimum condition may differ from the initial setting value.
- (2) Do not change the initial setting values of the setting items not listed in "ADJUSTMENT PROCEDURE".
- (3) The " --- " means adjustment is not possible.
- (4) " 12.TWIN CONT " is displayed only in the models with PIP function.

[2. V/C] * is variable values for adjustment.

Adjustment item		Variable range	Initial setting value						
			PAL	SECAM	NTSC3. 58	NTSC4. 43	VIDEO 2	COMPONENT (V-2)	
								525i	625i
1. SCREEN	BRI	0 ~ 63	32*	32*	32*	32*	---	32*	32*
2. CUT OFF	B	0 ~ 63(-32 ~ +31)	37*	37*	37*	37*	---	-3*	-3*
	G	0 ~ 63(-32 ~ +31)	18*	18*	18*	18*	---	(-5)*	(-5)*
CUT OFF THEATER	B	0 ~ 63(-32 ~ +31)	---	---	---	---	+6	+5	+5
	G	0 ~ 63(-32 ~ +31)	---	---	---	---	+4	+8	+8
3. WDR	R	0 ~ 63(-32 ~ +31)	32*	32*	32*	32*	---	0	0
	G	0 ~ 63(-32 ~ +31)	32	32	32	32	---	0	0
	B	0 ~ 63(-32 ~ +31)	45*	45*	45*	45*	---	0	0
4. BRIGHT	RF	0 ~ 63	39*	39*	39*	39*	---	---	---
	VIDEO-1(COMPOSITE/S)	(-32 ~ +31)	(+1)	(+1)	(+1)	(+1)	---	---	---
	VIDEO-2(COMPONENT)	(-32 ~ +31)	(+1)	(+1)	(+1)	(+1)	---	(+2)	(+2)
	VIDEO-3(COMPOSITE)	(-32 ~ +31)	(+2)	(+2)	(+2)	(+2)	---	---	---
5. CONT.	RF	0 ~ 63	32*	32*	32*	32*	---	---	---
	VIDEO	(-32 ~ +31)	(-2)	(-2)	(-2)	(-2)	---	(-2)	(-2)
6. COLOUR	RF	0 ~ 63(-32 ~ +31)	42*	28*	30*	+1	---	---	---
	VIDEO-1(COMPOSITE/S)	(-32 ~ +31)	+6	+3	+3	+2	---	---	---
	VIDEO-2(COMPONENT)	(-32 ~ +31)	+6	+3	+3	+2	---	(+9)	(+5)
	VIDEO-3(COMPOSITE)	(-32 ~ +31)	+6	+3	+3	+2	---	---	---
7. TINT	RF	0 ~ 63(-32 ~ +31)	---	---	+27*	+2	---	---	---
	VIDEO	(-32 ~ +31)	---	---	(+4)	(+2)	---	---	---
	THEATER	(-32 ~ +31)	---	---	(+3)	(+0)	---	---	---
8. SHARP	RF	0 ~ 63	28	28	28	28	---	---	---
	VIDEO	0 ~ 63	53	53	53	53	---	15	15
9. Y DELAY	RF	0 ~ 15	11	9	12	5	---	---	---
	VIDEO	0 ~ 15	9	8	11	10	---	---	---
	S-VIDEO	0 ~ 15	7	7	7	7	---	---	---
10. TINT DVD	RF	0 ~ 63(-32 ~ +31)	37*	-7	+0	+0	---	---	---
	VIDEO	(-32 ~ +31)	+1	-8	+0	+0	---	+5	+0
	THEATER	(-32 ~ +31)	-2	+0	---	---	---	+3	+3
11. AMP T.SHARP	RF VIDEO	0 ~ 63	0	0	0	0	---	0	0
12. TWIN CONT.	TWIN (RF)	---	-15	-15	-15	-15	---	---	---
	TWIN (VIDEO)	---	---	---	---	---	---	---	---

[3. AUDIO] *This submenu is for display only, no adjustment is required.

Function	Item	Setting value
AUDIO	1. DC XO ADJ	12H*
	2. NICAM LOWER ERR LIM	6FH
	3. NICAM UPPER ERR LIM	B0H
	4. A2 ID THR	00H

Function	MODE	Item	100Hz	300Hz	1kHz	3kHz	8kHz
MENU EQUALIZER	RF	SOUND TURBO	+11	+8	+4	+7	+9
		THEATER	+8	+5	-7	+4	+4
		MUSIC	+10	+6	-5	+4	+10
		NEWS	-1	-1	+1	-4	-6
		USER	+0	+0	+0	+0	+0
	VIDEO	SOUND TURBO	+11	+8	+4	+7	+9
		THEATER	+8	+5	-7	+4	+4
		MUSIC	+10	+6	-5	+4	+10
		NEWS	-1	-1	+1	-4	-6
		USER	+0	+0	+0	+0	+0
	DVD	THEATER	+8	+5	-7	+4	+4
		MUSIC	+10	+6	-5	+4	+10
		DRAMA	+2	+3	+4	+1	+0
		USER	+0	+0	+0	+0	+0

[4. DEF]

Adjustment item	Variable range		Initial setting value			
			4:3		COMPRESS (16:9)	
	4:3 50Hz	Others	50Hz	60Hz	50Hz	60Hz
1. V-SHIFT	0 ~ 63	-32 ~ +31	0*	0*	0*	0*
2. V-SLOPE	0 ~ 63	-32 ~ +31	0*	0*	0*	0*
3. V-SIZE	0 ~ 63	-32 ~ +31	+30*	0*	-4*	-2*
4. H-CENT	0 ~ 63	-32 ~ +31	+35*	0*	0*	0*
5. H-SIZE	0 ~ 63	-32 ~ +31	+45*	0*	0*	0*
6. TRAPEZ	0 ~ 63	-32 ~ +31	0*	0*	0*	0*
7. EW-PIN	0 ~ 63	-32 ~ +31	-12*	0*	0*	0*
8. COR-UP	0 ~ 63	-32 ~ +31	0*	0*	0*	0*
9. COR-LO	0 ~ 63	-32 ~ +31	0*	0*	0*	0*
10. ANGLE	0 ~ 63	-32 ~ +31	0*	0*	0*	0*
11. BOW	0 ~ 63	-32 ~ +31	0*	0*	0*	0*
12. V-S.CR	0 ~ 63	-32 ~ +31	0*	0*	0*	0*
13. V-LIN	0 ~ 63	-32 ~ +31	0*	0*	0*	0*
14. V-ZOOM	0 ~ 63	-32 ~ +31	+20	(0)	-23*	+3*

NOTE: The value with an asterisk * is variable for adjustment. The values in parenthesis () are fixed values.

V-ZOOM DATA can adjust follow data range in case measurement line power on is appeared.

[5. VSM W/B]

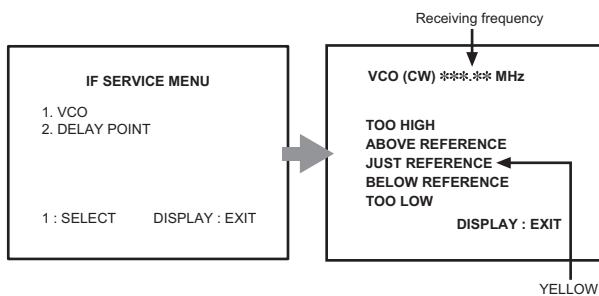
Setting item	Variable range	Setting value			
		BRIGHT	SOFT	STANDARD	THEATER
1. BRIGHT	-16 - 16	0	0	0	-4
2. CONT.	-16 - 16	+15	+5	+10	+5
3. COLOUR	-16 - 16	0	0	-4	-8
4. SHARP	-16 - 16	0	-10	-5	0
5. HUE	-16 - 16	0	0	0	-1

Setting item	Variable range	Setting value			
		COOL	WARM	NORMAL	THEATER
1. R DRIVE	-64 - 63	0	+10	0	+9
2. G DRIVE	-64 - 63	0	-4	+2	0
3. B DRIVE	-64 - 63	0	-12	-10	-27

4.8 ADJUSTMENT PROCEDURE

4.8.1 CHECK ITEM

Item	Measuring instrument	Test point	Adjustment part	Description
B1 VOLTAGE	DC voltmeter Remote control unit	CN00X connector 1-pin:TP-B1 5-pin:TP-E [MAIN PWB]		(1) Receive any broadcast. (2) Connect a DC voltmeter to 1-pin and 5-pin of CN00X connector. (3) Make sure that the voltage is DC134.5V ±2.0V .
HIGH VOLTAGE	HV voltmeter Remote control unit	CRT anode Chassis GND		(1) Receive any broadcast. (2) Connect the earth clip of HV voltmeter to chassis GND. (3) Connect the probe of HV voltmeter to CRT anode. (4) Make sure that the voltage is DC30.5kV +1kV/-1.5kV . NOTE: <ul style="list-style-type: none">• Remove the probe before removing the earth clip.
IF VCO	Remote control unit		[1.IF] 1.VCO	<ul style="list-style-type: none">• Under normal conditions, no adjustment is required.• Confirmation adjustment.<ul style="list-style-type: none">(1) Select 1.IF from the SERVICE MODE.(2) Select <1.VCO>(3) Receive any broadcast.(4) Check the ←(Arrow) position between the ABOVE REF. and BELOW REF.



4.8.2 TUNER / IF CIRCUIT

Item	Measuring instrument	Test point	Adjustment part	Description											
DELAY POINT (AGC)	Signal generator Remote control unit		[1. IF] 2. DELAY POINT (AGC TAKE-OVER)	(1) Receive a black and white signal (colour off). (2) Select 1. IF. (3) Select <2. DELAY POINT>. (4) Set the setting values of the setting items as shown bellow table. (5) Then adjust the [MENU - / +] keys until video noise disappears. (6) Turn to other channels and make sure that there are no irregularities.											
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Setting Item</th> <th>Variable range</th> <th>Initial setting value</th> </tr> <tr> <td>DELAY POINT (AGC TAKE-OVER)</td> <td>NTSC3.58 OTHER</td> <td>0 - 127</td> <td>28</td> </tr> <tr> <td></td> <td></td> <td></td> <td>28</td> </tr> </table>					Setting Item	Variable range	Initial setting value	DELAY POINT (AGC TAKE-OVER)	NTSC3.58 OTHER	0 - 127	28				28
Setting Item	Variable range	Initial setting value													
DELAY POINT (AGC TAKE-OVER)	NTSC3.58 OTHER	0 - 127	28												
			28												

4.8.3 FOCUS

Item	Measuring instrument	Test point	Adjustment part	Description
FOCUS	Signal generator		FOCUS VR [In HVT]	(1) Receive the cross hatch signal. (2) While looking at the screen, adjust the FOCUS VR to the vertical and horizontal lines will be thinnest and sharpest. (3) Make sure that the picture is in focus even when the screen gets darkened.

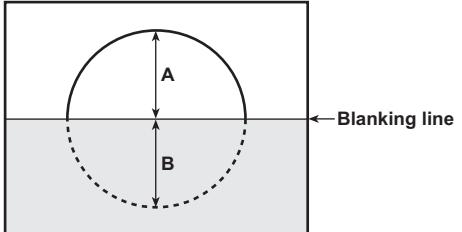
4.8.4 DEFLECTION CIRCUIT

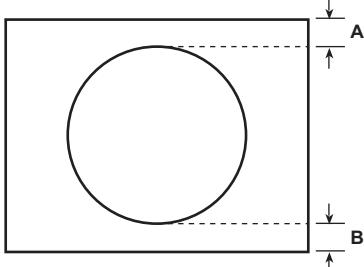
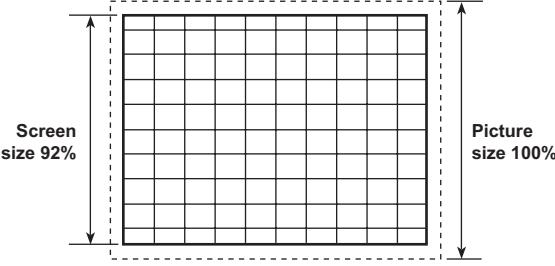
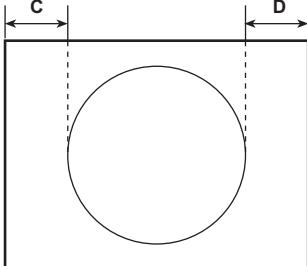
- The setting (adjustment) using the remote control unit is made on the basis of the initial setting values.
- The setting values which adjust the screen to the optimum condition can be different from the initial setting values.
- When performing deflection circuit adjustment, adjusts PAL signal (fv: 50 Hz) in 4:3 mode and 16:9 mode respectively, and adjust the NTSC signal (fv: 60 Hz) similarly.

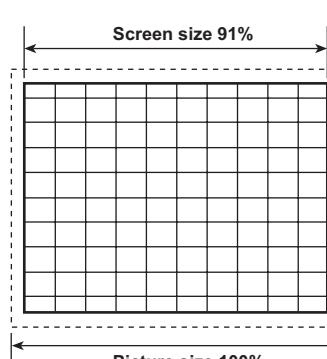
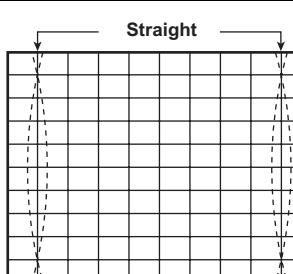
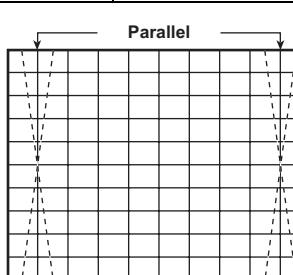
NOTE:

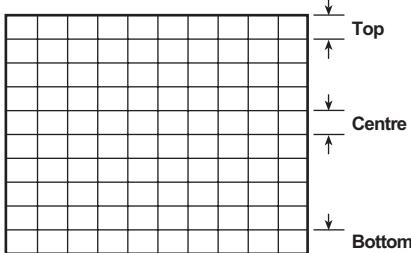
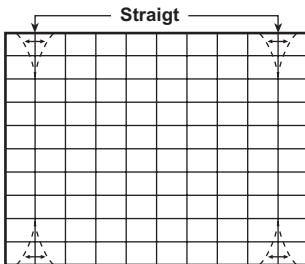
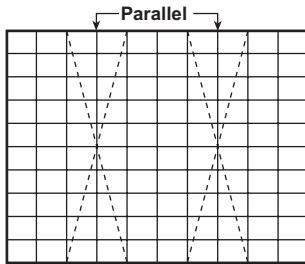
Proceed to the following adjustment after having completed the adjustments of SUB BRIGHT and SUB PICTURE.

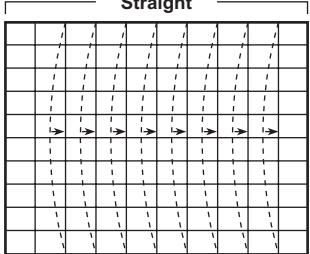
■ COMPRESS: OFF (4:3)

Item	Measuring instrument	Test point	Adjustment part	Description
V. SLOPE	Signal generator Remote control unit		[4. DEF] 2. V-SLOPE	PAL V. SLOPE (1) Receive a circle pattern signal of vertical frequency 50Hz (PAL). (2) Select 4. DEF from the SERVICE MODE. (3) Select <2. V-SLOPE>. (4) Set the initial setting value of <2. V-SLOPE>. (5) Adjust <2. V-SLOPE> to make "A = B". (6) Press the [OK] key to memorize the set values. NTSC V. SLOPE (1) Receive a circle pattern signal of vertical frequency 60Hz (NTSC). (2) Follow the same step 2 to 6 as in PAL V. SLOPE.
				

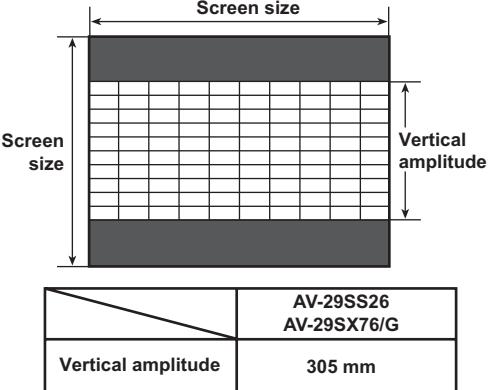
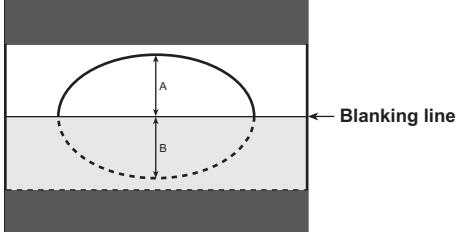
Item	Measuring instrument	Test point	Adjustment part	Description
V. POSITION	Signal generator Remote control unit		[4. DEF] 1. V-SHIFT	<p>PAL V. POSITION</p> <p>(1) Receive a circle pattern signal of vertical frequency 50Hz (PAL).</p> <p>(2) Select 4. DEF from the SERVICE MODE.</p> <p>(3) Select <1. V-SHIFT>.</p> <p>(4) Set the initial setting value of <1. V-SHIFT>.</p> <p>(5) Adjust <1. V-SHIFT> to make "A = B".</p> <p>(6) Press the [OK] key to memorize the set values.</p> <p>NTSC V. POSITION</p> <p>(1) Receive a circle pattern signal of vertical frequency 60Hz (NTSC).</p> <p>(2) Follow the same step 2 to 6 as in PAL V. POSITION.</p> 
V. SIZE	Signal generator Remote control unit		[4. DEF] 3. V-SIZE	<p>PAL V. SIZE</p> <p>(1) Receive a PAL crosshatch signal.</p> <p>(2) Select 4. DEF from the SERVICE MODE.</p> <p>(3) Select <3. V-SIZE>.</p> <p>(4) Set the initial setting value of <3. V-SIZE>.</p> <p>(5) Adjust <3. V-SIZE> to make the vertical screen size to 92% of the picture size.</p> <p>(6) Press the [OK] key to memorize the set values.</p> <p>NTSC V. SIZE</p> <p>(1) Receive a NTSC crosshatch signal.</p> <p>(2) Follow the same step 2 to 6 as in PAL V. SIZE.</p> 
H. POSITION	Signal generator Remote control unit		[4. DEF] 4. H-CENT	<p>PAL H. POSITION</p> <p>(1) Receive a PAL circle pattern signal.</p> <p>(2) Select 4. DEF from the SERVICE MODE.</p> <p>(3) Select <4. H-CENT>.</p> <p>(4) Set the initial setting value of <4. H-CENT>.</p> <p>(5) Adjust <4. H-CENT> to make "C = D".</p> <p>(6) Press the [OK] key to memorize the set values.</p> <p>NTSC H. POSITION</p> <p>(1) Receive a NTSC circle pattern signal.</p> <p>(2) Follow the same step 2 to 6 as in PAL H. POSITION.</p> 

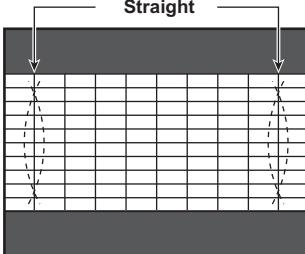
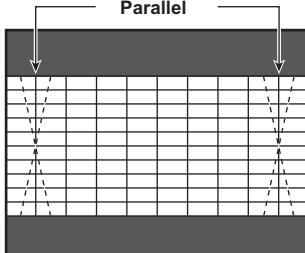
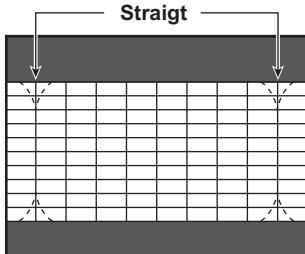
Item	Measuring instrument	Test point	Adjustment part	Description
H. SIZE	Signal generator Remote control unit		[4.DEF] 5. H-SIZE	<p>PAL H. SIZE</p> <p>(1) Receive a PAL crosshatch signal. (2) Select 4. DEF from the SERVICE MODE. (3) Select <5. H-SIZE>. (4) Set the initial setting value of <5. H-SIZE>. (5) Adjust <5. H-SIZE> to make the horizontal screen size to 91% of the picture size. (6) Press the [OK] key to memorize the set values.</p> <p>NTSC H. SIZE</p> <p>(1) Receive a NTSC crosshatch signal. (2) Follow the same step 2 to 6 as in PAL H. SIZE.</p> 
SIDE PIN	Signal generator Remote control unit		[4. DEF] 7. EW-PIN	<p>PAL SIDE PIN</p> <p>(1) Receive a PAL crosshatch signal. (2) Select 4. DEF from the SERVICE MODE. (3) Select <7. EW-PIN>. (4) Set the initial setting value of <7. EW-PIN>. (5) Adjust <7. EW-PIN> so that the first vertical lines at the left and right edges on the screen are straight. (6) Press the [OK] key to memorize the set values.</p> <p>NTSC SIDE PIN</p> <p>(1) Receive a NTSC crosshatch signal. (2) Follow the same step 2 to 6 as in PAL SIDE PIN.</p> 
TRAPEZIUM	Signal generator Remote control unit		[4.DEF] 6. TRAPEZ	<p>PAL TRAPEZIUM</p> <p>(1) Receive a PAL crosshatch signal. (2) Select 4. DEF from the SERVICE MODE. (3) Select <6. TRAPEZ>. (4) Set the initial setting value of 6. TRAPEZ. (5) Adjust <6. TRAPEZ> so that the vertical lines at the left and right edges on the screen are in parallel. (6) Press the [OK] key to memorize the set values.</p> <p>NTSC TRAPEZIUM</p> <p>(1) Receive a NTSC crosshatch signal. (2) Follow the same step 2 to 6 as in PAL TRAPEZIUM.</p> 

Item	Measuring instrument	Test point	Adjustment part	Description
V.LINEARITY	Signal generator Remote control unit		[4. DEF] 12. V-S. CR 13. V-LIN	<p>PAL V. LINEARITY</p> <p>(1) Receive a PAL crosshatch signal. (2) Select 4. DEF from the SERVICE MODE. (3) Select <12. V-S.CR>. (4) Set the initial setting value of <12. V-S. CR>. (5) Select <13. V-LIN>. (6) Set the initial setting value of <13. V-LIN>. (7) Adjust <12. V-S. CR> and <13. V-LIN> so that the spaces of each line on TOP, CENTRE and BOTTOM become uniform. (8) Press the [OK] key to memorize the set values.</p> <p>NTSC V. LINEARITY</p> <p>(1) Receive a NTSC crosshatch signal. (2) Follow the same step 2 to 8 as in PAL V-S. CR.</p> 
CORNER PIN	Signal generator Remote control unit		[4. DEF] 8. COR-UP 9. COR-LO	<p>PAL CORNER PIN</p> <p>(1) Receive a PAL crosshatch signal. (2) Select 4. DEF from the SERVICE MODE. (3) Select <8. COR-UP>. (4) Set the initial setting value of <8. COR-UP>. (5) Select <9. COR-LO>. (6) Set the initial setting value of <9. COR-LO>. (7) Adjust <8. COR-UP> and <9. COR-LO> so that the vertical lines at the four corners on the screen are straight. (8) Press the [OK] key to memorize the set values.</p> <p>NTSC CORNER PIN</p> <p>(1) Receive a NTSC crosshatch signal. (2) Follow the same step 2 to 8 as in PAL CORNER.</p> 
H. PARALLEL	Signal generator Remote control unit		[4. DEF] 10. ANGLE	<p>PAL H. PARALLEL</p> <p>(1) Receive a PAL crosshatch signal. (2) Select 4. DEF from the SERVICE MODE. (3) Select <10. ANGLE>. (4) Set the initial setting value of <10. ANGLE>. (5) Adjust <10. ANGLE> to optimize the trapezium distortion at the centre of the screen. (6) Press the [OK] key to memorize the set values.</p> <p>NTSC H. PARALLEL</p> <p>(1) Receive a NTSC crosshatch signal. (2) Follow the same step 2 to 6 as in PAL H. PARALLEL.</p> 

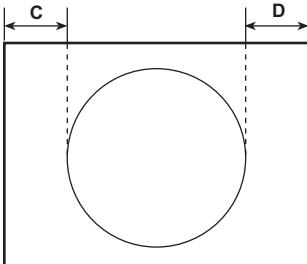
Item	Measuring instrument	Test point	Adjustment part	Description
H. BOW	Signal generator Remote control unit		[4.DEF] 11. BOW	<p>PAL H. BOW</p> <p>(1) Receive a PAL crosshatch signal. (2) Select 4. DEF from the SERVICE MODE. (3) Select <11. BOW>. (4) Set the initial setting value of <11. BOW>. (5) Adjust <11. BOW> to optimize the horizontal arc distortion. (6) Press the [OK] key to memorize the set values.</p> <p>NTSC H. BOW</p> <p>(1) Receive a NTSC crosshatch signal. (2) Follow the same step 2 to 6 as in PAL H. BOW.</p> 

■ COMPRESS : ON (16:9)

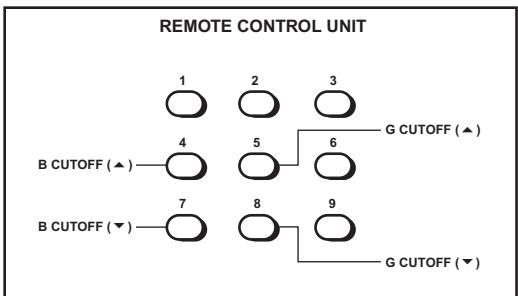
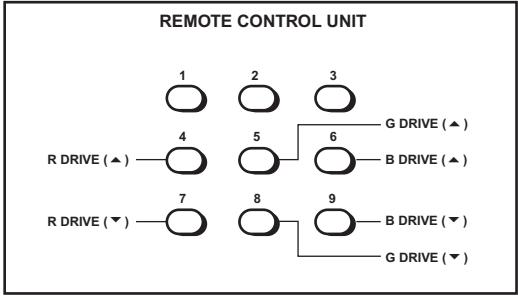
Item	Measuring instrument	Test point	Adjustment part	Description
V. SIZE	Signal generator Remote control unit		[4.DEF] 14. V. ZOOM 3. V-SIZE	<p>PAL V. SIZE</p> <p>(1) Receive a circle pattern signal of vertical frequency 50Hz (PAL). (2) Set the COMPRESS(16 : 9) to ON. (3) Select 4. DEF from the SERVICE MODE. (4) Set the initial setting value of <14. V. ZOOM>. (5) Select <3. V-SIZE>. (6) Set the initial setting value of <3. V-SIZE>. (7) Adjust <3. V-SIZE> to set the vertical amplitude of the image to the value shown in the left hand side list. (8) Press the [OK] key to memorize the set values.</p> <p>NTSC V. SIZE</p> <p>(1) Receive a crosshatch signal of vertical frequency 60Hz (NTSC). (2) Follow the same step 2 to 8 as in PAL V. SIZE.</p> 
V. SLOPE	Signal generator Remote control unit		[4.DEF] 2. V-SLOPE	<p>PAL V. SLOPE</p> <p>(1) Receive a circle pattern signal of vertical frequency 50Hz (PAL). (2) Set the COMPRESS(16 : 9) to ON. (3) Select 4. DEF from the SERVICE MODE. (4) Select <2. V-SLOPE>. (5) Set the initial setting value of <2. V-SLOPE>. (6) Adjust <2. V-SLOPE> to make "A = B". (7) Press the [OK] key to memorize the set values.</p> <p>NTSC V. SLOPE</p> <p>(1) Receive a circle pattern signal of vertical frequency 60Hz (NTSC). (2) Follow the same step 2 to 7 as in PAL V-SLOPE.</p> 

Item	Measuring instrument	Test point	Adjustment part	Description
SIDE PIN	Signal generator Remote control unit		[4. DEF] 7. EW-PIN	<p>PAL SIDE PIN</p> <p>(1) Receive a PAL crosshatch signal. (2) Set the COMPRESS(16 : 9) to ON. (3) Select 4. DEF from the SERVICE MODE. (4) Select <7. EW-PIN>. (5) Set the initial setting value of <7. EW-PIN>. (6) Adjust <7. EW-PIN> so that the first vertical lines at the left and right edges on the screen are straight. (7) Press the [OK] key to memorize the set values.</p> <p>NTSC SIDE PIN</p> <p>(1) Receive a NTSC crosshatch signal. (2) Follow the same step 2 to 7 as in PAL SIDE PIN.</p> 
TRAPEZIUM	Signal generator Remote control unit		[4. DEF] 6. TRAPEZ	<p>PAL TRAPEZIUM PIN</p> <p>(1) Receive a PAL crosshatch signal. (2) Set the COMPRESS(16 : 9) to ON. (3) Select 4. DEF from the SERVICE MODE. (4) Select <6. TRAPEZ>. (5) Set the initial setting value of <6. TRAPEZ>. (6) Adjust <6. TRAPEZ> so that the vertical lines at the left and right edges on the screen are in parallel. (7) Press the [OK] key to memorize the set values.</p> <p>NTSC TRAPEZIUM PIN</p> <p>(1) Receive a NTSC crosshatch signal. (2) Follow the same step 2 to 7 as in PAL TRAPEZIUM.</p> 
CORNER PIN	Signal generator Remote control unit		[4. DEF] 8. COR-UP 9. COR-LO	<p>PAL CORNER PIN</p> <p>(1) Receive a PAL crosshatch signal. (2) Set the COMPRESS(16 : 9) to ON. (3) Select 4. DEF from the SERVICE MODE. (4) Select <8. COR-UP>. (5) Set the initial setting value of <8. COR-UP>. (6) Select <9. COR-LO>. (7) Set the initial setting value of <9. COR-LO>. (8) Adjust <8. COR-UP> and <9. COR-LO> so that the vertical lines at the four corners on the screen are straight. (9) Press the [OK] key to memorize the set values.</p> <p>NTSC CORNER PIN</p> <p>(1) Receive a NTSC crosshatch signal. (2) Follow the same step 2 to 9 as in PAL CORNER PIN.</p> 

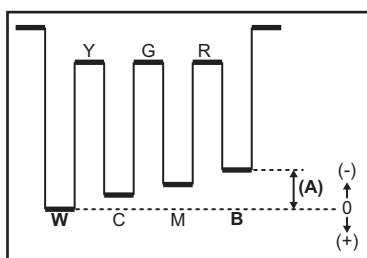
■ VIDEO - 2 SET: COMPONENT

Item	Measuring instrument	Test point	Adjustment part	Description
H. POSITION	Signal generator Remote control unit		[4. DEF] 4. H-CENT	<p>(1) Receive a PAL circle pattern signal to VIDEO-2 component terminal.</p> <p>(2) Select VIDEO-2 SET from the MENU and set VIDEO-2 SET to COMPONENT.</p> <p>(3) Select 4. DEF from the SERVICE MODE.</p> <p>(4) Select <4. H-CENT>.</p> <p>(5) Set the initial setting value of <4. H-CENT>.</p> <p>(6) Adjust <4. H-CENT> to make "C=D".</p> <p>(7) Press the [OK] key to memorize the set values.</p> 

4.8.5 VIDEO CIRCUIT

Item	Measuring instrument	Test point	Adjustment part	Description
WHITE BALANCE (Low light)	Signal generator Remote control unit		[2. V/C] 2. CUTOFF (B) 2. CUTOFF (G) SCREEN VR [In HVT]	<p>COMPOSITE WHITE BALANCE</p> <p>(1) Receive a PAL black and white signal (colour off).</p> <p>(2) Set the PICTURE MODE to BRIGHT.</p> <p>(3) Select 2. V/C from the SERVICE MODE.</p> <p>(4) Select <2. CUTOFF> (B) and (G).</p> <p>(5) Set each value to initial setting value with the [4] / [7] keys and [5] / [8] keys.</p> <p>(6) Turn the SCREEN VR fully counterclockwise, then slowly turn it clockwise to where a red, blue or green colour is faintly visible.</p> <p>(7) Use the [4] / [7] and [5] / [8] keys to adjust so that the other 2 colours appear white.</p> <p>(8) Turn the SCREEN VR to where the single horizontal line glows faintly.</p> <p>(9) Press the [OK] key to memorize the set values.</p>  <p>COMPONENT WHITE BALANCE</p> <p>(1) Receive a PAL component black and white signal (colour off).</p> <p>(2) Select VIDEO-2 SET from the MENU and set VIDEO-2 SET to COMPONENT.</p> <p>(3) Adjust COMPONENT WHITE BALANCE in the same way as "COMPOSITE WHITE BALANCE".</p>
WHITE BALANCE (High light)	Signal generator Remote control unit		[2. V/C] 3. WDR (R) 3. WDR (G) 3. WDR (B)	<p>(1) Receive a PAL black and white signal (colour off).</p> <p>(2) Set the PICTURE MODE to BRIGHT.</p> <p>(3) Select 2. V/C from the SERVICE MODE.</p> <p>(4) Select <3. WDR> (R), (G) and (B).</p> <p>(5) Set each value to initial setting value with the [4] to [9] keys.</p> <p>(6) Use the [4] to [9] keys to produce a white screen.</p> <p>(7) Press the [OK] key to memorize the set values.</p> 

Item	Measuring instrument	Test point	Adjustment part	Description
SUB BRIGHT	Remote control unit		[2. V/C] 4. BRIGHT	(1) Receive a NTSC broadcast. (2) Set the PICTURE MODE to BRIGHT . (3) Select 2. V/C from the SERVICE MODE. (4) Select < 4. BRIGHT >. (5) Set the initial setting value of < 4. BRIGHT >. (6) If the brightness is not best with the initial setting value, make fine adjustment until you get the best brightness. (7) Press the [OK] key to memorize the set values.
SUB CONTRAST	Remote control unit		[2. V/C] 5. CONT	(1) Receive a NTSC broadcast. (2) Set the PICTURE MODE to BRIGHT . (3) Select 2. V/C from the SERVICE MODE. (4) Select < 5. CONT >. (5) Set the initial setting value of < 5. CONT >. (6) If the contrast is not best with the initial setting value, make fine adjustment until you get the best contrast. (7) Press the [OK] key to memorize the set values.
SUB COLOUR	Remote control unit		[2. V/C] 6. COLOUR	<p>[Method of adjustment without measuring instrument]</p> <p>PAL COLOUR</p> (1) Receive a PAL M broadcast. (2) Set the PICTURE MODE to BRIGHT . (3) Select 2. V/C from the SERVICE MODE. (4) Select < 6. COLOUR >. (5) Set the initial setting value of < 6. COLOUR >. (6) If the colour is not the best with the initial set value, make fine adjustment until you get the best colour. (7) Press the [OK] key to memorize the set values. <p>SECAM COLOUR</p> (1) Receive a SECAM broadcast. (2) Follow the same step 2 to 7 as in PAL COLOUR. <p>NTSC 3.58 COLOUR</p> (1) Receive a NTSC 3.58MHz broadcast. (2) Follow the same step 2 to 7 as in PAL COLOUR. <p>NTSC 4.43 COLOUR</p> <ul style="list-style-type: none"> When NTSC 3.58 COLOUR is set, NTSC 4.43 COLOUR will be automatically set.
	Signal generator Oscilloscope Remote control unit	TP-47B TP-E [CRT SOCKET PWB]	[2. V/C] 6. COLOUR	<p>[Method of adjustment using measuring instrument]</p> <p>PAL COLOUR</p> (1) Receive a PAL M colour bar signal (full field colour bar 75% white). (2) Connect the oscilloscope between TP-47B and TP-E. (3) Set the PICTURE MODE to BRIGHT . (4) Select 2. V/C from the SERVICE MODE. (5) Select < 6. COLOUR >. (6) Set the initial setting value of < 6. COLOUR >. (7) Adjust the value of (A) to the value in the voltage table in the left. (8) Press the [OK] key to memorize the set values. <p>SECAM COLOUR</p> (1) Receive a SECAM colour bar signal (full field colour bar 75% white) (2) Follow the same step 2 to 8 as in PAL COLOUR. <p>NTSC 3.58 COLOUR</p> (1) Receive a NTSC 3.58MHz broadcast. (2) Follow the same step 2 to 8 as in PAL COLOUR. <p>NTSC 4.43 COLOUR</p> <ul style="list-style-type: none"> When NTSC 3.58 COLOUR is set, NTSC 4.43 COLOUR will be automatically set.



VOLTAGE (W-B)	Voltage setting		
	PAL	NTSC	SECAM
AV-29SS26	38V	26V	6V
AV-29SX76/G	38V	26V	6V

Item	Measuring instrument	Test point	Adjustment part	Description												
SUB TINT	Remote control unit		[2. V/C] 7. TINT	<p>[Method of adjustment without measuring instrument]</p> <p>PAL TINT</p> <ol style="list-style-type: none"> (1) Receive a PAL broadcast. (2) Set the PICTURE MODE to BRIGHT. (3) Select 2. V/C from the SERVICE MODE. (4) Select <7. TINT>. (5) Set the initial setting value of <7. TINT>. (6) If you cannot get the best HUE with the initial setting value, make fine adjustment until you get the best TINT. (7) Press the [OK] key to memorize the best values. <p>NTSC 3.58 TINT</p> <ol style="list-style-type: none"> (1) Receive a NTSC 3.58 broadcast. (2) Follow the same step 2 to 8 as in PAL TINT. <p>NTSC 4.43 TINT</p> <ul style="list-style-type: none"> • When NTSC 3.58 TINT is set, NTSC 4.43 TINT will be automatically set. <p>PAL TINT (DVD)</p> <ol style="list-style-type: none"> (1) Receive a PAL broadcast. (2) Set the PICTURE MODE to BRIGHT. (3) Select 2. V/C from the SERVICE MODE. (4) Select <10. TINT DVD>. (5) Set the initial setting value of <10. TINT DVD>. (6) If you cannot get the best HUE with the initial setting value, make fine adjustment until you get the best TINT. (7) Press the [OK] key to memorize the best values. 												
	Signal generator Oscilloscope Remote control unit	TP-47B TP-E [CRT SOCKET PWB]	[2. V/C] 7. TINT	<p>[Method of adjustment using measuring instrument]</p> <p>PAL TINT</p> <ol style="list-style-type: none"> (1) Receive a PAL colour bar signal (full field colour bar 75% white). (2) Connect the oscilloscope to TP-47B and TP-E. (3) Set the PICTURE MODE to BRIGHT. (4) Select 2. V/C from the SERVICE MODE. (5) Select <7. TINT>. (6) Set the initial setting value of <7. TINT>. (7) If you cannot get the best HUE with the initial setting value, make fine adjustment until you get the best TINT. (8) Press the [OK] key to memorize the best values. <p>NTSC 3.58 TINT</p> <ol style="list-style-type: none"> (1) receive a NTSC 3.58 colour bar signal (full field colour bar 75% white). (2) Follow the same step 2 to 8 as in PAL TINT. <p>NTSC 4.43 TINT</p> <ul style="list-style-type: none"> • When NTSC 3.58 TINT is set, NTSC 4.43 TINT will be automatically set. <p>PAL TINT (DVD)</p> <ol style="list-style-type: none"> (1) Receive a PAL colour bar signal (full field colour bar 75% white). (2) Connect the oscilloscope to TP-47B and TP-E. (3) Set the PICTURE MODE to BRIGHT. (4) Select 2. V/C from the SERVICE MODE. (5) Select <10. TINT DVD>. (6) Set the initial setting value of <10. TINT>. (7) If you cannot get the best HUE with the initial setting value, make fine adjustment until you get the best TINT. (8) Press the [OK] key to memorize the best values. 												
	VOLTAGE (W-B)	<table border="1"> <thead> <tr> <th colspan="3">Voltage setting</th> </tr> <tr> <th></th> <th>NTSC 3.58 (TINT)</th> <th>PAL TINT (DVD)</th> </tr> </thead> <tbody> <tr> <td>AV-29SS26</td> <td>+14V</td> <td>+27V</td> </tr> <tr> <td>AV-29SX76/G</td> <td>+14V</td> <td>+27V</td> </tr> </tbody> </table>			Voltage setting				NTSC 3.58 (TINT)	PAL TINT (DVD)	AV-29SS26	+14V	+27V	AV-29SX76/G	+14V	+27V
Voltage setting																
	NTSC 3.58 (TINT)	PAL TINT (DVD)														
AV-29SS26	+14V	+27V														
AV-29SX76/G	+14V	+27V														

4.8.6 VSM PRESET SETTING

Item	Measuring instrument	Test point	Adjustment part	Description																																									
VSM PRESET	Remote control unit		[5.VSM W/B] 1. BRIGHT 2. CONT 3. COLOUR 4. SHARP 5. HUE 1. R-DRIVE 2. G-DRIVE 3. B-DRIVE	(1) Select 5.VSM W/B from the SERVICE MODE. (2) Select the BRIGHT with the [OK] key. (3) Adjust the [MENU ▲ / ▼] key to bring the set values of <1. BRIGHT> - <5. HUE> to the values shown in the table. (4) Press the [OK] key to memorize the set values. (5) Respectively select the VSM PRESET mode for STANDARD , SOFT and THEATER . (6) Select COOL with the [OK] key. (7) Adjust the [MENU ▲ / ▼] key to bring the set values of <1. R DRIVE> to <3. B DRIVE> to the values shown in the table. (8) Press the [OK] key to memorize the set values. (9) Respectively select the WIHITE BALANCE mode for WARM and NORMAL .																																									
		<table border="1"> <thead> <tr> <th rowspan="2">Setting item</th> <th rowspan="2">Variable range</th> <th colspan="4">Setting value</th> </tr> <tr> <th>BRIGHT</th> <th>SOFT</th> <th>STANDARD</th> <th>THEATER</th> </tr> </thead> <tbody> <tr> <td>1. BRIGHT</td> <td>-16 - 16</td> <td>0</td> <td>0</td> <td>0</td> <td>-4</td> </tr> <tr> <td>2. CONT.</td> <td>-16 - 16</td> <td>+15</td> <td>+5</td> <td>+10</td> <td>+5</td> </tr> <tr> <td>3. COLOUR</td> <td>-16 - 16</td> <td>0</td> <td>+0</td> <td>-4</td> <td>-8</td> </tr> <tr> <td>4. SHARP</td> <td>-16 - 16</td> <td>0</td> <td>-10</td> <td>-5</td> <td>0</td> </tr> <tr> <td>5. HUE</td> <td>-16 - 16</td> <td>0</td> <td>0</td> <td>0</td> <td>-1</td> </tr> </tbody> </table>				Setting item	Variable range	Setting value				BRIGHT	SOFT	STANDARD	THEATER	1. BRIGHT	-16 - 16	0	0	0	-4	2. CONT.	-16 - 16	+15	+5	+10	+5	3. COLOUR	-16 - 16	0	+0	-4	-8	4. SHARP	-16 - 16	0	-10	-5	0	5. HUE	-16 - 16	0	0	0	-1
Setting item	Variable range	Setting value																																											
		BRIGHT	SOFT	STANDARD	THEATER																																								
1. BRIGHT	-16 - 16	0	0	0	-4																																								
2. CONT.	-16 - 16	+15	+5	+10	+5																																								
3. COLOUR	-16 - 16	0	+0	-4	-8																																								
4. SHARP	-16 - 16	0	-10	-5	0																																								
5. HUE	-16 - 16	0	0	0	-1																																								
<table border="1"> <thead> <tr> <th>W/B preset</th> <th>COOL</th> <th>NORMAL</th> <th>WARM</th> <th>THEATER</th> </tr> </thead> <tbody> <tr> <td>1.R DRIVE</td> <td>0</td> <td>0</td> <td>+10</td> <td>+9</td> </tr> <tr> <td>2.G DRIVE</td> <td>0</td> <td>+2</td> <td>-4</td> <td>0</td> </tr> <tr> <td>3.B DRIVE</td> <td>0</td> <td>-10</td> <td>-12</td> <td>-27</td> </tr> </tbody> </table>		W/B preset	COOL	NORMAL	WARM	THEATER	1.R DRIVE	0	0	+10	+9	2.G DRIVE	0	+2	-4	0	3.B DRIVE	0	-10	-12	-27																								
W/B preset	COOL	NORMAL	WARM	THEATER																																									
1.R DRIVE	0	0	+10	+9																																									
2.G DRIVE	0	+2	-4	0																																									
3.B DRIVE	0	-10	-12	-27																																									

4.8.7 PURITY AND CONVERGENCE

■ PURITY ADJUSTMENT

NOTE:

The final adjustment of CONVERGENCE must be done after the FOCUS adjustment. (CONVERGENCE is changed by FOCUS adjustment.)

When makes difference by FOCUS adjustment, should be reconfirming PURITY adjustment.

- (1) Demagnetize CRT with the demagnetizer.
- (2) Loosen the retainer screw of the deflection yoke.
- (3) Remove the wedges.
- (4) Input a green raster signal from the signal generator, and turn the screen to green raster.
- (5) Move the deflection yoke backward.
- (6) Bring the long lug of the purity magnets on the short lug and position them horizontally. (Fig.2)
- (7) Adjust the gap between two lugs so that the GREEN RASTER will come into the centre of the screen. (Fig.3)
- (8) Move the deflection yoke forward, and fix the position of the deflection yoke so that the whole screen will become green.
- (9) Insert the wedge to the top side of the deflection yoke so that it will not move.
- (10) Input a crosshatch signal.
- (11) Verify that the screen is horizontal.
- (12) Input red and blue raster signals, and make sure that purity is properly adjusted.

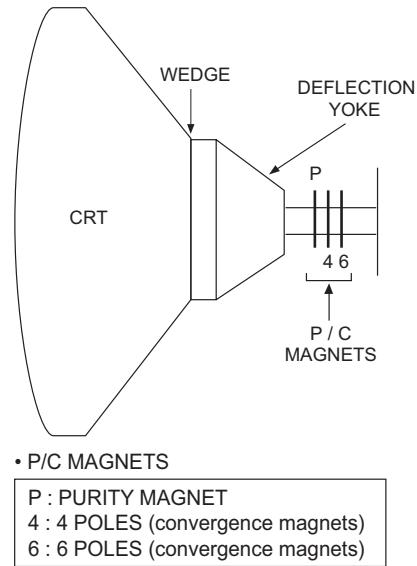


Fig.1

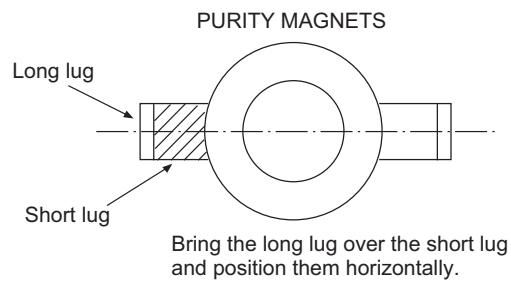


Fig.2

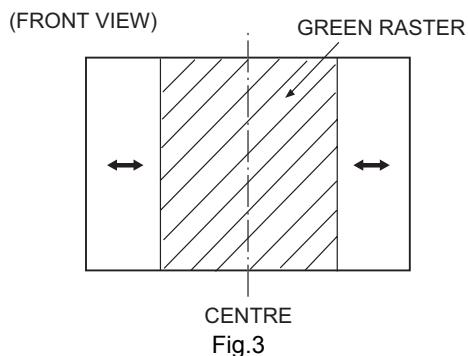
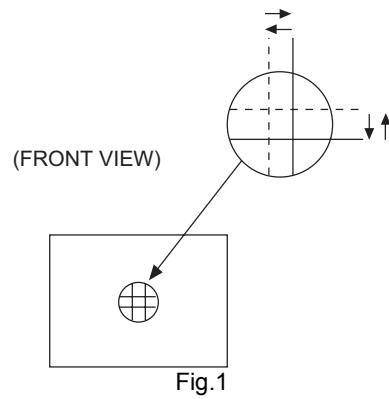


Fig.3

■ STATIC CONVERGENCE ADJUSTMENT

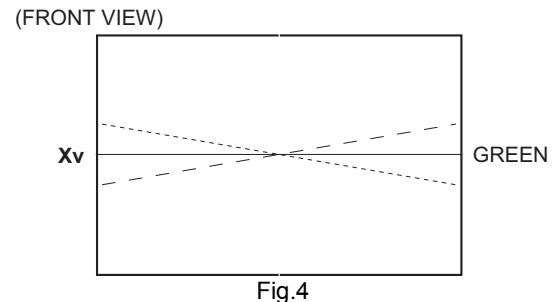
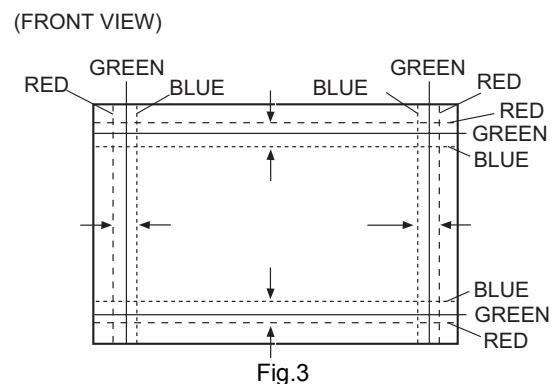
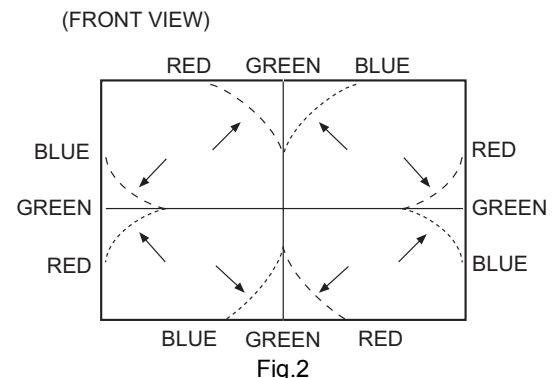
- (1) Input a crosshatch signal.
- (2) Using 4-pole convergence magnets, overlap the red and blue lines in the centre of the screen (Fig.1) and turn them to magenta (red/blue).
- (3) Using 6-pole convergence magnets, overlap the magenta (red/blue) and green lines in the centre of the screen and turn them to white.
- (4) Repeat 2 and 3 above, and make best convergence.



■ DYNAMIC CONVERGENCE ADJUSTMENT

- (1) Move the deflection yoke up and down and overlap the lines in the periphery. (Fig. 2)
- (2) Move the deflection yoke left to right and overlap the lines in the periphery. (Fig. 3)
- (3) Repeat 1 and 2 above, and make best convergence.
- (4) Adjust XV by XV coil. (Fig.4)

- After adjustment, fix the wedge at the original position. Fasten the retainer screw of the deflection yoke. Fix the P/C magnets with glue.



SECTION 5

TROUBLESHOOTING

5.1 SELF CHECK FUNCTIONS

5.1.1 OUTLINE

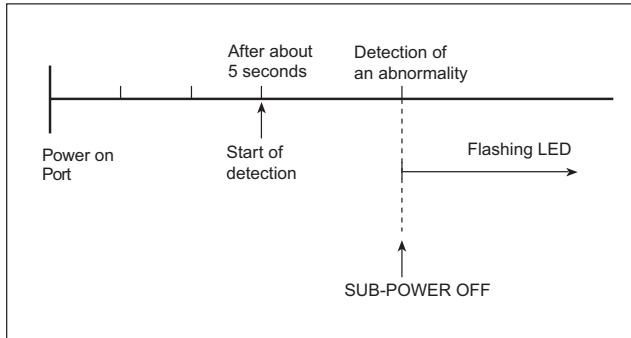
This model has self check functions given below. When an abnormality has been detected, the SUB POWER is turned off and POWER LED flashes to inform of the failure. An abnormality is detected by the signal input state of the control line connected to the microcomputer.

5.1.2 SELF CHECK ITEMS

Check item	Details of detection	Method of detection	State of abnormality
B1 over-current protection	An over-current on the low B1 line is detected.	The main microcomputer detects the possible abnormality at 24-msec. intervals and judges the results in every 16 time. Of the 16 times, if NG is detected more than 9 times, it is judged that there is an abnormality.	When an abnormality has been detected, the SUB-POWER is turned off. While the SUB-POWER is being turned off, the POWER key on the remote control unit is not operational until the power cord is disconnected and connected again.
CRT neck broken protection	Operation of CRT neck protection circuit.		

5.1.3 SELF CHECK INDICATING FUNCTION

When an abnormality has been detected at about 5 seconds after the power was turned on, the SUB POWER is turned off immediately and the POWER LED flashes.



[INDICATION BY THE POWER LED]

Item	LED flashing intervals
B1 over-current protection / CRT neck broken protection	0.3 seconds

The JVC logo consists of the letters "JVC" in a bold, black, sans-serif font. The "J" is stylized with a vertical bar on its left side.

Victor Company of Japan, Limited
Display Category 12, 3-chome, Moriya-cho, Kanagawa-ku, Yokohama-city, Kanagawa-prefecture, 221-8528, Japan

(No.YA449)

 Printed in Japan
VPT



COLOUR TELEVISION

AV-29BS26	AV-21BS26
AV-29BX16	AV-21BX16
AV-29MS26	AV-21BX16B
AV-29MX16	AV-21MS26
AV-29MX56	AV-21MX16
AV-29MX76	AV-21MX56
AV-29SS26	AV-21MX76
AV-29SX56	
AV-29SX76	

AV-25MS26
AV-25MX16
AV-25MX56
AV-25MX76

EQUALIZER • CINEMA SURROUND • COMPONENT INPUT

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INSTRUCTIONS

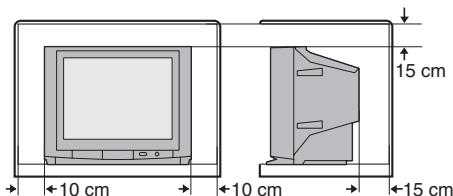
Thank you for buying this JVC colour television.

To make sure you understand how to use your new TV, please read this manual thoroughly before you begin.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION: TO ENSURE PERSONAL SAFETY, OBSERVE THE FOLLOWING RULES REGARDING THE USE OF THIS TV.

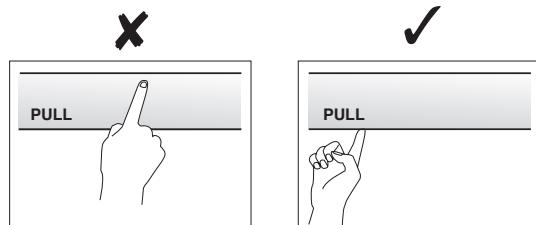
- 1 Operate only from the power source indicated on the rear of the TV.
- 2 Avoid damaging the power cord and mains plug. When unplugging the TV, grasp the mains plug. Do not pull on the power cord.
- 3 Never block or cover the ventilation openings.
Never install the TV where good ventilation is unattainable.
When installing this TV, leave spaces for ventilation around the TV of more than the minimum distances as shown.



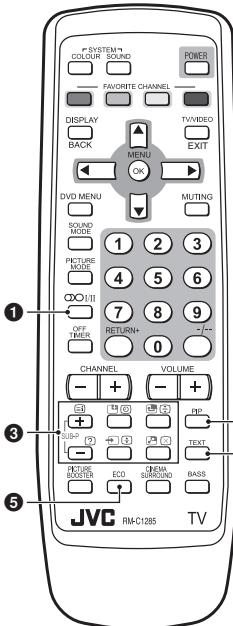
- 4 Do not allow objects or liquid into the cabinet openings.
- 5 In the event of a fault, unplug the unit and call a service technician.
Do not attempt to repair it yourself or remove the rear cover.
- 6 The surface of the TV screen is easily damaged. Be very careful with it when handling the TV. Should the TV screen become soiled, wipe it with a soft dry cloth. Never rub it forcefully. Never use any cleaner or detergent on it.

- 7 This TV can be turned on/off power by connecting/disconnecting the AC plug into AC outlet. While this TV is being installed, enough space should be reserved for connection/disconnecting the AC plug into AC outlet by hand.
- 8 The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

WARNING: <AV-21M, AV-25M, AV-29M, AV-21B, AV-29B Series>
YOU CAN DETACH THE PROTECT SHEET ON THE TOP AND BOTTOM OF FRONT FRAME IF YOU NEEDED.
THE FRONT BUTTON DOOR OF THE TV SHOULD BE PULLED OUT FROM ITS BOTTOM. DO NOT PRESS THE UPPER PART, OR YOUR FINGER MAY BE PINCHED.



Knowing your TV's features



Main features

DVD MENU	Just connect DVD player to the television. The television will detect DVD signal and display picture on the screen automatically and you can adjust pictures and sound while you are watching DVD as your desire. When disconnect DVD player, the television will display the previous channel.
MaxxBass	MaxxBass enhances bass sound that cannot be reproduced by normal speakers to be heard by our ears.
PIP (Picture In Picture)	You can view two screens (Main picture and Sub picture) at the same time.
TELETEXT	You can view teletext programmes which are broadcasted by some TV channels. Teletext programme is an information in text form.
FAVORITE CH (Channel)	You can register up to four favorite channels for quick recall with one press.
A2/NICAM (STEREO / I-II)	You can listen the stereo sound or bilingual sound from TV programme broadcasting by A2 or NICAM Sound-multiplex system.
AI ECO SENSOR	TV detects the brightness of your room and automatically adjust the picture brightness to a suitable level for a better eyecare.
ECO MODE	You can adjust TV screen contrast according to the brightness of your room to suitable level for a better eyecare.
AI VOLUME	TV adjusts the volume automatically to the same level for all TV channels to avoid sudden change of the volume when selecting different TV channels or selecting Video Mode.
TINT	You can adjust TINT setting for all colour systems, including PAL.

Confirm your TV's functions

Some functions written in this instruction manual may not be available for your TV.

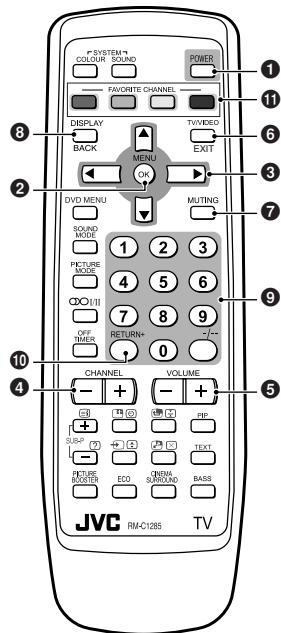
Please see the chart below and check the functions that are equipped for your TV's model number.

The model number is indicated at the rear of your TV. When you press a button concerned to a function that is not available for your TV, it does not work and the logo "Ø" appears on the screen.

NO.	Function	Model No.																		
		AV-29BS26	AV-29BX16	AV-29MX16	AV-29MS26	AV-29SS26	AV-29MX56	AV-29SX56	AV-29MX76	AV-29SX76	AV-25MS26	AV-25MX16	AV-25MS56	AV-25MX76	AV-21BS26	AV-21BX16	AV-21MS26	AV-21MX16	AV-21MS56	AV-21MX76
①	Ø Ø I/II (STEREO/I-II)	O	—	—	O	—	—	—	O	—	—	—	O	—	O	—	O	—	—	—
②, ③	PIP control buttons (Green label)	—	—	—	—	O	O	—	—	O	O	—	O	O	—	—	O	O	—	O
④, ③	TELETEXT control buttons (Black label)	O	—	—	O	—	O	O	O	O	—	O	O	—	O	O	—	O	—	O
—	PICTURE TILT	O	O	O	O	O	O	O	—	—	—	—	—	—	—	—	—	—	—	—
—	MaxxBass	—	—	O	O	O	O	O	O	O	O	O	O	O	—	O	O	O	O	O
⑤	AI ECO SENSOR	—	—	O	O	O	O	O	O	O	O	O	O	—	O	O	—	O	O	O
⑤	ECO MODE	O	O	—	—	—	—	—	—	—	—	—	—	O	O	—	—	—	—	—

Remote control buttons and basic functions

No.	Press	To
①	POWER	Turn on or off the TV from standby mode.
②	MENU/OK	Display menu and confirm selected function.
③	▲ / ▼ / ◀ / ▶	Select and adjust menu function.
④	CHANNEL -/+	Select the desired channel number.
⑤	VOLUME -/+	Adjust the volume level.
⑥	TV/VIDEO EXIT	Select TV or video terminal input. On the other hand, you can use this button to EXIT from the menu.
⑦	MUTING	Turn off the volume. Press this button again to resume the volume.
⑧	DISPLAY /BACK	Display the programme number or video terminal number, stereo/bilingual broadcast system and PR list (channel list) on the screen. You can select the channel using the PR list. 1 Press the DISPLAY button once to display the PR list. 2 Press ▲ / ▼ / ◀ / ▶ buttons to choose a channel, then press the MENU/OK button. You can confirm the favorite channels in the PR list. The channels set to favorite channels are indicated with coloured mark.
		On the other hand, you can use this button to return to the previous menu.
⑨	0~9, -/-	Select the programme number. For two digits programme number, press -/-, then press the number button.
⑩	RETURN+	a) Return to the frequently view channel with one touch. 1 Choose the channel you want to register. 2 Press and hold RETURN+ button until "RETURN PLUS PROGRAMMED!" appears. To cancel, press and hold RETURN+ button until "RETURN PLUS CANCELED!" appears. b) Return to the previously viewed channel, if you have not set or have cancelled the Return channel as above.
⑪	FAVORITE CHANNEL (colour buttons: red, green, yellow, blue)	Register and recall 4 favorite channels. 1. Choose the TV channel you want to register then press and hold a colour button until "PROGRAMMED! ■" appears. 2. To register other favorite channels, repeat step 1. To recall the favorite channel, press the corresponding colour button. When the TV is in Text function or MENU mode, the favorite channel function is not available. When the TV is in PIP function, the favorite channel function cannot register but can recall the favorite channel.



Remote control buttons and basic functions (continued)

How to operate menus and menus locations

To	Operation	Note
Display the MENU	Press the MENU/OK button ②. PICTURE MENU is displayed on first press.	To exit the MENU, press the DISPLAY/BACK button ⑧ or choose EXIT menu or TV/VIDEO/EXIT button ⑥.
Choose a Top menu	Press $\blacktriangle/\triangledown$ buttons ③ to choose a menu title when the cursor is pointing at MENU.	—
Choose a 2nd menu	Press $\blacktriangle/\triangledown$ buttons ③ to choose a 2nd menu title.	Press \blacktriangledown button ③ to display the next functions.
Display the 3rd menu	Press $\blacktriangle/\triangledown$ buttons ③ to choose a 2nd menu title. Then press MENU/OK button ②.	
Return to the previous menu	Press the DISPLAY/BACK button ⑧.	—
Choose the setting of a function	Press $\blacktriangle/\triangledown$ buttons ③ to choose a function. Then press the $\blacktriangle/\triangledown$ buttons ③ to change the setting.	Press the TV/VIDEO/EXIT button ⑥ to exit from the menu.
Adjust the effect level of a function	Press $\blacktriangle/\triangledown$ buttons ③ to choose a function. Then press the $\blacktriangle/\triangledown$ buttons ③ to adjust the effect level.	
Display the sub menu of a function	Press the $\blacktriangle/\triangledown$ buttons ③ to choose a function. Then press MENU/OK button ② to display the sub menu.	—

The following chart shows locations of functions in menus. In this manual, location of a function is described as follows:

(MENU) → (Top menu) → (2nd menu)

(MENU) → (Top menu) → (2nd menu) → (3rd menu)

Note: Some functions have the 4th menus as the sub-menus.

	Top menu	2nd menu	Location	3rd menu	Location
MENU	PICTURE	PICTURE MODE	P.9	—	—
		PICTURE SETTING	P.10	CONTRAST BRIGHT SHARP COLOUR TINT	P.10 P.10 P.10 P.10 P.10
		WHITE BALANCE	P.10	—	—
		VNR	P.17	—	—
		STEREO/I/II	P.15	—	—
		AI VOLUME	P.15	—	—
		SOUND MODE	P.14	—	—
		EQUALIZER	P.15	—	—
		BALANCE	P.14	—	—
		CINEMA SURROUND	P.15	—	—
FEATURES		MaxxBass	P.15	—	—
		DVD MENU	P.16	AUTO SIGNAL DETECT DVD PICTURE MODE DVD THEATER STATUS DVD SOUND MODE	P.16 P.16 P.16 P.16
		ON TIMER	P.17	PR ON TIMER	P.17 P.17
		OFF TIMER	P.17	—	—
		CHILD LOCK	P.17	—	—
		COMPRESS (16:9)	P.11	—	—
		AI ECO SENSOR/ ECO MODE	P.11	—	—
		AUTO PROGRAM	P.19	—	—
		EDIT/MANUAL	P.19	DELETE, MOVE, MANUAL, INSERT	P.19- P.20
		COLOUR SYSTEM	P.9	—	—
INSTALL		LANGUAGE	P.17	LANGUAGE	P.17
		TEXT LANGUAGE	P.13	TEXT LANGUAGE	P.13
		VIDEO-2 SETTING	P.18	—	—
		BLUE BACK	P.11	—	—
		PICTURE TILT	P.11	—	—
		BEEP	P.18	—	—

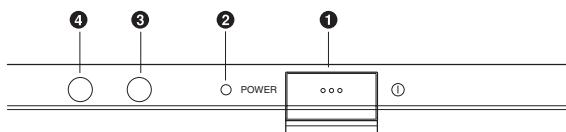
TV buttons and functions

The illustrations shown below is for AV-21BS26 and AV-29SS26 only, which are used for explanation purpose.

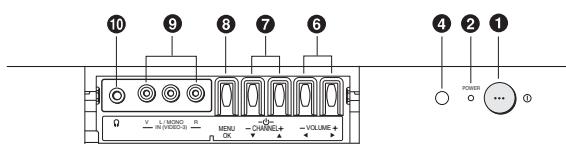
Your TV may not look exactly the same as illustrated.

Front of the TV

AV-29SS26

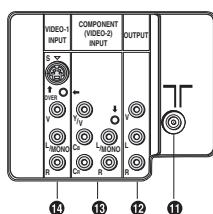


AV-21BS26



Rear of the TV

AV-29SS26



No. Button/terminal	Description	Page
① ① (main power)	Press to turn on or turn off the TV's main power.	—
② POWER lamp	Indicate the TV's status. No colour : TV's main power is being turned off. Red : TV's main power is being turned on. Blink : While the TV is in standby mode, ON TIMER function is in used. While the TV is in turn on mode , OFF TIMER function is in used. Note: When you turn off the power switch while TV is in standby mode, the power lamp will go off in 10 -15 seconds. When you operate the TV, POWER Lamp will be blink.	—
③ ECO sensor		—
④ Remote control sensor		—
⑤ TV/VIDEO	Press to select TV or Video terminal input or exit from menu.	—
⑥ VOLUME -/+	Press to adjust the volume level.	—
⑦ CHANNEL -/+	Press to select the desired channel (Both of RF and Video input.)	—
⑧ MENU/OK	Press to display the menu.	—
⑨ IN (VIDEO-3)	Video and audio input jacks for VIDEO-3 mode.	22
⑩ Headphone jack.		22
⑪ Aerial socket.		7
⑫ OUTPUT	Video and audio output jacks. (The component video signal cannot be output.)	22
⑬ COMPONENT (VIDEO-2) INPUT	Video or component video, and audio input jacks for VIDEO-2 mode. You can select the input signal by setting the "VIDEO-2 SETTING" function (see page 18).	22
⑭ VIDEO-1 INPUT	Video or S-VIDEO, and audio input jacks for VIDEO-1 mode.	7

How to operate the menus with the TV button

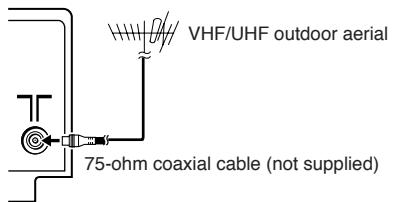
TV button	Work as same as the button on the remote control unit	Note
MENU	MENU/OK button	To display main menu and exit menu after finish setting.
CHANNEL -/+	▼/▲ button	To select menu function.
VOLUME -/+	◀/▶ button	To choose a Top menu and adjust the desired menu function.

Setting up your TV

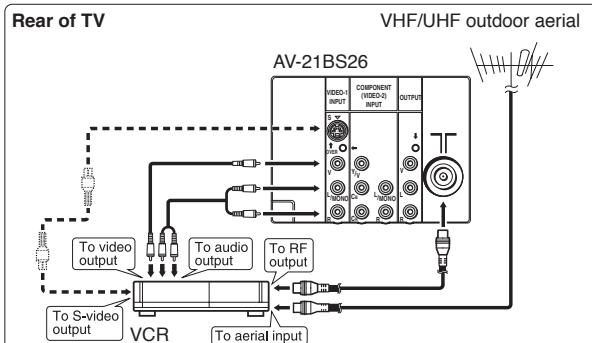
CAUTION

- Turn off the equipment including the TV before connecting.

1 Connecting the aerial cable.



If you connect a VCR, connect the aerial output jack of your VCR and the aerial jack on the TV with aerial cable. Then connect the output jacks of your VCR and the VIDEO-1 input jacks of the TV with the video cable (or S-VIDEO cable if available) and audio cables. For details, see the manual of your VCR.



The illustration shown is just a sample. It may not be same as your TV.

2 Connecting the main plug to the AC outlet.



3 Inserting batteries into the remote control.

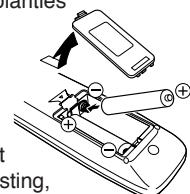
Insert two batteries by following the \oplus and \ominus polarities and inserting the \ominus end first.

CAUTION:

Follow the cautions printed on the batteries.

Notes:

- Use AA/R6/UM-3 dry cell batteries.
- If the remote control does not work properly, fit new batteries. The supplied batteries are for testing, not regular use.



4 Turn on the TV by pressing the main power button.

JVC logo appears on the screen.



JVC logo will appear on the screen again at the phase of "SETUP TOUR RESTART?" function. Then the initial setting can be performed according to page 8.

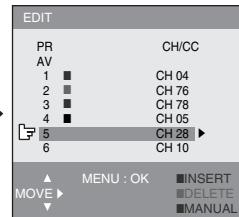
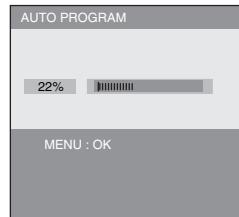
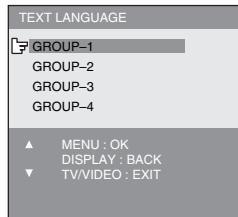
Note:

While in the INSTALL menu with the cursor pointing at INSTALL, pressing the blue button will also display the JVC logo.

Setting up your TV (continued)

5 Making the initial settings

Set up your TV by pressing MENU/OK button or waiting for 15 seconds, then operate the TV by following the steps below:

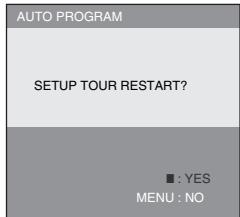


- Press ▲/▼ button to select your desired language*.
- Press ▲/▼ button to select your desired Teletext language group*. For details, see page 13. (For BS26/MS26/SS26/MX76/SX76 series only)

- TV will start searching for the channels.
To stop AUTO PROGRAM, press MENU/OK button.

- To complete the initial setting, press the MENU/OK button. To edit the channel list, see page 19.

When turn on the TV at the next time



- “SETUP TOUR RESTART?” will be displayed. Press the MENU/OK button to cancel the SETUP TOUR RESTART function. If you want to make initial settings again when the next time you turn on the TV, press the Red button to activate the SETUP TOUR RESTART function.

* If the TEXT function is available for your TV and the LANGUAGE shown follow as ENGLISH/РУССКИЙ/فارسی/FRANÇAIS, you can select the TEXT LANGUAGE group from GROUP-1 to GROUP-4.

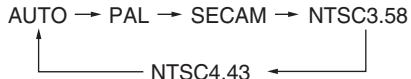
If the TEXT function is available for your TV and the LANGUAGE shown follow as ENGLISH/РУССКИЙ/中文/MELAYU/INDONESIA, you can select the TEXT LANGUAGE group from GROUP-1 to GROUP-3.

Basic setting for picture

COLOUR SYSTEM

You can select the appropriate colour system when the picture is not clear or no colour appears.

Press the COLOUR SYSTEM button to select a setting.



To operate this function with a menu:

* **(MENU) → (INSTALL menu) → (COLOUR SYSTEM)**

For the colour system in each country or region, see the table below:

Area	Country or Region	System
Asia, Middle East	Bahrain, Kuwait, Oman, Qatar, United Arab Emirates, Yemen, etc.	PAL
	Indonesia, Malaysia, Singapore, Thailand, India, etc.	
	China, Vietnam, etc.	PAL
	Hong Kong, etc.	PAL
	Islamic Republic of Iran, Lebanon, Saudi Arabia, etc.	SECAM
Europe	Philippines, Taiwan, Myanmar, etc.	NTSC
	Russia, etc.	SECAM
	Czech Republic, Poland, etc.	PAL
	Germany, Holland, Belgium, etc.	PAL
	UK, etc.	PAL
Oceania	Australia, New Zealand, etc.	PAL
Africa	Republic of South Africa, etc.	PAL
	Nigeria, etc.	PAL
	Egypt, Morocco, etc.	SECAM

PICTURE MODE

You can choose the desired picture setting with one-touch. Press the PICTURE MODE button to select a setting.

SOFT	Softens contrast and sharpness.
BRIGHT	Heightens contrast and sharpness.
STANDARD	Standard picture setting.
USER	You can change this picture setting as you like. Select USER and adjust following items in the PICTURE SETTING menu. (CONTRAST, BRIGHT, SHARP, COLOUR, TINT)

When you select VIDEO-2 Mode, you cannot adjust SHARP.

When you set DVD THEATER STATUS in DVD MENU to ON, you cannot adjust PICTURE MODE.

To operate this function with a menu:

* **(MENU) → (PICTURE menu) → (PICTURE MODE)**

To return the USER setting to default, press the blue button when the PICTURE SETTING menu is displayed.

* About the basic operations of the menu, please see the "How to operate menus and menus locations" on page 5.

Basic setting for picture (continued)

PICTURE SETTING

You can adjust the desired picture setting when selecting USER in PICTURE MODE.

- 1 Select USER in PICTURE MODE under PICTURE menu.

* **(MENU) → (PICTURE menu) → (PICTURE MODE)
→ (USER)**

- 2 Select PICTURE SETTING in PICTURE menu, then adjust the setting.

* **(MENU) → (PICTURE menu) → (PICTURE SETTING)**

CONTRAST	◀ : Lower contrast	▶ : Higher contrast
BRIGHT	◀ : Darker	▶ : Brighter
SHARP	◀ : Softer	▶ : Higher
COLOUR	◀ : Lighter	▶ : Deeper
TINT	◀ : Reddish	▶ : Greenish

When you select VIDEO-2 Mode, you cannot adjust SHARP.

WHITE BALANCE

You can change the white balance of the picture to better match the type of video being viewed.

Select WHITE BALANCE in the PICTURE menu, then choose the desired setting.

* **(MENU) → (PICTURE menu) → (WHITE BALANCE)**

NORMAL	Normal white balance.
COOL	Bluish white.
WARM	Reddish white.

When you set DVD THEATER STATUS in DVD MENU to ON, you cannot adjust WHITE BALANCE.

* About the basic operations of the menu, please see the "How to operate menus and menus locations" on page 5.

Advanced setting for picture

AI ECO SENSOR (ECO)/ECO MODE

You can adjust TV screen contrast according to the brightness of your room.

Press the ECO button to select the desired mode.

OFF	Cancel the function.
MODE-1/ECO-1	Mild contrast (recommended.)
MODE-2/ECO-2	Even contrast.
DISPLAY (for AI ECO SENSOR only)	Display the graphic of the function.

To operate this function with a menu:

* (MENU) → (FEATURES menu)
→ (AI ECO SENSOR / ECO MODE)

When you set DVD THEATER STATUS in DVD MENU to ON, you cannot adjust AI ECO SENSOR / ECO MODE.

Note : AI ECO SENSOR for M and S series.
ECO MODE for B series.

Correcting the Slanting Picture (PICTURE TILT)

You can correct the picture tilt caused by the earth's magnetic force.

1 Select PICTURE TILT in the INSTALL menu, then press MENU/OK button.

* (MENU) → (INSTALL menu) → (PICTURE TILT)

The following display appears.



2 Press the ▲/▼ buttons until the picture becomes level. Then press the MENU/OK button.

COMPRESS (16:9)

You can convert a normal picture (4:3 aspect ratio) into a wide picture (16:9 aspect ratio).

Select COMPRESS (16:9) in the FEATURES menu, then choose ON or OFF.

* (MENU) → (FEATURES menu) → (COMPRESS (16:9))

BLUE BACK

You can set the TV to automatically change to a blue screen and mute the sound if the signal is weak or absent, or when there is no input from an antenna.

Select BLUE BACK in the INSTALL menu, then choose ON or OFF.

* (MENU) → (INSTALL menu) → (BLUE BACK)

If you wish to continue viewing the poor picture, off the BLUE BACK function.

* About the basic operations of the menu, please see the "How to operate menus and menus locations" on page 5.

Original features for picture

PIP

You can display a sub picture within the main picture on the screen. Press the PIP operation buttons to display and change the sub picture setting.

PIP Display the sub picture.

To cancel, press the PIP button again.

Notes:

- You can hear the sound from the main picture only.
- When main picture and sub picture are the same TV channel.

Press SUB-P -/+	Main picture will be changed TV channel follow as sub picture.
-----------------	--

Press  (Input)	To change sub picture to video mode.
---	--------------------------------------

Press CHANNEL -/+	Sub picture will be changed TV channel follow as Main picture.
-------------------	--

Press CHANNEL -/+	Until main picture change to video mode.
-------------------	--

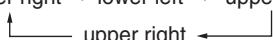
SUB-P -/+ Select the desired TV channel for sub picture.

 (Input) Select the input source for the sub picture.

 (Swap) Swap between the main picture and sub picture.

 (Position) Change the sub picture position.
Each time you press the  (Position) button, the sub picture position will change as follows:

lower right → lower left → upper left



 (Freeze) Freeze the sub picture.

When VIDEO-2 is set to component, you cannot select VIDEO-2 for sub picture. If the main picture input source is VIDEO-2 with component, the PIP function is disabled.

TELETEXT

You can watch the Teletext broadcast channel with TEXT function.

1 Press the TEXT button to select the desired mode as follows:

→ TV mode → TEXT twin mode → TEXT mode →

2 Press the CHANNEL -/+ buttons, number buttons or colour buttons to select other Teletext pages.

3 Press TEXT or TV/VIDEO button to return to TV mode.

You can also operate the teletext using the following buttons:

 (Hold) Hold a teletext page.
The  (Hold) icon is displayed at the top left of the screen.
To cancel, press  (Hold) button again.

 (Reveal) Display the hidden text (e.g. answers to a quiz).
To cancel, press  (Reveal) button again.

 (Size) Enlarge the teletext display.

 (Index) Return to the index page instantly.

 (Cancel) Watch TV programme while waiting for a teletext page.
When the teletext page is found, a page number appears at the upper left of the screen.
Press  (Cancel) button to view the teletext page.

 (Sub-page) Operate the  (Sub-page) function.
Sub-page numbers are displayed at the left of the screen.
To cancel sub-page function, press  (Sub-page) button again.

Original features for picture (continued)

TEXT LANGUAGE

You can set the Teletext language group that corresponds to the programmes.

Select TEXT LANGUAGE in the INSTALL menu, then choose the desired language group.

* (MENU) → (INSTALL menu) → (TEXT LANGUAGE)

GROUP-1	English, German, Swedish, Finnish, Danish, Hungarian, Italian, French, Spanish, Portuguese, Turkish
GROUP-2	Polish, German, Estonian, Slovenian, Czech, Slovakian, Rumanian
GROUP-3	Polish, German, Estonian, Lettish, Russian, Ukrainian
GROUP-4	English, Polish, French, Turkish, Arabic, Farsi

Depending on the broadcast, the language set may not display properly. For details, refer to page 8.

* About the basic operations of the menu, please see the “How to operate menus and menus locations” on page 5.

Basic setting for sound

SOUND SYSTEM

You can select an appropriate sound system when abnormal sound occurs even when the picture appears normally.
Press the SOUND SYSTEM button to select a setting.

→ B/G → I → D/K → M

This function is not available in video mode.

For the sound system in each country or region, see the table below:

Area	Country or Region	System
Asia, Middle East	Bahrain, Kuwait, Oman, Qatar, United Arab Emirates, Yemen, etc. Indonesia, Malaysia, Singapore, Thailand, India, etc.	B/G
	China, Vietnam, etc.	D/K
	Hong Kong, etc.	I
	Islamic Republic of Iran, Lebanon, Saudi Arabia, etc.	B/G
	Philippines, Taiwan, Myanmar, etc.	M
Europe	Russia, etc.	D/K
	Czech Republic, Poland, etc.	D/K
	Germany, Holland, Belgium, etc.	B/G
	UK, etc.	I
Oceania	Australia, New Zealand, etc.	B/G
Africa	Republic of South Africa, etc.	I
	Nigeria, etc.	B/G
	Egypt, Morocco, etc.	B/G

SOUND MODE

You can choose the desired sound setting.
Select the SOUND MODE in SOUND menu, then choose the setting.

* (MENU) → (SOUND menu) → (SOUND MODE)

USER

You can change this sound setting as you like.
Select USER and adjust the frequencies in EQUALIZER (100, 300, 1K, 3K, 8K Hz).
For details, see "EQUALIZER" on page 15.

SOUND TURBO

Emphasize on low and high frequency levels.

THEATER

Emphasize on movie sound.

MUSIC

Emphasize on music effect.

NEWS

Emphasize on vocal sound.

When you select VIDEO-2, you cannot adjust SOUND MODE function. You can adjust it in DVD Menu.

When SOUND MODE is set to SOUND TURBO, EQUALIZER, CINEMA SURROUND and MaxxBass functions are not available.

BALANCE

You can adjust the volume balance between the left and right speakers.

Select BALANCE in SOUND menu, then adjust the setting.

* (MENU) → (SOUND menu) → (BALANCE)

* About the basic operations of the menu, please see the "How to operate menus and menus locations" on page 5.

Advanced setting for sound

CINEMA SURROUND

You can enjoy an enhanced sound for wider audience.
Press the CINEMA SURROUND button to select a setting.

OFF Cancel the function.

ON Listen to sound with wider audience effect.

This function is not available when SOUND MODE is set to SOUND TURBO.

To operate this function with a menu:

* (MENU) → (SOUND menu) → (CINEMA SURROUND)

STEREO / I-II (I/II)

You can enjoy the stereo and bilingual broadcasted programmes.
Press the  I/II button to select the desired mode.

 Select stereo sound.

 Select monaural sound.

 Select bilingual I (sub I).

 Select bilingual II (sub II).

This function is not available in video mode.

To operate this function with a menu:

* (MENU) → (SOUND menu) → (STEREO / I-II)

MaxxBass

You can enjoy an enhanced bass sound which cannot be reproduced by normal speakers.

Select MaxxBass in SOUND menu, then choose the desired setting.

* (MENU) → (SOUND menu) → (MaxxBass)

OFF MaxxBass is turned off.

HIGH MaxxBass effect is high.

LOW MaxxBass effect is low.

This function is not available when SOUND MODE is set to SOUND TURBO.

"MaxxBass" is a registered trademark of Waves Audio Ltd. in the USA, Japan and other countries.

EQUALIZER

You can adjust the sound level of each frequencies when selecting USER mode in SOUND MODE.

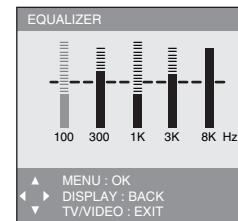
1 Select USER in SOUND MODE under SOUND menu.

* (MENU) → (SOUND menu) → (SOUND MODE) → (USER)

2 Select EQUALIZER in SOUND menu.

* (MENU) → (SOUND menu) → (EQUALIZER)

The following display appears.



3 Select and adjust the desired frequencies.

4 Press the MENU/OK button to exit the menu.

Adjust high frequency will affect higher pitch sound and vice versa.
When you select VIDEO-2, you cannot adjust EQUALIZER.

AI VOLUME

You can adjust the volume of all the channels and video inputs to the same level automatically depends on the strength of signal of the sources.

Select AI VOLUME in SOUND menu, then choose ON or OFF.

* (MENU) → (SOUND menu) → (AI VOLUME)

* About the basic operations of the menu, please see the "How to operate menus and menus locations" on page 5.

DVD Menu

AUTO SIGNAL DETECT

When the DVD input signal is detected, the input mode will be changed to VIDEO-2 automatically. And when the DVD input signal is not detected, the input mode will be changed to RF previous input mode. Select AUTO SIGNAL DETECT in DVD MENU under FEATURES menu then choose ON or OFF (Factory setting is ON).

* (MENU) → (FEATURES menu) → (DVD MENU)
→ (AUTO SIGNAL DETECT)

Press the "POWER ON" button on the DVD players or VCRs (follow by the "PLAY" button for VCRs) so that the signal can be detected.

DVD PICTURE MODE

You can enhance the picture quality of the DVD or VIDEO-2. Select DVD PICTURE MODE in DVD MENU under FEATURES menu, then choose the desired setting.

* (MENU) → (FEATURES menu) → (DVD MENU)
→ (DVD PICTURE MODE)

OFF Cancel the function.

CLEAR-1 Select when the disc is with lots of noise (To soften the picture).

CLEAR-2 Select when the disc is with less noise (To sharpen the picture).

DVD THEATER STATUS

You can enjoy an enhanced picture quality for movie playback in a dark room, like watching a movie in the theater. Select DVD THEATER STATUS in DVD MENU under FEATURES menu, then choose ON or OFF.

* (MENU) → (FEATURES menu) → (DVD MENU)
→ (DVD THEATER STATUS)

ON	Enjoy movie playback with suitable colour temperature, sharp subtitles and improved gradation for black, like in a theater.
OFF	Cancel the function.

When you set DVD THEATER STATUS to ON, PICTURE MODE, WHITE BALANCE and AI ECO SENSOR / ECO MODE functions are not available.

DVD SOUND MODE

You can choose different sound setting for viewing different types of DVD content.

Select DVD SOUND MODE in DVD MENU under FEATURES menu, then choose the desired setting.

* (MENU) → (FEATURES menu) → (DVD MENU)
→ (DVD SOUND MODE)

MUSIC Select when watching a music concert.

USER Select if you want to adjust the sound setting to your preference.

THEATER Select when watching an action movie.

DRAMA Select when watching a drama movie.

* About the basic operations of the menu, please see the "How to operate menus and menus locations" on page 5.

Customized setting

VNR

You can reduce the picture noise.

Select VNR in PICTURE menu, then choose a setting of VNR function.

* (MENU) → (PICTURE menu) → (VNR)

OFF	VNR is turned off.
AUTO	Effect of VNR is automatically controlled.
MIN	Effect of VNR becomes minimum level.
MAX	Effect of VNR becomes maximum level.

If you select MAX, the picture becomes softer even if the original picture is sharp.

When you select VIDEO-2, you cannot adjust VNR function.

LANGUAGE

You can choose your desired on screen display language.

Select LANGUAGE in the INSTALL menu, then choose a language.

* (MENU) → (INSTALL menu) → (LANGUAGE)

CHILD LOCK

You can disable the front control buttons of the TV.

Select CHILD LOCK in the FEATURES menu, then choose ON or OFF.

* (MENU) → (FEATURES menu) → (CHILD LOCK)

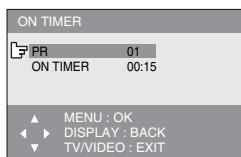
ON TIMER

You can set the TV to turn on automatically from standby mode at a set channel and time.

1 Select ON TIMER in the FEATURE menu.

* (MENU) → (FEATURES menu)
→ (ON TIMER)

The following display appears.



2 Choose the PR (channel) by pressing the **◀/▶** button.
External input, AV position and any un-preset channel cannot be chosen for PR.

3 Set the ON TIMER to your desired period of time by pressing the **◀/▶** button. ON TIMER starts. You can set the period of time to a maximum of 12 hours in 15-minute intervals.

To off the ON TIMER, set the ON TIMER to OFF.

Note : If TV is not in standby mode when ON TIMER is reach the setting time, this case is not available.

OFF TIMER

You can set the TV to turn off automatically to standby mode after a set time.

Press the OFF TIMER button to select a desired period of time.

You can set the period of time to a maximum of 120 minutes in 10 minute intervals.

To operate this function with a menu:

* (MENU) → (FEATURES menu) → (OFF TIMER)

When the remaining elapse time is one minute, "GOOD NIGHT!" appears on the screen.

You can display the OFF TIMER menu again to confirm or change the remaining time.

* About the basic operations of the menu, please see the "How to operate menus and menus locations" on page 5.

Customized setting (continued)

VIDEO-2 SETTING

You can set the VIDEO-2 SETTING according to the video signal output from external devices connected to the VIDEO-2 terminal. Select VIDEO-2 SETTING in INSTALL menu, then choose a setting (Factory setting is COMPONENT).

* **(MENU) → (INSTALL menu) → (VIDEO-2 SETTING)**

VIDEO If a normal video signal (composite video signal) is input.

COMPONENT If a component video signal (Y/C_B/C_R) is input.

You must choose a setting according to the signal that you input to VIDEO-2. (If you input the VIDEO Signal or VCR Signal to VIDEO-2, you must set VIDEO-2 SETTING to VIDEO.)

For connecting methods, see "Additional Preparation" on page 22.

BEEP

You can use the BEEP function to alert you during DVD AUTO SIGNAL DETECT, AI ECO SENSOR Detect, Stereo Detect, ON TIMER/OFF TIMER operations and when some buttons on the remote control are pressed.

Select BEEP in the INSTALL menu, then choose ON or OFF.

* **(MENU) → (INSTALL menu) → (BEEP)**

When the volume is level 0, then BEEP function is not available.

DISPLAY

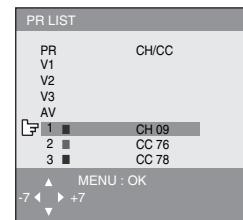
You can display the programme number, video terminal number and PR list on the screen.

Press the DISPLAY button to select the desired mode:



Choose a TV channel or a VIDEO terminal.

- 1 Press the DISPLAY button to display the PR LIST.
- 2 Select a programme number or video terminal by pressing the ▲/▼ button to move up/down on the programme number or press the ◀/▶ button to skip for each 7 programme numbers, then press MENU/OK button.



* About the basic operations of the menu, please see the "How to operate menus and menus locations" on page 5.

TV channel presetting

To register the TV channels automatically (AUTO PROGRAM)

You can register the TV channels into the TV's channel list automatically.

- 1 Display the INSTALL menu.

* (MENU) → (INSTALL menu)

- 2 Choose AUTO PROGRAM, then press the MENU/OK button.
AUTO PROGRAM function starts, and the channels received are registered in the channel list (PR LIST) automatically.

- 3 The EDIT menu appears.

To edit the channel list	Proceed to Step 3 of "To edit the channel list (PR LIST)" on page 20.
If a channel is not registered	Proceed to Step 3 of "To register the TV channels manually" on this page.
To exit the menu	Press the MENU/OK button.

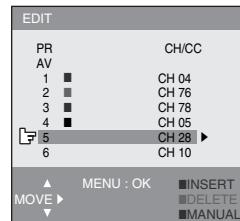
To register the TV channels manually (MANUAL in the EDIT menu)

You can register the TV channels into the TV's channel list manually.

- 1 Display the INSTALL menu.

* (MENU) → (INSTALL menu)

- 2 Choose EDIT/MANUAL, then press the MENU/OK button.
EDIT menu appears.



- 3 Choose the channel which you want to register.
- 4 Press the blue button to activate the MANUAL function.
The sound system of the channel appears at the right of the CH/CC number.
- 5 Press the ▶ button to choose an appropriate sound system.
For details, see "SOUND SYSTEM" on page 14.
- 6 Press the green or red button to search for the TV channel.
Searching stops when a channel is found and displayed.
- 7 Repeat step 5 until your desired TV channel appears.

If the reception is poor Press the blue or yellow button to fine tune the TV channel.

If noisy sound is heard Press the ▶ button to choose an appropriate sound system.

- 8 Press the MENU/OK button to exit the menu.

* About the basic operations of the menu, please see the "How to operate menus and menus locations" on page 5.

TV channel presetting (continued)

To edit the channel list (PR LIST) (MOVE and DELETE in the EDIT menu)

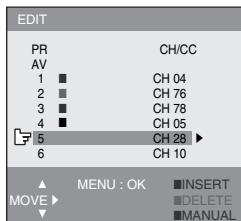
You can edit the TV channel list as you like.

Note: After this operation, other channel's PR numbers will be changed.

- 1 Display the INSTALL menu.

* **(MENU) → (INSTALL menu)**

- 2 Choose EDIT/MANUAL, then press the MENU/OK button.
EDIT menu appears.



- 3 Choose the channel which you want to change its PR number, or delete.

- 4 Do the following action:

To change the PR number (MOVE) Press the **▶** button. Then move it to the new PR number you want to use for the channel by pressing the **▲/▼** button. Finally press the **◀** button.

To delete the channel (DELETE) Press the yellow button.

- 5 Press the MENU/OK button to exit the menu.

To add in the new channel (INSERT in the EDIT menu)

You can add in new channels in the TV channel list as you like.

You need to find the "CH/CC" number for the TV channel. Find the "CH/CC" number corresponding to the channel number of the TV channel from "CH/CC number list" on page 21.

- 1 Display the INSTALL menu.

* **(MENU) → (INSTALL menu)**

- 2 Choose EDIT/MANUAL, then press the MENU/OK button.
EDIT menu appears.

- 3 Choose the PR number for which you will register a new TV channel. When you add a new TV channel of NTSC-M system, press the SOUND SYSTEM button to change the sound system to M. Then proceed to the next step.

- 4 Press the green button, then press **▶** button to choose "CC" or "CH".

- 5 Press the number button to enter the CH/CC number for the TV channel you wish to add.

The TV starts to search the TV channel, and the picture of the TV channel appears. If the TV finds no TV channel, a noisy picture appears.

When a TV channel has already been registered in PR99, using the INSERT function deletes that TV channel.

* About the basic operations of the menu, please see the "How to operate menus and menus locations" on page 5.

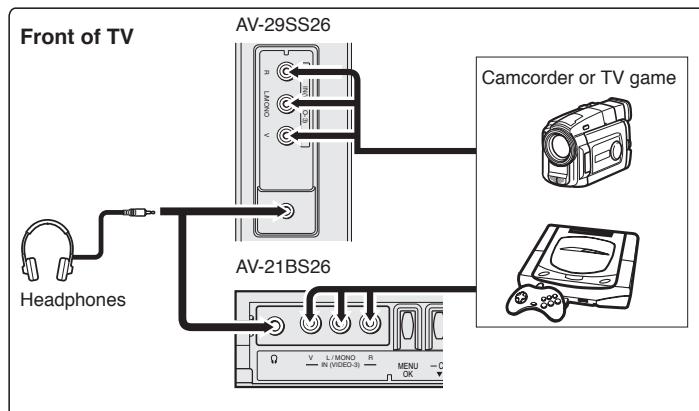
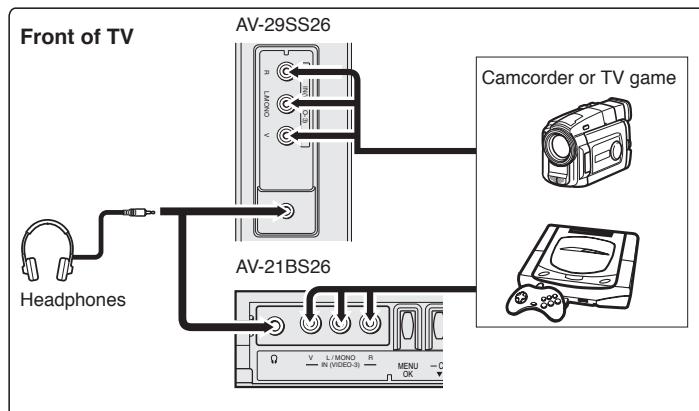
Additional preparation

The illustrations shown in this section are for AV-21BS26 and AV-29SS26 only, which are used for explanation purpose. Your TV may not look exactly the same as illustrated.

Before connecting

- Read the manuals provided with the devices for the proper connection.
- Turn off all the devices including the TV.
- Note that connecting cables are not supplied.

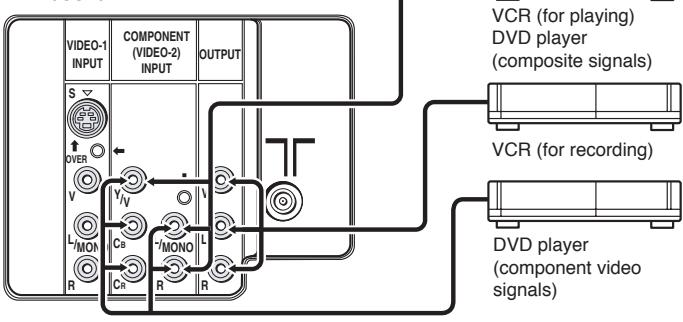
Connecting to front video input terminals



Connecting to rear component/video input terminals and output terminals

Rear of TV

AV-29SS26



When connecting to COMPONENT (VIDEO-2) input, depending on the connection, choose the appropriate video input using the menu (see "VIDEO-2 SETTING" on page 18)

Troubleshooting

If a problem occurs when you are using the TV, check the below troubleshooting guide before calling for repair.

• No picture, no sound	<ul style="list-style-type: none">Deactivate the BLUE BACK function if it is turned on.Choose the appropriate sound system. Refer to "SOUND SYSTEM" on page 14.	• Colour patches appear at the corner of the screen	<ul style="list-style-type: none">This may due to the magnetized device such as a speaker near to your TV. Keep the device apart from your TV. Alternately, you can also use the magnetic-shielded speaker.
• Snowy picture	<ul style="list-style-type: none">Check the aerial cable and its connection with the TV.	• Picture is tilted	<ul style="list-style-type: none">This may due to the earth magnetism. Refer to "PICTURE TILT" on page 11 to correct the tilt.
• Stripes appear on the picture	<ul style="list-style-type: none">Interference occurs caused by other devices such as an amplifier, personal computer, or a hair drier. Move such devices away from your TV.	• Image takes a short period to be displayed	<ul style="list-style-type: none">Image required time to stabilize before display. This is not a malfunction.
• Double-pictures (ghosting) occur	<ul style="list-style-type: none">Interference occurs caused by signal reflecting from mountains or building. Try to adjust the aerial's direction or use a better directionality antenna.	• TV may emit crackling sound	<ul style="list-style-type: none">This is due to a sudden change in temperature and it is not a malfunction. If the crackling sound is too frequent, request your service technician for inspection.
• Poor picture	<ul style="list-style-type: none">Choose the appropriate colour system. Refer to "COLOUR SYSTEM" on page 9.Adjust the COLOUR or BRIGHT setting. Refer to "PICTURE SETTING" on page 10.	• Feel a slight electric shock when touching the TV screen	<ul style="list-style-type: none">This is due to the static electricity of the picture tube and it will not harm the human body. This is not a malfunction.
• White and bright still image look as if it were coloured	<ul style="list-style-type: none">Inevitable phenomenon due to the nature of the picture tube. This is not a malfunction.	• The Auto Signal Detect function does not work	<ul style="list-style-type: none">Please check that the AUTO SIGNAL DETECT function is on or off.Turn the VCR or DVD player off, wait a while, then turn it on again.Inspect the video cable connection on VIDEO-2 that they are connected properly.
• Top of the image from software products or video tape is distorted	<ul style="list-style-type: none">This is due to the condition of the video signal whereby the image was not recorded properly. This is not a malfunction.	• Suddenly, a channel or input was changed to VIDEO-2 inputs.	<ul style="list-style-type: none">Some VCRs and DVD players can trigger Auto Signal Detect even after you choose a different input.Please turn off the AUTO SIGNAL DETECT function.
• Poor sound	<ul style="list-style-type: none">Adjust the sound frequency properly. Refer to "EQUALIZER" on page 15.	• "PLEASE DISCONNECT VIDEO-1 CABLE!" appears on the screen.	<ul style="list-style-type: none">Please disconnect either S-VIDEO cable or video input cable from Video-1 input.
• Stereo or bilingual sound is unclear	<ul style="list-style-type: none">TV channel reception is poor. Change the stereo/bilingual mode to mono sound (see page 15).		
• Cannot operate the remote control	<ul style="list-style-type: none">The batteries may be exhausted. Replace with new batteries (see page 7).Ensure that you are operating the remote control at less than seven meters from the front of your TV.		
• Cannot operate the menus	<ul style="list-style-type: none">Press TV/VIDEO button to return to TV mode and try operating the menus.		
• Cannot operate the front control buttons	<ul style="list-style-type: none">Deactivate the CHILD LOCK function if it is turned on (see page 17).		

Specifications

TV RF systems

B, G, I, D, K, M

Colour systems

PAL, SECAM, NTSC 3.58 MHz, NTSC 4.43 MHz

Receiving channels

VHF low channel (VL), VHF high channel (VH), UHF channel (U)

Receives cable channels in mid band, super band and hyper band.

Power requirements

For Australia: AC 220 to 240 V, 50 Hz / 60 Hz

For others: AC 110 to 240 V, 50 Hz / 60 Hz

External input / output

VIDEO-1: S-video input, VIDEO input, AUDIO L/R input

VIDEO-2/COMPONENT: VIDEO input, AUDIO L/R input, COMPONENT VIDEO (Y/C_B/C_R) input

VIDEO-3: VIDEO input, AUDIO L/R input

OUTPUT: VIDEO output, AUDIO L/R output

Headphone jack: Stereo mini jack (3.5 mm diameter)

**Sound-multiplex systems

A2 (B/G) or NICAM (B/G, I, D/K)

**Teletext system

FLOF (Fastext), WST (World Standard Text)

**Language displayed by teletext

Please see the table in the description "TEXT LANGUAGE" on page 13.

**Depends on the models, STEREO/I-II function for the Sound-multiplex systems or Teletext function may not be available.

Please confirm with the chart on page 3.

Design and specifications subject to change without notice.



PARTS LIST

CAUTION

- The parts identified by the Δ symbol are important for the safety . Whenever replacing these parts, be sure to use specified ones to secure the safety.
- The parts not indicated in this Parts List and those which are filled with lines --- in the Parts No. columns will not be supplied.
- P.W. BOARD Ass'y will not be supplied, but those which are filled with the Parts No. in the Parts No. columns will be supplied.

ABBREVIATIONS OF RESISTORS, CAPACITORS AND TOLERANCES

RESISTORS		CAPACITORS	
CR	Carbon Resistor	C CAP.	Ceramic Capacitor
FR	Fusible Resistor	E CAP.	Electrolytic Capacitor
PR	Plate Resistor	M CAP.	Mylar Capacitor
VR	Variable Resistor	CH CAP.	Chip Capacitor
HV R	High Voltage Resistor	HV CAP.	High Voltage Capacitor
MF R	Metal Film Resistor	MF CAP.	Metalized Film Capacitor
MG R	Metal Glazed Resistor	MM CAP.	Metalized Mylar Capacitor
MP R	Metal Plate Resistor	MP CAP.	Metalized Polystyrol Capacitor
OM R	Metal Oxide Film Resistor	PP CAP.	Polypropylene Capacitor
CMF R	Coating Metal Film Resistor	PS CAP.	Polystyrol Capacitor
UNF R	Non-Flammable Resistor	TF CAP.	Thin Film Capacitor
CH V R	Chip Variable Resistor	MPP CAP.	Metalized Polypropylene Capacitor
CH MG R	Chip Metal Glazed Resistor	TAN. CAP.	Tantalum Capacitor
COMP. R	Composition Resistor	CH C CAP.	Chip Ceramic Capacitor
LPTC R	Linear Positive Temperature Coefficient Resistor	BP E CAP.	Bi-Polar Electrolytic Capacitor
		CH AL E CAP.	Chip Aluminum Electrolytic Capacitor
		CH AL BP CAP.	Chip Aluminum Bi-Polar Capacitor
		CH TAN. E CAP.	Chip Tantalum Electrolytic Capacitor
		CH AL BP E CAP.	Chip Tantalum Bi-Polar Electrolytic Capacitor

RESISTORS									
F	G	J	K	M	N	R	H	Z	P
$\pm 1\%$	$\pm 2\%$	$\pm 5\%$	$\pm 10\%$	$\pm 20\%$	$\pm 30\%$	+30% -10%	+50% -10%	+80% -20%	+100% -0%

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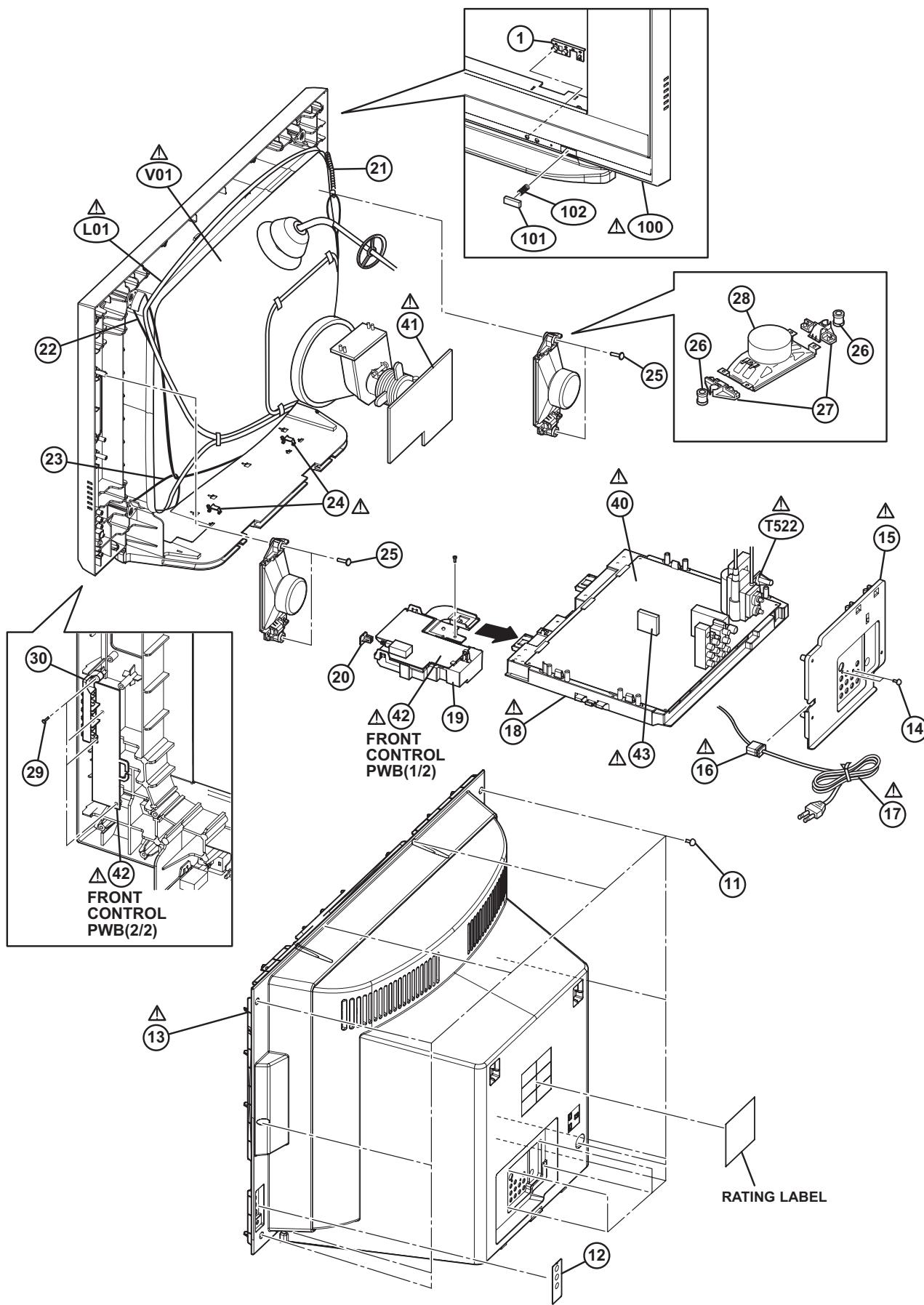
USING P.W. BOARD & REMOTE CONTROL UNIT

P.W.B ASS'Y	AV-29SS26	AV-29SX76/G
MAIN P.W.B	SCW-1941A-H2	SCW-1947A-H2
CRT SOCKET P.W.B	SCW-3038A-H2	←
FRONT CONTROL P.W.B	SCW-8020A-H2	←
BASS P.W.B	SCW-6003A-H2	←
REMOTE CONTROL UNIT	RM-C1286-1H	RM-C1285-1H

EXPLODED VIEW PARTS LIST -1

△	Ref.No.	Part No.	Part Name	Description	Local
△	V01	A68ERS870X04KD	PICTURE TUBE(ITE)	Inc.DEF YOKE, PC MAGNET	
△	L01	QQW0214-001	DEG COIL		
△	T522	QQH0216-001	FB TRANSF		
	1	GG30155-001A-H	LED LENS		
	11	QYSBSFG4016ZA	TAP SCREW	M4 x 16mm(x15)	
	12	GG20132-001B-H	OPERATION SHEET		
△	13	GG10425-001B-H	REAR COVER		
	14	QYSBSF3010ZA	TAP SCREW	M3 x 10mm(x2)	
△	15	GG10441-001B-H	AV BOARD		
△	16	CM23167-A01-H	POWER CORD CLAMP		
△	17	QMPPR340-165-K2	POWER CORD	1.65m BLACK	
△	18	LC11061-002C-H	CHASSIS BASE		
	19	GG10428-001A-H	CONTROL BASE		
	20	CM48241-001-H	KNOB CAP		
	21	A48457-3-H	SPRING		
	22	WJY0018-001A-E	BRAIDED ASSY		
	23	WJY0013-003A-E	BRAIDED ASS'Y	(x2)	
△	24	LC30103-003A-H	CHASSIS ADAPTER	(x2)	
	25	GG40046-001A-H	TAP SCREW	(x4)	
	26	LC40226-005A-H	SPACER	(x4)	
	27	GG20057-002A-H	SPEAKER HOLDER	(x4)	
	28	QAS0348-001	SPEAKER	(x2) SP01,SP02	AV-29SS26
	28	QAS0139-001	SPEAKER	(x2) SP01,SP02	AV-29SX76G
	29	QYSBSFG3008ZA	TAP SCREW	M3 x 8mm(x4)	
	30	GG30154-001B-H	CONTROL KNOB		
△	40	SCW-1941A-H2	MAIN PWB		AV-29SS26
△	40	SCW-1947A-H2	MAIN PWB		AV-29SX76G
△	41	SCW-3038A-H2	CRT SOCKET PWB		
△	42	SCW-8020A-H2	FRONT CONTROL PWB		
△	43	SCW-6003A-H2	BASS PWB		
△	100	GG10423-001B-H	FRONT CABINET ASS'Y	Inc.101,102	
	101	GG30153-001B-H	POWER KNOB		
	102	CM35235-009-H	SPRING		

EXPLODED VIEW -1



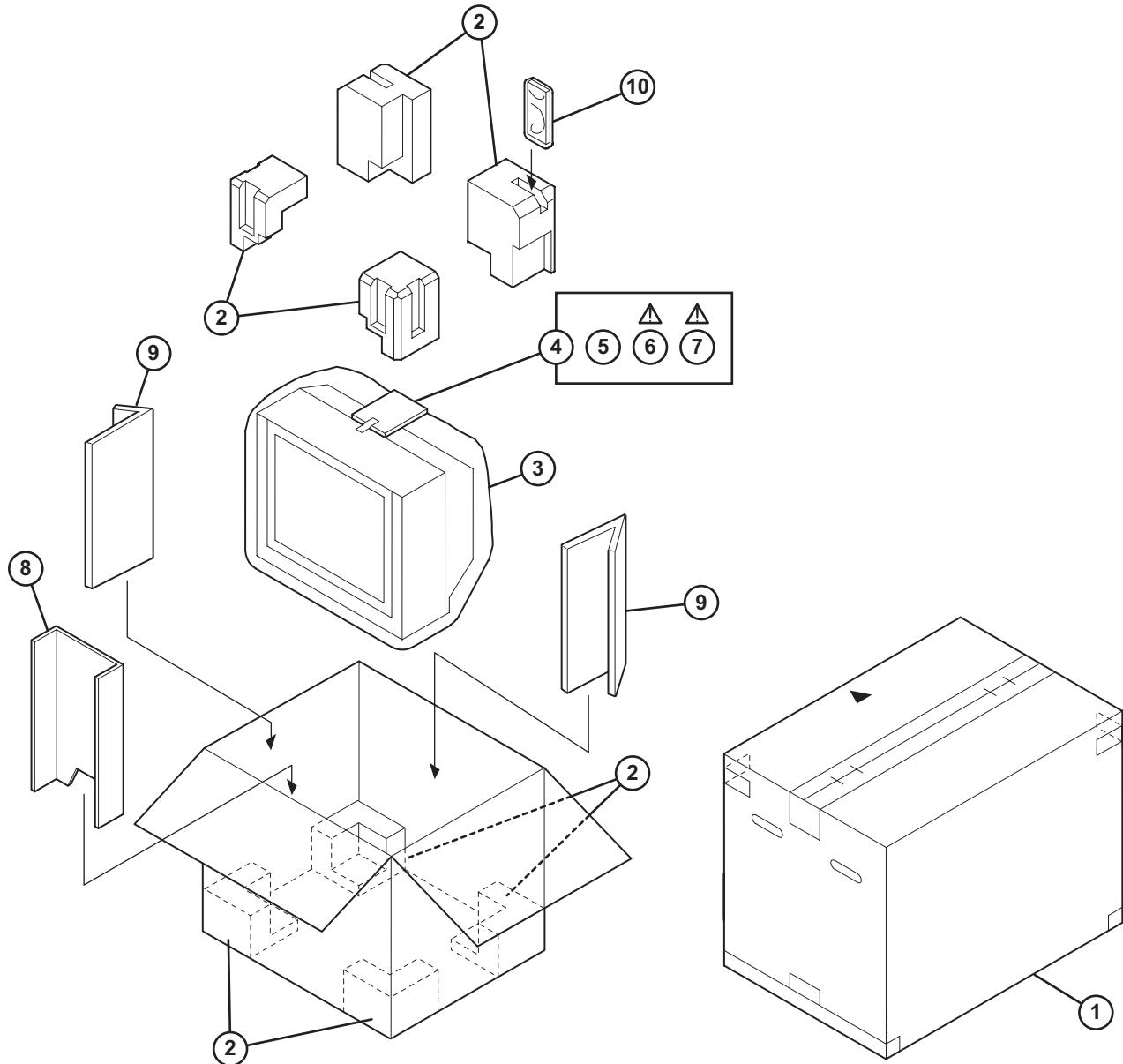
REMOTE CONTROL UNIT PARTS LIST (RM-C1286-1H) [AV-29SS26]

△ Ref No.	Part No.	Part Name	Description	Local
	R25-8566	BATTERY COVER		

REMOTE CONTROL UNIT PARTS LIST (RM-C1285-1H) [AV-29SX76/G]

△ Ref No.	Part No.	Part Name	Description	Local
	R25-8566	BATTERY COVER		

PACKING



PACKING PARTS LIST

Ref.No.	Part No.	Part Name	Description	Local
1	GG10285-014A-H	PACKING CASE		AV-29SS26
1	GG10282-042A-H	PACKING CASE		AV-29SX76G
2	GG10427-001A-H	CUSHION ASS'Y	8pcs in 1set	
3	GG30097-004A-H	POLY BAG		
4	GG30096-001A-H	POLY BAG		
5	-----	BATTERY	AA/R6 1.5V(x2)	
6	GGT0116-001A-H	INST BOOK		
7	GGT0117-001A-H	DIGEST MANUAL		AV-29SX76G
8	GG20011-015A-H	SUPPORT PAD		AV-29SS26
9	GG20011-016A-H	SUPPORT PAD	(x2)	AV-29SS26
10	RM-C1286-1H	REMOTE CONTROL UNIT		AV-29SS26
	RM-C1285-1H	REMOTE CONTROL UNIT		AV-29SX76G

JVC

SCHEMATIC DIAGRAMS

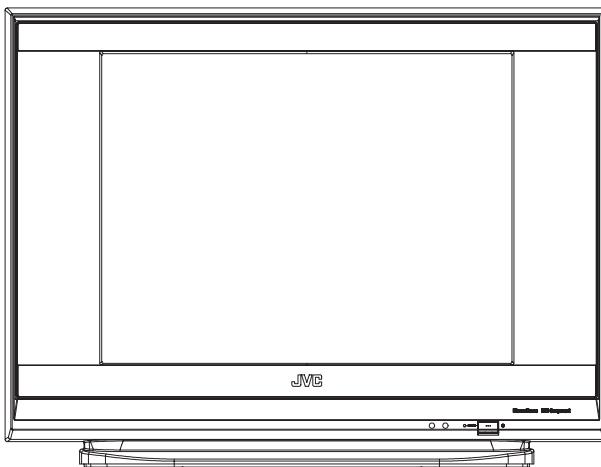
FLAT COLOUR TELEVISION

**AV-29SS26,
AV-29SX76/G**

CD-ROM No.SML200609

BASIC CHASSIS
CW3

InteríArt
MaxxBass®



AV-29SS26, AV-29SX76/G

STANDARD CIRCUIT DIAGRAM

■ NOTE ON USING CIRCUIT DIAGRAMS

1.SAFETY

The components identified by the  symbol and shading are critical for safety. For continued safety replace safety critical components only with manufacturer's recommended parts.

2.SPECIFIED VOLTAGE AND WAVEFORM VALUES

The voltage and waveform values have been measured under the following conditions.

- (1)Input signal : Colour bar signal
- (2)Setting positions of each knob/button and variable resistor : Original setting position when shipped
- (3)Internal resistance of tester : DC 20kΩ/V
- (4)Oscilloscope sweeping time : H ⇒ 20μs / div
: V ⇒ 5ms / div
: Others ⇒ Sweeping time is specified
- (5)Voltage values : All DC voltage values

* Since the voltage values of signal circuit vary to some extent according to adjustments, use them as reference values.

3.INDICATION OF PARTS SYMBOL [EXAMPLE]

- In the PW board : R209 → R209

4.INDICATIONS ON THE CIRCUIT DIAGRAM

(1)Resistors

● Resistance value

- No unit : [Ω]
- K : [kΩ]
- M : [MΩ]

● Rated allowable power

- No indication : 1/16 [W]
- Others : As specified

● Type

- No indication : Carbon resistor
- OMR : Oxide metal film resistor
- MFR : Metal film resistor
- MPR : Metal plate resistor
- UNFR : Uninflammable resistor
- FR : Fusible resistor

* Composition resistor 1/2 [W] is specified as 1/2S or Comp.

(2)Capacitors

● Capacitance value

- 1 or higher : [pF]
- less than 1 : [μ F]

● Withstand voltage

- No indication : DC50[V]
- Others : DC withstand voltage [V]
- AC indicated : AC withstand voltage [V]

* Electrolytic Capacitors

47/50[Example]: Capacitance value [μ F]/withstand voltage[V]

●Type

- | | |
|---------------|--------------------------------------|
| No indication | : Ceramic capacitor |
| MM | : Metallized mylar capacitor |
| PP | : Polypropylene capacitor |
| MPP | : Metallized polypropylene capacitor |
| MF | : Metalized film capacitor |
| TF | : Thin film capacitor |
| BP | : Bipolar electrolytic capacitor |
| TAN | : Tantalum capacitor |

(3)Coils

- | | |
|---------|----------------|
| No unit | : [μ H] |
| Others | : As specified |

(4)Power Supply



* Respective voltage values are indicated

(5)Test point

-  : Test point
-  : Only test point display

(6)Connecting method

-  : Connector
-  : Wrapping or soldering
-  : Receptacle

(7)Ground symbol

-  : LIVE side ground
-  : ISOLATED(NEUTRAL) side ground
-  : EARTH ground
-  : DIGITAL ground

5.NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : () side GND and the ISOLATED(NEUTRAL) : () side GND. Therefore, care must be taken for the following points.

- (1)Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED(NEUTRAL) side GND simultaneously. If the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.
- (2)Do not short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or never measure with a measuring apparatus measure with a measuring apparatus (oscilloscope, etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND at the same time. If the above precaution is not respected, a fuse or any parts will be broken.

◆ Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.

NOTE

- ◆ Due improvement in performance, some part numbers show in the circuit diagram may not agree with those indicated in the part list.
When ordering parts, please use the numbers that appear in the Parts List.

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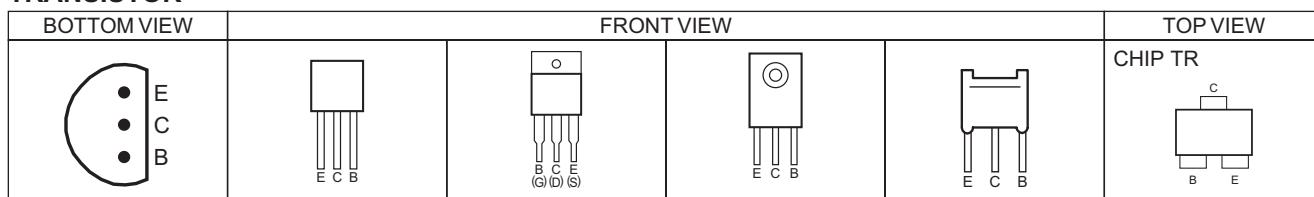
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USING P.W. BOARD

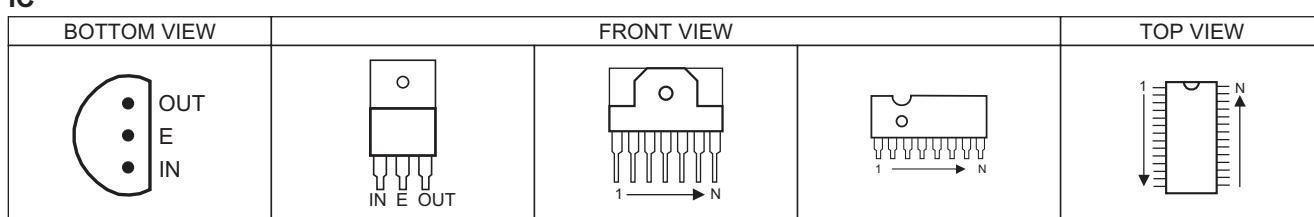
P.W.B ASS'Y name	AV-29SS26	AV-29SX76/G
MAIN P.W. BOARD	SCW-1941A-H2	SCW-1947A-H2
CRT SOCKET P.W. BOARD	SCW-3038A-H2	←
FRONT CONTROL P.W. BOARD	SCW-8020A-H2	←
BASS P.W. BOARD	SCW-6003A-H2	←

SEMICONDUCTOR SHAPES

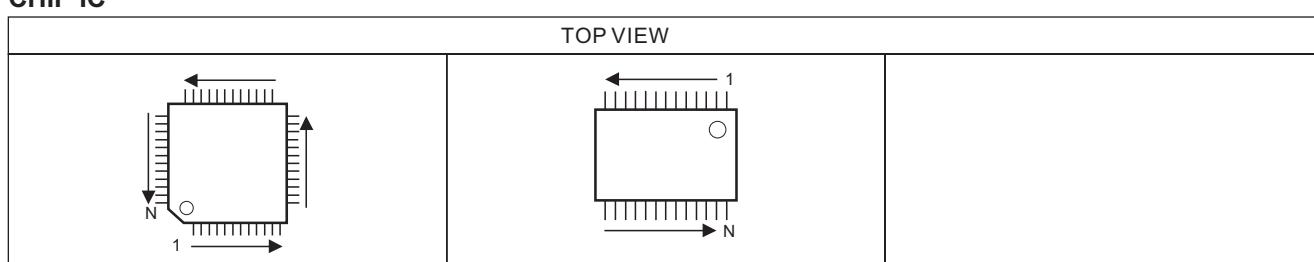
TRANSISTOR



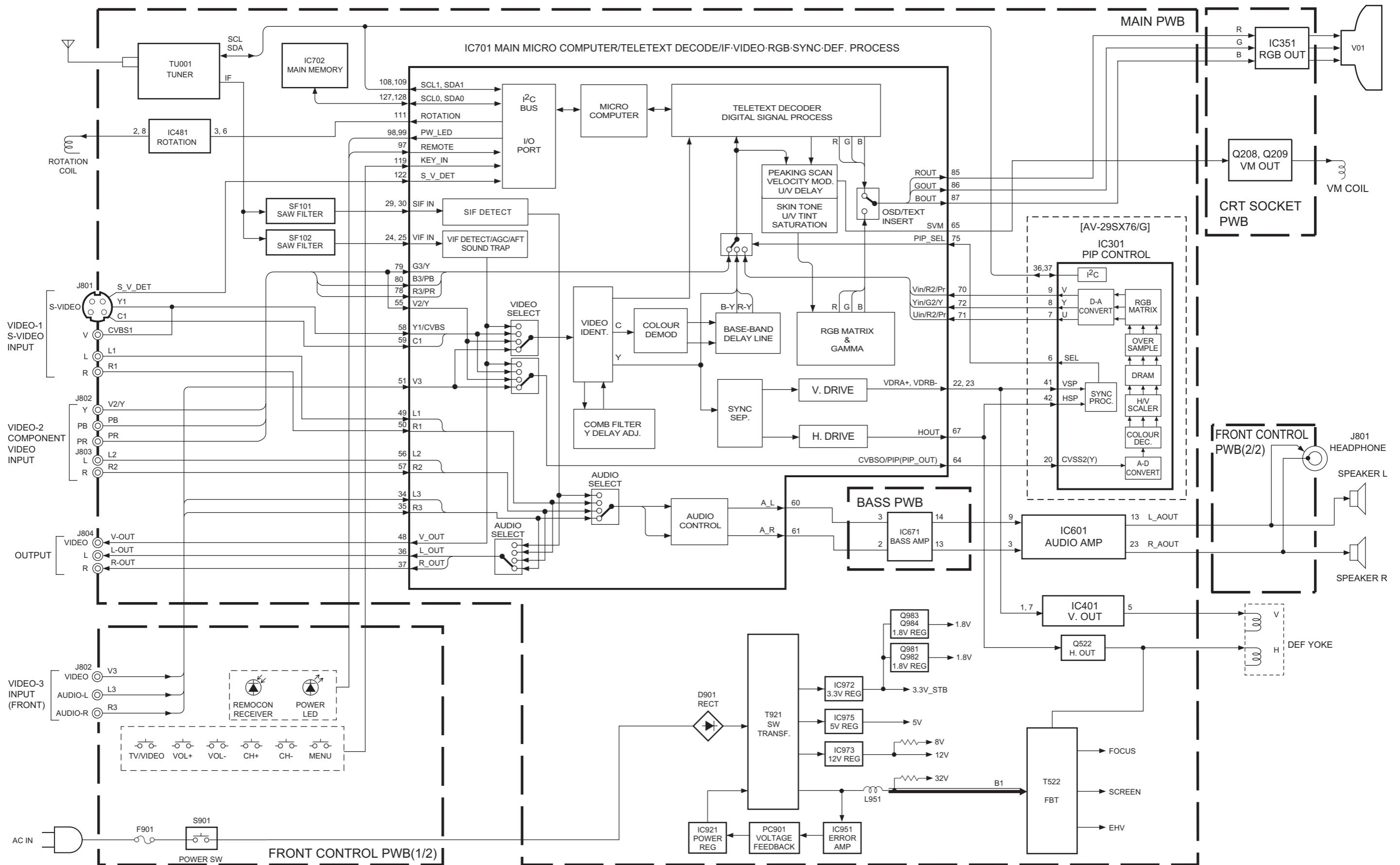
IC



CHIP IC



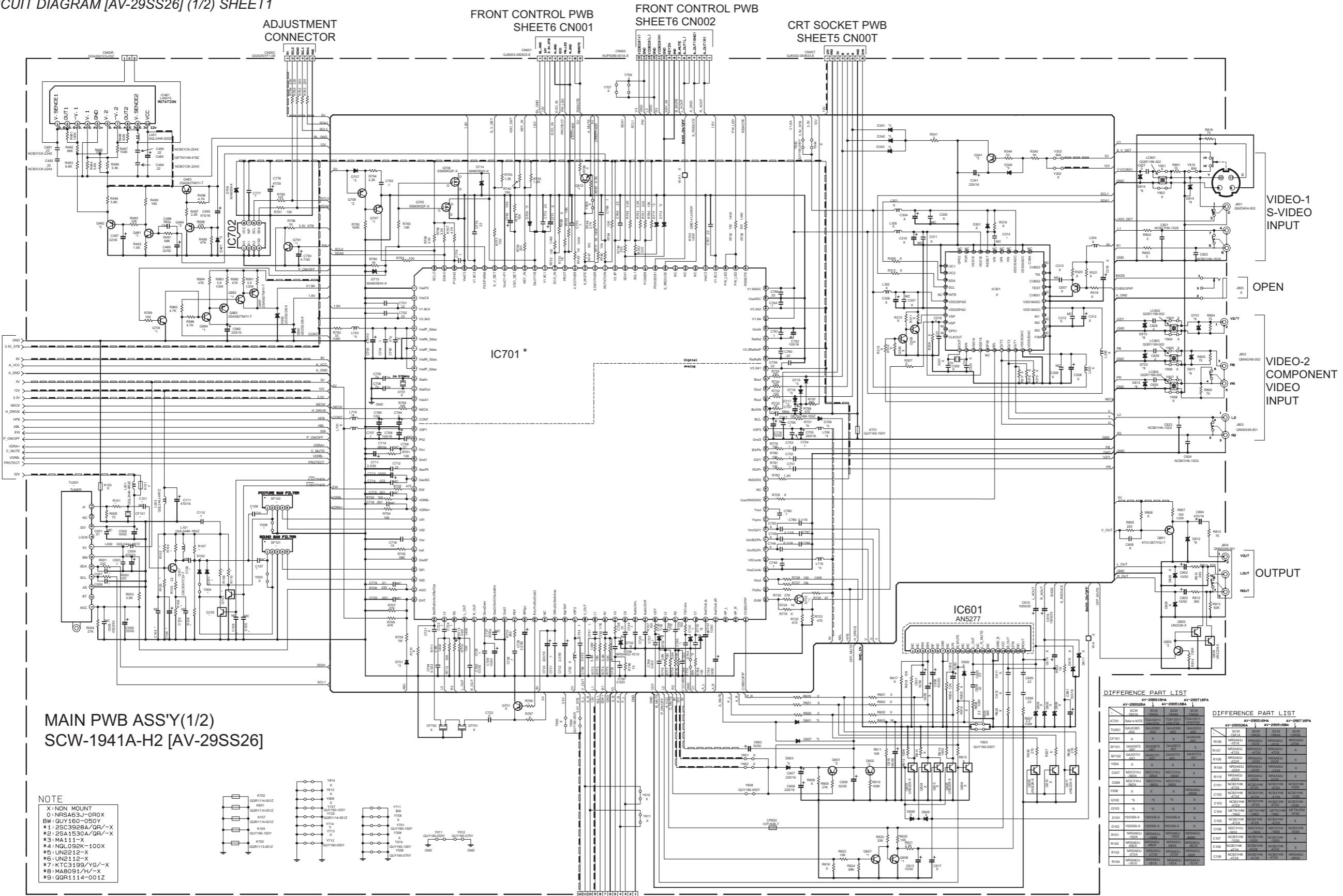
BLOCK DIAGRAM



CIRCUIT DIAGRAMS

MAIN PWB CIRCUIT DIAGRAM [AV-29SS26] (1/2) SHEET1

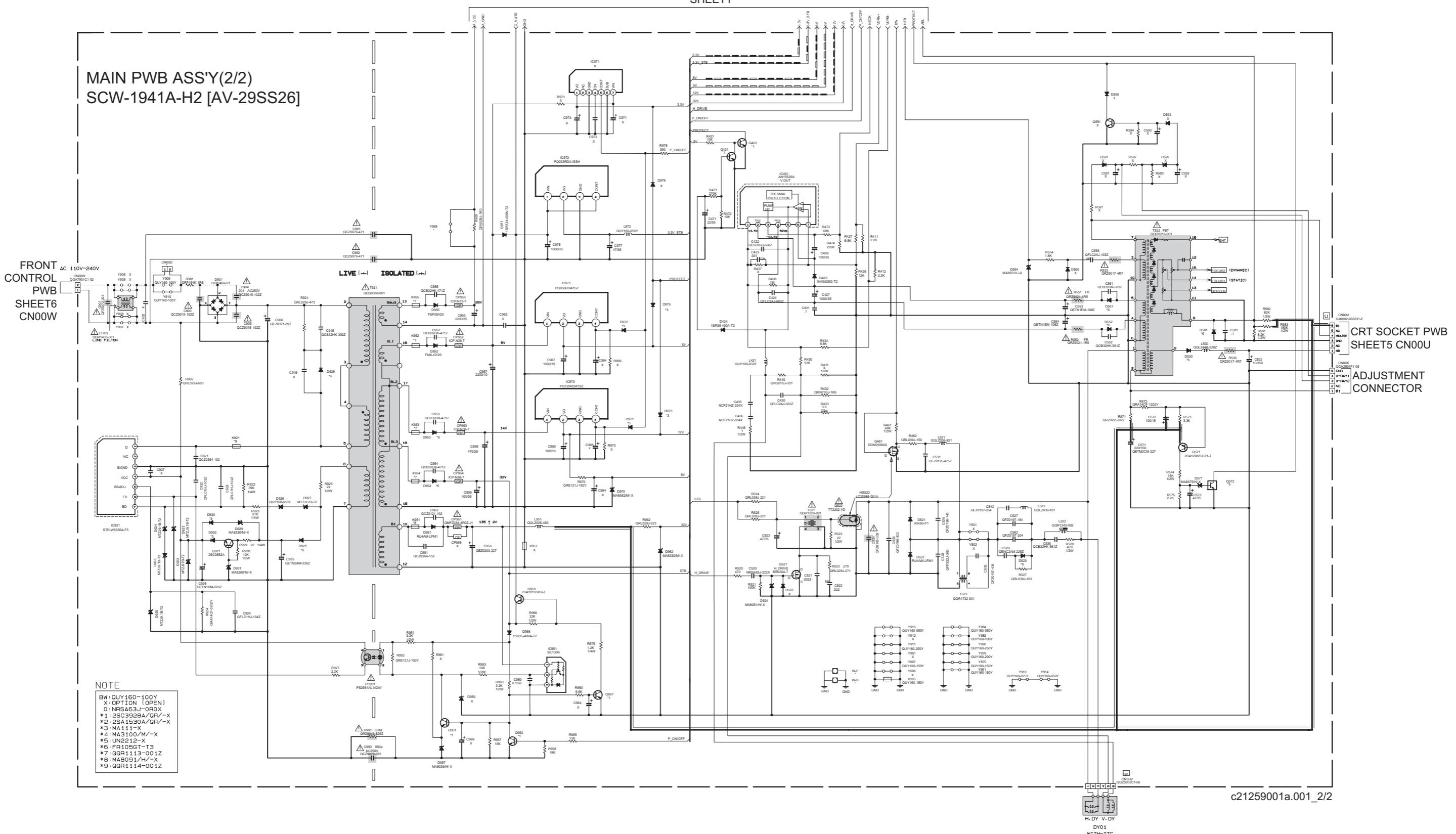
MAIN PWB(2/2)
SHEET2



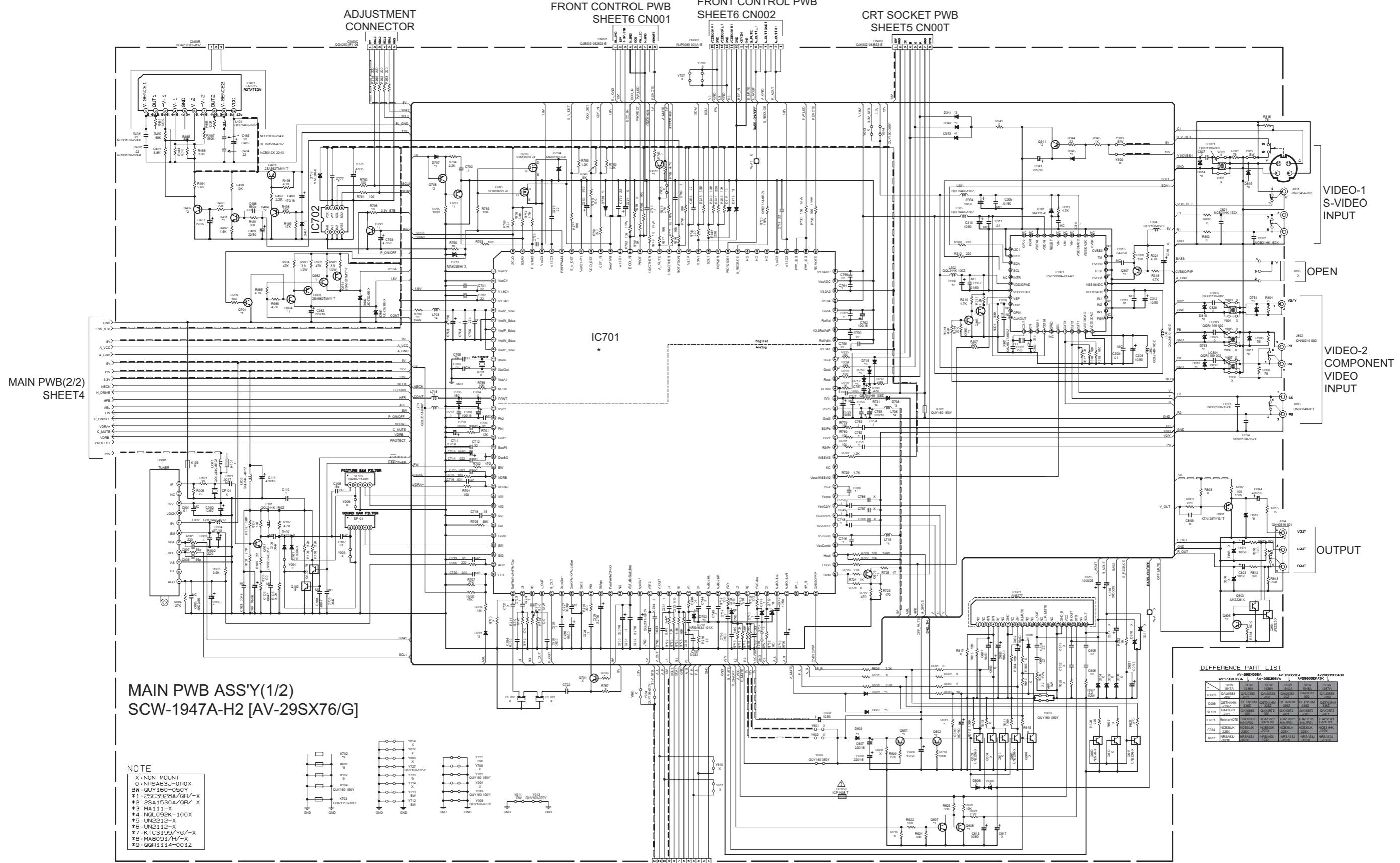
NOTE 1. Refer to the part list for the part number of IC701 and IC702.

2. Refer to page 2-25 for voltages of this circuit diagram.

3. Refer to page 2-26 for waveforms of this circuit diagram.

MAIN PWB(1/2)
SHEET1

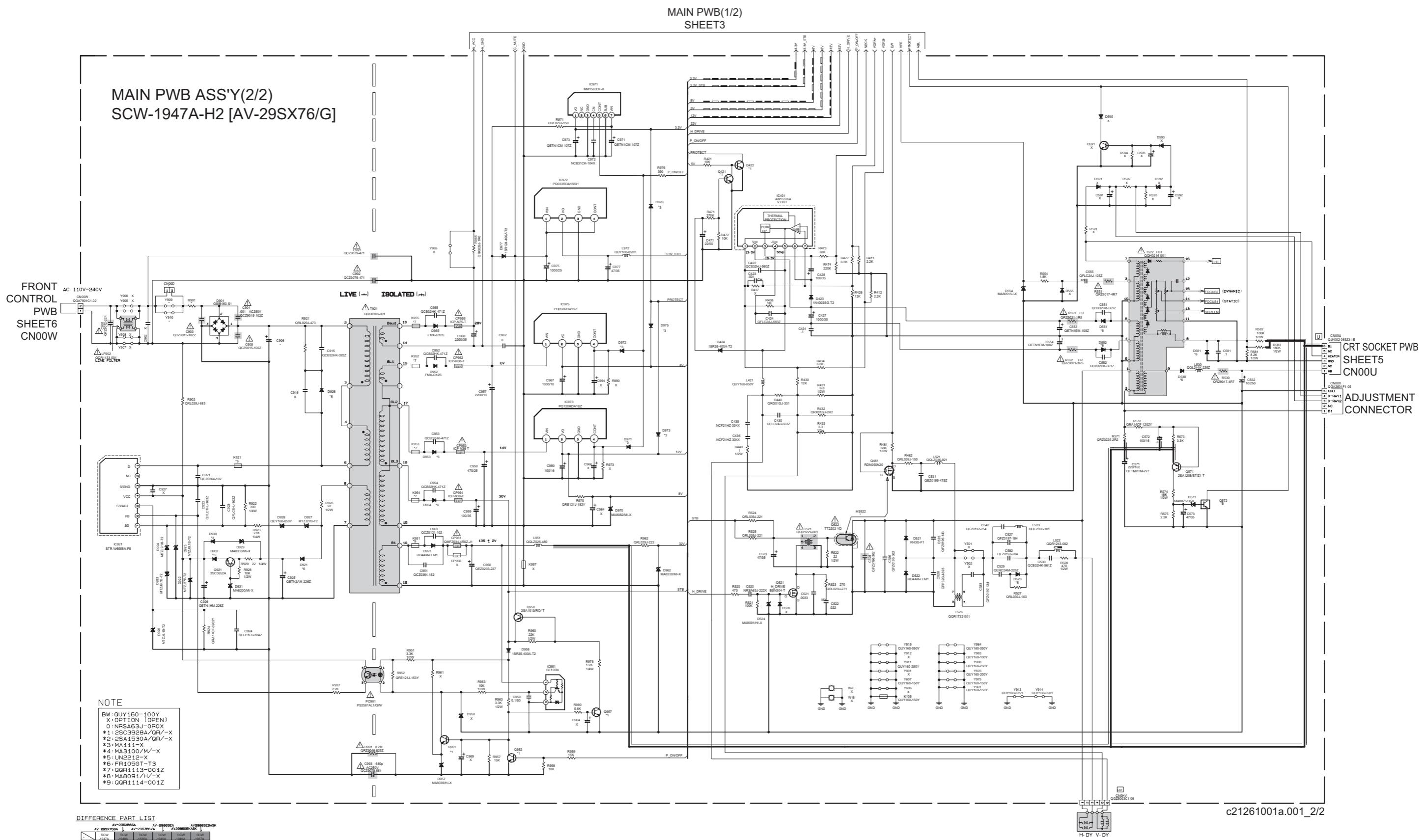
NOTE) 1. Refer to page 2-25 for voltages of this circuit diagram.
2. Refer to page 2-26 for waveforms of this circuit diagram.



- NOTE
 X: NON MOUNT
 O: NPA83U-DROX
 BW: QUY160-050Y
 *1: 2SC3928A/GR-X
 *2: 2SA1530A/GR-X
 *3: MA111-X
 *4: NQL092K-100X
 *5: UN2212-X
 *6: KTC3199-Y-X
 *7: KTC3199-Y-X
 *8: MA80914/H-X
 *9: QQR1114-001Z

NOTE 1. Refer to the part list for the part number of IC701 and IC702.
 2. Refer to page 2-25 for voltages of this circuit diagram.
 3. Refer to page 2-26 for waveforms of this circuit diagram.

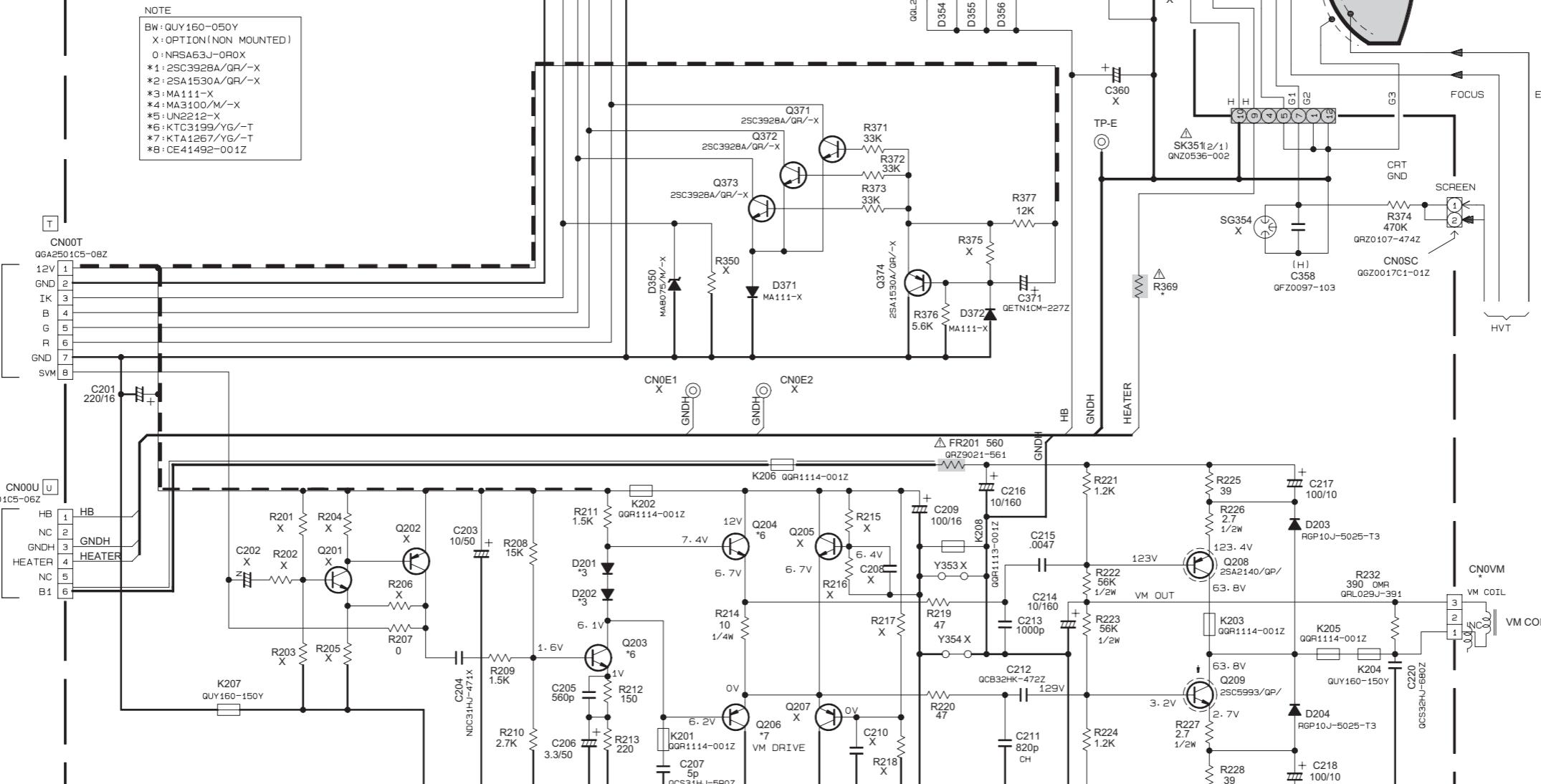
BASS PWB
SHEET
CN00M



**CRT SOCKET PWB ASS'Y
SCW-3038A-H2**

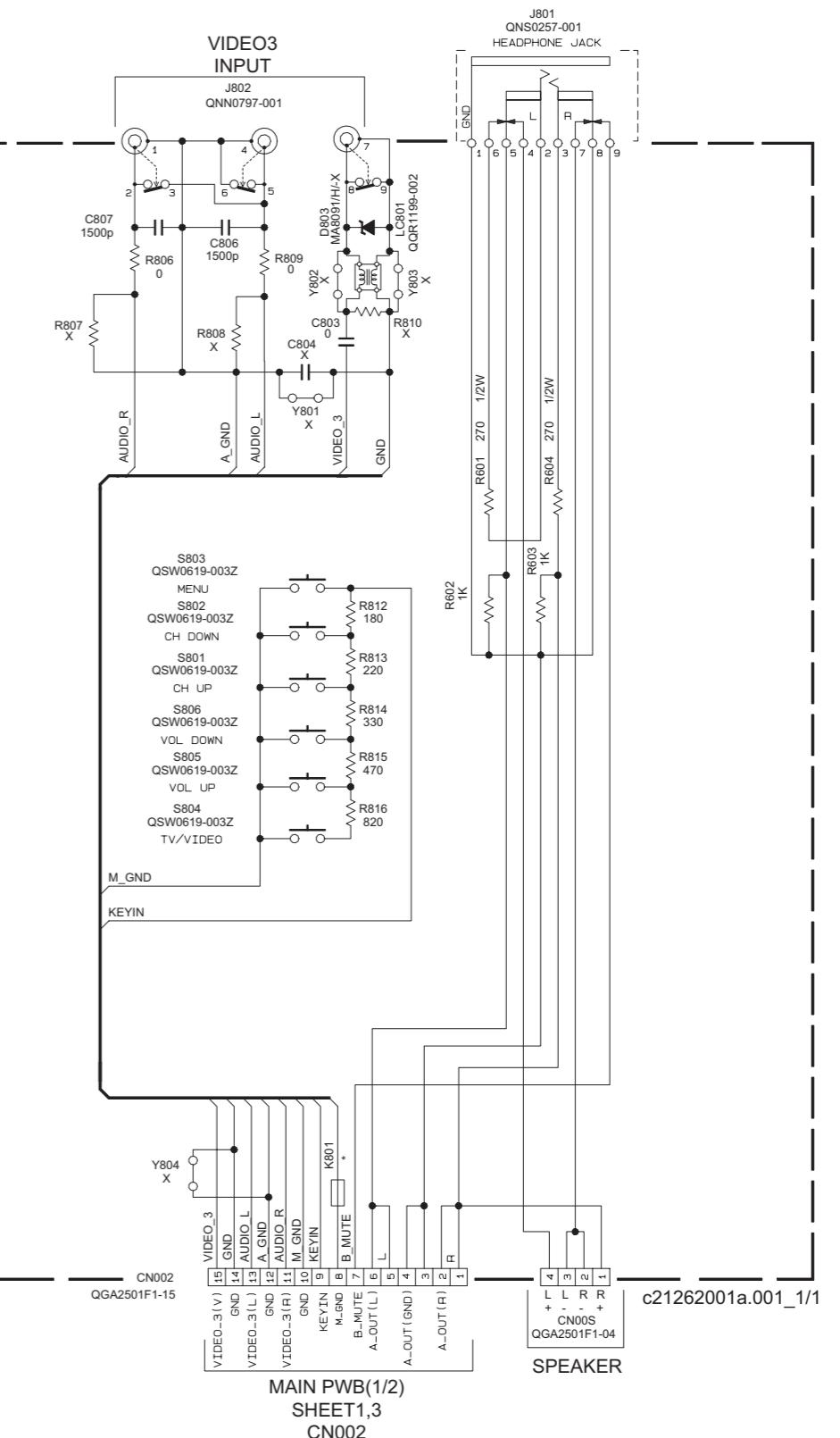
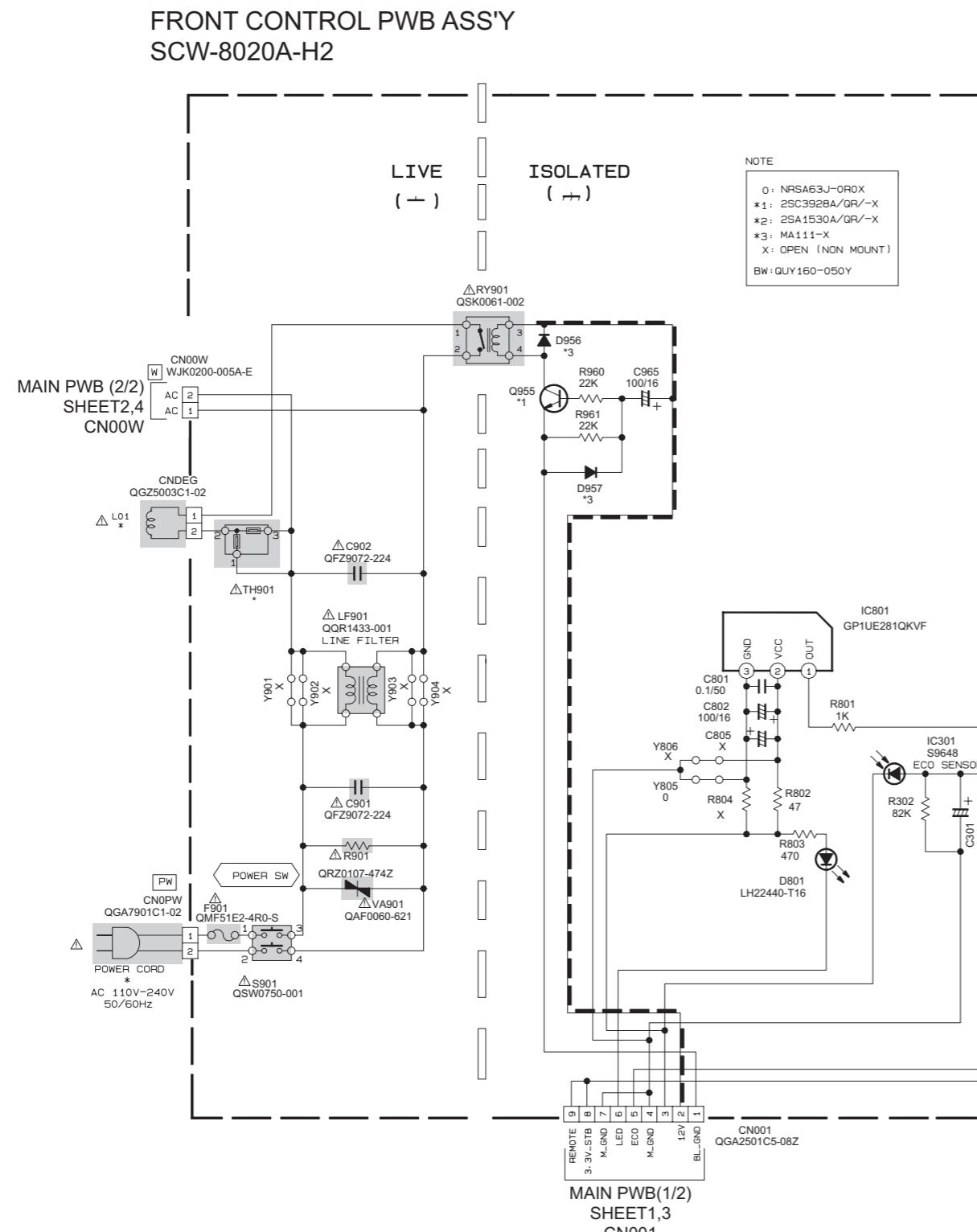
NOTE
 BW: QUY160-050Y
 X: OPTION (NON MOUNTED)
 O: NRSAG3J-0R0X
 *1: 2SC3928A/QR/-X
 *2: 2SA1530A/QR/-X
 *3: MA111-X
 *4: MA3100/M-X
 *5: UN2212-X
 *6: KTC3199/YG/-T
 *7: KTA1267/YG/-T
 *8: CE41492-001Z

**MAIN PWB(1/2)
SHEET1,3
CN00T**



NOTE) 1. Refer to page 2-25 for voltages of this circuit diagram.
 2. Refer to page 2-26 for waveforms of this circuit diagram.

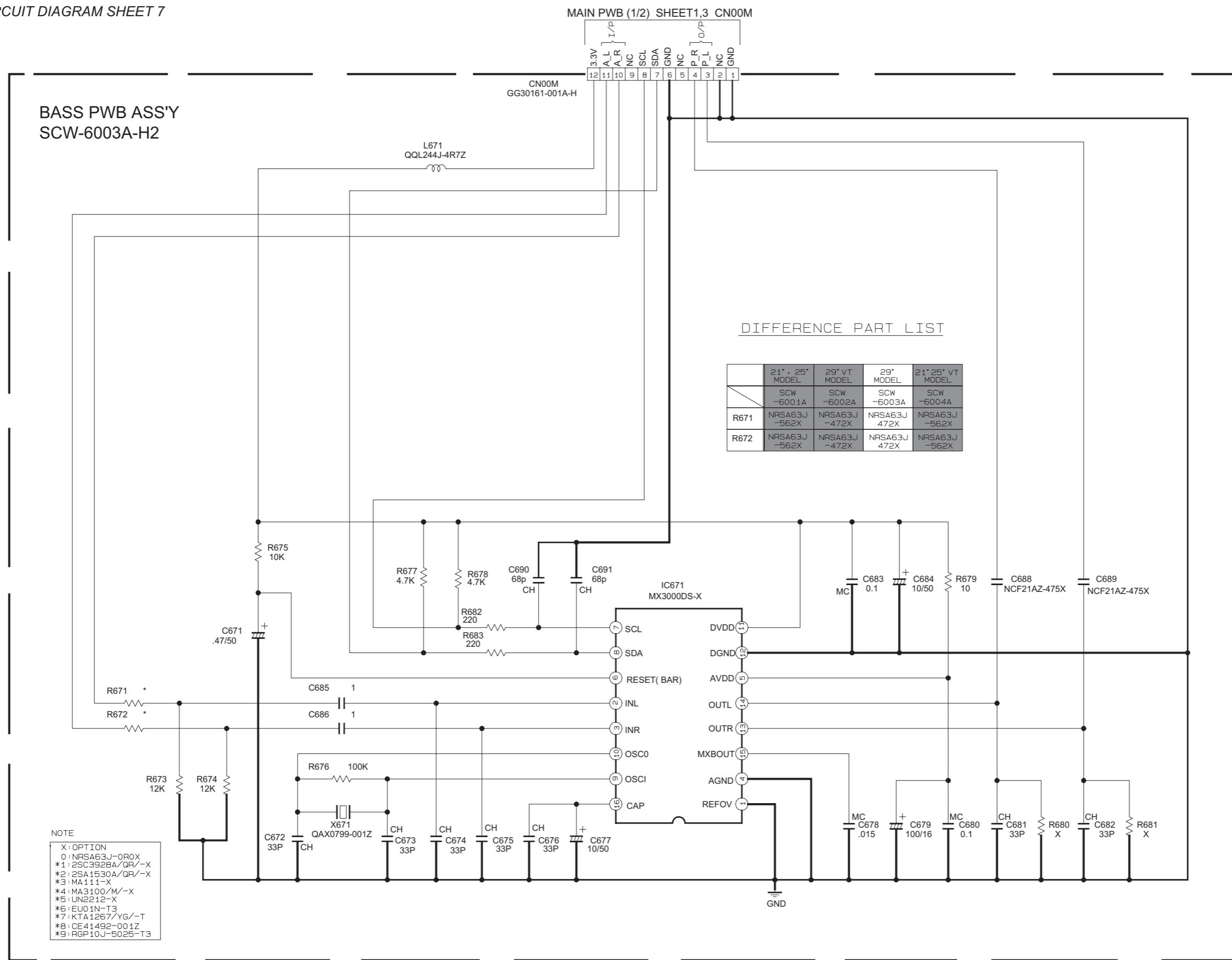
DIFFERENCE PART LIST									
AV-2980EAA	AV-29M292A	AV-29M16PA	AV-29M16HA	AV-29M16SA	AV-29MX56SA	AV-29V16PA	AV-29V16HA	AV-29V16SA	AV-29V16SA
V01	A68AK Y13X								
CN0VM	MJ0404P- 002A-E								
R369	GRZ0023 -1R2								



NOTE) 1. Refer to page 2-25 for voltages of this circuit diagram.
2. Refer to page 2-26 for waveforms of this circuit diagram.

DIFFERENCE PART LIST

	AV-29SX766A	AV-29SS26A	AV-29SS16HA	AV-29SS16BA	AV-29T16PA	AV-29S356VA	AV-29B6SEA	AV29B6SEASK
SCW-8020A	SCW-8020A	SCW-8020A	SCW-8020A	SCW-8020A	SCW-8020A	SCW-8601A	SCW-8023A	SCW-8023A
POWER CORD	QMPR340-165-K2	QMPR340-165-K2	QMPR650-165-JC	QMPR650-165-JC	QMPR380-165-K2	QMPR420-200-JC	QMPR500-165-K2	QMPR340-165-K2
L01	QQW0214-001	QQW0214-001	QQW0214-001	QQW0214-001	QQW0214-001	QQW0213-001	QQW0213-001	QQW0213-001
K801	QQR1114-001Z	QQR1114-001Z	QQR1114-001Z	QQR1114-001Z	QQR1114-001Z	QQR1113-001Z	QQR1113-001Z	QQR1113-001Z
TH901	QAD0145-2R3	QAD0145-2R3	QAD0145-2R3	QAD0145-2R3	QAD0145-2R3	QAD0134-4R5	QAD0134-4R5	QAD0134-4R5

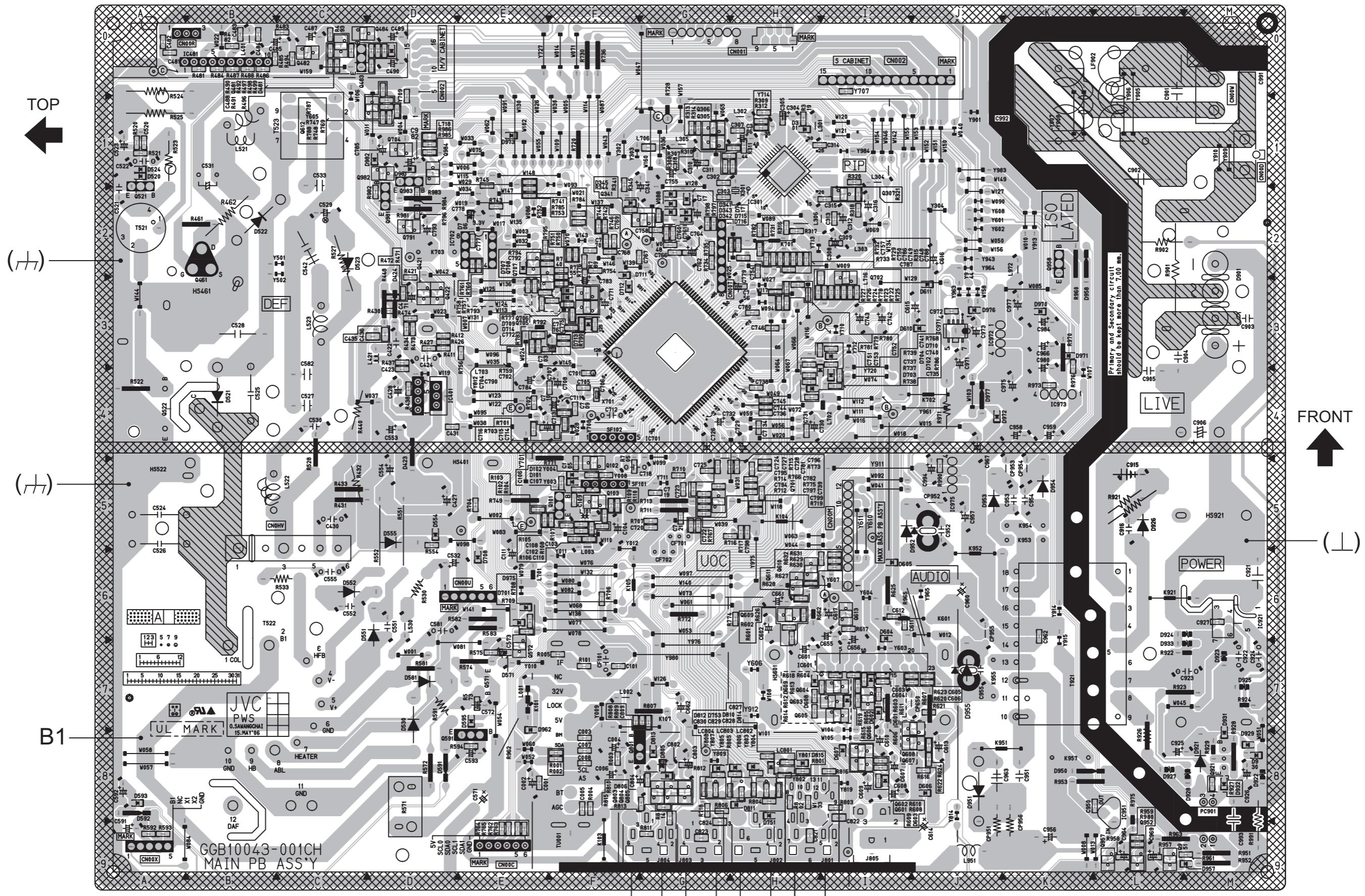


NOTE) 1. Refer to page 2-25 for voltages of this circuit diagram.
2. Refer to page 2-26 for waveforms of this circuit diagram.

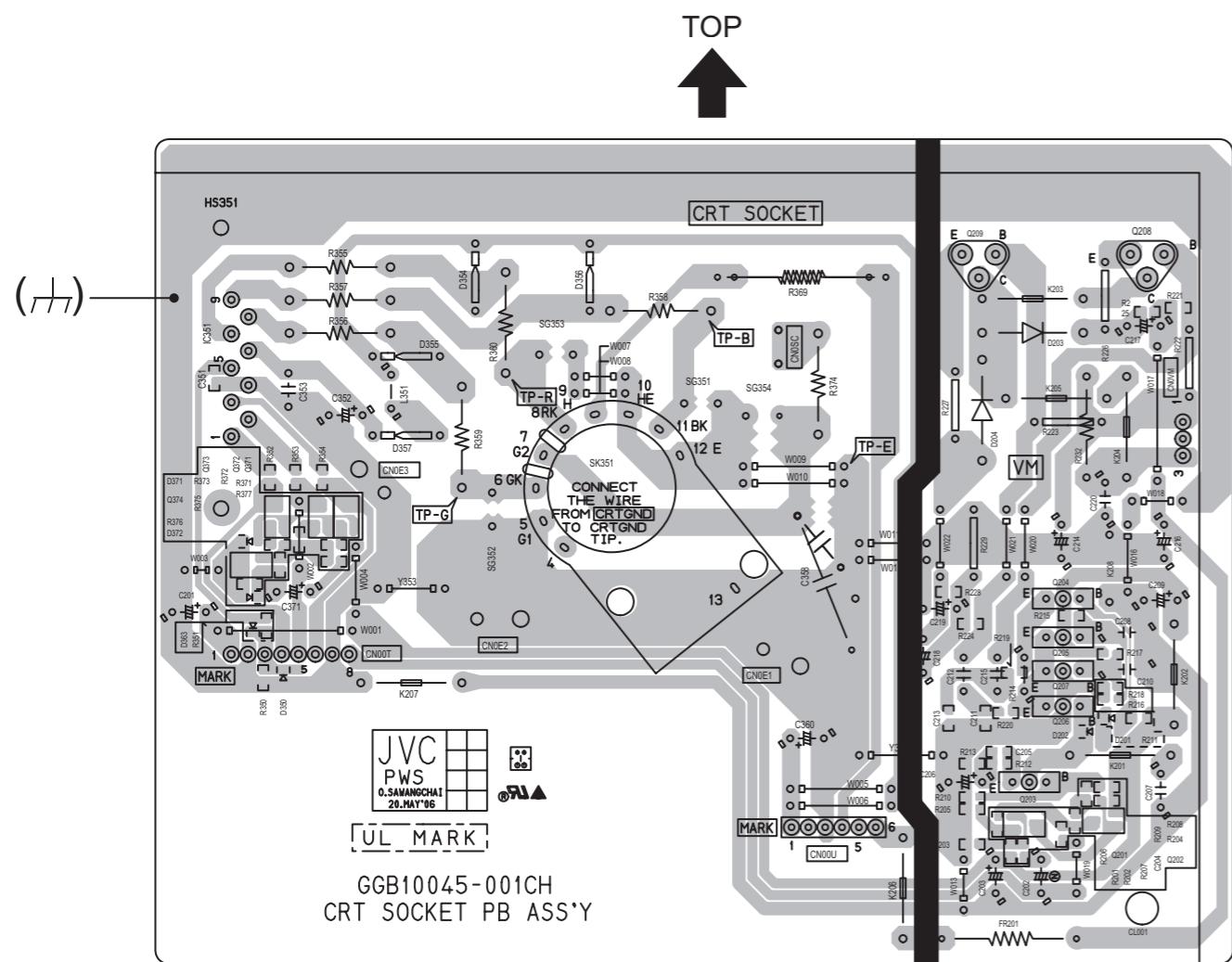
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PATTERN DIAGRAMS

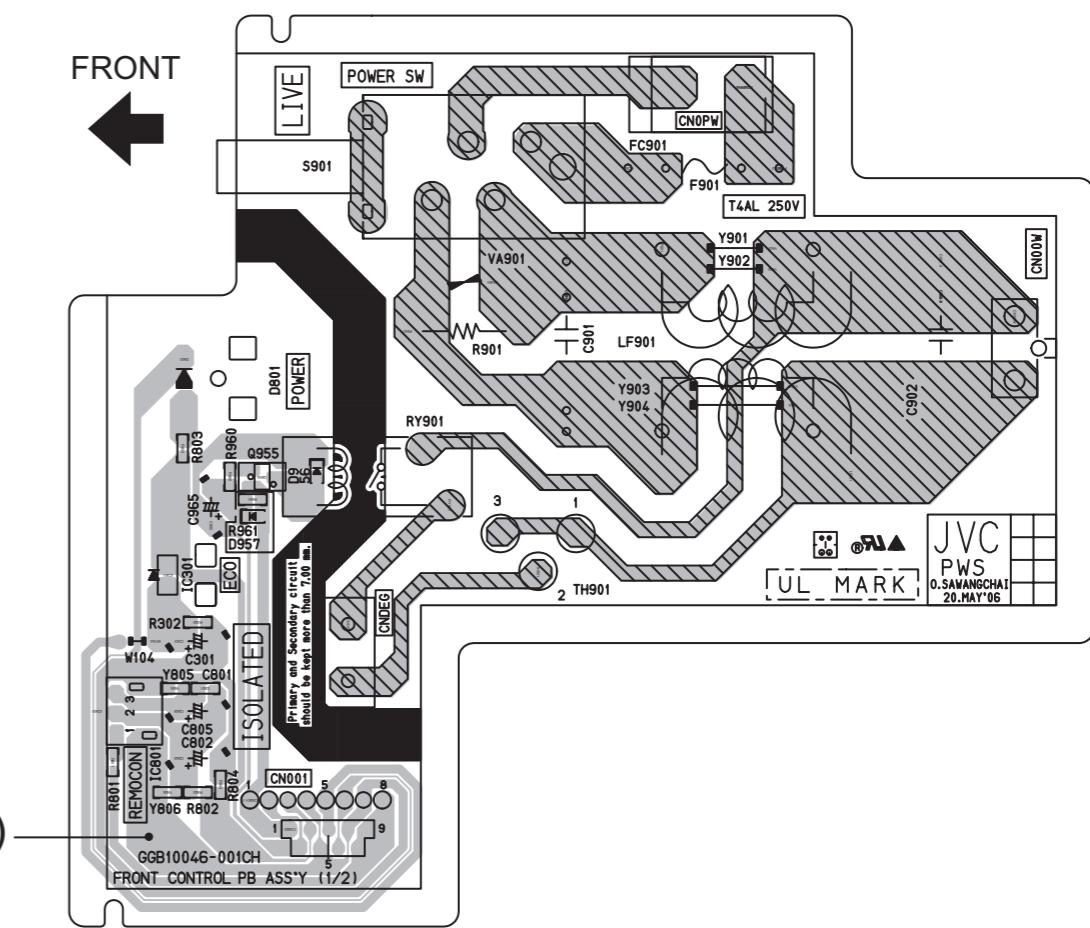
MAIN PWB PATTERN



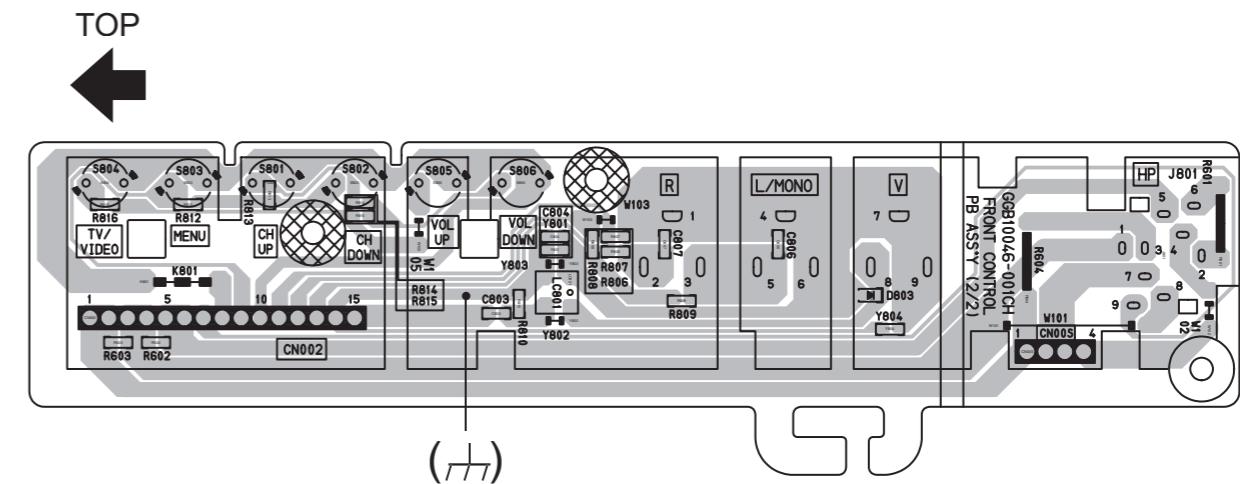
CRT SOCKET PWB PATTERN



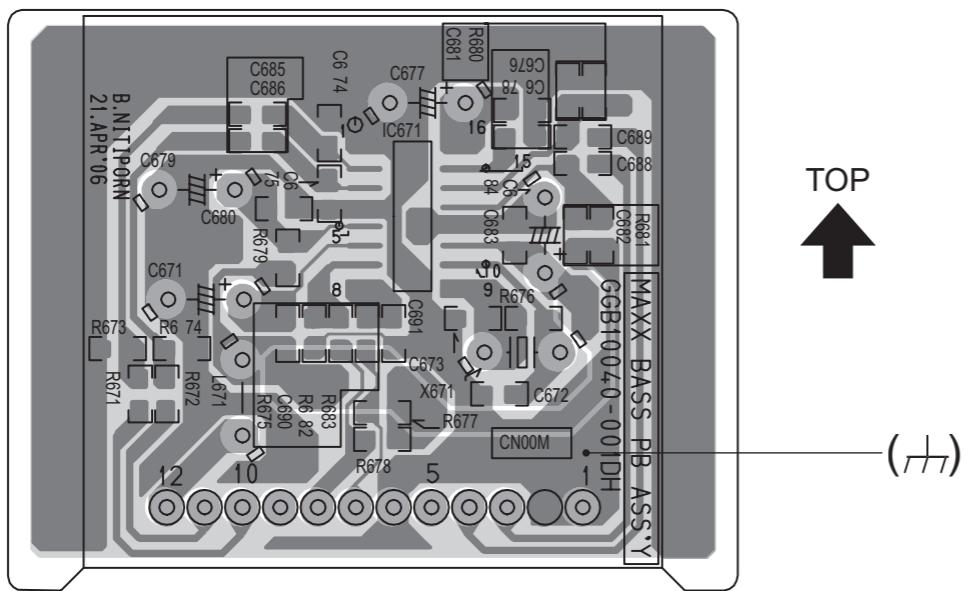
FRONT CONTROL PWB PATTERN



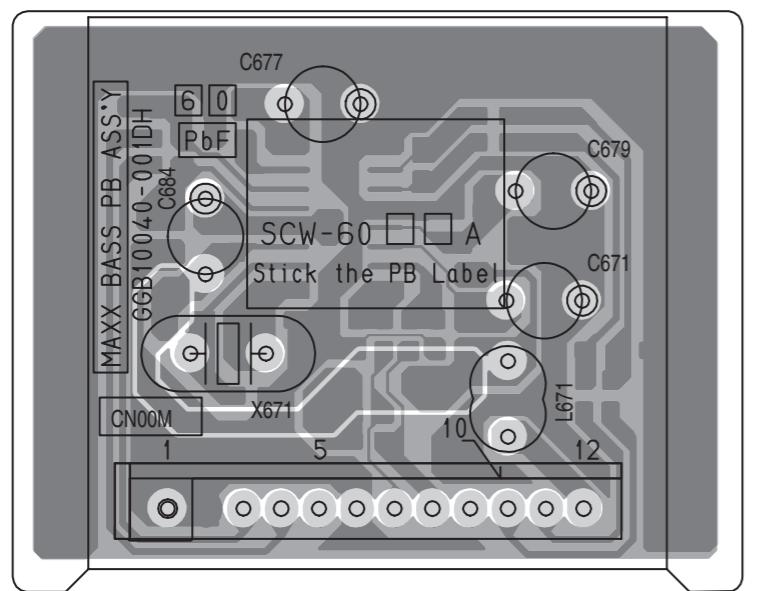
FRONT CONTROL PWB PATTERN



BASS PWB PATTERN [SOLDER SIDE]



BASS PWB PATTERN [PARTS SIDE]



The JVC logo consists of the letters "JVC" in a bold, black, sans-serif font. The "J" is stylized with a vertical bar on its left side.

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