

JVC

SERVICE MANUAL

FLAT COLOUR TELEVISION

AV-29J334/V

BASIC CHASSIS

CW

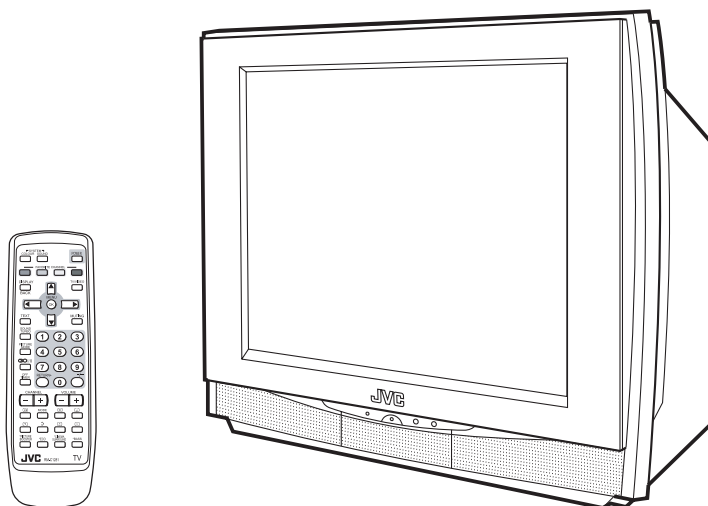


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SPECIFICATION

Items		Contents
Dimensions (W × H × D)		73.1cm × 62.2cm × 49.45cm
Mass		44.4kg
TV RF System		B, G, I, D, K, M
Colour System	TV Mode Video Mode	PAL / SECAM / NTSC3.58 / NTSC4.43 PAL / SECAM / NTSC3.58 / NTSC4.43
Stereo System		Playback
Receiving Frequency	VHF Low VHF High UHF CATV	46.25MHz ~ 140.25MHz (AS0 ~ S6) 147.25MHz ~ 423.25MHz (S7 ~ S36) 431.25MHz ~ 863.25MHz (S37 ~ C57) Mid : X ~ Z, S1 ~ S10 Super: S11 ~ S20 Hyper: S21 ~ S41
Intermediate Frequency	VIF	38.0MHz
	SIF	D/K: 31.5MHz (6.5MHz) I: 32.0MHz (6.0MHz) B/G: 32.5MHz (5.5MHz) M: 33.5MHz (4.5MHz)
Colour Sub Carrier Frequency		4.43MHz (PAL) / 4.40MHz/4.25MHz (SECAM) / 3.58MHz/4.43MHz (NTSC)
Aerial Input Terminal		75Ω unbalanced, coaxial
Power Input		AC110V-AC240V, 50Hz / 60Hz (Operating Voltage AC90V ~ AC260V)
Power Consumption		215W (Max.) / 130W (Avg.)
Picture Tube 		A68LZU185X 29-inch, aspect ratio 4:3, flat square face type, tinted
Screen Size		Visible size :67.6cm (Diagonal) / 55.4cm × 41.4cm (H × V)
High Voltage		32kV -1.5kV / +1.0kV (at zero beam current)
Speaker		6.5cm × 13cm, Oval type × 2 13cm, round type × 1 (Bass blaster unit)
Audio Output		7W + 7W + 13W
Video / Audio Input [1/2/3]	S-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 [1/2/3]	1V(p-p), negative sync, 75Ω, RCA pin jack × 3
	Audio [1/2/3]	500mV(rms) (-4dBs), high impedance, RCA pin jack × 6
	Component Video [2]	RCA pin jack × 3 Y:1V(p-p), positive (negative sync), 75Ω Cb/Cr:0.7V(p-p), 75Ω
Video / Audio Output	Video Audio	1V(p-p), 75Ω, RCA pin jack × 1 500mV(rms)(-4dBs), Low impedance (400Hz when modulated 100%), RCA pin jack × 2
Headphone		3.5mm stereo mini jack × 1
Remote Control Unit		RM-C1281-2H (AA/R06/UM-3 battery × 2)

Design & specifications are subject to change without notice.

SECTION 1 PRECAUTION

1.1 SAFETY PRECAUTIONS

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

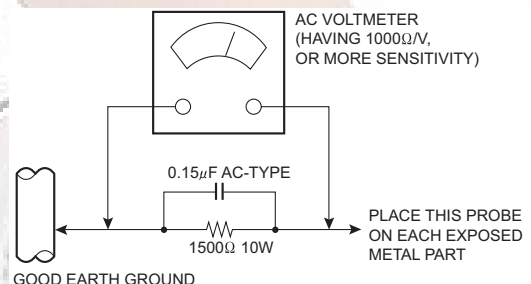
The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 3000V AC (r.m.s.) for a period of one second. (. . . Withstand a voltage of 1100V AC (r.m.s.) to an appliance rated 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 1000 Ω per volt or more sensitivity in the following manner. Connect a 1500 Ω 10W resistor paralleled by a 0.15 μ F AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.). Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.). However, in tropical area, this must not exceed 0.3V AC (r.m.s.). This corresponds to 0.2mA AC (r.m.s.).



SECTION 2

SPECIFIC SERVICE INSTRUCTIONS

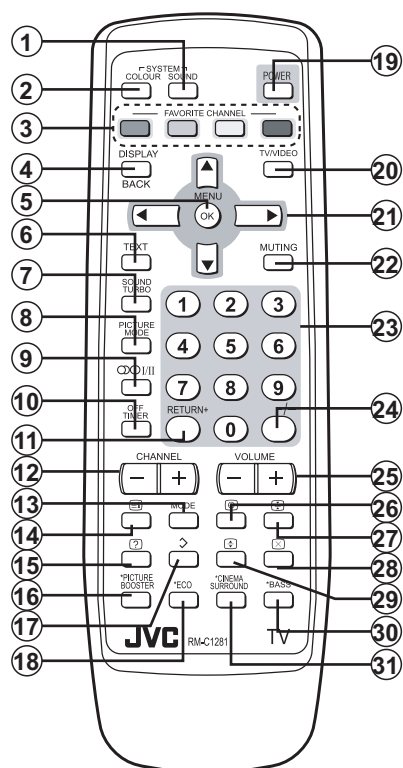
2.1 FEATURES

- New chassis design enables use of an interactive on-screen control.
- Pure flat CRT produces fine textured picture in every detail.
- Wide range voltage (110V ~ 240V) for AC power input.
- With AUDIO/VIDEO/S-VIDEO/COMPONENT input terminals.
- I²C bus control utilizes single chip ICs.
- By means of AUTO PROGRAM, the TV stations can be selected automatically and the TV channels can also be rearranged automatically.
- Built-in DIGITAL ECO MODE (ECONOMY, ECOLOGY).
In accordance with the brightness in a room, the brightness and/or contrast of the picture can be adjusted automatically to make the optimum picture which is easy on the eye.
- Built-in OFF TIMER & RETURN +.

2.2 FUNCTIONS

■ REMOTE CONTROL UNIT

RM-C1281-2H



① SOUND SYSTEM key

② COLOUR SYSTEM key

③ FAVORITE CHANNEL keys

④ DISPLAY BACK key

⑤ MENU (OK) key

⑥ Not used

⑦ SOUND TURBO key

⑧ PICTURE MODE key

⑨ SOUND setting key

⑩ OFF TIMER key

⑪ RETURN + key

⑫ CHANNEL (-/+) keys

⑬ Not used

⑭ Not used

⑮ Not used

⑯ Not used

⑰ Not used

⑱ ECO key

⑲ POWER key

⑳ TV / VIDEO key

㉑ MENU (▲/▼, ◀/▶) keys

㉒ MUTING key

㉓ Number keys

㉔ -/-- key

㉕ VOLUME (-/+) keys

㉖ Not used

㉗ Not used

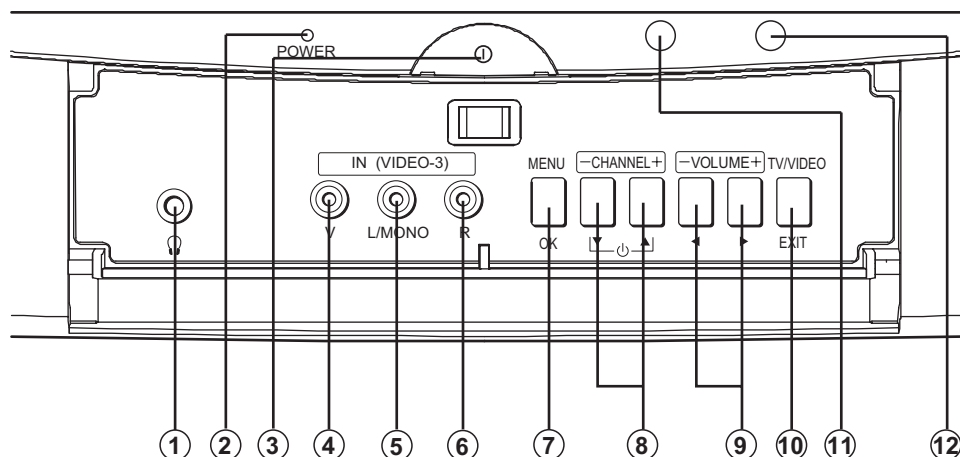
㉘ Not used

㉙ Not used

㉚ BASS key

㉛ CINEMA SURROUND key

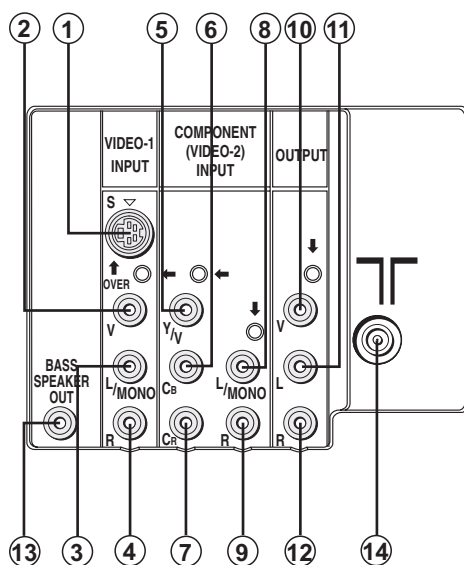
■ FRONT PANEL CONTROLS



- ① HEADPHONE jack
- ② POWER lamp
- ③ MAIN POWER button
- ④ IN (VIDEO-3) : VIDEO
- ⑤ IN (VIDEO-3) : AUDIO L / MONO
- ⑥ IN (VIDEO-3) : AUDIO R

- ⑦ MENU (OK) button
- ⑧ CHANNEL (-/+) buttons
- ⑨ VOLUME (-/+) buttons
- ⑩ TV/VIDEO EXIT button
- ⑪ ECO sensor
- ⑫ Remote control sensor

■ REAR TERMINAL



VIDEO-1 INPUT TERMINAL

- ① S-VIDEO
- ② VIDEO
- ③ AUDIO L/MONO
- ④ AUDIO R

COMPONENT (VIDEO-2) INPUT TERMINAL

- ⑤ Y/VIDEO
- ⑥ Cb
- ⑦ Cr
- ⑧ AUDIO L/MONO
- ⑨ AUDIO R

OUTPUT TERMINAL

- ⑩ VIDEO
- ⑪ AUDIO L
- ⑫ AUDIO R

BASS BLASTER UNIT OUTPUT TERMINAL

- ⑬ BASS SPEAKER OUT

- ⑭ Aerial input terminal

2.3 MAIN CPU [MAIN PWB : IC701] PIN FUNCTION

Pin no.	Pin name	I/O	Remark
1	VssP2	-	GND
2	VssC4	-	GND
3	V1.8C4	I	1.8V (Digital)
4	V3.3A3	I	3.3V
5	VrefP_Sdac	I	3.3V (Positive)
6	VrefN_Sdac	-	GND
7	VrefP_Sdac	I	3.3V (Negative)
8	VrefN_Sdac	-	GND
9	VrefP_Sdac	I	3.3V (Positive)
10	Xtalln	I	24.567MHz for system clock
11	XtalOut	O	24.567MHz for system clock
12	VssA1	-	GND
13	NECK	I	V-guard input/ I/O switch
14	CONT	I	1.8V regulator control
15	V5P1	I	+5V
16	Ph2	-	Phase-2 filter
17	Ph1	-	Phase-1 filter
18	Gnd1	-	GND
19	SecPll	-	SECAM PLL decoupling
20	Dec8G	-	Bandgap decoupling
21	EW	O	East-West drive output
22	VDRB-	O	Vertical drive B output
23	VDRA+	O	Vertical drive A output
24	Vif1	I	Video IF input 1
25	Vif2	I	Video IF input 2
26	Vsc	-	Vertical sawtooth capacitor
27	Iref	I	Reference current input
28	GndIF	-	GND
29	Sif1	I	Sound IF input 1
30	Sif2	I	Sound IF input 2
31	AGC	O	Tuner AGC output
32	EHT	I	EHT/overvoltage protection input
33	Ssif/RefIn/AvI/RefOut	O	Automatic Volume Levelling/ sound IF input / subcarrier reference output / external reference signal input for I signal mixer for DVB operation
34	L3	I	Audio-L3 input (left signal)
35	R3	I	Audio-R3 input (right signal)
36	L_OUT	O	Audio L output
37	R_OUT	O	Audio R output
38	DecsDem	-	Decoupling sound demodulator
39	QssO/AmO/AudeEm	O	QSS intercarrier output / AM output / deemphasis / (front-end audio out)
40	Gnd2	-	GND
41	Plilf	-	IF-PLL loop filter
42	SifAgc	-	AGC sound IF
43	IfVo/FmRo/DvbO	O	Not used
44	NC	O	Not used
45	V8AudioSwitches	I	8V
46	AgcSsif	-	AGC capacitor second sound IF
47	V5P2	I	5V
48	V_OUT	O	Video output
49	L1	I	Audio-L1 input
50	R1	I	Audio-R1 input
51	V3	I	Video V3 input
52	C4	I	Not used
53	Audio2InL	I	Not used
54	Audio2InR	I	Not used
55	V2/Y	I	Video 2 input
56	L2	I	Audio L2 input (Left signal)
57	R2	I	Audio R2 input (right signal)
58	Y3/Cvbs	I	S-Video Y1 input
59	C1	I	S-Video C1 input
60	AudioLsL	O	Audio L output for audio power amplifier
61	AudioLsR	O	Audio R output for audio power amplifier
62	HP_L	O	Headphone L
63	HP_R	O	Headphone R

Pin no.	Pin name	I/O	Remark
64	CVBSO/PIP	O	CVBS / PIP output
65	SVM	O	Scan velocity modulation output
66	FbiSo	I	Flyback input/sandcastle output
67	Hout	O	Horizontal output
68	VssComb	-	GND
69	V5Comb	I	5V
70	Vin/R2/Pr	I	PIP R input
71	Uin/B2/Pb	I	PIP B input
72	Yin/G2/Y	I	PIP G input
73	Ysync	I	Not used
74	Yout	O	Not used
75	Uout/INSSW2	I	YUV insertion input
76	NC	O	Not used
77	INSSW3	I	YUV insertion input
78	R3/Pr	I	Component PR input (Video-2)
79	G3/Y	I	Component Y input (Video-2)
80	B3/Pb	I	Component PB input (Video-2)
81	Gnd3	-	GND
82	V5P3	I	5V
83	BCL	I	Beam current limiter input
84	BLKIN	I	Black current input
85	Rout	O	R output
86	Gout	O	G output
87	Bout	O	B output
88	V3.3A1	I	3.3V
89	RefAdN	-	GND
90	V3.3RefAdP	I	3.3V (Positive)
91	RefAd	I	3.3/2V
92	GndA	-	GND
93	V1.8A	I	1.8V
94	V3.3A2	I	3.3V
95	VssADC	-	GND
96	V1.8ADC	I	1.8V
97	REMOTE	I	Remote control
98	PW_LED	I	POWER LED control
99	P11/TO	I	POWER LED control
100	V1.8C2	I	1.8V
101	VssC2	-	GND
102	COMPONENT-PIP	-	Not used
103	COMB_SW_NT3.5/OTHER	-	Not used
104	VER_PROTECT	O	X-ray protect
105	S_REDUCE	O	Sound control
106	P00/I2SDI1	O	Not used
107	POWER	O	SUB POWER control
108	SCL1	I	I2C bus clock
109	SDA1	I/O	I2C bus clock
110	V3.3P	I	3.3V
111	ROTATION	O	ROTATION
112	3.58/OTHER	O	NTSC 3.58 detection
113	A_MUTE	O	Audio muting
114	4.5/OTHER	O	NTSC 4.43 detection
115	PROT	I	Protect
116	ECO_IN	I	ECO sensor level detection
117	V1.8C1	I	1.8V (Digital)
118	DecV1V8	I	1.8V
119	KEY_IN	I	Key scan data
120	VDO_DET	I	Video DET input
121	VSSC1+P1	-	Digital GND
122	P24/PWM3	I	S-Video DET input
123	P25/PWM4	O	GTVA_reset
124	V1.8C3	I	1.8V (Digital)
125	VssC3	-	GND
126	P12/Int2	I	External interrupt
127	SDA0	I/O	I2C bus data (for memory)
128	SCL0	I	I2C bus clock (for memory)

SECTION 3 DISASSEMBLY

3.1 DISASSEMBLY PROCEDURE

3.1.1 REMOVING THE TWIN PORT BASS BLASTER UNIT

- Unplug the power supply cord.
 - (1) Disconnect the TWIN PORT BASS BLASTER UNIT's cord from the rear of the TV set.
 - (2) Remove the TWIN PORT BASS BLASTER UNIT by pulling it upwards.

NOTE:

After removing the TWIN PORT BASS BLASTER UNIT, proceed to the following procedure.

3.1.2 REMOVING THE REAR COVER

- Unplug the power cord.
 - (1) Remove the 16 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.

3.1.3 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.

3.1.4 REMOVING THE AV TERMINAL BOARD

- Remove the REAR COVER.
 - (1) Remove the 4 screws [C] as shown in Fig.1.
 - (2) When you pull out the AV TERMINAL BOARD in the direction of arrow [D] as shown in Fig.1, it can be removed.

3.1.5 REMOVING THE CONTROL BASE

- Remove the REAR COVER.
- Remove the CHASSIS.
 - (1) While pushing down the 2 claws [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.)

3.1.6 REMOVING THE SPEAKER

- Remove the REAR COVER.
 - (1) Remove the 2 screws [G], and remove the SPEAKER HOLDER.
 - (2) Remove the 4 screws [H] as shown in Fig.1.
 - (3) Withdraw the SPEAKER backward.
 - (4) Follow the same steps when removing the other hand SPEAKER.

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 solderside 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.

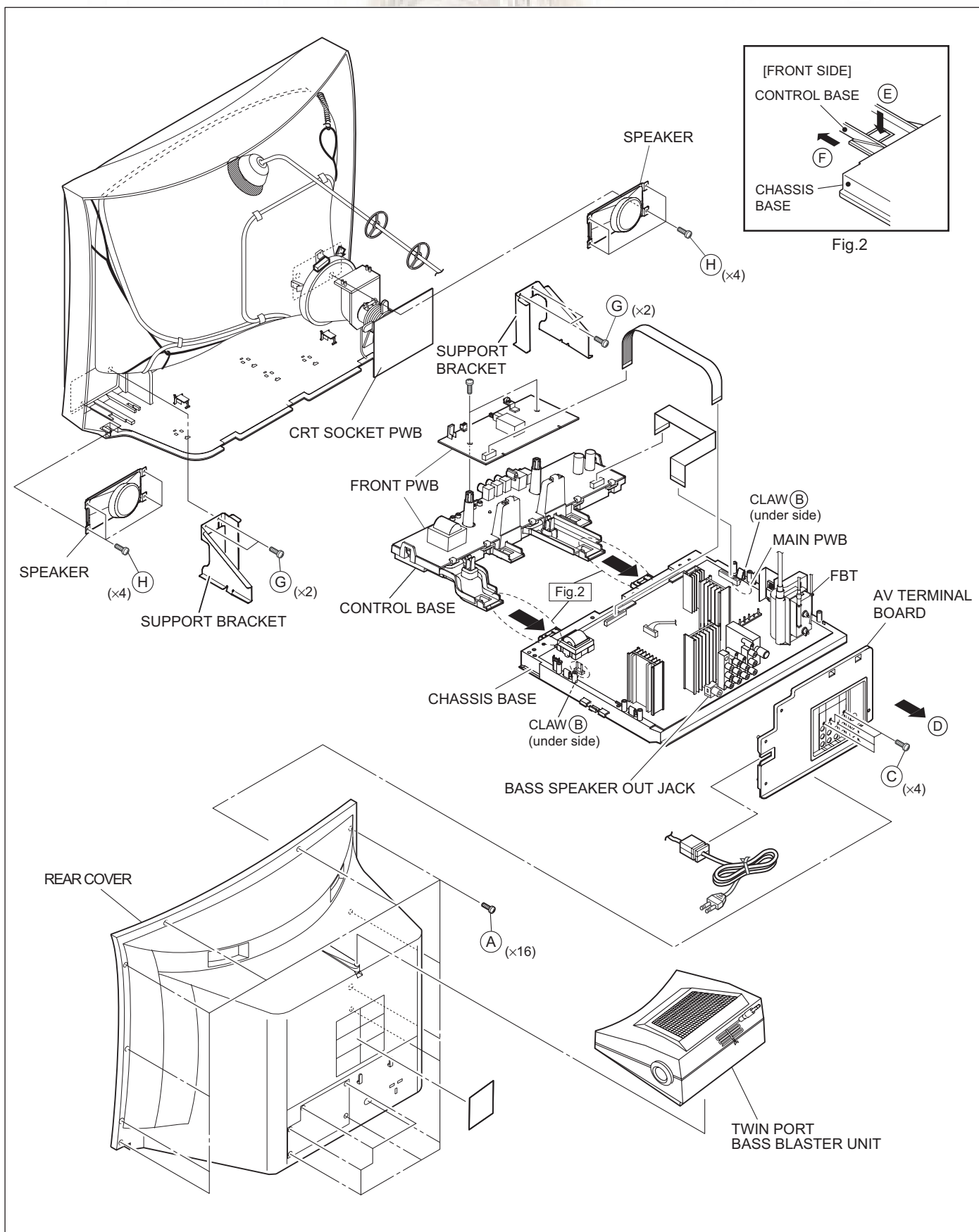


Fig.1

3.2.3 FACTORY SETTING VALUE

■ SETTING OF SYSTEM CONSTANT SET

Setting item	Setting content	Setting value
SYSTEM	→ MULTI ↔ TRIPLE ↔ PAL ↔ THAI ←	MULTI
COMB	→ YES ↔ NO ←	YES
TILT	→ YES ↔ NO ←	YES
SUPER BASS	→ YES ↔ NO ←	YES
TEXT	→ SINGLE ↔ NO ↔ PAT ←	NO
LANGUAGE	→ E/V ↔ E/T ←	E/V
SOUND	→ STEREO ↔ PB ↔ MONO ←	PB
BILINGUAL	→ YES ↔ NO ←	NO
BLUE BACK MUTE	→ YES ↔ NO ←	NO
COLOUR AUTO	→ YES ↔ NO ←	NO
ECO SENSOR	→ YES ↔ NO ←	YES
SURROUND	→ YES ↔ NO ←	YES
PICTURE BOOSTER	→ YES ↔ NO ←	NO
COMPONENT	→ YES ↔ NO ←	YES
PIP	→ YES ↔ NO ←	NO
S INPUT	→ YES ↔ NO ←	YES

Table 1

■ SETTING OF BASIC FUNCTIONS

Setting item	Setting value
POWER	Off
SUB POWER	On
VOLUME	15
COLOR SYSTEM	PAL
SOUND SYSTEM	B/G
PICTURE MODE (VSM)	BRIGHT
CINEMA SURROUND	OFF
SUPER BASS	ON
OFF TIMER	OFF
CHANNEL POSITION	PR01

Table 2

■ SETTING OF MENU SCREEN

Setting item	Setting value
INPUT	TV
VNR	AUTO
COMPRESS (16:9)	OFF
PICTURE TILT	◆
AUTO SHUTOFF	OFF
CHILD LOCK	OFF
BLUE BACK	ON
VIDEO-2 SET	VIDEO
AUTO PROGRAM	Refer to OPERATING INSTRUCTIONS
EDIT / MANUAL	Refer to OPERATING INSTRUCTIONS
LANGUAGE	VIET
WHITE BALANCE	COOL
TINT	Centre
COLOUR	Centre
BRIGHT	Centre
CONT	Maximum
SHARP	Centre
BALANCE	Centre
SOUND MODE	DYNAMIC
SOUND TURBO	OFF
AI VOLUME	ON
FAVORITE CH RED	PR01
FAVORITE CH GREEN	PR02
FAVORITE CH YELLOW	PR03
FAVORITE CH BLUE	PR04
AI ECO SENSOR	OFF
AI ECO DISPLAY	ON

Table 3

■ SERVICE MENU SETTING ITEMS

Setting item	Setting value
1. IF	1. VCO 2. DELAY POINT
2. V/C	1. SCREEN 2. CUTOFF(B/G) 3. WDR(R/G/B) 4. BRIGHT(TV/VDO 1/2/3) 5. CONT(TV/VDO 1/2/3/TV 16:9/VDO 16:9) 6. COLOUR(TV/VDO1/2/3/DVD) 7. TINT(TV/VDO 1/2/3) 8. SHARP [Do not adjust] 9. Y DELAY [Do not adjust] 10. TINT DVD [Do not adjust] 11. AMP T. SHARP
3. AUDIO [Do not adjust]	1. DCXO ADJ 2. NICAM lower ERR LIM 3. NICAM upper ERR LIM 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 15. V-SCROLL
5. VSM W/B (BRIGHT/STANDARD/SOFT) (COOL/WARM/NORMAL)	1. BRIGHT 2. CONT 3. COLOUR 4. SHARP 5. HUE 1. R DRIVE 2. G DRIVE 3. B DRIVE
6. STATUS [Display only]	
7. PLUG & PLAY(ON) [Display only]	

Table 4

3.3 REPLACEMENT OF CHIP COMPONENT

3.3.1 CAUTIONS

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

3.3.2 SOLDERING IRON

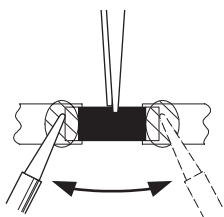
- (1) Use a high insulation soldering iron with a thin pointed end of it.
- (2) A 30w soldering iron is recommended for easily removing parts.

3.3.3 REPLACEMENT STEPS

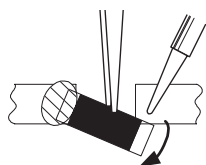
1. How to remove Chip parts

[Resistors, capacitors, etc.]

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



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

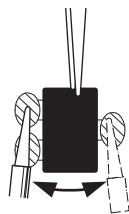


[Transistors, diodes, variable resistors, etc.]

- (1) Apply extra solder to each lead.



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



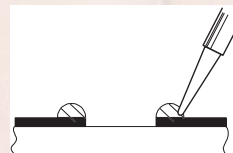
NOTE :

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

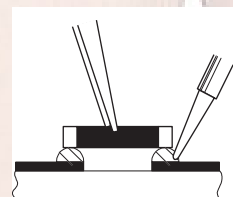
2. How to install Chip parts

[Resistors, capacitors, etc.]

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

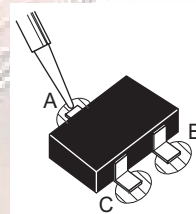


- (2) Grasp the chip part with tweezers and place it on the solder. Then heat and melt the solder at both ends of the chip part.

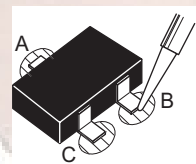


[Transistors, diodes, variable resistors, etc.]

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



- (4) Then solder leads B and C.



SECTION 4 ADJUSTMENT

4.1 ADJUSTMENT PREPARATION

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

4.2 PRESETTING BEFORE ADJUSTMENT

Unless otherwise specified in the adjustment instructions, preset the following functions with the remote control unit.

■ User mode setting position

Setting item	Setting value
PICTURE MODE (VSM)	BRIGHT
TINT, COLOUR, BRIGHT, SHARP	Centre
CONT	Maximum
VNR	OFF
AI ECO SENSOR	OFF
BALANCE	Centre
SOUND TURBO	OFF
CINEMA SURROUND	OFF
COMPRESS	4:3

4.3 MEASURING INSTRUMENT AND FIXTURES

- (1) DC voltmeter (or Digital voltmeter)
- (2) Oscilloscope
- (3) Signal generator (Pattern generator) [PAL/SECAM/NTSC]
- (4) Remote control unit

4.4 ADJUSTMENT ITEMS

■ B1 VOLTAGE

■ FOCUS ADJUSTMENT

■ IF CIRCUIT ADJUSTMENTS

- IF VCO adjustment
- DELAY POINT (AGC TAKE-OVER) adjustment

■ VIDEO CIRCUIT ADJUSTMENTS

- WHITE BALANCE (Low light) adjustment
- WHITE BALANCE (High light) adjustment
- SUB BRIGHT adjustment
- SUB CONTRAST adjustment
- SUB COLOUR 1 adjustment
- SUB COLOUR 2 adjustment
- SUB TINT 1 adjustment
- SUB TINT 2 adjustment

■ AUDIO SETTING

■ DEFLECTION CIRCUIT ADJUSTMENTS

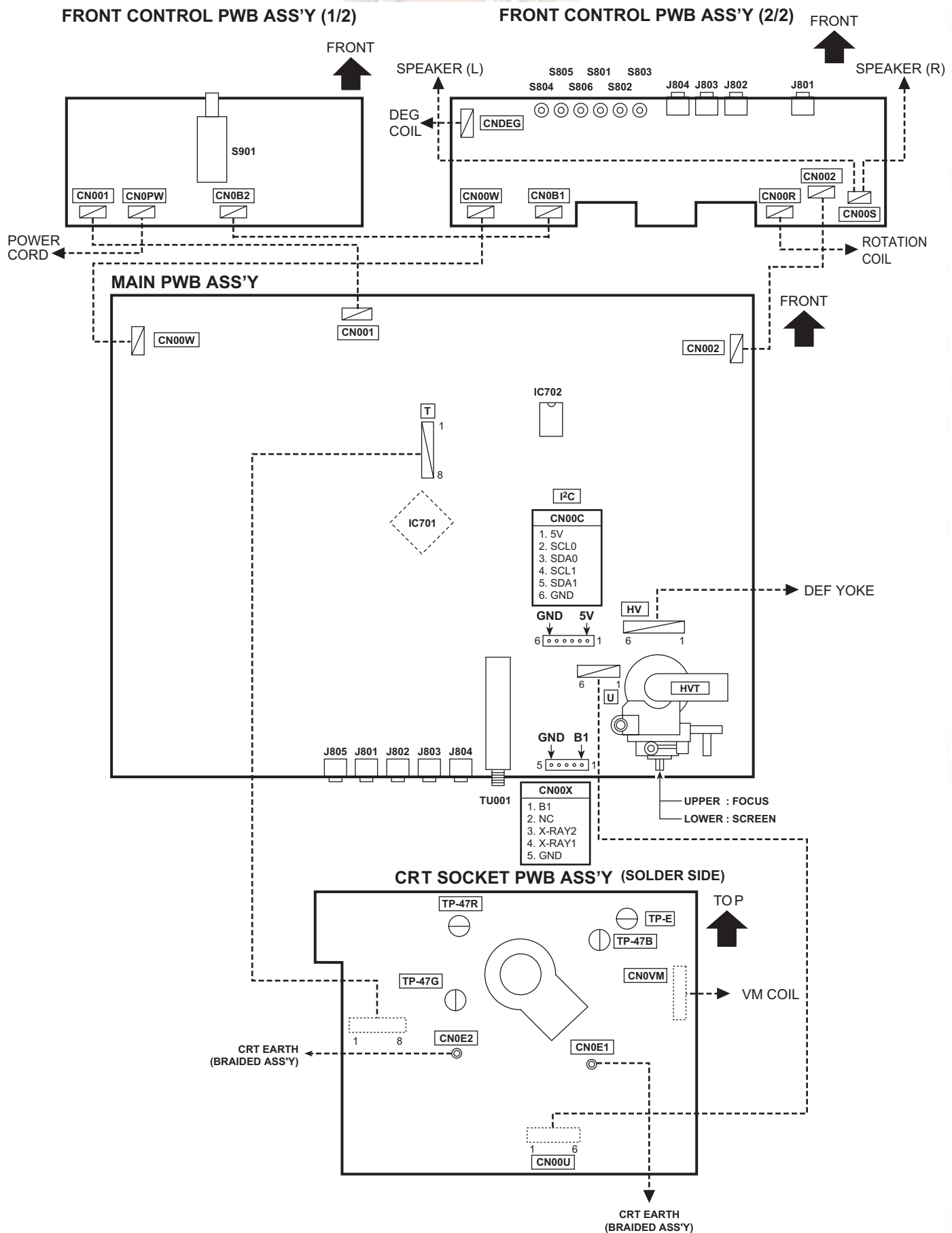
- V.SLOPE adjustment
- V.POSITION adjustment
- V.HEIGHT adjustment
- H.POSITION adjustment
- H. WIDTH adjustment
- SIDE PIN adjustment
- TRAPEZIUM adjustment
- V.S-CURVE adjustment
- CORNER adjustment
- H. PARALLEL adjustment
- H.BOW adjustment

■ VSM PRESET SETTING

■ PURITY AND CONVERGENCE ADJUSTMENTS

- PURITY adjustment
- STATIC CONVERGENCE adjustment
- DYNAMIC CONVERGENCE adjustment

4.5 ADJUSTMENT LOCATIONS



4.6 BASIC OPERATION IN SERVICE MENU

Operate the SERVICE MENU with the remote control unit.

4.6.1 SERVICE MENU ITEMS

With the SERVICE MENU, various settings (adjustments) can be made, and they are broadly classified in the following items of settings:

1. IF	For entering/adjusting the setting values (adjustment values) of the IF circuit.
2. V/C	For entering/adjusting the setting values (adjustment values) of the VIDEO circuit.
3. AUDIO	For entering/adjusting the setting values (adjustment values) of the AUDIO circuit.
4. DEF	For entering/adjusting the setting values (adjustment values) of the DEFLECTION circuit.
5. VSM W/B	For setting the values of STANDARD, SOFT, BRIGHT and COOL, NORMAL, WARM.
6. STATUS	This is not used for service.
7. PLUG & PLAY (ON)	This is not used for service.

4.6.2 BASIC OPERATION IN SERVICE MENU

1. HOW TO ENTER SERVICE MENU

Press the [DISPLAY] key and the [PICTURE MODE] key on the remote control unit simultaneously.
The SERVICE MENU screen will be displayed. (See Fig. 1 on the next page.)

2. SELECTION OF SUB MENU SCREEN

Press one of the keys 1 to 6 on the remote control unit, and select the SUB MENU SCREEN from the SERVICE MENU. (See Fig.1 on the next page.)

SERVICE MENU → SUB MENU

- | | |
|----------|---------------------|
| 1. IF | 5. VSM W/B |
| 2. V/C | 6. STATUS |
| 3. AUDIO | 7. PLUG & PLAY (ON) |
| 4. DEF | |

3. METHOD OF SETTING

NOTES:

- Once the setting values are set, they are memorized automatically.
- It must not be adjusted without inputting a signal.

(1) 1. IF

[1.VCO] : Under normal conditions, no adjustment is required.

(a) [1] key	Select 1. IF .
(b) [1] key	Select 1. VCO .
(c) [DISPLAY] key	When this is pressed twice, you will return to the SERVICE MENU.

[2.DELAY POINT]

(a) [1] key	Select 1. IF .
(b) [2] key	Select 2. DELAY POINT .
(c) MENU [◀] / [▶] key	Adjust the setting value.
(d) [DISPLAY] key	When this is pressed twice, you will return to the SERVICE MENU.

(2) 2. V/C, 3. AUDIO and 4. DEF

(a) [2] ~ [4] keys	Select one from 2. V/C , 3. AUDIO and 4. DEF .
(b) MENU [▲] / [▼] key	Select setting items.
(c) MENU [◀] / [▶] key	Adjust the setting values of the setting items. Use the number keys on the remote control unit for setting the WHITE BALANCE. For the setting, refer to each item concerned.
(d) [DISPLAY] key	When this is pressed, you will return to the SERVICE MENU.

(3) 5. VSM W/B

(a) [5] keys	Select 5. VSM W/B .
(b) MENU [OK] key	Select preset items.
(c) MENU [▲] / [▼] key	Adjust setting items.
(d) MENU [◀] / [▶] key	Adjust the setting values of the setting items.
(e) [DISPLAY] key	When this is pressed, you will return to the SERVICE MENU.

(4) 6. STATUS

This is for display only.

(5) 7. PLUG & PLAY (ON)

This is not used for service.

4. Release of SERVICE MENU

After completing the setting, return to the SERVICE MENU by pressing the [DISPLAY] key, then again press the [DISPLAY] key to return to the normal screen.

4.6.3 SERVICE MENU FLOW CHART

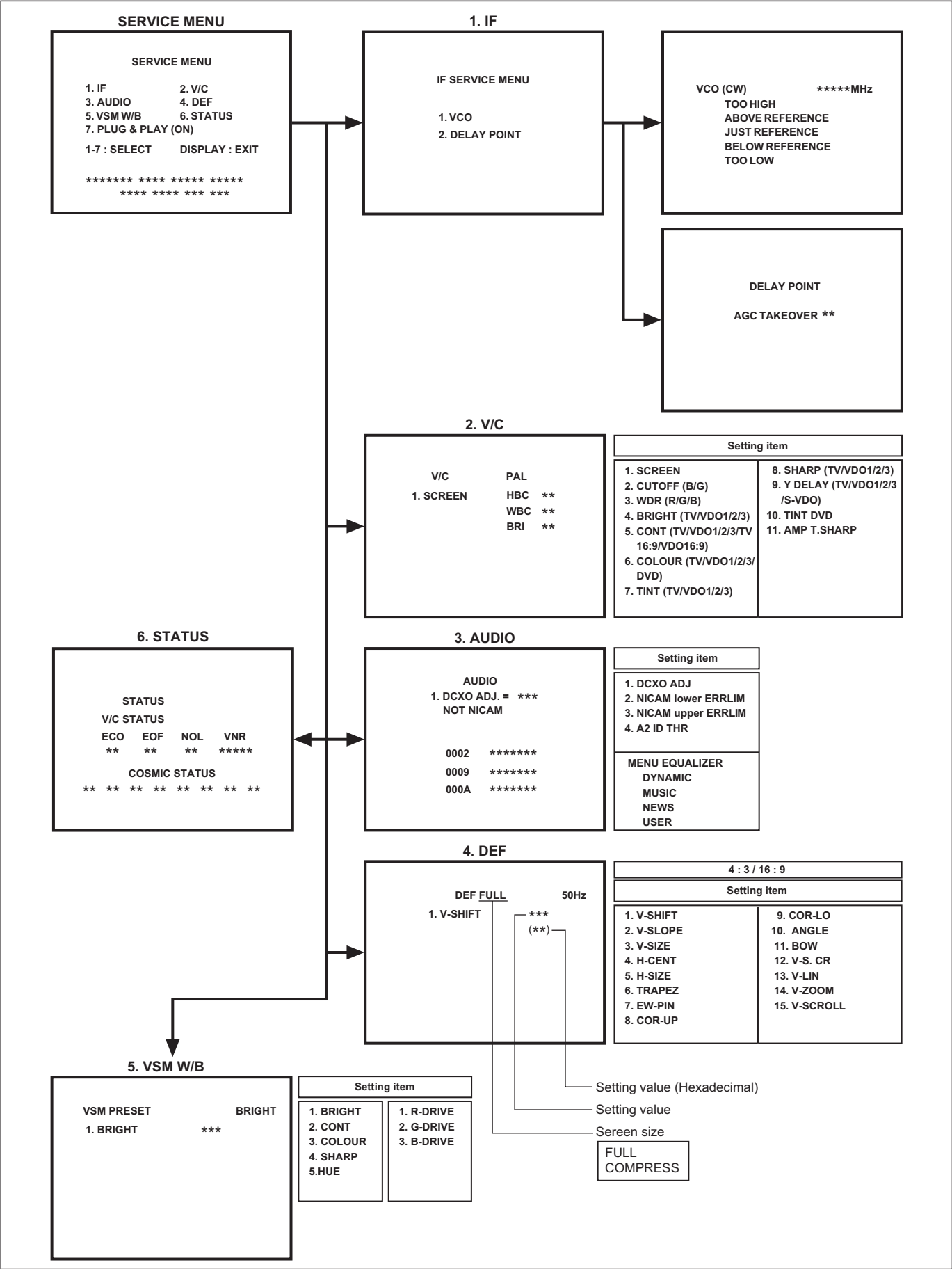


Fig.1

4.7 ADJUSTMENT PROCEDURE

4.7.1 B1 VOLTAGE

Item	Measuring instrument	Test point	Adjustment part	Description
B1 VOLTAGE check	Signal generator DC voltmeter	B1 (pin 1) GND (pin 5) [CN00X connector in MAIN PWB]		(1) Receive a black and white signal. (2) Connect a DC voltmeter between B1 and GND (between pins 1 and 5 of the connector CN00X). (3) Make sure that the voltage is DC134.5V ± 2V .

4.7.2 FOCUS ADJUSTMENT

Item	Measuring instrument	Test point	Adjustment part	Description
FOCUS adjustment	Signal generator		FOCUS VR [In HVT]	Notes: - Set PICTURE MODE (VSM) to "BRIGHT". - The final adjustment of CONVERGENCE must be done after the FOCUS adjustment. (CONVERGENCE is affected by the FOCUS adjustment.) If any deviation in CONVERGENCE is found, PURITY must be adjusted to restore the convergence. (1) Receive a crosshatch signal. (2) Adjust the FOCUS VR so that the vertical and horizontal lines will be clear and in fine detail on the screen. (3) Make sure that the picture is in focus even when the screen gets darkened.

4.7.3 IF CIRCUIT ADJUSTMENTS

Item	Measuring instrument	Test point	Adjustment part	Description																			
IF VCO check	Remote control unit		[1. IF] 1. VCO (CW)	Note: - Under normal conditions, no adjustment is required. - Receive a broadcast signal. - Select 1. IF from the SERVICE MENU. - Select 1. VCO. - Check the characters colour of the JUST REFERENCE displayed to yellow. - Press the [DISPLAY] key three times to return to normal screen.																			
		VCO (CW) ***.*** MHz ← TOO HIGH ABOVE REFERENCE JUST REFERENCE ← BELOW REFERENCE TOO LOW DISPLAY : EXIT Receiving frequency YELLOW																					
DELAY POINT (AGC TAKE-OVER) adjustment	Remote control unit		[1. IF] 2. DELAY POINT	- Receive a black and white broadcast signal (colour off). - Select 1. IF from the SERVICE MENU. - Select 2. DELAY POINT. - Adjust in order to eliminate any noise or beat from the image. Any increase above the initial value produces the noise and any decrease below it produces the beat. - Press the [DISPLAY] key three times to return to the normal screen. - Turn to other channels and make sure that there are no irregularities.																			
		<table><tr><th rowspan="2">Adjustment item</th><th colspan="4">Initial setting value</th></tr><tr><th colspan="2">NTSC 3.58</th><th colspan="2">OTHERS</th></tr><tr><td></td><th>VHF</th><th>UHF</th><th>VHF</th><th>UHF</th></tr><tr><td>2. DELAY POINT (AGC TAKE-OVER)</td><td>35</td><td>35</td><td>35</td><td>35</td></tr></table>		Adjustment item	Initial setting value				NTSC 3.58		OTHERS			VHF	UHF	VHF	UHF	2. DELAY POINT (AGC TAKE-OVER)	35	35	35	35	
Adjustment item	Initial setting value																						
	NTSC 3.58		OTHERS																				
	VHF	UHF	VHF	UHF																			
2. DELAY POINT (AGC TAKE-OVER)	35	35	35	35																			

4.7.4 VIDEO CIRCUIT ADJUSTMENTS

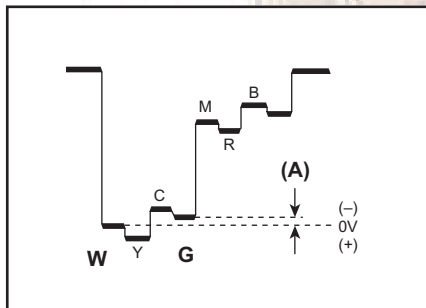
- The setting (adjustment) using the remote control unit is made on the basis of the initial setting values.
- The setting values which adjust the screen to the optimum condition can be different from the initial setting values.
- Do not change the initial setting values of the setting (adjustment) items not listed in "ADJUSTMENT PROCEDURE".
- The initial setting values in parenthesis () are fixed offset values, needing no further adjustment.

Adjustment item		Variable range	Initial setting value					
			PAL	SECAM	NTSC3.58	NTSC4.43	COMPONENT (V-2)	
							525i	625i
1. SCREEN	BRI	0 ~ 63	32	32	32	32	32	32
2. CUTOFF	B	0 ~ 63 (-32 ~ +31)	11	11	11	11	(-3)	(-3)
	G	0 ~ 63 (-32 ~ +31)	7	7	7	7	(-5)	(-5)
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 (-32 ~ +31)	39	39	39	39	---	---
	VIDEO 1(COMPOSITE/S)	(-32 ~ +31)	(-2)	(-2)	(-2)	(-2)	---	---
	VIDEO 2(COMPONENT)	(-32 ~ +31)	(-2)	(-2)	(-2)	(-2)	(0)	(0)
	VIDEO 3(COMPOSITE)	(-32 ~ +31)	(-2)	(-2)	(-2)	(-2)	---	---
5. CONT.	RF	0 ~ 63	32	32	32	32	---	---
	VIDEO	(-32 ~ +31)	(+4)	(+4)	(+4)	(+4)	(+2)	(+2)
	RF 16:9	(-32 ~ +31)	(0)	(0)	(0)	(0)	---	---
	VIDEO 16:9	(-32 ~ +31)	---	---	---	---	---	---
6. COLOUR	RF	0 ~ 63 (-32 ~ +31)	42	32	37	(-3)	---	---
	VIDEO	(-32 ~ +31)	(-1)	(0)	(-3)	(0)	(+4)	(-5)
7. TINT	RF	0 ~ 63 (-32 ~ +31)	---	---	27	(-4)	---	---
	VIDEO	(-32 ~ +31)	---	---	(+6)	(+11)	---	---
8. SHARP	RF	0 ~ 63	27	27	27	27	---	---
	VIDEO	0 ~ 63	43	43	43	43	15	15
9. Y DELAY	RF	0 ~ 15	9	7	12	7	---	---
	VIDEO	0 ~ 15	7	7	7	7	---	---
	S-VIDEO	0 ~ 15	9	10	11	11	---	---
10. TINT DVD	VIDEO, S-VIDEO	0 ~ 63	34	32	32	32	-2	-2
11. AMP T.SHARP	RF, VIDEO	0 ~ 63	0	0	0	0	0	0

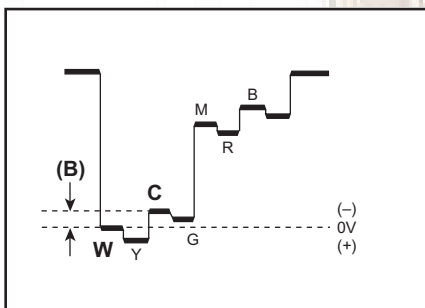
Item	Measuring instrument	Test point	Adjustment part	Description																
WHITE BALANCE (Low light) adjustment	Signal generator		[2. V/C] 2. CUTOFF (B) 2. CUTOFF (G)	Note: - Set PICTURE MODE (VSM) to "BRIGHT". - COMPOSITE WHITE BALANCE - - Receive a PAL black and white signal (colour off). - Select 2. V/C from the SERVICE MENU. - Select 2. CUTOFF (B) and (G). - Set each value to initial setting value with the [4] / [7] keys and [5] / [8] keys. - Turn the SCREEN VR fully counterclockwise, then slowly turn it clockwise to where a red, blue or green colour is faintly visible. - Use the [4] / [7] and [5] / [8] keys to adjust so that the other 2 colours appear white. - Turn the SCREEN VR to where the single horizontal line glows faintly. - Press the [DISPLAY] key twice to return to the normal screen. - COMPONENT WHITE BALANCE - - Receive a PAL component black and white signal (colour off). - Select VIDEO-2 SET from the MENU and set VIDEO-2 SET to COMPONENT. - Adjust COMPONENT WHITE BALANCE in the same way as "COMPOSITE WHITE BALANCE". <table><tr><th rowspan="2">Adjustment Item</th><th rowspan="2">Variable range</th><th colspan="2">Initial setting value</th></tr><tr><th>COMPOSITE</th><th>COMPONENT</th></tr><tr><td rowspan="2">2. CUT OFF</td><td>B 0 ~ 63(-32~+31)</td><td>11</td><td>(-3)</td></tr><tr><td>G 0 ~ 63(-32~+31)</td><td>7</td><td>(-5)</td></tr></table>	Adjustment Item	Variable range	Initial setting value		COMPOSITE	COMPONENT	2. CUT OFF	B 0 ~ 63(-32~+31)	11	(-3)	G 0 ~ 63(-32~+31)	7	(-5)			
	Adjustment Item	Variable range	Initial setting value																	
COMPOSITE			COMPONENT																	
2. CUT OFF	B 0 ~ 63(-32~+31)	11	(-3)																	
	G 0 ~ 63(-32~+31)	7	(-5)																	
	Remote control unit		SCREEN VR [In HVT]																	
V/C 2. CUTOFF PAL (B) ** (**) (G) ** (**) REMOTE CONTROL UNIT 1 2 3 4 5 6 7 8 9 B CUTOFF (▲) G CUTOFF (▲) B CUTOFF (▼) G CUTOFF (▼)																				
WHITE BALANCE (High light) adjustment	Signal generator		[2. V/C] 3. WDR (R) 3. WDR (G) 3. WDR (B)	Notes: - Proceed to the following adjustment after having completed the WHITE BALANCE (Low light) adjustment. - Set PICTURE MODE (VSM) to "BRIGHT". - Receive a PAL black and white signal (colour off). - Select 2. V/C from the SERVICE MENU. - Select 3. WDR (R), (G) and (B). - Set each value to initial setting value with the [4] to [9] keys. - Use the [4] to [9] keys to produce a white screen. - Press the [DISPLAY] key twice to return to the normal screen. <table><tr><th rowspan="2">Adjustment Item</th><th rowspan="2">Variable range</th><th colspan="2">Initial setting value</th></tr><tr><th colspan="2"></th></tr><tr><td rowspan="3">3. WDR</td><td>R 0 ~ 63</td><td colspan="2">32</td></tr><tr><td>G 0 ~ 63</td><td colspan="2">32</td></tr><tr><td>B 0 ~ 63</td><td colspan="2">45</td></tr></table>	Adjustment Item	Variable range	Initial setting value				3. WDR	R 0 ~ 63	32		G 0 ~ 63	32		B 0 ~ 63	45	
	Adjustment Item	Variable range	Initial setting value																	
3. WDR	R 0 ~ 63	32																		
	G 0 ~ 63	32																		
	B 0 ~ 63	45																		
	Remote control unit																			
V/C 3. WDR PAL (R) ** (**) (G) ** (**) (B) ** (**) REMOTE CONTROL UNIT 1 2 3 4 5 6 7 8 9 R DRIVE (▲) G DRIVE (▲) R DRIVE (▼) B DRIVE (▲) B DRIVE (▼) G DRIVE (▼)																				

Item	Measuring instrument	Test point	Adjustment part	Description
SUB BRIGHT adjustment	Remote control unit		[2. V/C] 4. BRIGHT	Notes: • Proceed to the following adjustment after having completed the WHITE BALANCE (Low light) and WHITE BALANCE (High light) adjustment. • Set PICTURE MODE (VSM) to "BRIGHT". (1) Receive a broadcast. (2) Select 2. V/C from the SERVICE MENU. (3) Select 4. BRIGHT . (4) Set the initial setting value. (5) If the brightness is not best with the initial setting value, make fine adjustment until you get the best brightness. (6) Press the [DISPLAY] key twice to return to the normal screen.
SUB CONTRAST adjustment	Remote control unit		[2. V/C] 5. CONT	Notes: • Proceed to the following adjustment after having completed the SUB BRIGHT adjustment. • Set PICTURE MODE (VSM) to "BRIGHT". (1) Receive a broadcast. (2) Select 2. V/C from the SERVICE MENU. (3) Select 5. CONT . (4) Set the initial setting value. (5) If the contrast is not best with the initial setting value, make fine adjustment until you get the best contrast. (6) Press the [DISPLAY] key twice to return to the normal screen.
SUB COLOUR 1 adjustment	Remote control unit		[2. V/C] 6. COLOUR	[Method of adjustment without measuring instrument] Notes: • Proceed to the following adjustment after having completed the SUB CONTRAST adjustment. • Set PICTURE MODE (VSM) to "BRIGHT". - PAL COLOUR - (1) Receive a PAL broadcast. (2) Select 2. V/C from the SERVICE MENU. (3) Select 6. COLOUR . (4) Set the initial setting value for PAL COLOUR. (5) If the colour is not best with the initial setting value, adjust until you get the best colour. (6) Press the [DISPLAY] key twice to return to the normal screen. - SECAM COLOUR - (1) Receive a SECAM broadcast. (2) Press the [COLOUR SYSTEM] key to select the SECAM colour system. (3) Adjust SECAM COLOUR in the same way as for "PAL COLOUR". - NTSC 3.58 COLOUR - (1) Receive a NTSC 3.58MHz broadcast. (2) Press the [COLOUR SYSTEM] key to select the NTSC 3.58 colour system. (3) Adjust NTSC 3.58 COLOUR in the same way as for "PAL COLOUR". - NTSC 4.43 COLOUR - When adjustment is done for NTSC 3.58 COLOUR, appropriate values are automatically set for NTSC 4.43 COLOUR.

Item	Measuring instrument	Test point	Adjustment part	Description
SUB COLOUR 2 adjustment	Signal generator Oscilloscope Remote control unit	TP-47G TP-E [CRT SOCKET PWB]	[2. V/C] 6. COLOUR	[Method of adjustment using measuring instrument] Notes: - Proceed to the following adjustment after having completed the SUB CONTRAST adjustment. - Set PICTURE MODE (VSM) to "BRIGHT". - PAL COLOUR - - Receive a PAL colour bar signal (full field colour bar 75% white). - Select 2. V/C from the SERVICE MENU. - Select 6. COLOUR. - Set the initial setting value of PAL COLOUR. - Connect the oscilloscope between TP-47G and TP-E. - Adjust PAL COLOUR to set the value (A) in the figure to +18V. - SECAM COLOUR - - Receive a SECAM colour bar signal (colour bar 75% white). - Press the [COLOUR SYSTEM] key to select the SECAM colour system. - Set the initial setting value of SECAM COLOUR. - Adjust SECAM COLOUR to set the value (A) in the figure to +6V. - NTSC 3.58 COLOUR - - Receive a NTSC 3.58 colour bar signal (full field colour bar 75% white). - Press the [COLOUR SYSTEM] key to select the NTSC 3.58 colour system. - Set the initial setting value of NTSC 3.58 COLOUR. - Adjust NTSC 3.58 COLOUR to set the value (A) in the figure to +7V. - NTSC 4.43 COLOUR - When adjustment is done for NTSC 3.58 COLOUR, appropriate values are automatically set for NTSC 4.43 COLOUR.
SUB TINT 1 adjustment	Signal generator Remote control unit		[2. V/C] 7. TINT	[Method of adjustment without measuring instrument] Notes: - Proceed to the following adjustment after having completed the SUB CONTRAST adjustment. - Set PICTURE MODE (VSM) to "BRIGHT". - NTSC 3.58 TINT - - Receive a NTSC 3.58 colour bar signal (full field colour bar 75% white). - Press the [COLOUR SYSTEM] key to select the NTSC 3.58 colour system. - Select 2. V/C from the SERVICE MENU. - Select 7. TINT. - Set the initial setting value of NTSC 3.58. - If you cannot get the best tint with the initial setting value, make fine adjustment until you get the best tint. - Press the [DISPLAY] key twice to return to the normal screen. - NTSC 4.43 TINT - When adjustment is done for NTSC 3.58 TINT, appropriate values are automatically set for NTSC 4.43 TINT.



Item	Measuring instrument	Test point	Adjustment part	Description
SUB TINT 2 adjustment	Signal generator	TP-47G TP-E [CRT SOCKET PWB]	[2. V/C] 7. TINT	[Method of adjustment using measuring instrument] Notes: • Proceed to the following adjustment after having completed the SUB CONTRAST adjustment. • Set PICTURE MODE (VSM) to "BRIGHT". - NTSC 3.58 TINT - (1) Receive a NTSC 3.58 colour bar signal (full field colour bar 75% white). (2) Press the [COLOUR SYSTEM] key to select the NTSC 3.58 colour system. (3) Select 2. V/C from the SERVICE MENU. (4) Select 7. TINT. (5) Set the initial setting value of NTSC 3.58. (6) Connect the oscilloscope between TP-47G and TP-E. (7) Adjust NTSC 3.58 TINT to set the value (B) in the figure to +9V. (8) Press the [DISPLAY] key twice to return to the normal screen. - NTSC 4.43 TINT - When adjustment is done for NTSC 3.58 TINT, appropriate values are automatically set for NTSC 4.43 TINT.
	Oscilloscope Remote control unit			



4.7.5 AUDIO SETTING

This submenu is for display only, no adjustment is required.

Function	Item	Setting value				
AUDIO	1. DC XO ADJ	F0H				
	2. NICAM LOWER ERR LIM	6FH				
	3. NICAM UPPER ERR LIM	B0H				
	4. A2 ID THR	00H				
Function	Item	100Hz	300Hz	1kHz	3kHz	8kHz
MENU EQUALIZER	DYNAMIC	+6	+4	0	+4	+6
	MUSIC	+7	+2	+7	+4	+8
	NEWS	-6	+1	+6	+1	-6
	USER	0	0	0	0	0

4.7.6 DEFLECTION CIRCUIT ADJUSTMENTS

- 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.

■ 4. DEF

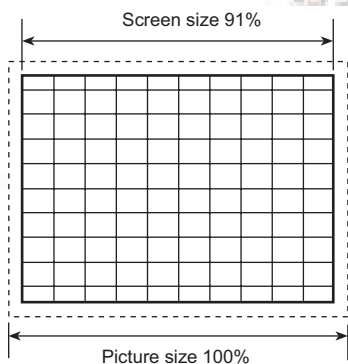
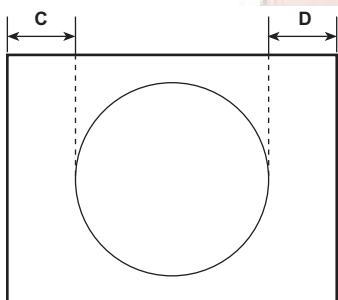
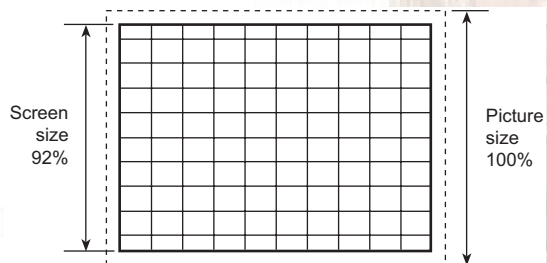
Adjustment item	Variable range		Initial setting value			
	4:3 50Hz	Others	4:3		COMPRESS (16:9)	
			50Hz	60Hz	50Hz	60Hz
1. V-SHIFT	0 ~ 63	-32 ~ +31	0*	0*	0*	0*
2. V-SLOPE	0 ~ 63	-32 ~ +31	0*	0*	0*	0*
3. V-SIZE	0 ~ 63	-32 ~ +31	+15*	0*	-4*	-2*
4. H-CENT	0 ~ 63	-32 ~ +31	+35*	0*	0*	0*
5. H-SIZE	0 ~ 63	-32 ~ +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	(+25)	0	-23*	+3*
15. V-SCROLL	0 ~ 63	-32 ~ +31	(+32)	(0)	(0)	(0)

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

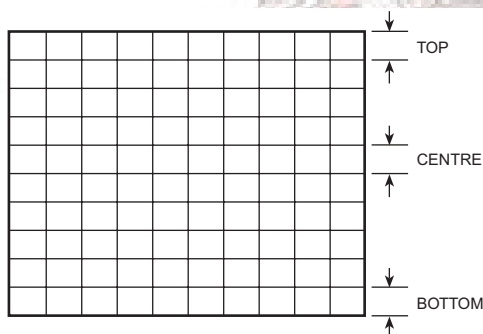
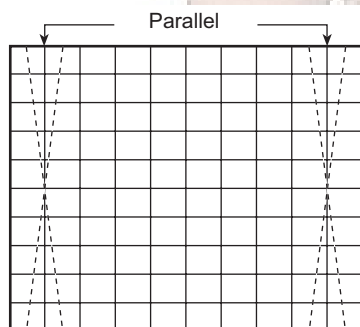
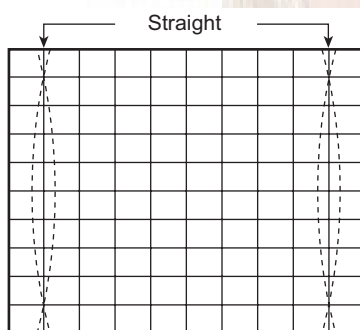
■ COMPRESS: OFF (4:3)

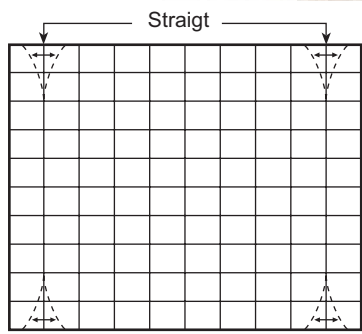
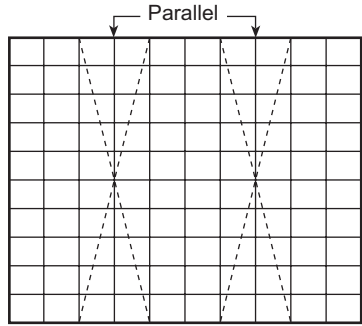
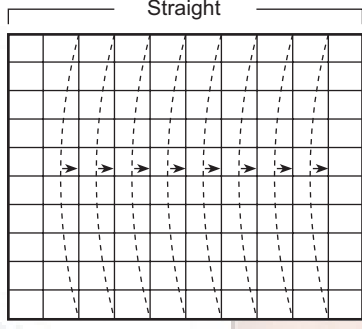
Item	Measuring instrument	Test point	Adjustment part	Description
V. SLOPE adjustment	Signal generator		[4. DEF] 2. V-SLOPE	- PAL V. SLOPE - (1) Receive a PAL circle pattern signal of vertical frequency 50Hz. (2) Select 4. DEF from the SERVICE MENU. (3) Select 2. V-SLOPE . (4) Set the initial setting value of 2. V-SLOPE . (5) Adjust 2. V-SLOPE to make " A = B ". (6) Press the [DISPLAY] key twice to return to SERVICE MENU screen. - NTSC V. SLOPE - (1) Receive a NTSC circle pattern signal of vertical frequency 60Hz. (2) Make similar adjustment of NTSC V-SLOPE in the same way as for "PAL V-SLOPE".
	Remote control unit			
V. POSITION adjustment	Signal generator		[4. DEF] 1. V-SHIFT	- PAL V. POSITION - (1) Receive a PAL circle pattern signal of vertical frequency 50Hz. (2) Select 1. V-SHIFT . (3) Set the initial setting value of 1. V-SHIFT . (4) Adjust 1. V-SHIFT to make " A = B ". - NTSC V. POSITION - (1) Receive a NTSC circle pattern signal of vertical frequency 60Hz. (2) Make similar adjustment of NTSC V. POSITION in the same way as for "PAL V. POSITION".
	Remote control unit			

Item	Measuring instrument	Test point	Adjustment part	Description
V. HEIGHT adjustment	Signal generator		[4. DEF] 3. V-SIZE 14. V-ZOOM	- PAL V. HEIGHT - (1) Receive a PAL crosshatch signal. (2) Select 3. V-SIZE . (3) Set the initial setting value of 3. V-SIZE . (4) Select 14. V-ZOOM . (5) Set the initial setting value of 14. V-ZOOM . (6) Adjust 14. V-ZOOM to make the vertical screen size to 92% of the picture size. - NTSC V. HEIGHT - (1) Receive a NTSC crosshatch signal. (2) Make similar adjustment of NTSC V. HEIGHT in the same way as for "PAL V. HEIGHT".
	Remote control unit			
H. POSITION adjustment	Signal generator		[4. DEF] 4. H-CENT	- PAL H. POSITION - (1) Receive a PAL circle pattern signal. (2) Select 4. H-CENT . (3) Set the initial setting value of 4. H-CENT . (4) Adjust 4. H-CENT to make " C = D ". - NTSC H. POSITION - (1) Receive a NTSC circle pattern signal. (2) Make similar adjustment of NTSC H. POSITION in the same way as for "PAL H. POSITION".
	Remote control unit			
H. WIDTH adjustment	Signal generator		[4. DEF] 5. H-SIZE	- PAL H. WIDTH - (1) Receive a PAL crosshatch signal. (2) Select 5. H-SIZE . (3) Set the initial setting value of 5. H-SIZE . (4) Adjust 5. H-SIZE to make the horizontal screen size to 91% of the picture size. - NTSC H. WIDTH - (1) Receive a NTSC crosshatch signal. (2) Make similar adjustment of NTSC H. WIDTH in the same way as for "PAL H. WIDTH".
	Remote control unit			

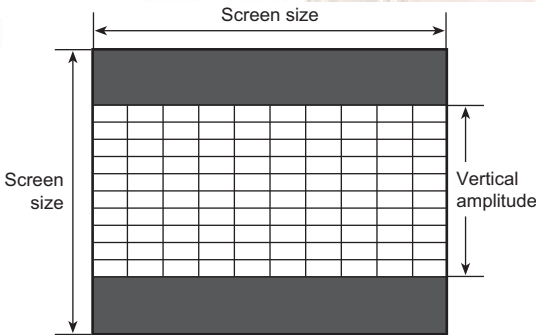
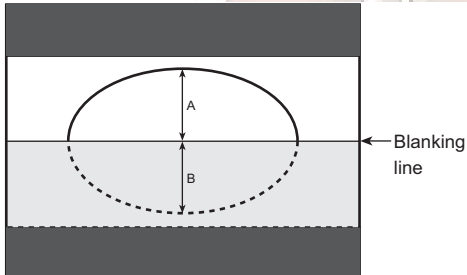


Item	Measuring instrument	Test point	Adjustment part	Description
SIDE PIN adjustment	Signal generator		[4. DEF] 7. EW-PIN	- PAL SIDE PIN - (1) Receive a PAL crosshatch signal. (2) Select 7. EW-PIN . (3) Set the initial setting value of 7. EW-PIN . (4) Adjust 7. EW-PIN so that the first vertical lines at the left and right edges on the screen are straight. - NTSC SIDE PIN - (1) Receive a NTSC crosshatch signal. (2) Make similar adjustment of NTSC SIDE PIN in the same way as for "PAL SIDE PIN".
	Remote control unit			
TRAPEZIUM adjustment	Signal generator		[4.DEF] 6. TRAPEZ	- PAL TRAPEZIUM - (1) Receive a PAL crosshatch signal. (2) Select 6. TRAPEZ . (3) Set the initial setting value of 6. TRAPEZ . (4) Adjust 6. TRAPEZ so that the vertical lines at the left and right edges on the screen are in parallel. - NTSC TRAPEZIUM - (1) Receive a NTSC crosshatch signal. (2) Make similar adjustment of NTSC TRAPEZIUM in the same way as for "PAL TRAPEZIUM".
	Remote control unit			
V.LINEARITY adjustment	Signal generator		[4. DEF] 12. V-S. CR 13. V-LIN	- PAL V. LINEARITY - (1) Receive a PAL crosshatch signal. (2) Select 12. V-S.CR . (3) Set the initial setting value of 12. V-S. CR . (4) Select 13. V-LIN . (5) Set the initial setting value of 13. V-LIN . (6) Adjust 12. V-S. CR and 13. V-LIN so that the spaces of each line on TOP, CENTRE and BOTTOM become uniform. - NTSC V. LINEARITY - (1) Receive a NTSC crosshatch signal. (2) Make similar adjustment of NTSC V-S. CR in the same way as for "PAL V-S. CR".
	Remote control unit			



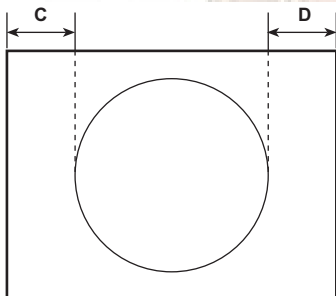
Item	Measuring instrument	Test point	Adjustment part	Description
CORNER PIN adjustment	Signal generator		[4. DEF] 8. COR-UP 9. COR-LO	- PAL CORNER PIN - (1) Receive a PAL crosshatch signal. (2) Select 8. COR-UP . (3) Set the initial setting value of 8. COR-UP . (4) Select 9. COR-LO . (5) Set the initial setting value of 9. COR-LO . (6) Adjust 8. COR-UP and 9. COR-LO so that the vertical lines at the four corners on the screen are straight. - NTSC CORNER PIN - (1) Receive a NTSC crosshatch signal. (2) Make similar adjustment of NTSC CORNER in the same way as for "PAL CORNER".
	Remote control unit			
				
H. PARALLEL adjustment	Signal generator		[4.DEF] 10. ANGLE	- PAL H. PARALLEL - (1) Receive a PAL crosshatch signal. (2) Select 10. ANGLE . (3) Set the initial setting value of 10. ANGLE . (4) Adjust 10. ANGLE to optimize the trapezium distortion at the centre of the screen. - NTSC H. PARALLEL - (1) Receive a NTSC crosshatch signal. (2) Make similar adjustment of NTSC H. PARALLEL in the same way as for "PAL H. PARALLEL".
	Remote control unit			
				
H. BOW adjustment	Signal generator		[4.DEF] 11. BOW	- PAL H. BOW - (1) Receive a PAL crosshatch signal. (2) Select 11. BOW . (3) Set the initial setting value of 11. BOW . (4) Adjust 11. BOW to optimize the horizontal arc distortion. - NTSC H. BOW - (1) Receive a NTSC crosshatch signal. (2) Make similar adjustment of NTSC H. BOW in the same way as for "PAL H. BOW". (3) Press the [DISPLAY] key twice to return to the normal screen.
	Remote control unit			
				

■ COMPRESS : ON (16:9)

Item	Measuring instrument	Test point	Adjustment part	Description
V. HEIGHT adjustment	Signal generator Remote control unit		[4.DEF] 14. V. ZOOM 3. V-SIZE	- PAL V. HEIGHT - (1) Receive a PAL crosshatch signal of vertical frequency 50Hz. (2) Press the [MENU] key and select PICTURE. (3) Select PICTURE FEATURES. (4) Select COMPRESS (16 : 9) and set COMPRESS to ON. (5) Select 4. DEF from the SERVICE MENU. (6) Set the initial setting value of 14. V. ZOOM. (7) Select 3. V-SIZE. (8) Set the initial setting value of 3. V-SIZE. (9) Adjust 3. V-SIZE to set the vertical amplitude of the image to 305mm. - NTSC V. HEIGHT - (1) Receive a NTSC crosshatch signal of vertical frequency 60Hz. (2) Make similar adjustment of NTSC V. HEIGHT in the same way as for "PAL V. HEIGHT".
				
V. SLOPE adjustment	Signal generator Remote control unit		[4.DEF] 2. V-SLOPE	- PAL V. SLOPE - (1) Receive a PAL circle pattern signal of vertical frequency 50Hz. (2) Select 4. DEF from the SERVICE MENU. (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 [DISPLAY] key to return to SERVICE MENU screen. - NTSC V. SLOPE - (1) Receive a NTSC circle pattern signal of vertical frequency 60Hz. (2) Make similar adjustment of NTSC V-SLOPE in the same way as for "PAL V-SLOPE".
				

Item	Measuring instrument	Test point	Adjustment part	Description
SIDE PIN adjustment	Signal generator		[4. DEF] 7. EW-PIN	- PAL SIDE PIN - (1) Receive a PAL crosshatch signal. (2) Select 7. EW-PIN . (3) Set the initial setting value of 7. EW-PIN . (4) Adjust 7. EW-PIN so that the first vertical lines at the left and right edges on the screen are straight. - NTSC SIDE PIN - (1) Receive a NTSC crosshatch signal. (2) Make similar adjustment of NTSC SIDE PIN in the same way as for "PAL SIDE PIN".
	Remote control unit			
TRAPEZIUM adjustment	Signal generator		[4. DEF] 6. TRAPEZ	- PAL TRAPEZIUM PIN - (1) Receive a PAL crosshatch signal. (2) Select 6. TRAPEZ . (3) Set the initial setting value of 6. TRAPEZ . (4) Adjust 6. TRAPEZ so that the vertical lines at the left and right edges on the screen are in parallel. - NTSC TRAPEZIUM PIN - (1) Receive a NTSC crosshatch signal. (2) Make similar adjustment of NTSC TRAPEZIUM in the same way as for "PAL TRAPEZIUM".
	Remote control unit			
CORNER PIN adjustment	Signal generator		[4. DEF] 8. COR-UP 9. COR-LO	- PAL CORNER PIN - (1) Receive a PAL crosshatch signal. (2) Select 8. COR-UP . (3) Set the initial setting value of 8. COR-UP . (4) Select 9. COR-LO . (5) Set the initial setting value of 9. COR-LO . (6) Adjust 8. COR-UP and 9. COR-LO so that the vertical lines at the four corners on the screen are straight. - NTSC CORNER PIN - (1) Receive a NTSC crosshatch signal. (2) Make similar adjustment of NTSC CORNER in the same way as for "PAL CORNER". (3) Press the [DISPLAY] key twice to return to the normal screen.
	Remote control unit			

■ VIDEO - 2 SET: COMPONENT

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

4.7.7 VSM PRESET SETTING

Item	Measuring instrument	Test point	Adjustment part	Description																																																
VSM PRESET setting	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 MENU. (2) Select BRIGHT with the MENU [OK] key. (3) Set the value of 1. BRIGHT ~ 5. HUE to the values shown in the table. (4) Respectively select the VSM PRESET mode for SOFT and STANDARD. (5) Select COOL with the MENU [OK] key. (6) Set the values of 1. R-DRIVE ~ 3. B-DRIVE to the value shown in the table. (7) Select the W/B preset for WARM and NORMAL, respectively. (8) Press the [DISPLAY] key twice to return to the normal screen.																																																
SUB MENU 5. VSM W/B VSM PRESET BRIGHT 1. BRIGHT ***				[Setting Values for SUB 5. VSM W/B] <table><tr><th>VSM preset</th><th>BRIGHT</th><th>STANDARD</th><th>SOFT</th></tr><tr><th>Setting item</th><td></td><td></td><td></td></tr><tr><td>1. BRIGHT</td><td>0</td><td>0</td><td>+2</td></tr><tr><td>2. CONT</td><td>+15</td><td>0</td><td>-3</td></tr><tr><td>3. COLOUR</td><td>0</td><td>0</td><td>0</td></tr><tr><td>4. SHARP</td><td>0</td><td>0</td><td>-10</td></tr><tr><td>5. HUE</td><td>0</td><td>0</td><td>0</td></tr><tr><th>W/B preset</th><th>COOL</th><th>NORMAL</th><th>WARM</th></tr><tr><th>Setting item</th><td></td><td></td><td></td></tr><tr><td>1. R-DRIVE</td><td>0</td><td>+2</td><td>+10</td></tr><tr><td>2. G-DRIVE</td><td>0</td><td>0</td><td>-4</td></tr><tr><td>3. B-DRIVE</td><td>0</td><td>-10</td><td>-12</td></tr></table>	VSM preset	BRIGHT	STANDARD	SOFT	Setting item				1. BRIGHT	0	0	+2	2. CONT	+15	0	-3	3. COLOUR	0	0	0	4. SHARP	0	0	-10	5. HUE	0	0	0	W/B preset	COOL	NORMAL	WARM	Setting item				1. R-DRIVE	0	+2	+10	2. G-DRIVE	0	0	-4	3. B-DRIVE	0	-10	-12
VSM preset	BRIGHT	STANDARD	SOFT																																																	
Setting item																																																				
1. BRIGHT	0	0	+2																																																	
2. CONT	+15	0	-3																																																	
3. COLOUR	0	0	0																																																	
4. SHARP	0	0	-10																																																	
5. HUE	0	0	0																																																	
W/B preset	COOL	NORMAL	WARM																																																	
Setting item																																																				
1. R-DRIVE	0	+2	+10																																																	
2. G-DRIVE	0	0	-4																																																	
3. B-DRIVE	0	-10	-12																																																	

4.7.8 PURITY AND CONVERGENCE

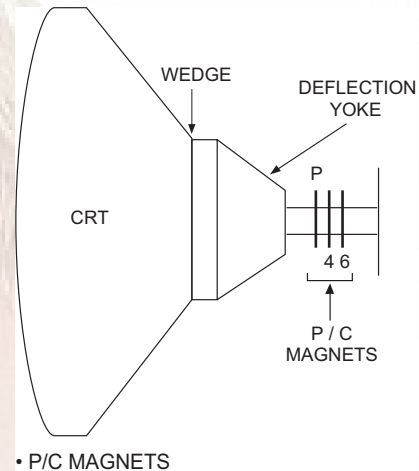
■ PURITY ADJUSTMENT

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.



• P/C MAGNETS

P : PURITY MAGNET
4 : 4 POLES (convergence magnets)
6 : 6 POLES (convergence magnets)

Fig.1

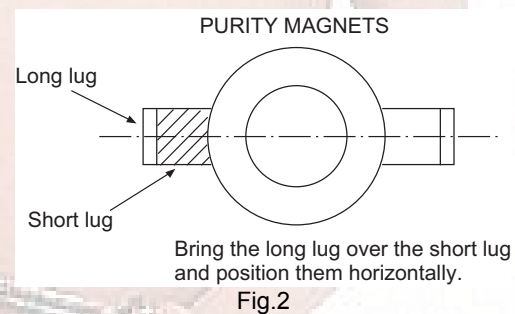


Fig.2

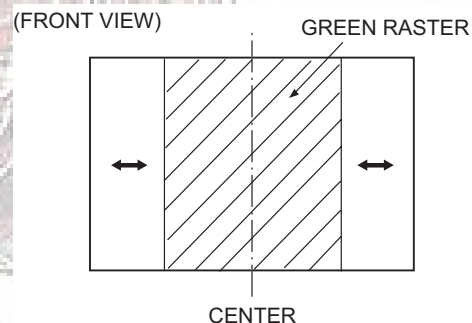


Fig.3

■ 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.

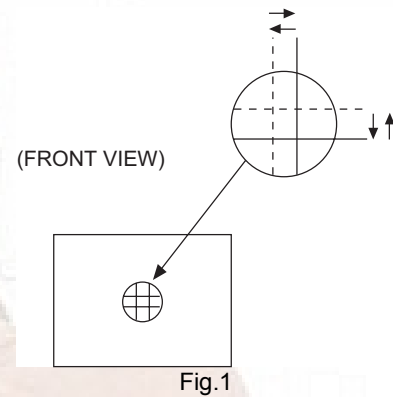


Fig.1

■ 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.

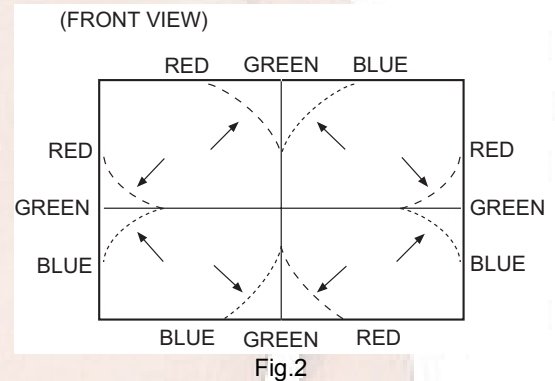


Fig.2

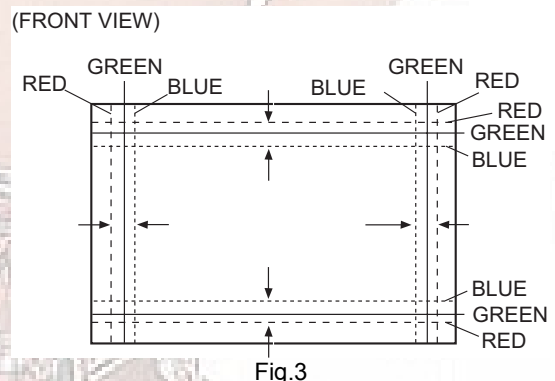


Fig.3

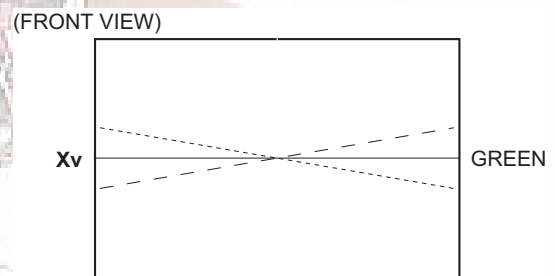


Fig.4

SECTION 5 TROUBLESHOOTING

5.1 SELF CHECK FUNCTIONS

5.1.1 OUTLINE

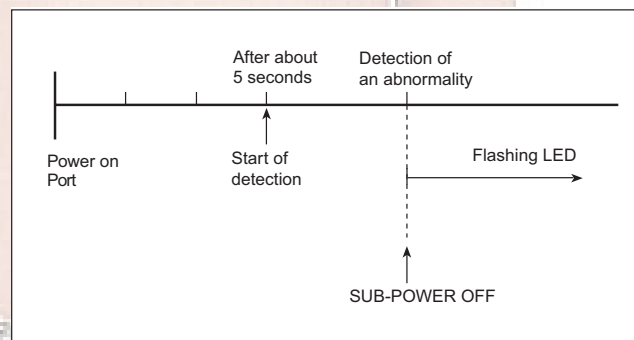
This model has self check functions given below. When an abnormality has been detected, the SUB POWER is turned off and POWER LED flashes to inform of the failure. An abnormality is detected by the signal input state of the control line connected to the microcomputer.

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.		

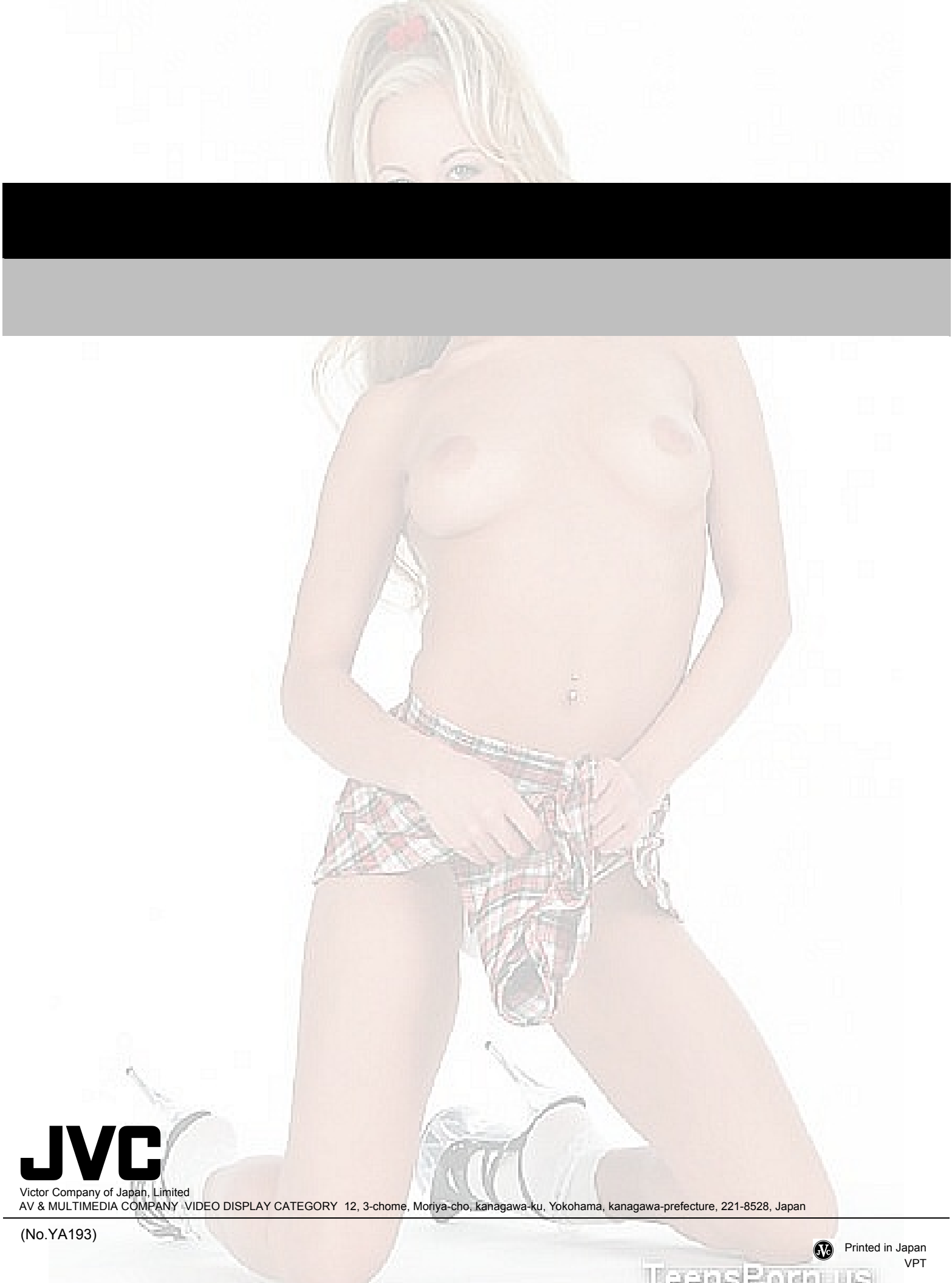
5.1.3 SELF CHECK INDICATING FUNCTION

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



JVC

Victor Company of Japan, Limited

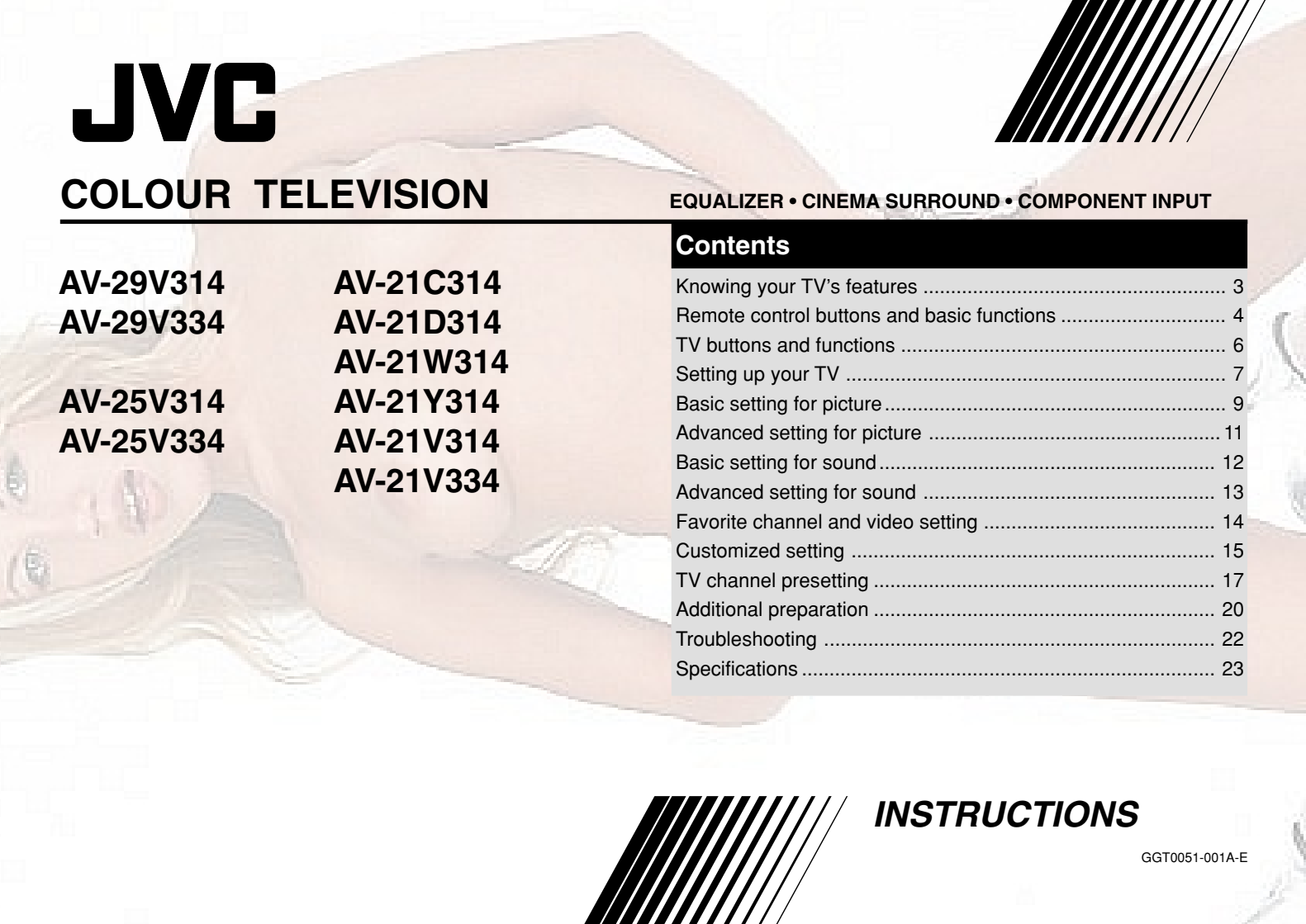
AV & MULTIMEDIA COMPANY VIDEO DISPLAY CATEGORY 12, 3-chome, Moriya-cho, kanagawa-ku, Yokohama, kanagawa-prefecture, 221-8528, Japan

(No.YA193)



Printed in Japan
VPT

Teens Portraits



JVC

COLOUR TELEVISION

AV-29V314

AV-29V334

AV-25V314

AV-25V334

AV-21C314

AV-21D314

AV-21W314

AV-21Y314

AV-21V314

AV-21V334

EQUALIZER • CINEMA SURROUND • COMPONENT INPUT

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INSTRUCTIONS

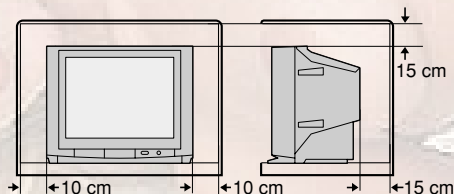
Thank you for buying this JVC colour television.

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.



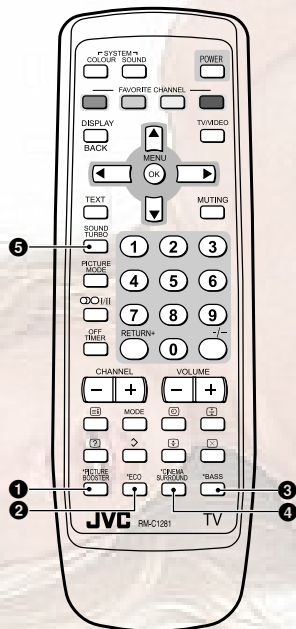
- 4 Do not allow objects or liquid into the cabinet openings.
- 5 In the event of a fault, unplug the unit and call a service technician. Do not attempt to repair it yourself or remove the rear cover.
- 6 The surface of the TV screen is easily damaged. Be very careful with it when handling the TV. Should 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 If you are not going to use this TV for a long period of time, be sure to disconnect the AC plug from the AC socket.
- 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-21W314/AV-21Y314 only>

A REMOVABLE PLASTIC COVER IS FIXED TO THE TELEVISION'S FRONT AUDIO/VIDEO CONNECTOR. TO PREVENT THIS COVER FROM BEING ACCIDENTALLY SWALLOWED BY BABIES OR CHILDREN, REMOVE IT FROM THE TELEVISION AND STORE IT IN A SAFE PLACE. IF THE COVER IS SWALLOWED SEEK THE ADVICE OF A DOCTOR IMMEDIATELY.

Knowing your TV's features



Main features

FAVORITE CH (Channel)	You can register up to four favorite channels for quick recall with one press.
AI ECO	TV detects the brightness of your room and automatically adjust the picture brightness to a suitable level for a better eye care.
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 channel.
VNR	You can reduce the picture noise when viewing noisy TV programmes or video sources.
WHITE BALANCE	You can choose one of three tones of white to match the video source such as movie, sports, etc. Changing WHITE BALANCE affects the appearance of all other colours on the screen.
CHILD LOCK	To prevent accidental operation by your child, you can disable the control buttons on the TV.

Confirm your TV's functions

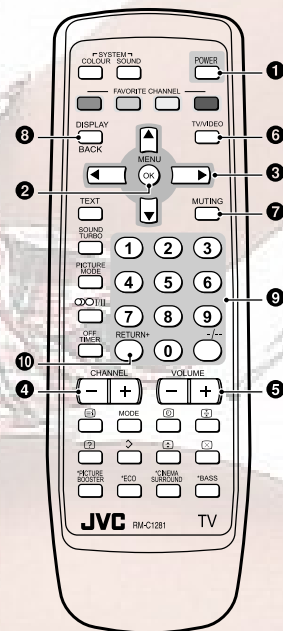
Some functions written in this instruction manual may not be available for your TV.

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. For a function that is not available for your TV, it is not displayed in the menu.

No.	Model No.	AV-29V334	AV-25V334	AV-21V334	AV-29V314	AV-25V314	AV-21V314	AV-21W314	AV-21C314	AV-21Y314	AV-21D314
	Function										
1	*PICTURE BOOSTER	—	—	—	—	—	—	—	—	—	—
2	*ECO	○	○	○	○	○	○	—	—	—	—
3	*BASS	○	○	—	—	—	—	—	—	—	—
4	*CINEMA SURROUND	○	○	○	○	○	○	○	—	—	—
5	*SOUND TURBO	○	○	○	○	○	○	○	○	○	○
—	PICTURE TILT	○	—	○	—	—	—	—	—	—	—
—	COMPRESS (16:9)	○	○	○	○	○	○	—	—	—	○

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	Select TV or video terminal input.
7	MUTING	Turn off the volume. Press this button again to resume the volume.
8	DISPLAY	Display the programme number or video terminal number 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.
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.

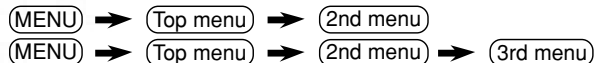


Remote control buttons and basic functions (continued)

How to operate menus and menu locations

To	Operation	Note
Display the MENU	Press the MENU/OK button ②.	To exit the MENU, press the DISPLAY button ③ or choose EXIT menu.
Display the top menu	Press ▲/▼ buttons ③ to choose a menu title. Then press MENU/OK button ②.	Press ▼ button ③ to display the next page for more functions.
Display the 2nd menu	Press ▲/▼ buttons ③ to choose a menu title. Then press MENU/OK button ②.	
Display the 3rd menu	Press ▲/▼ buttons ③ to choose a menu title. Then press MENU/OK button ②.	
Return to the previous menu	Press the DISPLAY button ③.	—
Choose the setting of a function	Press ▲/▼ buttons ③ to choose a function. Then press the ◀/▶ buttons ③ to change the setting.	Press the MENU/OK button ② to exit from the menu.
Adjust the effect level of a function	Press ▲/▼ buttons ③ to choose a function. Then press the ◀/▶ buttons ③ to adjust the effect level.	
Display the sub menu of a function.	Press the ▲/▼ buttons ③ to choose a function. Then press MENU/OK buttons 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:



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

	Top menu	2nd menu	Location	3rd menu	Location
MENU	INPUT	EXT. INPUT	P.16	—	—
		DISPLAY	P.16	—	—
	PICTURE * If you want to adjust PICTURE SETTING menu, you must set PICTURE MODE menu to USER.	PICTURE MODE	P.9	—	—
		PICTURE SETTING	P.10	—	—
		WHITE BALANCE	P.10	—	—
		PICTURE FEATURES	—	VNR	P.15
			—	FAVORITE CH SETTING	P.14
			—	VIDEO SETTING	P.14
			—	COLOUR SYSTEM	P.9
			—	PICTURE BOOSTER	P.10
			—	COMPRESS (16:9)	P.11
			—	PICTURE TILT	P.11
	SOUND * If you want to adjust EQUALIZER menu, you must set SOUND MODE menu to USER.	AI VOLUME	P.13	—	—
		SOUND MODE	P.12	—	—
		EQUALIZER	P.13	—	—
		BALANCE	P.12	—	—
		SOUND TURBO	P.12	—	—
		CINEMA SURROUND	P.13	—	—
	FEATURES	SUPER BASS	P.12	—	—
		OFF TIMER	P.15	—	—
		CHILD LOCK	P.15	—	—
	INSTALL	AI ECO SENSOR	P.11	—	—
		AUTO PROGRAM	P.17	—	—
		EDIT/MANUAL	P.17	DELETE, MOVE, MANUAL, INSERT	P.17-P.18
		LANGUAGE	P.15	LANGUAGE	P.15
		BLUE BACK	P.11	—	—
		AUTO SHUTOFF	P.16	—	—
		VIDEO-2 SETTING	P.16	—	—
		AI ECO DISPLAY	P.11	—	—
	EXIT	—	—	—	—

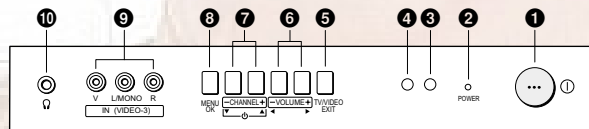
TV buttons and functions

The illustrations shown below is for AV-29V334 and AV-21C314 series only, which are used for explanation purpose.

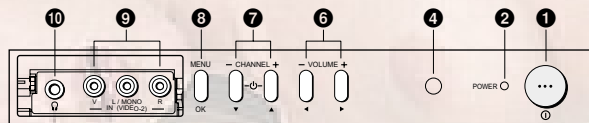
Your TV may not look exactly the same as illustrated.

Front of the TV

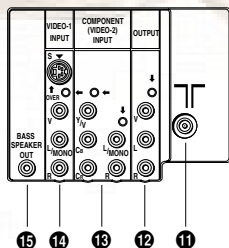
AV-29V334



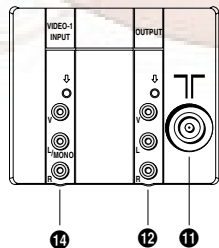
AV-21C314



AV-29V334



AV-21C314



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 is being turned on or off. No colour: TV's main power is being turned off. Red: TV's main power is being turned on. Note: When you turn off the power switch while TV is in standby mode, the light of power lamp will be off in 10 -15 seconds.	–
③	ECO sensor		–
④	Remote control sensor		–
⑤	TV/ VIDEO	Press to select TV or video mode.	–
⑥	VOLUME +/-	Press to adjust the volume level.	–
⑦	CHANNEL +/-	Press to select the desired channel.	–
⑧	MENU	Press to display the menu.	–
⑨	IN (VIDEO-3)	Video and audio input jacks for VIDEO-3 mode.	20
⑩	Headphone jack.		20
⑪	Aerial socket.		7
⑫	OUTPUT	Video and audio output jacks. (The component video signal cannot be output.)	20
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 16).	20
⑭	VIDEO-1 INPUT	Video or S-VIDEO, and audio input jacks for VIDEO-1 mode	7
⑮	BASS SPEAKER OUT	Twin Port Bass Blaster Unit output terminal.	21

How to operate the menus with the TV button

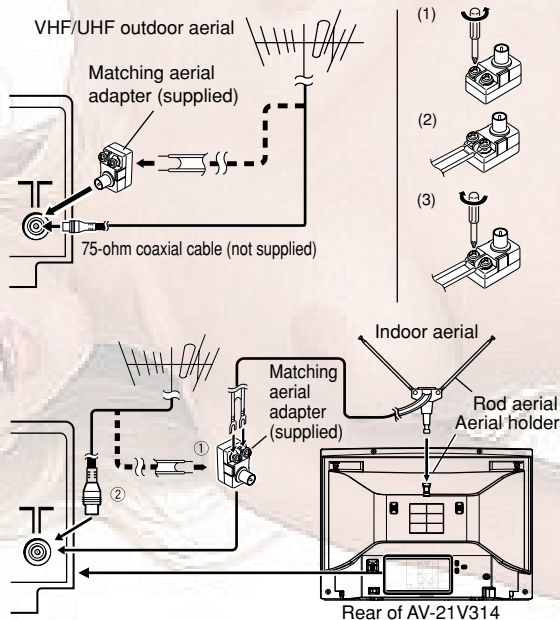
TV button	Work as same as the button on the remote control unit	Note
MENU	MENU/OK button	To display main menu and exit menu after finish setting.
CHANNEL +/-	▼/▲ button	To select menu function.
VOLUME +/-	◀/▶ button	To adjust the desired function.

Setting up your TV

CAUTION

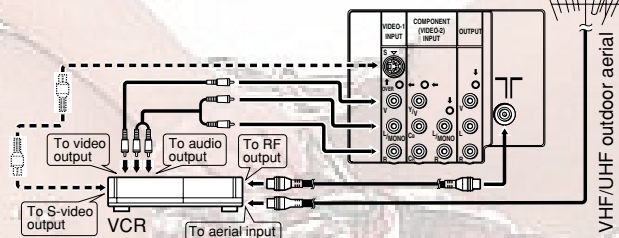
- Turn off the equipment including the TV before connecting.

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 the 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.

Rear of TV



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

2 Connecting the compatible main plug to the AC outlet.



3 Inserting batteries into the remote control.

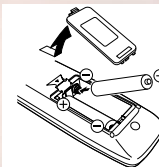
Insert two batteries by following the ⊕ and ⊖ polarities and inserting the ⊖ end first.

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.

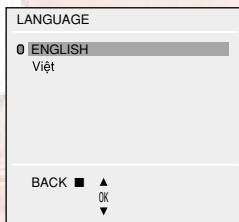
JVC logo appears on the screen.

JVC

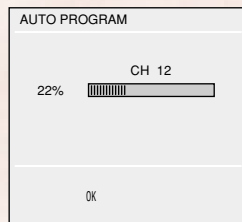
Setting up your TV (continued)

5 Making the initial settings

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

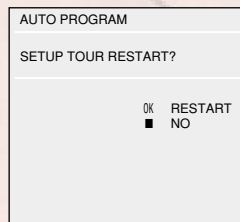


- Press ▲/▼ button to select your desired language, then press MENU/OK button.

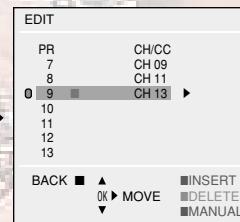


- TV will start searching for the channels.

To stop AUTO PROGRAM, press MENU/OK button.



- Press the red 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 MENU/OK button to activate the SETUP TOUR RESTART function.



- To complete the initial setting, press the MENU/OK button. To edit the channel list, see page 17.

If the JVC logo does not appear, use LANGUAGE, and AUTO PROGRAM functions to make the initial settings. Those functions are located in the INSTALL menu.

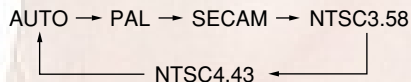
If the JVC logo appears, although you had made the initial settings, press the TV/VIDEO button to exit from initial settings.

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) ➡ (PICTURE menu) ➡ (PICTURE FEATURES 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*)

*TINT can only be adjusted in NTSC system.

To operate this function with a menu:

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

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

※ 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)

Adjusting the picture - USER

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

1 Select the USER in PICTURE MODE under PICTURE menu.

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

2 Select the 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

*TINT can only be adjusted in NTSC system.

PICTURE BOOSTER

You can improve picture clarity when the picture is unclear due to the low signal reception.

Press the PICTURE BOOSTER button to select the desired mode.

HIGH	Perform at maximum level.
LOW	Perform at minimum level.
OFF	Cancel the function

To operate this function with a menu:

* (MENU) → (PICTURE menu) → (PICTURE FEATURES menu)
→ (PICTURE BOOSTER)

WHITE BALANCE

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

Select the 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.

* 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)

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

Press the ECO button to select the desired mode.

1	Mild contrast (recommended).
2	Even contrast.
OFF	Cancel the function.

To operate this function with a menu:

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

You can display the graphic of AI ECO SENSOR on the screen. Select the AI ECO DISPLAY in the INSTALL menu, then choose ON or OFF.

* (MENU) → (INSTALL menu) → (AI ECO DISPLAY)

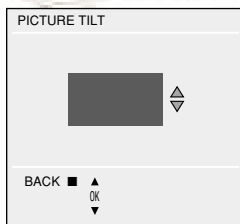
Correcting the Slanting Picture (PICTURE TILT)

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

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

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

The following display appears.



2 Press the ▲/▼ buttons until the picture become 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 the COMPRESS (16:9) in the PICTURE FEATURES menu under PICTURE menu, then choose ON or OFF.

* (MENU) → (PICTURE menu) → (PICTURE 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 the BLUE BACK in the INSTALL menu, then choose ON or OFF.

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

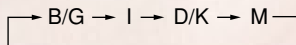
If you wish to continue viewing the poor picture, cancel the BLUE BACK function.

* 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.



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.	B/G
	Indonesia, Malaysia, Singapore, Thailand, India, etc.	
	China, Vietnam, etc.	D/K
	Hong Kong, etc.	I
	Islamic Republic of Iran, Lebanon, Saudi Arabia, etc.	B/G
Europe	Philippines, Taiwan, Myanmar, etc.	M
	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

SUPER BASS (BASS)

You can enjoy powerful bass sound with the Twin Port Bass Blaster unit.

Press the BASS button to select ON or OFF.

To operate this function with a menu:

* (MENU) → (SOUND menu) → (SUPER BASS)

For attaching the Twin Port Bass Blaster unit, please see in page 21.

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 13.
DYNAMIC	Emphasize on both vocal sound and music.
MUSIC	Emphasize on music effect.
NEWS	Emphasize on vocal sound.

BALANCE

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

Select the BALANCE in SOUND menu, then adjust the setting.

* (MENU) → (SOUND menu) → (BALANCE)

SOUND TURBO

You can enjoy the emphatic low and high frequency levels.

Press the SOUND TURBO to select ON or OFF.

To operate this function with a menu:

* (MENU) → (SOUND menu) → (SOUND TURBO)

* 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.
LOW	Listen to sound with less wider audience effect.
HIGH	Listen to sound with more wider audience effect.
MONO	Listen to mono sound with stereo effect.

To operate this function with a menu:

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

If slight volume distortion occurs when you select HIGH mode, change the setting to LOW mode. The CINEMA SURROUND effect will be less noticeable.

If you use CINEMA SURROUND and SOUND TURBO together, volume distortion might occurs.

EQUALIZER

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

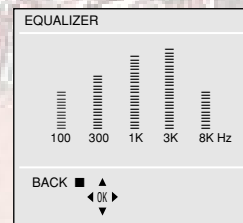
1 Select the USER in SOUND MODE under SOUND menu.

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

2 Select the 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.

AI VOLUME

You can adjust the volume of all the channels and video inputs to the same level automatically.

Select the 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.

Favorite channel and video setting

To register the favorite channel

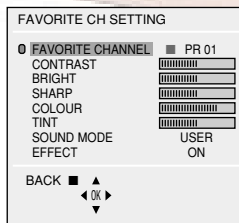
You can register and recall 4 favorite channels by using the colour buttons (red, green, yellow, blue).

- 1 In TV mode, select a TV channel (PR01-99) you desired to register.
- 2 Press and hold a colour button for 3 seconds or more.
“FAVORITE CHANNEL ■ PROGRAMMED!” appears on the screen and current channel is registered.
- 3 To register other favorite channels, repeat Step 1 to 2.
To recall the favorite channel, press the colour button.
When the TV is in menu mode, favorite channel function is not available.

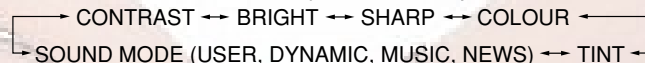
To adjust favorite channel setting (FAVORITE CH SETTING)

You can adjust the picture and sound settings for the favorite channels.

- 1 Display the PICTURE menu and select FAVORITE CH SETTING in PICTURE FEATURES menu.
*(MENU) ➡ (PICTURE menu) ➡ (PICTURE FEATURES menu)
➡ (FAVORITE CH SETTING)
- 2 Select FAVORITE CHANNEL in FAVORITE CH SETTING menu, then choose the desired favorite channel.
*(FAVORITE CH SETTING) ➡ (FAVORITE CHANNEL)
- 3 Select EFFECT, then press ◀▶ button to choose ON.
To cancel the settings, choose OFF.



- 4 Select the desired item that you wish to adjust.

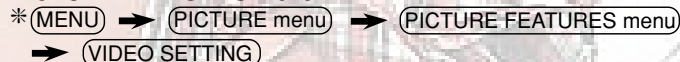


- 5 Press the MENU/OK button to exit the menu.

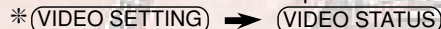
To adjust the video setting (VIDEO SETTING)

You can adjust the picture and sound settings for video inputs.

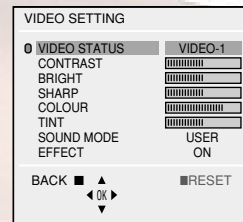
- 1 Display the PICTURE menu and select VIDEO SETTING in PICTURE FEATURES menu.



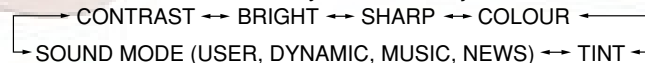
- 2 Select VIDEO STATUS in VIDEO SETTING menu, then choose the desired video input.



- 3 Select EFFECT, then press ◀▶ button to choose ON.
To cancel the settings, choose OFF.



- 4 Select the desired item that you wish to adjust.



- 5 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.

Customized setting

VNR

You can reduce the noise.

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

* (MENU) → (PICTURE menu) → (PICTURE FEATURES 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.

LANGUAGE

You can choose your desired on screen display language.

Select the 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.

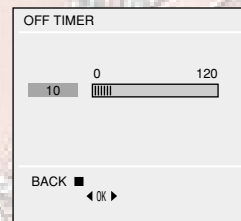
Select the CHILD LOCK in the FEATURES menu, then choose ON or OFF.

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

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 minutes step.

To operate this function with a menu:

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

When the elapsed of time left 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)

AUTO SHUTOFF

You can set the TV to turn off automatically when no signal is received for about 15 minutes or longer after the end of a broadcast.

Select AUTO SHUTOFF in INSTALL menu, then choose ON or OFF.

* (MENU) ➡ (INSTALL menu) ➡ (AUTO SHUTOFF)

The AUTO SHUTOFF function does not turn off the TV's main power.

The AUTO SHUTOFF function is not available in video mode.

VIDEO-2 SETTING

You can set the VIDEO-2 SETTING according to the video signal output from the external devices connected to the VIDEO-2 terminal.

Select the VIDEO-2 SETTING in INSTALL menu, then choose a setting.

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

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

COMPONENT	If a component video signal (Y/Cb/Cr) is input.
-----------	---

For connecting methods, see "Additional Preparation" on page 20.

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

EXT. INPUT (TV/VIDEO)

You can select TV or video terminal input with one touch.

Press the TV/VIDEO button to select an input.

To operate this function with a menu:

* (MENU) ➡ (INPUT menu) ➡ (EXT. INPUT)

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:

ON — OFF — PR LIST

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.

PR LIST	
PR	CH/CC
AV	
1	CH 03
2	CH 05
3	CH 07
4	CH 09
5	CC 04
6	CC 05

-7 ◀ 0 ▶ +7

To operate this function with a menu:

* (MENU) ➡ (INPUT menu) ➡ (DISPLAY)

* 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

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 "SETUP TOUR RESTART?" appears.

To start the SETUP TOUR	Press the MENU/OK button. Then proceed to step 5 of "Setting up your TV" on page 8.
-------------------------	---

To skip the SETUP TOUR	Press the Red button.
------------------------	-----------------------

4 The EDIT menu appears.

To edit the channel list	Proceed to the Step 3 of "To edit the channel list (PR LIST)" on page 18.
--------------------------	---

If a channel is not registered	Proceed to the Step 3 of "To register the TV channels manually" on this page.
--------------------------------	---

To exit the menu	Press the MENU/OK button.
------------------	---------------------------

For details of "SETUP TOUR", see page 8.

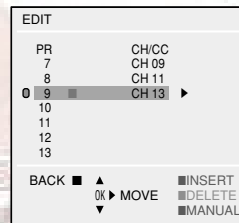
To register the TV channels manually (MANUAL in the EDIT menu)

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 12.

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)

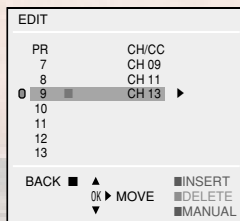
You can edit the TV channel list as you like.

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 PR number, or delete.

- 4 Do the following action:

To change the PR number (MOVE)	Press the ► button. Then move it to the PR number you want to use it for the channel. 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 the new channel 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 the attached sheet "CH/CC number list" on page 19.

- 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 ▲/▼ buttons to choose "CC" or "CH".

- 5 Press the number button to enter the remaining CH/CC number.

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.

TV channel presetting (continued)

CH/CC number

When you want to use the INSERT function on page 18, find the CH/CC number corresponding to the channel number of the TV channel from this table.

Channel No.	Country
US	United States, Philippines, etc..
CCIR	Middle East, Southeast Asia, etc..
OIRT	Eastern Europe, Russia, Vietnam, etc..
AUSTRALIA	Australia, etc..

Channel

CH	US	CCIR	OIRT	AUSTRALIA
CH 02	US-2	E2	R1	AU-0
CH 03	US-3	E3		AU-1
CH 04	US-4	E4	R2	AU-2
CH 05	US-5	E5	R6	AU-6
CH 06	US-6	E6	R7	AU-7
CH 07	US-7	E7	R8	AU-8
CH 08	US-8	E8	R9	AU-9
CH 09	US-9	E9		
CH 10	US-10	E10	R10	AU-10
CH 11	US-11	E11	R11	AU-11
CH 12	US-12	E12	R12	
CH 13	US-13			
CH 14	US-14, W+29			
CH 15	US-15, W+30			
CH 16	US-16, W+31			
CH 17	US-17, W+32			
CH 18	US-18, W+33			
CH 19	US-19, W+34			
CH 20	US-20, W+35			
CH 21	US-21, W+36	E21		
CH 22	US-22, W+37	E22		
CH 23	US-23, W+38	E23		
CH 24	US-24, W+39	E24		
CH 25	US-25, W+40	E25		
CH 26	US-26, W+41	E26		
CH 27	US-27, W+42	E27		
CH 28	US-28, W+43	E28		
CH 29	US-29, W+44	E29		
CH 30	US-30, W+45	E30		
CH 31	US-31, W+46	E31		
CH 32	US-32, W+47	E32		

CH	US	CCIR	OIRT	AUSTRALIA
CH 33	US-33, W+48	E33		
CH 34	US-34, W+49	E34		
CH 35	US-35, W+50	E35		
CH 36	US-36, W+51	E36		
CH 37	US-37, W+52	E37		
CH 38	US-38, W+53	E38		
CH 39	US-39, W+54	E39		
CH 40	US-40, W+55	E40		
CH 41	US-41, W+56	E41		
CH 42	US-42, W+57	E42		
CH 43	US-43, W+58	E43		
CH 44	US-44, W+59	E44		
CH 45	US-45, W+60	E45		
CH 46	US-46, W+61	E46		
CH 47	US-47, W+62	E47		
CH 48	US-48, W+63	E48		
CH 49	US-49, W+64	E49		
CH 50	US-50, W+65	E50		
CH 51	US-51, W+66	E51		
CH 52	US-52, W+67	E52		
CH 53	US-53, W+68	E53		
CH 54	US-54, W+69	E54		
CH 55	US-55, W+70	E55		
CH 56	US-56, W+71	E56		
CH 57	US-57, W+72	E57		
CH 58	US-58, W+73	E58		
CH 59	US-59, W+74	E59		
CH 60	US-60, W+75	E60		
CH 61	US-61, W+76	E61		
CH 62	US-62, W+77	E62		
CH 63	US-63, W+78	E63		
CH 64	US-64, W+79	E64		
CH 65	US-65, W+80	E65		
CH 66	US-66, W+81	E66		
CH 67	US-67, W+82	E67		
CH 68	US-68, W+83	E68		
CH 69	US-69, W+84	E69		

CC	US	CCIR	OIRT	AUSTRALIA
CC 01		S-1		AU-5
CC 02		S-2		
CC 03		S-3		
CC 04		S-4		
CC 05		S-5		
CC 06		S-6		AU-5A
CC 07		S-7		
CC 08		S-8		
CC 09		S-9		
CC 10		S-10		
CC 11		S-11		
CC 12		S-12		
CC 13		S-13		
CC 14	A	S-14		
CC 15	B	S-15		
CC 16	C	S-16		
CC 17	D	S-17		

CC	US	CCIR	OIRT	AUSTRALIA
CC 18	E	S-18		
CC 19	F	S-19		
CC 20	G	S-20		
CC 21	H	S-21		
CC 22	I	S-22		
CC 23	J	S-23		
CC 24	K	S-24		
CC 25	L	S-25		
CC 26	M	S-26		
CC 27	N	S-27		
CC 28	O	S-28		
CC 29	P	S-29		
CC 30	Q	S-30		
CC 31	R	S-31		
CC 32	S	S-32		
CC 33	T	S-33		
CC 34	U	S-34		
CC 35	V	S-35		
CC 36	W	S-36		
CC 37	W+1	S-37		
CC 38	W+2	S-38		
CC 39	W+3	S-39		
CC 40	W+4	S-40		
CC 41	W+5	S-41		
CC 42	W+6			
CC 43	W+7			
CC 44	W+8			
CC 45	W+9			
CC 46	W+10			
CC 47	W+11			
CC 48	W+12			
CC 49	W+13			
CC 50	W+14			
CC 51	W+15			
CC 52	W+16			
CC 53	W+17			
CC 54	W+18			
CC 55	W+19			
CC 56	W+20			
CC 57	W+21			
CC 58	W+22			
CC 59	W+23			
CC 60	W+24			
CC 61	W+25			
CC 62	W+26			
CC 63	W+27			
CC 64	W+28			
CC 75		X		
CC 76		Y	R3	
CC 77		Z	R4	AU-3
CC 78		Z+1	R5	
CC 79		Z+2		AU-4
CC 95	A-5			
CC 96	A-4			
CC 97	A-3			
CC 98	A-2			
CC 99	A-1			

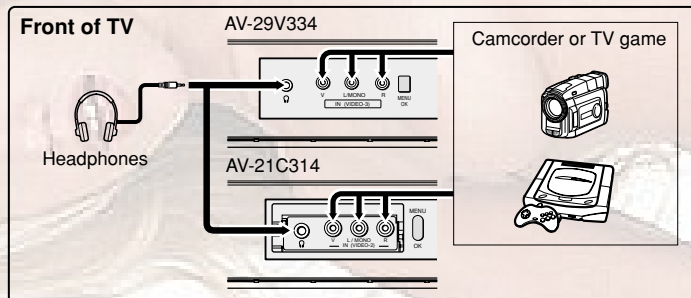
Additional preparation

The illustrations shown in this section are for AV-29V334 and AV-21C314 only, which are used for explanation purpose. Your TV may not look exactly the same as illustrated.

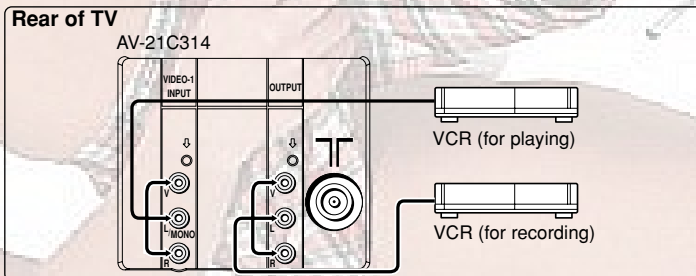
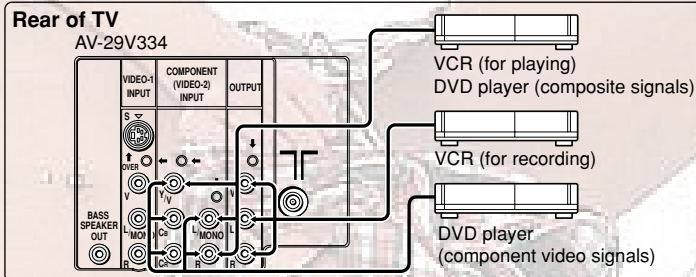
Before connecting

- 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 terminal



Connecting to rear component/video input terminal and output terminal



When you use VIDEO-1 INPUT, you should choose to connect S-VIDEO or video input. If S-VIDEO connector and video input are connected at the same time, no picture displays on the screen and the message "PLEASE DISCONNECT VIDEO-1 CABLE!" appears. In this case, you should disconnect either S-VIDEO or video input.

When connecting to COMPONENT (VIDEO-2) input, depending on the connection, choose the appropriate video input using the menu (see page 16).

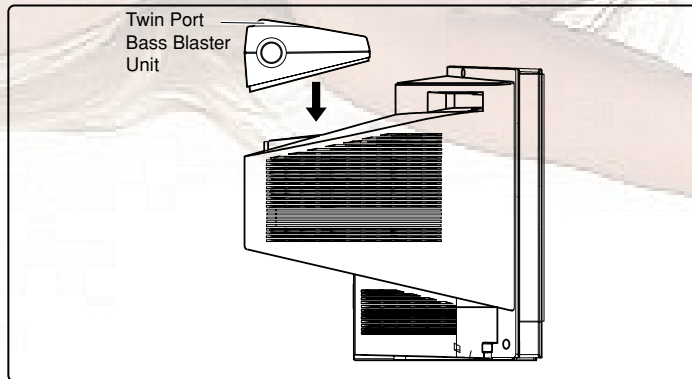
Additional preparation (continued)

Attaching the Twin Port Bass Blaster Unit

<AV-29V334/AV-25V334/AV-21V334 only>

The Twin Port Bass Blaster Unit is packaged together with the TV. Before you use the TV, mount the Twin Port Bass Blaster unit correctly on the TV.

- The SUPER BASS (BASS) function do not work unless the Twin Port Bass Blaster Unit is connected correctly to the TV. For details on the SUPER BASS (BASS) function, see page 12.
- 1 Place the unit on top of the TV making sure that the mounting pin on the bottom of the unit fits into the mounting hole on the top of the TV.
 - When you mount the unit, make sure that the mounting pin fits properly into the mounting hole. Otherwise, it may slide off the top of the TV. This may cause damage or cause unexpected injury.

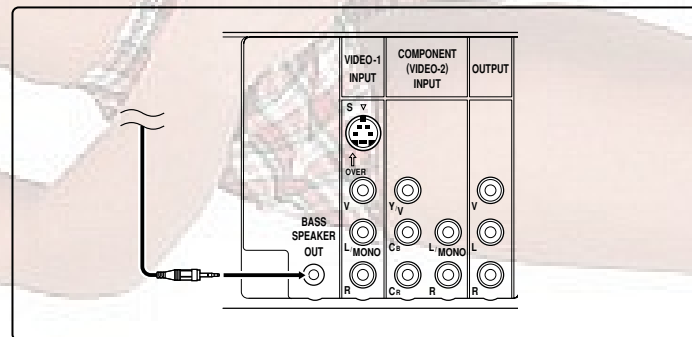


CAUTION:

The Twin Port Bass Blaster Unit is just placed on top of the TV and is not held in place by a screw. When using the unit, pay attention to the following cautions. Otherwise, the unit or TV may fall over and be damaged, or cause unexpected injury.

- Do not rest your hands or elbows on the Twin Port Bass Blaster Unit.
- Do not move the TV with the Twin Port Blaster Unit mounted on top of the TV. Before you move the TV, be sure to remove the unit.
- Do not move the TV by holding the Twin Port Bass Blaster Unit.

- 2 Firmly insert the Twin Port Bass Blaster Unit connector into the BASS SPEAKER OUT terminal.



Troubleshooting

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

• No picture, no sound	• Deactivate the BLUE BACK function if it is turned on. • Choose the appropriate sound system. Refer to "SOUND SYSTEM" on page 12.
• Snowy picture	• Check the aerial cable and its connection with the TV.
• Stripes appear on the picture	• Interference occurs caused by other devices such as an amplifier, personal computer, or a hair drier. Move such devices away from your TV.
• Double-pictures (ghosting) occur	• Interference occurs caused by signal reflecting from mountains or building. Try to adjust the aerial's direction or use a better directionality antenna.
• Poor picture	• Choose the appropriate colour system. Refer to "COLOUR SYSTEM" on page 9. • Adjust the COLOUR or BRIGHT setting. Refer to "Adjusting the picture - USER" on page 10.
• White and bright still image look as if it were coloured	• Inevitable phenomenon due to the nature of the picture tube. This is not a malfunction.
• Top of the image from software products or video tape is distorted	• This is due to the condition of the video signal whereby the image was not recorded properly. This is not a malfunction.
• Poor sound	• Adjust the sound frequency properly. Refer to "EQUALIZER" on page 13.

• Cannot operate the remote control	• The batteries may be exhausted. Replace with new batteries (see page 7). • Ensure that you are operating the remote less than seven meters from the front of your TV.
• Cannot operate the menus	• Press TV/VIDEO button to return to TV mode and try operating the menus.
• Cannot operate the front control buttons	• Deactivate the CHILD LOCK function if it is turned on (see page 15).
• TV is turned off suddenly	• This may due to the AUTO SHUT OFF function is activated. Press the POWER button to turn on the TV.
• Colour patches appear at the corner of the screen	• 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.
• Picture is tilted	• This may due to the earth magnetism. Refer to "PICTURE TILT" on page 11 to correct the tilt.
• Image takes a short period to be displayed	• Image required time to stabilize before display. This is not a malfunction.
• TV may emitted crackling sound	• 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.
• Feel a slight electric shock when touching the TV screen	• This is due to the static electricity of the picture tube and it will not harm the human body. This is not a malfunction.

Specifications

Model	AV-29V334	AV-29V314	AV-25V334	AV-25V314	AV-21V334
TV RF system	B/G, I, D/K, M				
Colour system	PAL, SECAM, NTSC 3.58 MHz, NTSC 4.43 MHz				
Channel and Frequencies	VHF low channel (VL) : 46.25 to 168.25 MHz VHF high channel (VH) : 175.25 to 463.25 MHz UHF channel (U) : 471.25 to 863.25 MHz *Receives cable channels in mid band (X to Z, S1 to S10), super band (S11 to S20) and hyper band (S21 to S41)				
Power input	AC 110 to 240 V, 50/60 Hz (operating AC 90 to 260 V, 50/60 Hz)				
Power consumption	MAX: 215 W AVG: 130 W	MAX: 166 W AVG: 109 W	MAX: 173 W AVG: 110 W	MAX: 151 W AVG: 102 W	MAX: 143 W AVG: 91 W
Screen size (Measured diagonally)	Picture tube: 727.4 mm Visible area: 676.0 mm	Picture tube: 727.4 mm Visible area: 676.0 mm	Picture tube: 649.0 mm Visible area: 597.0 mm	Picture tube: 649.0 mm Visible area: 597.0 mm	Picture tube: 546.9 mm Visible area: 508.0 mm
Audio output (Rated power output)	7 W + 7 W + 13 W	10 W + 10 W	7 W + 7 W + 13 W	7 W + 7 W	7 W + 7 W + 13 W
Speakers	(6.5 x 13) cm X 2 + (Ø 13) cm X 1	(6.5 x 13) cm X 2	(6.5 x 13) cm X 2 + (Ø 13) cm X 2	(6.5 x 13) cm X 2	(6.5 x 13) cm X 2 + (Ø 13) cm X 1
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)				
Dimension (W x H x D)	812 X 584.2 X 520.5 mm	812 X 584.2 X 520.5 mm	728 X 549 X 481.5 mm	728 X 536 X 481.5 mm	649 X 478 X 473.5 mm
Weight	41 kg	41 kg	35 kg	33 kg	26.5 kg
Accessories	• Remote control unit: RM-C1281 X 1 • AA/R6/UM-3 dry cell battery X 2 • Matching aerial adapter X 1				

Design and specifications subject to change without notice.

Specifications (continued)

Model	AV-21V314	AV-21C314	AV-21W314	AV-21D314	AV-21Y314
TV RF system	B/G, I, D/K, M				
Colour system	PAL, SECAM, NTSC 3.58 MHz, NTSC 4.43 MHz				
Channel and Frequencies	VHF low channel (VL) : 46.25 to 168.25 MHz VHF high channel (VH) : 175.25 to 463.25 MHz UHF channel (U) : 471.25 to 863.25 MHz *Receives cable channels in mid band (X to Z, S1 to S10), super band (S11 to S20) and hyper band (S21 to S41)				
Power input	AC 110 to 240 V, 50/60 Hz (operating AC 90 to 260 V, 50/60 Hz)				
Power consumption	MAX: 121 W AVG: 81 W	MAX: 88 W AVG: 65 W	MAX: 121 W AVG: 81 W	MAX: 91 W AVG: 65 W	MAX: 91 W AVG: 65 W
Screen size (Measured diagonally)	Picture tube: 546.9 mm Visible area: 508.0 mm	Picture tube: 547.5 mm Visible area: 505.0 mm	Picture tube: 546.9 mm Visible area: 508.0 mm	Picture tube: 548.1 mm Visible area: 508.0 mm	Picture tube: 548.1 mm Visible area: 508.0 mm
Audio output (Rated power output)	7 W + 7 W	3 W + 3 W	7 W + 7 W	3 W + 3 W	
Speakers	(6.5 x 13) cm X 2	(5 x 9) cm X 2	(6.5 x 13) cm X 2	(5 x 12) cm X 2	(6 x 12) cm X 2
External input/output	VIDEO-1: S-VIDEO input*, VIDEO input, AUDIO L/R input (*Except AV-21D314/AV-21Y314/AV-21C314) 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 (**Except AV-21Y314/AV-21C314) OUTPUT: VIDEO output, AUDIO L/R output Headphone jack: Stereo mini jack (3.5 mm diameter)				
Dimension (W x H x D)	649 X 465.5 X 473.5 mm	502 X 476.5 X 471.6 mm	649 X 465.5 X 471.5 mm	598 X 468 X 478 mm	649 X 470.5 X 477.5 mm
Weight	24 kg	22 kg	24 kg	25 kg	20 kg
Accessories	• Remote control unit: RM-C1281 X 1 • AA/R6/UM-3 dry cell battery X 2 • Matching aerial adapter X 1 • Rod aerial X 1				

Design and specifications subject to change without notice.

JVC
VICTOR COMPANY OF JAPAN, LIMITED

JVC

SCHEMATIC DIAGRAMS

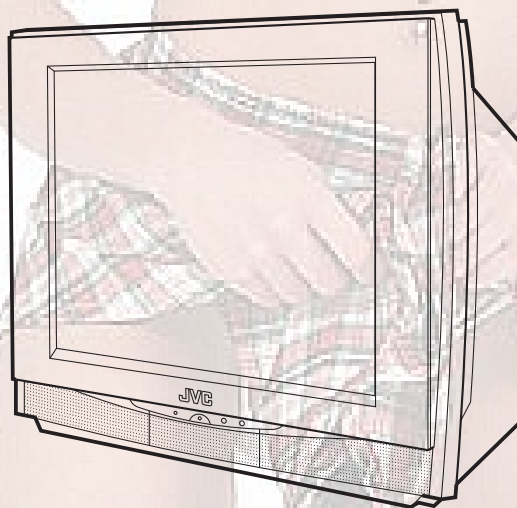
FLAT COLOUR TELEVISION

AV-29J334_N

CD-ROM No.SML200503

BASIC CHASSIS

CW



STANDARD CIRCUIT DIAGRAM

■ NOTE ON USING CIRCUIT DIAGRAMS

1.SAFETY

The components identified by the $\triangle$ symbol and shading are critical for safety. For continued safety replace safety critical components only with manufactures 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 20k Ω /V
- (4)Oscilloscope sweeping time : H $\Rightarrow$ 20 μ s / div
: V $\Rightarrow$ 5ms / div
: Others $\Rightarrow$ 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 $\rightarrow$ R209

4.INDICATIONS ON THE CIRCUIT DIAGRAM

(1)Resistors

● Resistance value

- No unit : [Ω]
- K : [k Ω]
- M : [M Ω]

● 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]

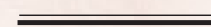
● Type

- No indication : Ceramic capacitor
- MM : Metalized mylar capacitor
- PP : Polypropylene capacitor
- MPP : Metalized 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

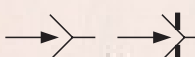
-  : B1
-  : B2 (12V)
-  : 9V
-  : 5V

* 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 : ($\perp$) side GND and the ISOLATED(NEUTRAL) : ($\downarrow$) 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.

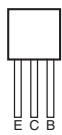
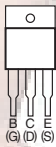
When ordering parts, please use the numbers that appear in the Parts List.

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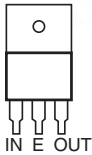
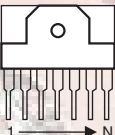
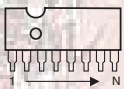
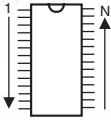
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SEMICONDUCTOR SHAPES

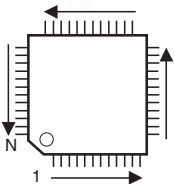
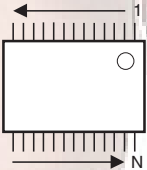
TRANSISTOR

BOTTOM VIEW	FRONT VIEW				TOP VIEW
					CHIP TR 

IC

BOTTOM VIEW	FRONT VIEW			TOP VIEW
				

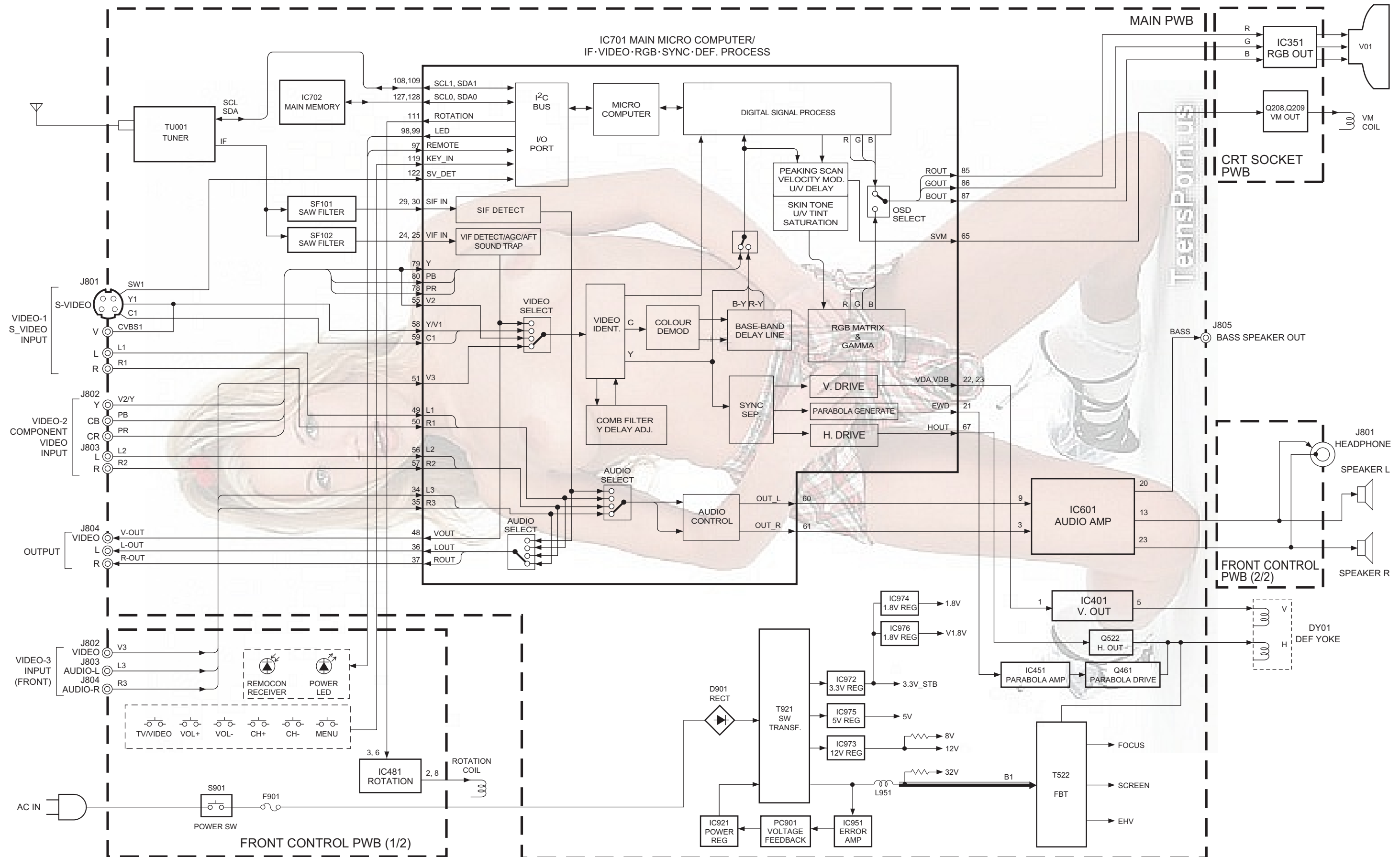
CHIP IC

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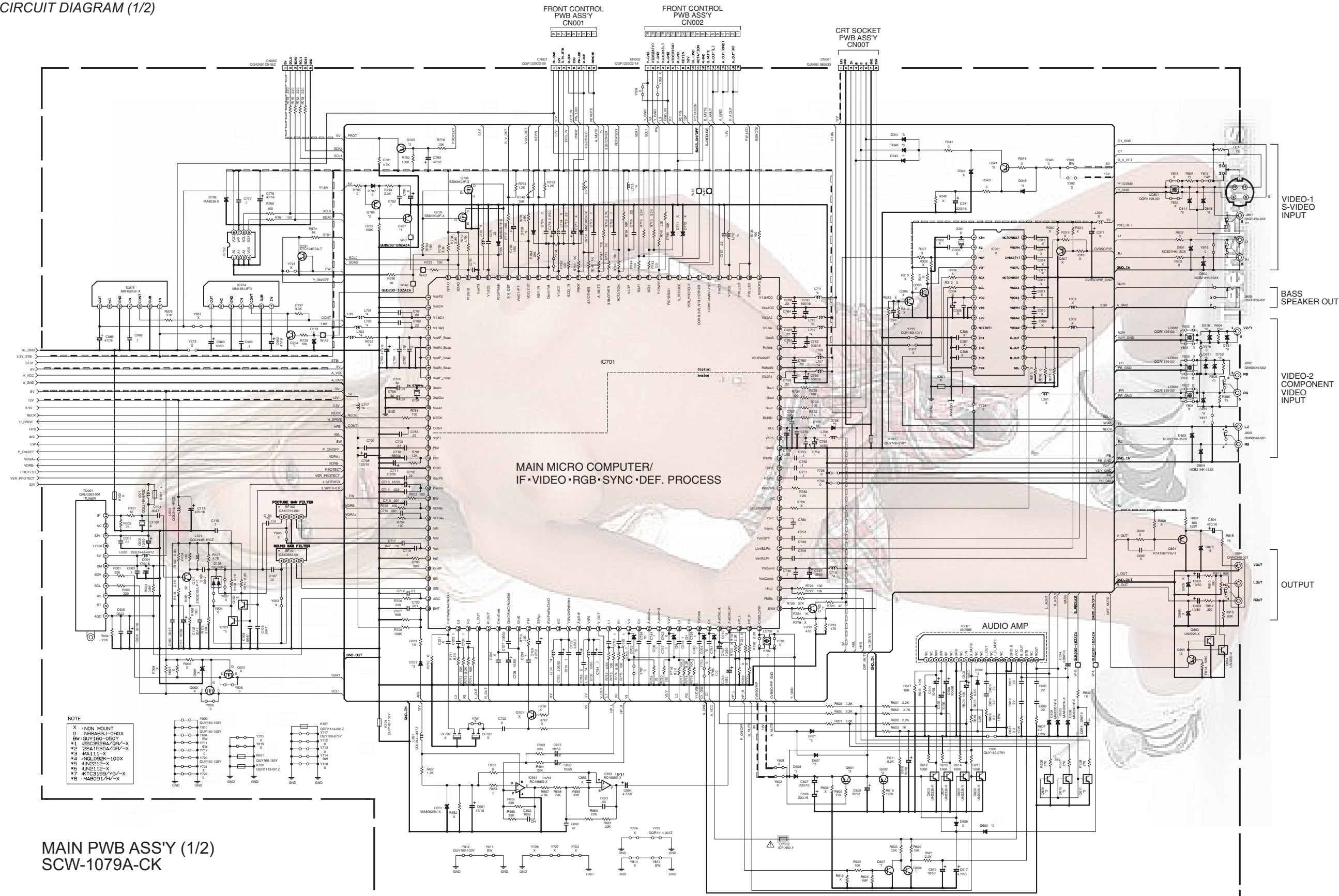
USING P.W. BOARD

P.W. BOARD ASS'Y NAME	AV-29J334/V
MAIN P.W. BOARD	SCW-1079A-CK
CRT SOCKET P.W. BOARD	SCW-3009A-CK
FRONT CONTROL P.W. BOARD	SCW-8009A-CK

BLOCK DIAGRAM



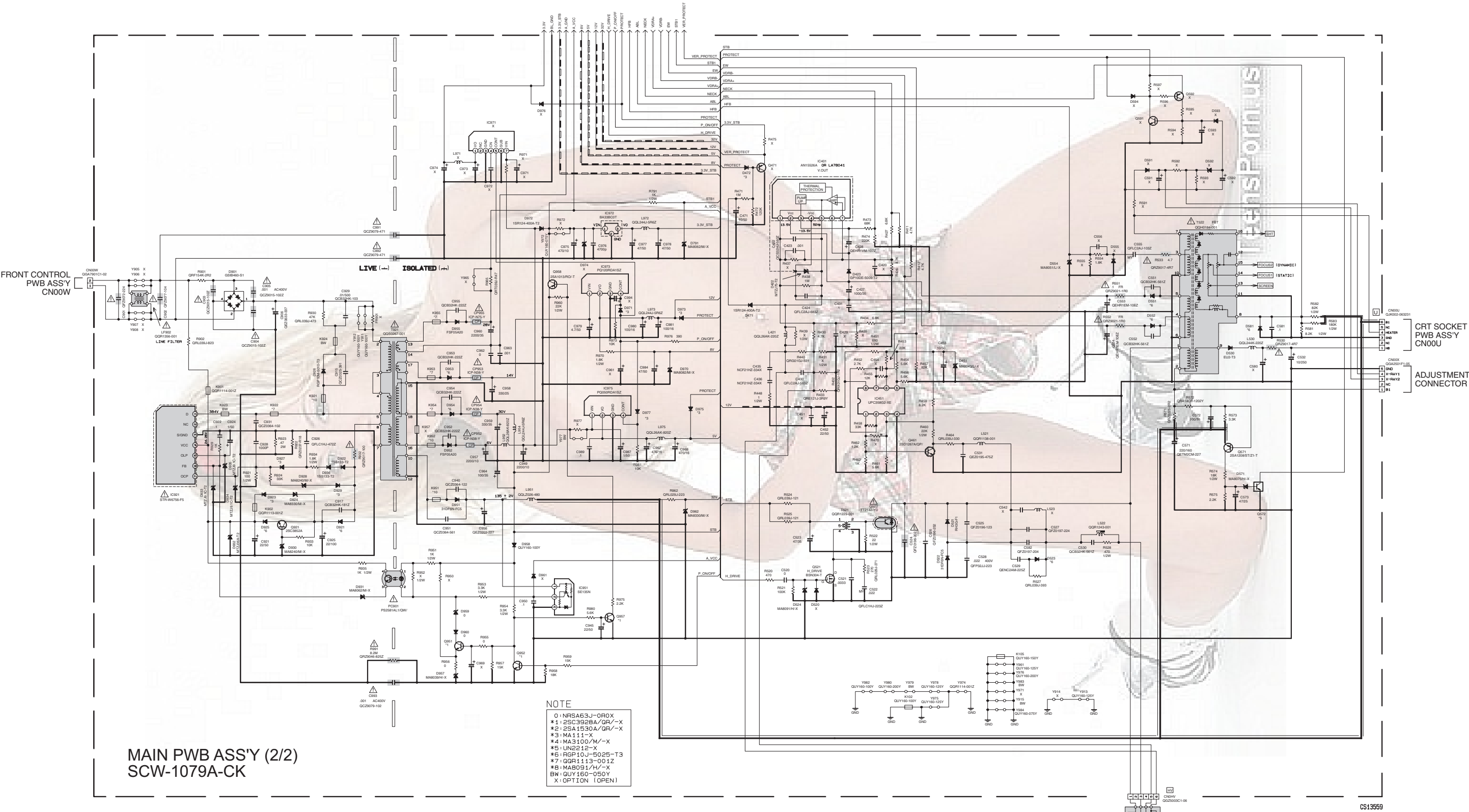
CIRCUIT DIAGRAMS
MAIN PWB CIRCUIT DIAGRAM (1/2)



MAIN PWB ASS'Y (1/2)
SCW-1079A-CK

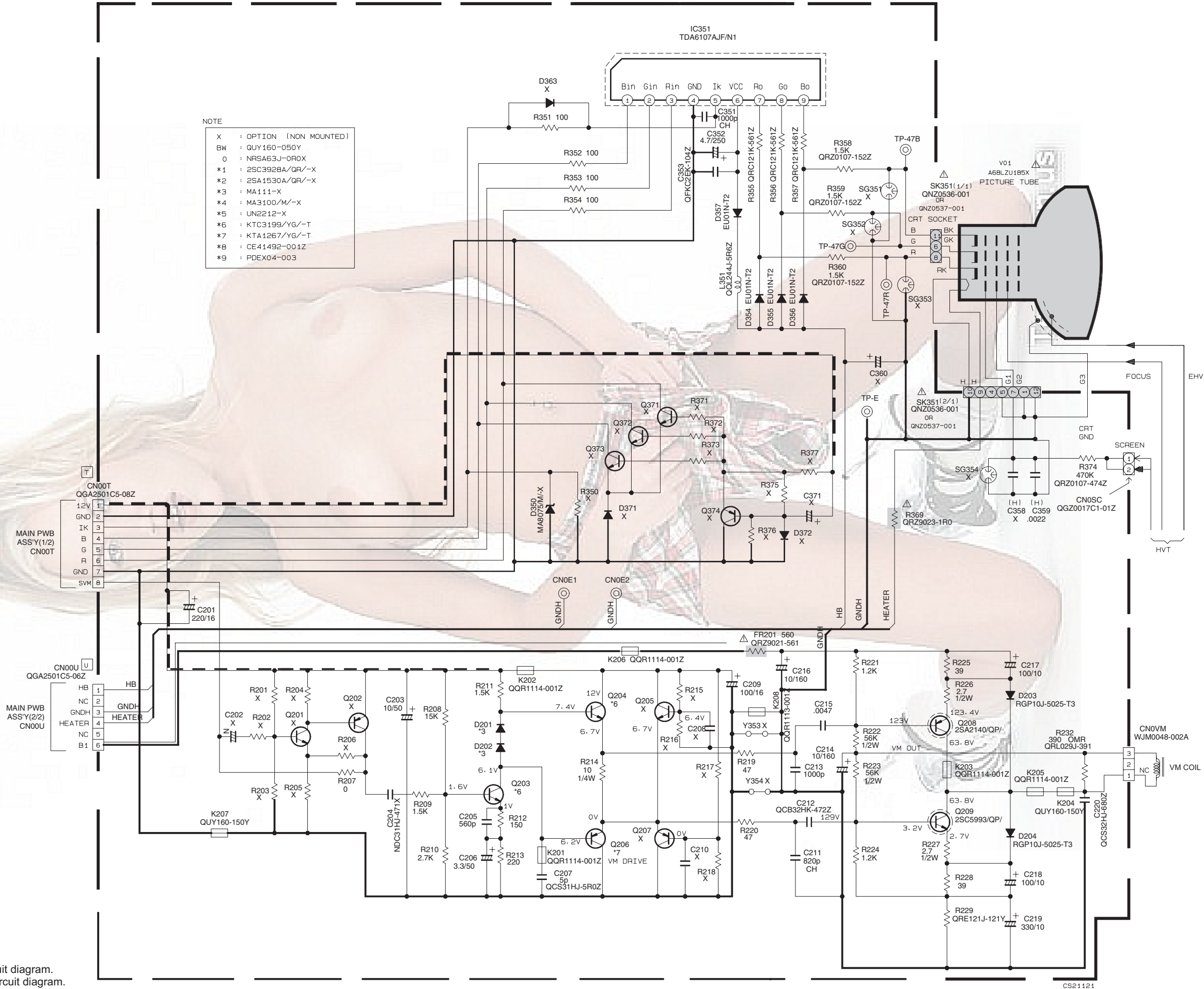
NOTE) 1.Refer to the part list for the part number of IC701 and IC702.
2.Refer to page 2-17 for voltages of this circuit diagram.
3.Refer to page 2-18 for waveforms of this circuit diagram.

MAIN PWB CIRCUIT DIAGRAM (2/2)



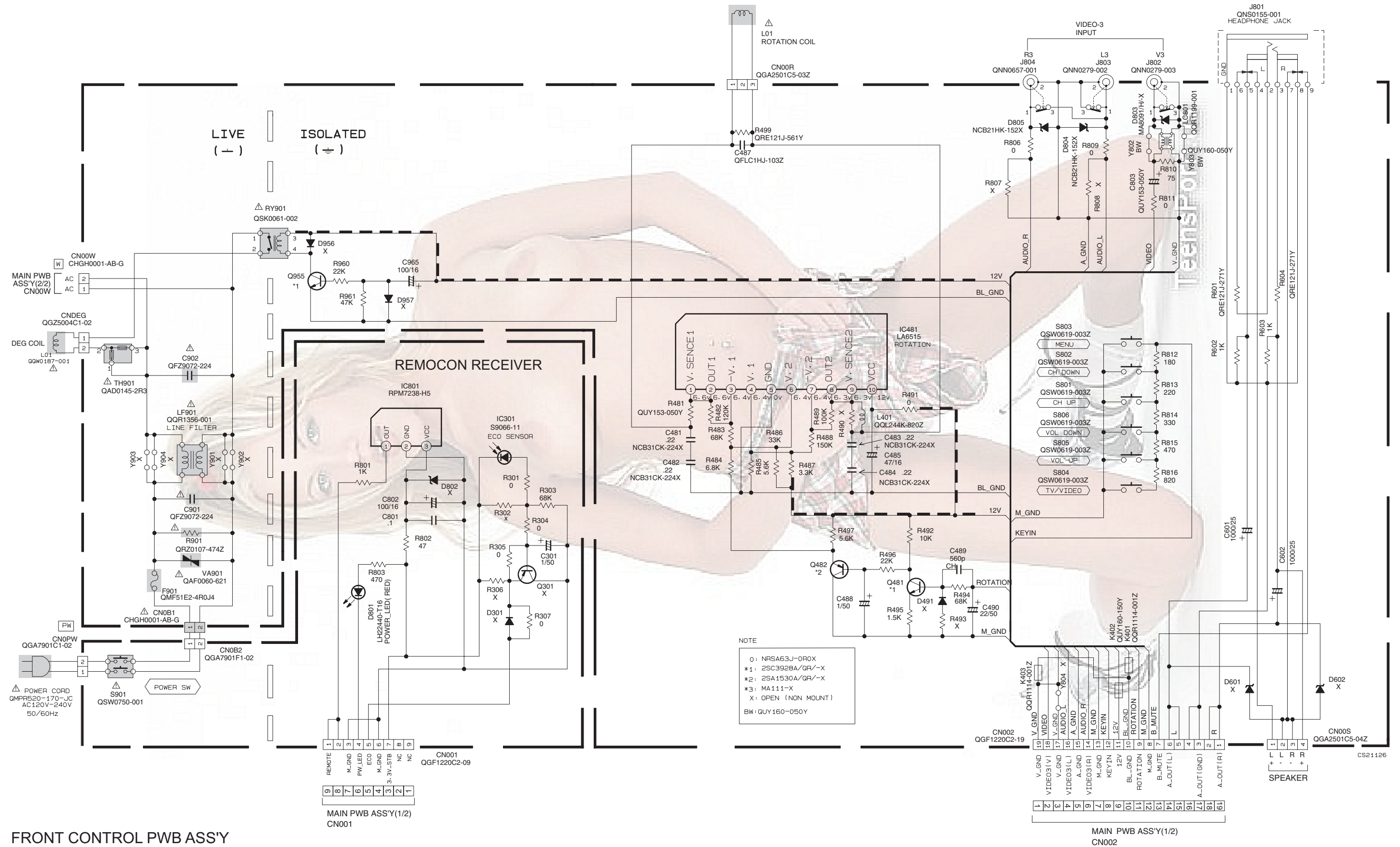
NOTE) 1.Refer to page 2-17 for voltages of this circuit diagram.
2.Refer to page 2-18 for waveforms of this circuit diagram.

CRT SOCKET PWB CIRCUIT DIAGRAM

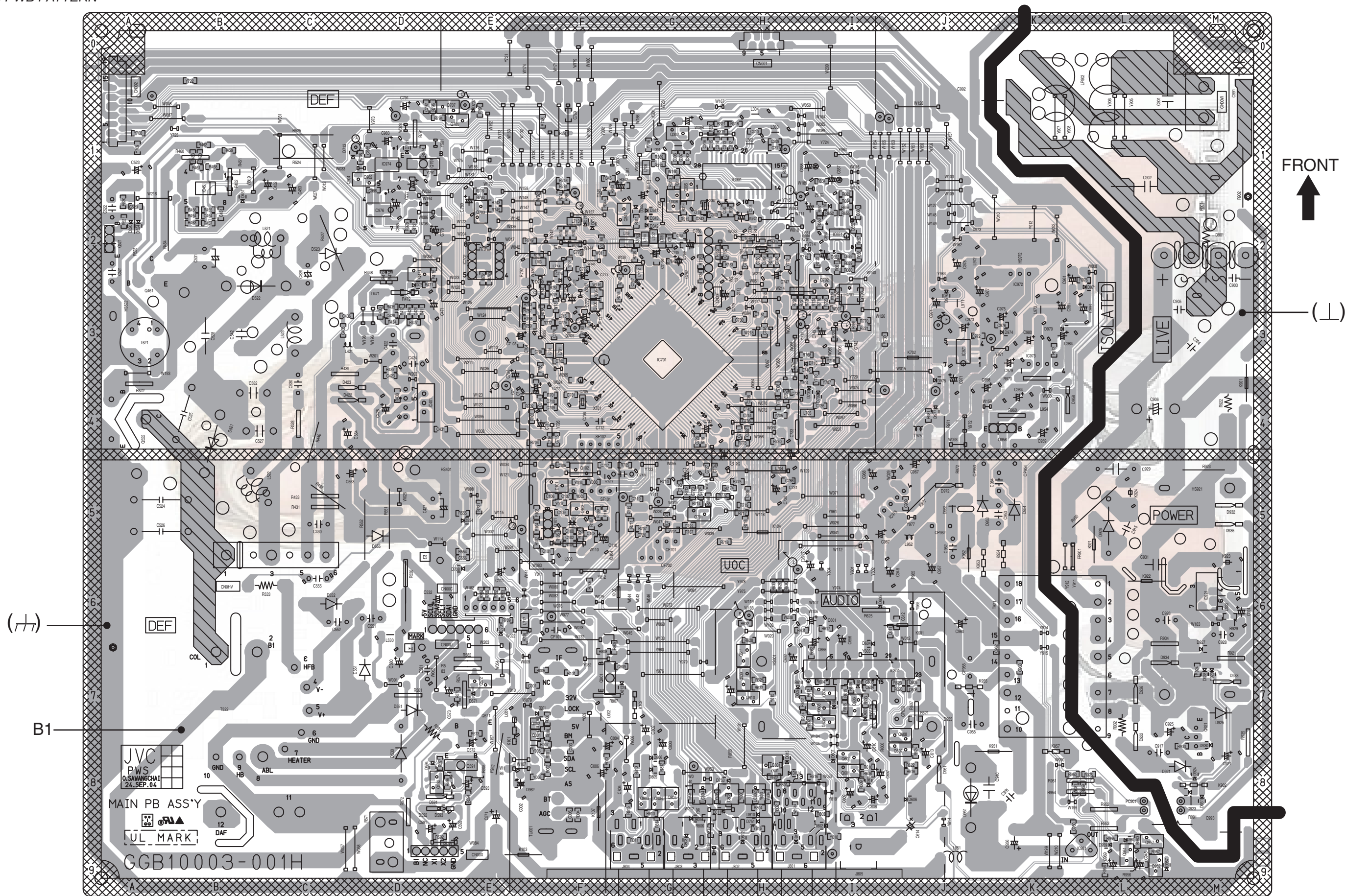


FRONT CONTROL PWB ASS'Y
SCW-8009A-CK

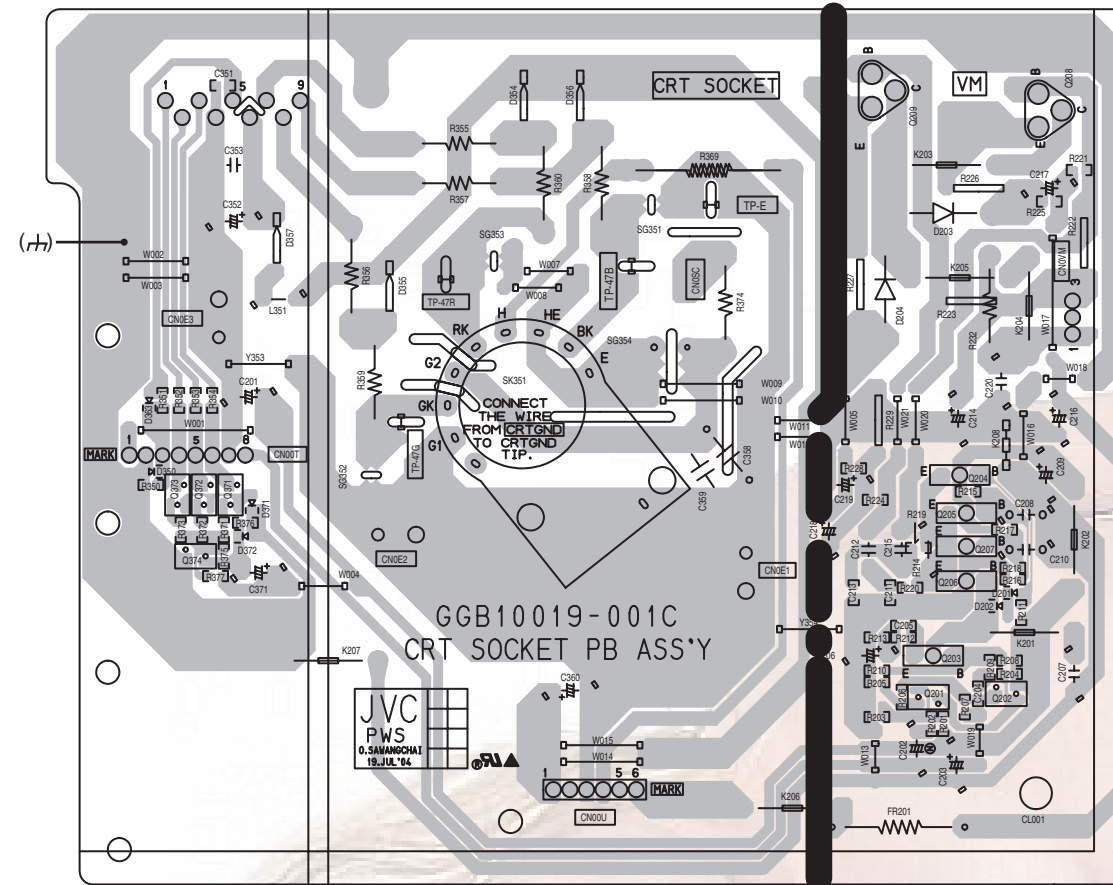
2-12(No.YA193)



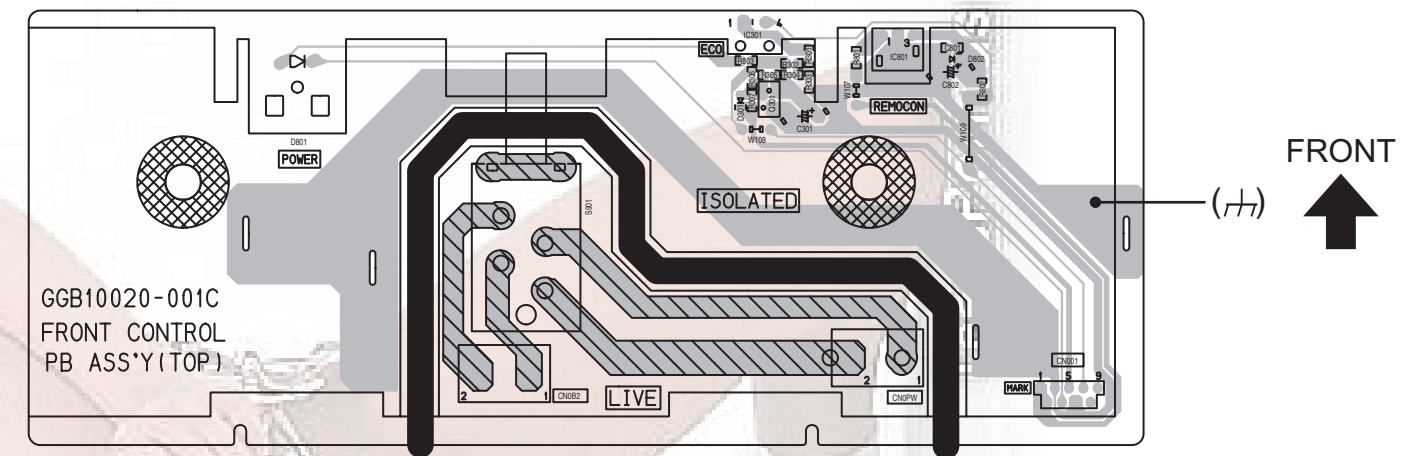
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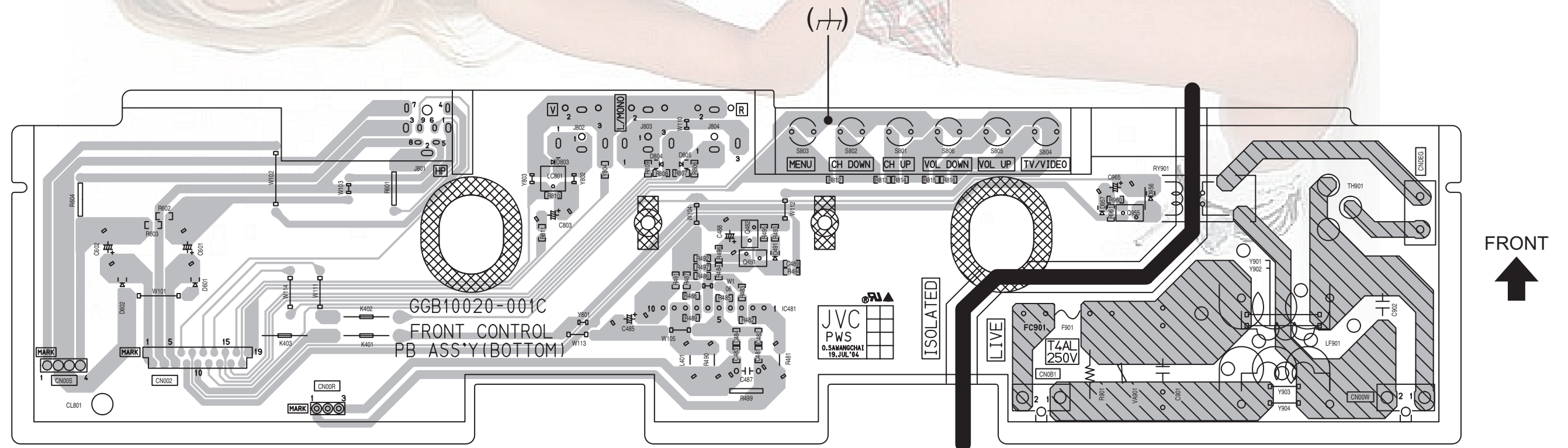
CRT SOCKET PWB PATTERN



FRONT CONTROL PWB PATTERN



FRONT CONTROL PWB PATTERN

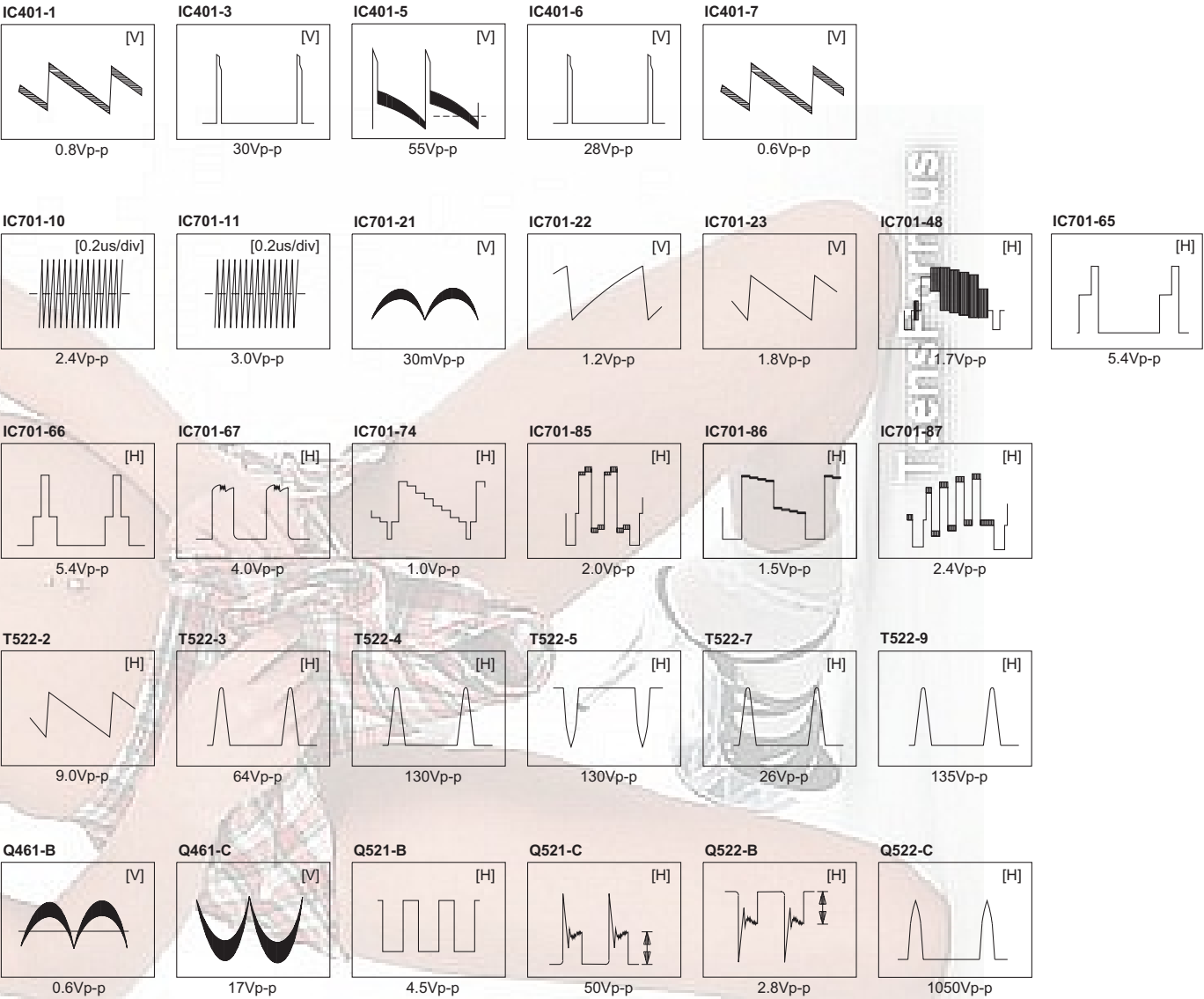


VOLTAGE CHARTS

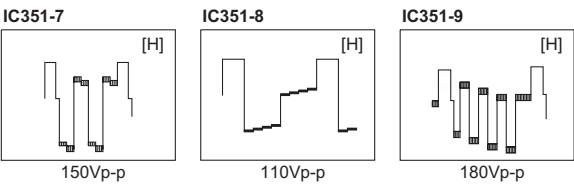
<MAIN PWB>		<CRT SOCKET PWB>		<FRONT CONTROL PWB>	
PIN NO.	VOLTAGE[V]	PIN NO.	VOLTAGE[V]	PIN NO.	VOLTAGE[V]
IC401		65	2.0	IC974	
1	0.5	66	0.3	1	0
2	13.8	67	1.6	2	0
3	-11.7	68	0	3	0
4	-13.3	69	4.9	4	0.5
5	0	70	1.3	5	2.9
6	14.1	71	1.4	6	0
7	0.6	72	1.3	7	3.2
IC451		73	1.9	IC976	
1	1.6	74	1.7	1	1.8
2	4.2	75	0.1	2	0
3	4.1	76	0	3	0
4	0	77	3.2	4	0.5
5	2.2	78	1.2	5	2.9
6	2.2	79	1.2	6	0
7	4.4	80	0	7	3.2
8	11.8	81	0	Q101	
IC601		82	4.9	E	2.1
1	0	83	2.3	C	11.6
2	0	84	3.7	B	2.9
3	31.0	85	1.9	Q102	
4	0	86	2.0	E	0
5	0	87	2.0	C	0
6	0	88	3.2	B	3.1
7	15.6	89	0	Q103	
8	0.6	90	3.2	E	0
9	0	91	1.5	C	0
10	32.4	92	0	B	3.1
11	19.1	93	1.8	Q461	
12	15.6	94	3.1	E	0
IC701		95	0	C	19.7
1	0	96	1.7	B	0.5
2	0	97	3.1	Q521	
3	1.7	98	0	E	0
4	3.2	99	0	C	0
5	3.2	100	1.8	B	1.6
6	0	101	0	Q522	
7	3.2	102	3.2	E	0
8	0	103	3.2	C	131.0
9	3.2	104	0.7	B	-0.1
10	1.6	105	0	Q571	
11	1.5	106	0	E	135.2
12	0	107	0	C	0
13	0	108	1.9	B	134.9
14	0	109	1.9	Q572	
15	0	110	3.2	E	0
16	1.9	111	1.6	C	3.2
17	0	112	3.2	B	0
18	0	113	0	Q601	
19	0	114	3.2	E	8.2
20	2.3	115	0	C	0.2
21	2.1	116	2.6	B	8.2
22	1.4	117	1.8	Q602	
23	1.4	118	1.8	E	0.2
24	1.9	119	3.2	C	-0.3
25	1.9	120	3.1	B	0
26	2.4	121	0	Q603	
27	2.0	122	3.2	E	0
28	0	123	0	C	0
29	1.9	124	1.8	B	-0.4
30	1.9	125	0	Q605	
31	2.0	126	3.2	E	0
32	1.8	127	3.1	C	0
33	0.6	128	3.1	B	-0.3
34	2.2	IC702		Q607	
35	2.1	1	0	E	0
36	0	2	0	C	0
37	3.5	3	0	B	0.6
38	2.3	4	0	Q608	
39	2.5	5	3.1	E	0
40	0	6	3.0	C	21.6
41	2.0	7	0	B	0
42	1.8	8	3.2	Q702	
43	2.0	IC921		E	1.3
44	0	1	297.5	C	4.7
45	8.3	3	0	B	2.0
46	0	4	19.9	Q703	
47	4.9	5	0.2	E	3.2
48	1.2	6	1.0	C	0
49	2.2	7	1.3	B	3.2
50	2.2	IC951		Q801	
51	1.4	1	135.3	E	1.9
52	1.6	2	24.9	C	0
53	2.2	3	0	B	1.2
54	2.2	IC972		Q803	
55	1.4	1	6.4	E	0
56	2.2	2	0	C	0
57	0	3	3.3	B	-0.4
58	0	IC973		Q804	
59	0	1	15.8	E	0
60	3.6	2	11.8	C	0
61	3.5	3	0	B	-0.5
62	3.6	4	2.8		
63	3.5				
64	0				

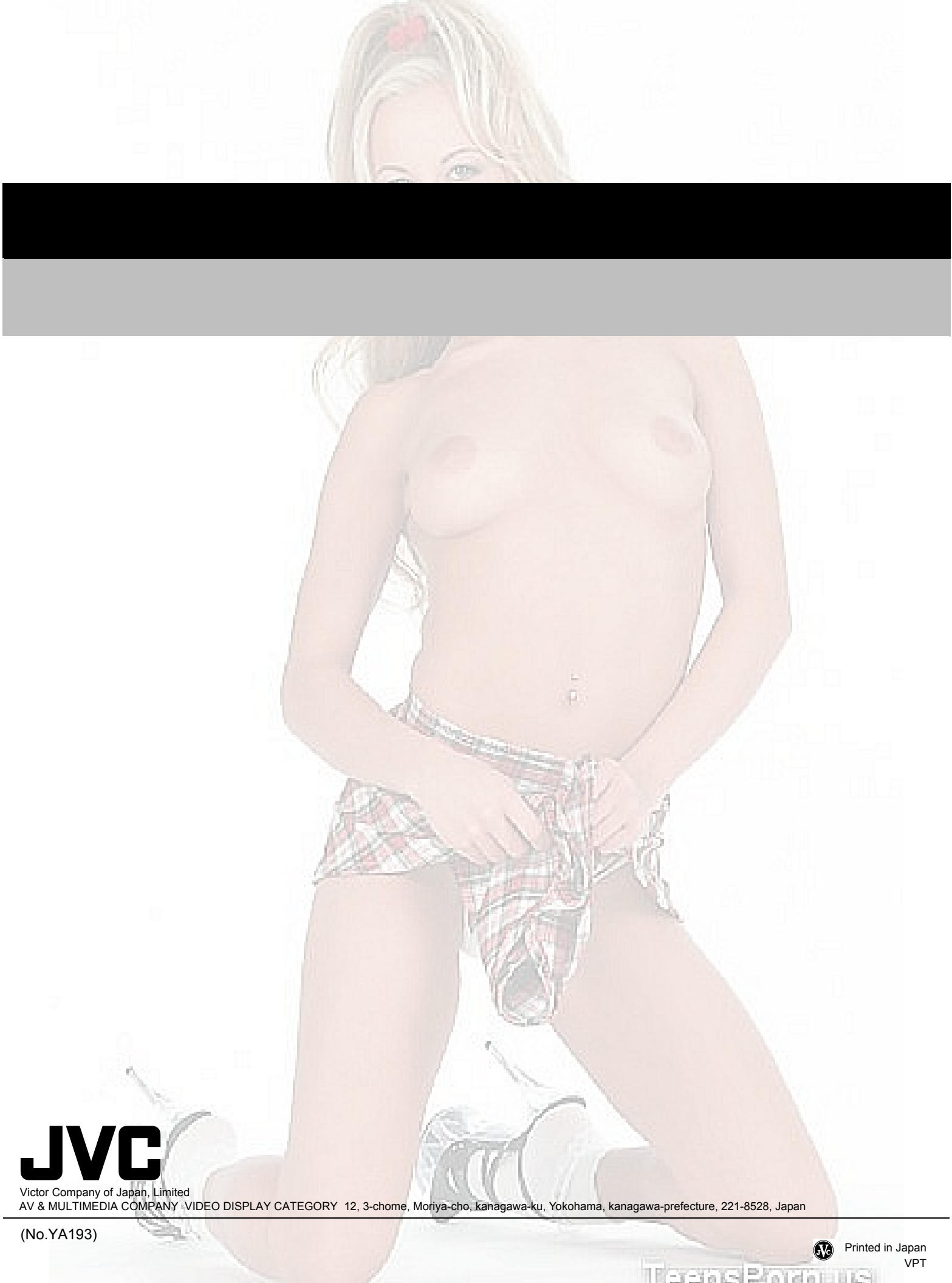
WAVEFORMS

-MAIN PWB-



-CRT SOCKET PWB-





JVC

Victor Company of Japan, Limited

AV & MULTIMEDIA COMPANY VIDEO DISPLAY CATEGORY 12, 3-chome, Moriya-cho, kanagawa-ku, Yokohama, kanagawa-prefecture, 221-8528, Japan

(No.YA193)



Printed in Japan
VPT

Teens Portraits

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
±1%	±2%	±5%	±10%	±20%	±30%	+30% -10%	+50% -10%	+80% -20%	+100% -0%

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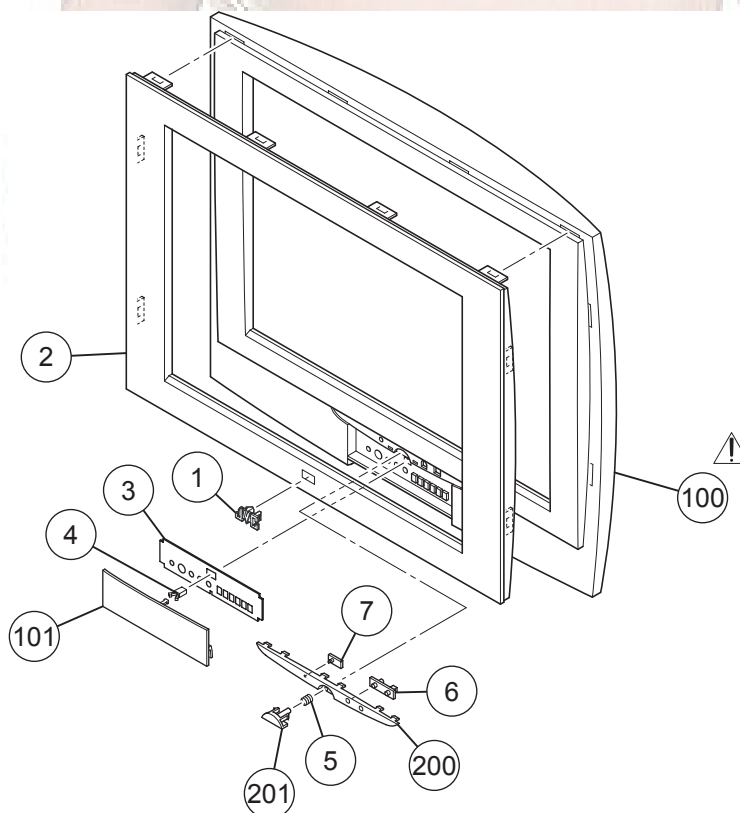
USING P.W. BOARD & REMOTE CONTROL UNIT

P.W.B ASS'Y	AV-29J334/V
MAIN P.W.B	SCW-1079A-CK
CRT SOCKET P.W.B	SCW-3009A-CK
FRONT CONTROL P.W.B	SCW-8009A-CK
REMOTE CONTROL UNIT	RM-C1281-2H

EXPLODED VIEW PARTS LIST -1

△ Ref.No.	Part No.	Part Name	Description	Local
1	GG30109-001A-H	JVC MARK		
2	GG10280-006A-HK	FRONT PANEL		
3	GG20059-002A-H	OPERATION SHEET		
4	CM41861-00B	DOOR LATCH		
5	CM35235-009-H	SPRING		
6	GG30100-001A-H	LED LENS		
7	GG30099-001A-H	REMOCON LENS		
△ 100	GG10278-001C-HK	FRONT CABINET ASS'Y	Inc.101	
101	GG20058-001B-H	DOOR		
200	GG20064-001A-H	CONTROL PANEL ASS'Y	Inc.201	
201	GG30098-001A-H	POWER KNOB		

EXPLODED VIEW -1



EXPLODED VIEW PARTS LIST -2

△	Ref.No.	Part No.	Part Name	Description	Local
△	V01	A68LZU185X	PICTURE TUBE		
△	DY01	QQD0106-001	DEF YOKE		
△	L01	QQW0187-001	DEG COIL		
△	T522	QQH0184-001	FB TRANSF		
	11	QYSBSFG4016ZA	TAP SCREW	M4 x 16mm(x16)	
△	12	GG10276-004A-HK	REAR COVER		
	13	QYSBSF3012ZA	TAP SCREW	M3 x 12mm(x4)	
△	14	LC11064-006A-H	AV BOARD		
△	15	CM23167-A01-H	POWER CORD CLAMP		
△	16	QMPR500-200-JC	POWER CORD	2m BLACK	
△	17	LC11061-002A-H	CHASSIS BASE		
	18	GG10277-001A-H	CONTROL BASE		
	19	QYSBSFG3012ZA	TAP SCREW	M3 x 12mm(x2)	
	20	QUQ212-0916CH-E	FFC WIRE	9pin 16cm	
	21	WJS0053-001A-E	E-FL/RBY		
	22	QAL0610-001	PC MAGNET		
	23	QAL0627-001	DY WEDGE	(x4)	
	24	A48457-3-H	SPRING		
	25	WJY0018-001A	BRAIDED ASS'Y		
	26	CHGB0017-0C	BRAIDED SUB ASS'Y	(x2)	
	27	LC30103-003A-H	CHASSIS ADAPTER	(x2)	
	28	QYSBSF4012ZA	TAP SCREW	M4 x 12mm(x4)	
	29	GG20065-001B-H	SUPPORT BRACKET		
	30	GG20065-002B-H	SUPPORT BRACKET		
	31	QYSBSF4012ZA	TAP SCREW	M4 x 12mm(x8)	
	32	QAS0139-001	SPEAKER	(x2) SP01,SP02	
△	33	GG20016-045A-E	RATING LABEL		
△	40	SCW-1079A-CK	MAIN PWB		
△	41	SCW-3009A-CK	CRT SOCKET PWB		
△	42	SCW-8009A-CK	FRONT CONTROL PWB		

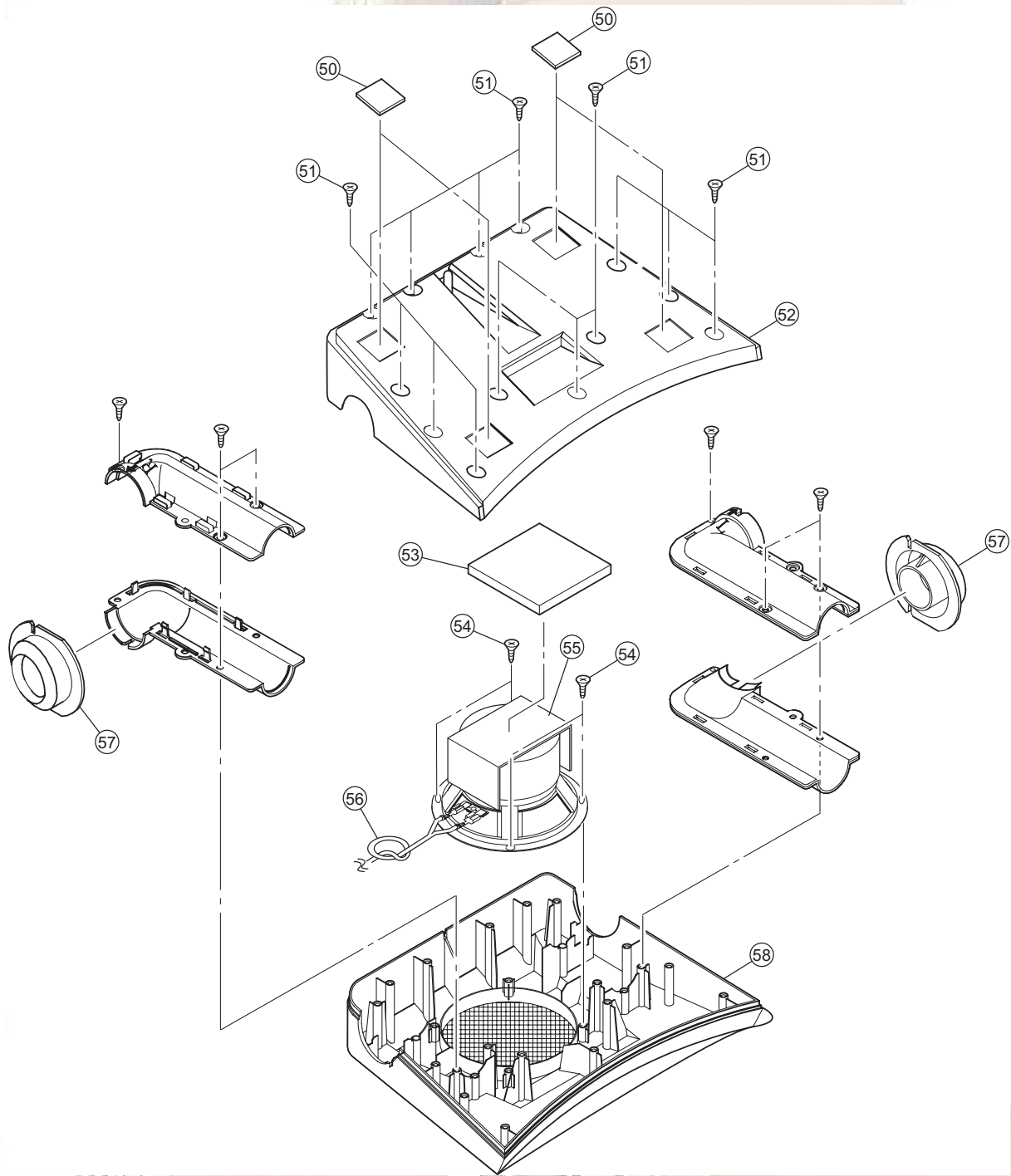
EXPLODED VIEW -2



EXPLODED VIEW PARTS LIST -3

△ Ref.No.	Part No.	Part Name	Description	Local
50	LC40352-001A-H	RUBBER SHEET	(x4)	
51	QYSBSFG4016ZA	TAP SCREW	M4 x 16mm(x13)	
52	GG10141-001C-HK	BASS BOTTOM		
53	LC41211-001A	SOUND ABSORBER		
54	QYSBSFG4016ZA	TAP SCREW	M4 x 16mm(x4)	
55	QAS0118-001	SPEAKER	SP03	
56	WJJ0266-002A	E-SIC WIRE C-C		
57	GG30022-001A-H	BASS DUCT R	(x2)	
58	GG10140-001C-HK	BASS TOP		

EXPLODED VIEW -3



PRINTED WIRING BOARD PARTS LIST

MAIN P.W. BOARD ASS'Y (SCW-1079A-CK)

△Ref No.	Part No.	Part Name	Description Local	△Ref No.	Part No.	Part Name	Description Local
IC401	LA78041	IC		D709	MA111-X	SI DIODE	
IC601	AN7585	IC		D710	MA8091/H/-X	Z DIODE	
IC651	RC4558D-X	IC		D714	MA8030/H/-X	Z DIODE	
IC701	TDA12027-ETV	IC(MCU)	(SERVICE)	D751	MA8091/H/-X	Z DIODE	
IC702	AT24C16-29VX74G	IC	(SERVICE)	D753	MA8091/H/-X	Z DIODE	
IC921	STR-W6756-F5	SW IC		D791	MA8062/M/-X	Z DIODE	
IC951	SE135N	IC		D801	NCB21HK-152X	C CAPACITOR	1500pF 50V K
IC972	BA33BC0T	REGULATOR IC		D802	NCB21HK-152X	C CAPACITOR	1500pF 50V K
IC973	PQ120RDA1SZ	IC		D803	NCB21HK-152X	C CAPACITOR	1500pF 50V K
IC974	MM1561JF-X	IC		D804	NCB21HK-152X	C CAPACITOR	1500pF 50V K
IC975	PQ050RDA1SZ	IC		D810	MA8091/H/-X	Z DIODE	
IC976	MM1561JF-X	IC		D811	MA8091/H/-X	Z DIODE	
Q101	2SC5397/CD/-T	TRANSISTOR		D812	MA8091/H/-X	Z DIODE	
Q341	2SA1530A/QR/-X	TRANSISTOR		D813	MA8091/H/-X	Z DIODE	
Q461	RDN050N20	POWER MOS FET		D814	MA8091/H/-X	Z DIODE	
Q521	BSN304-T	TRANSISTOR		D815	MA8091/H/-X	Z DIODE	
△Q522	TT2142-YD	TRANSISTOR		D901	GSIB460-S1	BRIDGE DIODE	
Q571	2SA1208/ST/Z1-T	TRANSISTOR		D921	RGP10J-5025-T3	SI DIODE	
Q572	UN2212-X	DIGI TRANSISTOR		D922	1SS133-T2	SI DIODE	
Q601	2SA1530A/QR/-X	TRANSISTOR		D923	MA111-X	SI DIODE	
Q602	2SA1530A/QR/-X	TRANSISTOR		D924	MA8330/M/-X	Z DIODE	
Q603	UN2226-X	DIGI TRANSISTOR		D925	RGP10J-5025-T3	SI DIODE	
Q604	UN2226-X	DIGI TRANSISTOR		D926	RGP10M-5010-T3	SI DIODE	
Q605	UN2226-X	DIGI TRANSISTOR		D927	MA111-X	SI DIODE	
Q606	UN2226-X	DIGI TRANSISTOR		D928	MA8240/M/-X	Z DIODE	
Q607	2SC3928A/QR/-X	TRANSISTOR		D929	MA111-X	SI DIODE	
Q608	2SC3928A/QR/-X	TRANSISTOR		D930	MA8240/M/-X	Z DIODE	
Q609	UN2212-X	DIGI TRANSISTOR		D931	MA8062/M/-X	Z DIODE	
Q610	UN2226-X	DIGI TRANSISTOR		D932	MTZJ36A-T2	Z DIODE	
Q611	UN2212-X	DIGI TRANSISTOR		D933	MTZJ9.1C-T2	Z DIODE	
Q702	2SC3928A/QR/-X	TRANSISTOR		D934	MTZJ9.1C-T2	Z DIODE	
Q703	2SA1530A/QR/-X	TRANSISTOR		D935	MTZJ9.1C-T2	Z DIODE	
Q704	2SC3928A/QR/-X	TRANSISTOR		D936	1SS133-T2	SI DIODE	
Q705	SSM3K02F-X	MOS FET		D951	RU4AM-LFT2	SI DIODE	
Q706	SSM3K02F-X	MOS FET		D952	FMX-G12S	SI DIODE	
Q707	2SC3928A/QR/-X	TRANSISTOR		D953	FR105GT-T3	SI DIODE	
Q708	2SA1530A/QR/-X	TRANSISTOR		D954	FR105GT-T3	SI DIODE	
Q791	DTC124ESA-T	DIGI TRANSISTOR		D955	FMX-G12S	SI DIODE	
Q801	KTA1267/YG/-T	TRANSISTOR		D957	MA8039/H/-X	Z DIODE	
Q803	UN2226-X	DIGI TRANSISTOR		D959	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
Q804	UN2226-X	DIGI TRANSISTOR		D960	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
Q805	2SA1530A/QR/-X	TRANSISTOR		D962	MA8330/M/-X	Z DIODE	
Q921	2SC3852A	POW TRANSISTOR		D970	MA8082/M/-X	Z DIODE	
Q951	2SC3928A/QR/-X	TRANSISTOR		D971	MA111-X	SI DIODE	
Q952	2SC3928A/QR/-X	TRANSISTOR		D972	1SR124-400A-T2	SI DIODE	
Q957	2SC3928A/QR/-X	TRANSISTOR		D973	MA111-X	SI DIODE	
Q958	2SA1013/RO/-T	TRANSISTOR		D975	MA111-X	SI DIODE	
				D977	MA111-X	SI DIODE	
D341	MA111-X	SI DIODE		C001	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
D342	MA111-X	SI DIODE		C002	QETN1HM-106Z	E CAPACITOR	10uF 50V M
D343	MA111-X	SI DIODE		C003	NCB31CK-104X	C CAPACITOR	0.1uF 16V K
D345	MA111-X	SI DIODE		C004	QETN1CM-477Z	E CAPACITOR	470uF 16V M
D423	1N4003SG-T2	SI DIODE		C005	NCB31HK-222X	C CAPACITOR	2200pF 50V K
D471	1SR124-400A-T2	SI DIODE		C006	QETN1CM-336Z	E CAPACITOR	33uF 16V M
D472	MA111-X	SI DIODE		C101	NCB31HK-472X	C CAPACITOR	4700pF 50V K
D521	RH3G-F1	SI DIODE		C102	NCB31HK-472X	C CAPACITOR	4700pF 50V K
D522	RU4AM-LFT2	SI DIODE		C103	NCB31HK-472X	C CAPACITOR	4700pF 50V K
D523	FR105GT-T3	SI DIODE		C104	QETN1HM-106Z	E CAPACITOR	10uF 50V M
D524	MA8091/H/-X	Z DIODE		C106	NDC31HJ-180X	C CAPACITOR	18pF 50V J
D530	FR105GT-T3	SI DIODE		C109	NCB31HK-472X	C CAPACITOR	4700pF 50V K
D551	FR105GT-T3	SI DIODE		C110	NCB31CK-104X	C CAPACITOR	0.1uF 16V K
D552	FR105GT-T3	SI DIODE		C111	QETN1CM-477Z	E CAPACITOR	470uF 16V M
D554	MA8051/L/-X	Z DIODE		C341	QETN1CM-227Z	E CAPACITOR	220uF 16V M
D571	MA8075/H/-X	Z DIODE		C422	QCS32HJ-560Z	C CAPACITOR	56pF 500V J
D581	FR105GT-T3	SI DIODE		C423	NDC31HJ-102X	C CAPACITOR	1000pF 50V J
D601	MA111-X	SI DIODE		C424	QFLC2AJ-683Z	M CAPACITOR	0.068uF 100V J
D602	MA111-X	SI DIODE		C427	QETN1VM-108Z	E CAPACITOR	1000uF 35V M
D603	MA111-X	SI DIODE		C428	QEHR1VM-107Z	E CAPACITOR	100uF 35V M
D604	MA8300/H/-X	Z DIODE		C430	QFLC2AJ-563Z	M CAPACITOR	0.056uF 100V J
D605	MA8300/H/-X	Z DIODE		C431	NCB31HK-104X	C CAPACITOR	0.1uF 50V K
D606	MA8300/H/-X	Z DIODE		C435	NCF21HZ-334X	C CAPACITOR	0.33uF 50V Z
D607	MA111-X	SI DIODE		C436	NCF21HZ-334X	C CAPACITOR	0.33uF 50V Z
D608	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	C471	QETN1HM-106Z	E CAPACITOR	10uF 50V M
D651	MA8062/M/-X	Z DIODE		C520	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
D701	MA111-X	SI DIODE		C521	QCB31HK-332Z	C CAPACITOR	3300pF 50V K
D702	MA8091/H/-X	Z DIODE		C522	QFLC1HJ-223Z	M CAPACITOR	0.022uF 50V J
D704	MA8091/H/-X	Z DIODE		C523	QETN1VM-476Z	E CAPACITOR	47uF 35V M
D705	MA8039/H/-X	Z DIODE		△C524	QFZ0196-202	MPP CAPACITOR	2000pF 1.5kV H
D706	MA8036-X	Z DIODE		C525	QFZ0196-123	MPP CAPACITOR	0.012uF 1.5kV H
D707	MA111-X	SI DIODE		C526	QFZ0196-252	MPP CAPACITOR	2500pF 1.5kV H
D708	MA111-X	SI DIODE		C527	QFZ0197-224	MPP CAPACITOR	0.22uF 250V J
				C528	QFP32JJ-223	PP CAPACITOR	0.022uF 630V J
				C529	QENC2AM-225Z	BP E CAPACITOR	2.2uF 100V M

△Ref No.	Part No.	Part Name	Description Local	△Ref No.	Part No.	Part Name	Description Local
C530	QCB32HK-561Z	C CAPACITOR	560pF 500V K	C754	NCB31CK-104X	C CAPACITOR	0.1uF 16V K
C531	QEZ0195-475Z	BP E CAPACITOR	4.7uF 50V M	C755	QETN1HM-106Z	E CAPACITOR	10uF 50V M
C532	QETN2EM-106Z	E CAPACITOR	10uF 250V M	C756	NCB31HK-104X	C CAPACITOR	0.1uF 50V K
C551	QCB32HK-561Z	C CAPACITOR	560pF 500V K	C757	NDC31HJ-561X	C CAPACITOR	560pF 50V J
C552	QCB32HK-561Z	C CAPACITOR	560pF 500V K	C758	NCB31CK-224X	C CAPACITOR	0.22uF 16V K
C553	QEH1EM-108Z	E CAPACITOR	1000uF 25V M	C759	QETN1CM-107Z	E CAPACITOR	100uF 16V M
C554	QEH1EM-108Z	E CAPACITOR	1000uF 25V M	C760	NCB31CK-224X	C CAPACITOR	0.22uF 16V K
C555	QFLC2AJ-103Z	M CAPACITOR	0.01uF 100V J	C761	NCB31CK-104X	C CAPACITOR	0.1uF 16V K
C571	QETM2CM-227	E CAPACITOR	220uF 160V M	C762	QETN1CM-107Z	E CAPACITOR	100uF 16V M
C572	QETN1CM-107Z	E CAPACITOR	100uF 16V M	C763	NCB31CK-224X	C CAPACITOR	0.22uF 16V K
C573	QETN1EM-476Z	E CAPACITOR	47uF 25V M	C764	NCB31CK-104X	C CAPACITOR	0.1uF 16V K
C581	QFVF1HJ-104Z	MF CAPACITOR	0.1uF 50V J	C765	QETN1CM-107Z	E CAPACITOR	100uF 16V M
C582	QFZ0197-204	MPP CAPACITOR	0.2uF 250V J	C766	NCB31CK-224X	C CAPACITOR	0.22uF 16V K
C601	QETN1HM-106Z	E CAPACITOR	10uF 50V M	C767	NCB31CK-224X	C CAPACITOR	0.22uF 16V K
C602	QETN1HM-106Z	E CAPACITOR	10uF 50V M	C768	NCB31CK-224X	C CAPACITOR	0.22uF 16V K
C603	NCB31CK-224X	C CAPACITOR	0.22uF 16V K	C769	NCB31CK-104X	C CAPACITOR	0.1uF 16V K
C604	NCB31CK-224X	C CAPACITOR	0.22uF 16V K	C770	NCB31CK-104X	C CAPACITOR	0.1uF 16V K
C605	NCB31CK-224X	C CAPACITOR	0.22uF 16V K	C772	NCB31CK-224X	C CAPACITOR	0.22uF 16V K
C606	NCB31CK-224X	C CAPACITOR	0.22uF 16V K	C773	QETN1HM-225Z	E CAPACITOR	2.2uF 50V M
C607	QETN1CM-227Z	E CAPACITOR	220uF 16V M	C774	NCB31CK-104X	C CAPACITOR	0.1uF 16V K
C608	QETN1CM-227Z	E CAPACITOR	220uF 16V M	C775	NCB31CK-224X	C CAPACITOR	0.22uF 16V K
C609	QETN1HM-336Z	E CAPACITOR	33uF 50V M	C776	NCB31CK-104X	C CAPACITOR	0.1uF 16V K
C610	QETN1HM-106Z	E CAPACITOR	10uF 50V M	C777	NCB31CK-104X	C CAPACITOR	0.1uF 16V K
C611	NCB31CK-224X	C CAPACITOR	0.22uF 16V K	C778	QETN1CM-476Z	E CAPACITOR	47uF 16V M
C612	NCB31CK-224X	C CAPACITOR	0.22uF 16V K	C779	QETN1HM-106Z	E CAPACITOR	10uF 50V M
C613	QETN1HM-106Z	E CAPACITOR	10uF 50V M	C780	NCB31CK-104X	C CAPACITOR	0.1uF 16V K
C614	QETM1VM-228	E CAPACITOR	2200uF 35V M	C781	NCB21CK-105X	C CAPACITOR	1uF 16V K
C651	QETN1CM-476Z	E CAPACITOR	47uF 16V M	C782	NCB21CK-105X	C CAPACITOR	1uF 16V K
C652	NDC31HJ-101X	C CAPACITOR	100pF 50V J	C783	QETN1HM-105Z	E CAPACITOR	1uF 50V M
C653	NCB31EK-393X	C CAPACITOR	0.039uF 25V K	C785	NCB21EK-224X	C CAPACITOR	0.22uF 25V K
C654	QETN1HM-475Z	E CAPACITOR	4.7uF 50V M	C789	QETN1HM-476Z	E CAPACITOR	47uF 50V M
C655	QETN1HM-106Z	E CAPACITOR	10uF 50V M	C790	NDC31HJ-270X	C CAPACITOR	27pF 50V J
C656	QETN1HM-107Z	E CAPACITOR	100uF 50V M	C792	NCB31CK-104X	C CAPACITOR	0.1uF 16V K
C657	QENC1HM-106Z	BP E CAPACITOR	10uF 50V M	C802	QETN1HM-106Z	E CAPACITOR	10uF 50V M
C658	QENC1HM-106Z	BP E CAPACITOR	10uF 50V M	C803	QETN1HM-106Z	E CAPACITOR	10uF 50V M
C660	NCF21EZ-474X	C CAPACITOR	0.47uF 25V Z	C804	QETN1CM-477Z	E CAPACITOR	470uF 16V M
C661	QETN1CM-227Z	E CAPACITOR	220uF 16V M	△C901	QFZ9072-224	MM CAPACITOR	0.22uF AC250V K
C701	NCB31CK-224X	C CAPACITOR	0.22uF 16V K	△C902	QFZ9077-104	MPP CAPACITOR	0.1uF 250V M
C702	NCB31CK-224X	C CAPACITOR	0.22uF 16V K	△C903	QCZ9015-102Z	C CAPACITOR	1000pF AC250V Z
C703	QETN1CM-477Z	E CAPACITOR	470uF 16V M	△C904	QCZ9015-102Z	C CAPACITOR	1000pF AC250V Z
C704	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	△C905	QCZ9015-102Z	C CAPACITOR	1000pF AC250V Z
C705	NDC31HJ-3R0X	C CAPACITOR	3pF 50V J	C906	QEZ0633-337	E CAPACITOR	330uF 450V M
C706	NDC31HJ-3R0X	C CAPACITOR	3pF 50V J	C915	QCZ0325-391	C CAPACITOR	390pF 2kV K
C707	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	C917	QCB32HK-181Z	C CAPACITOR	180pF 500V K
C708	QETN1CM-107Z	E CAPACITOR	100uF 16V M	C921	QETN1HM-226Z	E CAPACITOR	22uF 50V M
C709	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	C922	NCB31CK-104X	C CAPACITOR	0.1uF 16V K
C710	NCB31HK-682X	C CAPACITOR	6800pF 50V K	C924	QETN1HM-105Z	E CAPACITOR	1uF 50V M
C711	QETN1HM-225Z	E CAPACITOR	2.2uF 50V M	C925	QETN2AM-226Z	E CAPACITOR	22uF 100V M
C712	QFVF1HJ-224Z	MF CAPACITOR	0.22uF 50V J	C926	QFLC1HJ-472Z	M CAPACITOR	4700pF 50V J
C713	QETN1HM-106Z	E CAPACITOR	10uF 50V M	C928	QFLC1HJ-102Z	M CAPACITOR	1000pF 50V J
C714	NCB31HK-223X	C CAPACITOR	0.022uF 50V K	C929	QCB32HK-103	C CAPACITOR	0.01uF 500V K
C715	NCB31HK-102X	C CAPACITOR	1000pF 50V K	C931	QCZ0364-102	C CAPACITOR	1000pF 2kV K
C716	NCB31HK-102X	C CAPACITOR	1000pF 50V K	C940	QCZ0364-122	C CAPACITOR	1200pF 2kV K
C717	NCB31HK-473X	C CAPACITOR	0.047uF 50V K	C945	QETN1HM-226Z	E CAPACITOR	22uF 50V M
C718	QFVF1HJ-104Z	MF CAPACITOR	0.1uF 50V J	C949	QETN1AM-228Z	E CAPACITOR	2200uF 10V M
C719	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	C950	NCB31HK-104X	C CAPACITOR	0.1uF 50V K
C720	NCB31HK-102X	C CAPACITOR	1000pF 50V K	C951	QCZ0364-561	C CAPACITOR	560pF 2kV K
C723	NCB21CK-105X	C CAPACITOR	1uF 16V K	C952	QCB32HK-222Z	C CAPACITOR	2200pF 500V K
C724	NCB21CK-105X	C CAPACITOR	1uF 16V K	C953	QCB32HK-222Z	C CAPACITOR	2200pF 500V K
C726	QETN1HM-106Z	E CAPACITOR	10uF 50V M	C954	QCB32HK-222Z	C CAPACITOR	2200pF 500V K
C727	NCB31HK-332X	C CAPACITOR	3300pF 50V K	C955	QCB32HK-222Z	C CAPACITOR	2200pF 500V K
C728	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	C956	QEZ0203-227	E CAPACITOR	220uF 160V M
C729	QETN1HM-225Z	E CAPACITOR	2.2uF 50V M	C957	QETN1AM-228Z	E CAPACITOR	2200uF 10V M
C730	QETN1HM-227Z	E CAPACITOR	220uF 50V M	C958	QETN1EM-337Z	E CAPACITOR	330uF 25V M
C731	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	C959	QETN1VM-337Z	E CAPACITOR	330uF 35V M
C732	QETN1HM-225Z	E CAPACITOR	2.2uF 50V M	C960	QETM1VM-228	E CAPACITOR	2200uF 35V M
C733	QETN1HM-106Z	E CAPACITOR	10uF 50V M	C962	NRSA63J-0R0X	MG RESISTOR	Ω 1/16W J
C734	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	C963	NCB31HK-102X	C CAPACITOR	1000pF 50V K
C735	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	C964	QETN1VM-107Z	E CAPACITOR	100uF 35V M
C736	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	C965	NCB31CK-104X	C CAPACITOR	0.1uF 16V K
C737	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	C967	QETN1CM-477Z	E CAPACITOR	470uF 16V M
C738	NCB21CK-105X	C CAPACITOR	1uF 16V K	C968	QETN1CM-477Z	E CAPACITOR	470uF 16V M
C739	NCB21CK-105X	C CAPACITOR	1uF 16V K	C975	QETN1AM-477Z	E CAPACITOR	470uF 10V M
C740	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	C976	NCB31HK-472X	C CAPACITOR	4700pF 50V K
C741	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	C977	QETN1HM-476Z	E CAPACITOR	47uF 50V M
C742	QETN1HM-106Z	E CAPACITOR	10uF 50V M	C978	QETN1HM-476Z	E CAPACITOR	47uF 50V M
C743	QETN1HM-106Z	E CAPACITOR	10uF 50V M	C979	QETN1HM-475Z	E CAPACITOR	4.7uF 50V M
C744	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	C980	QETN1CM-107Z	E CAPACITOR	100uF 16V M
C745	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	C981	QETN1CM-107Z	E CAPACITOR	100uF 16V M
C746	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	C982	QETN1CM-476Z	E CAPACITOR	47uF 16V M
C747	QETN1HM-106Z	E CAPACITOR	10uF 50V M	C983	QETN1HM-106Z	E CAPACITOR	10uF 50V M
C748	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	C984	QETN1HM-476Z	E CAPACITOR	47uF 50V M
C749	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	C985	QETN1CM-476Z	E CAPACITOR	47uF 16V M
C750	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	C986	NCB31CK-104X	C CAPACITOR	0.1uF 16V K
C751	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	C987	QETN1HM-105Z	E CAPACITOR	1uF 50V M
C752	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	C989	NCB31CK-104X	C CAPACITOR	0.1uF 16V K
C753	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	△C991	QCZ9079-471	C CAPACITOR	470pF AC250V K

△Ref No.	Part No.	Part Name	Description Local	△Ref No.	Part No.	Part Name	Description Local
△C992	QCZ9079-471	C CAPACITOR	470pF AC250V K	R626	NRSA63J-271X	MG RESISTOR	270Ω 1/16W J
△C993	QCZ9079-102	C CAPACITOR	1000pF AC250V M	R627	NRSA63J-271X	MG RESISTOR	270Ω 1/16W J
				R628	NRSA63J-271X	MG RESISTOR	270Ω 1/16W J
R001	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	R629	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J
R002	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	R630	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J
R003	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J	R631	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J
R004	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	R632	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J
R005	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	R651	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J
R101	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	R653	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
R102	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	R654	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
R103	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J	R655	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J
R104	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J	R656	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J
R105	NRSA63J-220X	MG RESISTOR	22Ω 1/16W J	R657	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J
R106	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	R658	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J
R315	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	R659	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J
R316	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	R660	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J
R317	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	R661	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J
R341	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	R662	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J
R343	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	R663	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J
R344	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	R664	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J
R345	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	R701	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J
R411	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	R702	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
R412	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	R703	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
R426	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	R704	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
R427	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	R705	NRSA63J-393X	MG RESISTOR	39kΩ 1/16W J
R430	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	R706	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J
R432	QRX01GJ-1R2	MF RESISTOR	1.2Ω 1W J	R707	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J
R433	QRE121J-3R9Y	C RESISTOR	3.9Ω 1/2W J	R708	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J
R434	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	R709	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J
R438	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	R711	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J
R440	QRG01GJ-331	OMF RESISTOR	330Ω 1W J	R712	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J
R448	QRE121J-1R0Y	C RESISTOR	1Ω 1/2W J	R713	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J
R452	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	R714	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J
R455	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	R715	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J
R458	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	R716	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J
R460	QRE121J-823Y	C RESISTOR	82kΩ 1/2W J	R717	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J
R462	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	R718	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J
R464	QRL039J-330	OMF RESISTOR	33Ω 3W J	R719	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J
R470	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	R722	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J
R471	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	R723	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J
R472	NRSA63J-124X	MG RESISTOR	120kΩ 1/16W J	R724	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J
R473	NRSA63J-683X	MG RESISTOR	68kΩ 1/16W J	R725	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J
R474	NRSA63J-224X	MG RESISTOR	220kΩ 1/16W J	R726	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J
R520	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	R727	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J
R521	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	R728	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
R522	QRE121J-220Y	C RESISTOR	22Ω 1/2W J	R730	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J
R523	QRL029J-271	OMF RESISTOR	270Ω 2W J	R731	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J
R524	QRL039J-121	OMF RESISTOR	120Ω 3W J	R732	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J
R525	QRL039J-121	OMF RESISTOR	120Ω 3W J	R733	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
R527	QRL039J-393	OMF RESISTOR	39kΩ 3W J	R734	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
R528	QRE121J-471Y	C RESISTOR	470Ω 1/2W J	R735	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
△R530	QRZ9017-4R7	FUSI RESISTOR	4.7Ω 1/4W J	R736	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
△R533	QRZ9017-4R7	FUSI RESISTOR	4.7Ω 1/4W J	R737	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J
△R551	QRZ9021-1R0	FUSI RESISTOR	1Ω 1W J	R738	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J
△R552	QRZ9021-1R0	FUSI RESISTOR	1Ω 1W J	R739	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J
R554	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J	R740	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J
R571	QRZ0225-2R2	UNF RESISTOR	2.2Ω 7W K	R741	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J
R572	QRA14CF-1202Y	CMF RESISTOR	12kΩ 1/4W F	R742	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
R573	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	R743	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J
R574	QRE121J-183Y	C RESISTOR	18kΩ 1/2W J	R744	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
R575	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	R745	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J
R581	QRE121J-822Y	C RESISTOR	8.2kΩ 1/2W J	R746	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J
R582	QRE121J-823Y	C RESISTOR	82kΩ 1/2W J	R747	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
R583	QRE121J-184Y	C RESISTOR	180kΩ 1/2W J	R748	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J
R601	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	R749	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J
R602	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	R751	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J
R603	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	R752	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
R604	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	R753	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J
R605	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	R754	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J
R606	QRE121J-2R2Y	C RESISTOR	2.2Ω 1/2W J	R755	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J
R607	QRE121J-2R2Y	C RESISTOR	2.2Ω 1/2W J	R756	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
R609	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	R757	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J
R610	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	R758	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J
R611	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	R759	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J
R612	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	R760	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
R613	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	R761	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
R614	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	R762	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J
R615	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	R763	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J
R617	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	R764	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J
R618	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	R765	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J
R619	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	R768	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
R620	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	R771	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J
R621	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	R772	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J
R622	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	R773	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J
R623	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	R774	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J
R624	NRSA63J-683X	MG RESISTOR	68kΩ 1/16W J	R775	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J
R625	QRE121J-2R2Y	C RESISTOR	2.2Ω 1/2W J	R776	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J

△Ref No.	Part No.	Part Name	Description Local	△Ref No.	Part No.	Part Name	Description Local
R777	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	L714	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
R779	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	L715	NQL812K-100X	P COIL	10uH K
R780	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	L716	NQL812K-100X	P COIL	10uH K
R781	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	L717	NQL812K-100X	P COIL	10uH K
R782	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	L951	QQLZ026-480	COIL	48uH ±7%
R783	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	L952	QQL26AK-820Z	CHOKE COIL	82uH K
R784	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	L954	QQL244J-5R6Z	COIL	5.6uH J
R785	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	L972	QQL244J-5R6Z	COIL	5.6uH J
R790	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	L973	QQL244J-5R6Z	COIL	5.6uH J
R791	QRE121J-102Y	C RESISTOR	1kΩ 1/2W J	L975	QQL26AK-820Z	CHOKE COIL	82uH K
R792	QRE123J-330X	C RESISTOR	33Ω 1/2W J	T521	QQR1229-001	DRIVE TRANSF	
R793	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	△T921	QQS0267-001	SW TRANSF	
R794	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J				
R795	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	△PC901	PS2581AL1/QW/	PHOTO COUPLER	
R796	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J				
R797	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	△CP650	ICP-N50-Y	IC PROTECTOR	2.0A
R798	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	△CP952	ICP-N38-Y	IC PROTECTOR	1.5A
R801	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	△CP953	ICP-N38-Y	IC PROTECTOR	1.5A
R802	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	△CP954	ICP-N38-Y	IC PROTECTOR	1.5A
R803	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	△CP955	ICP-N75-Y	IC PROTECTOR	2.7A
R804	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J	J801	QNZ0454-002	PIN JACK	VIDEO1 IN
R805	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	J802	QNN0349-002	PIN JACK	COMP/VIDEO2 IN
R806	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	J803	QNN0348-001	PIN JACK	VIDEO2 L R IN
R807	QRE121J-101Y	C RESISTOR	100Ω 1/2W J	J804	QNN0349-001	PIN JACK	OUTPUT
R809	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	J805	QNS0100-001	3.5 JACK	BASS SPEAKER OUT
R810	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	K107	QQR1114-001Z	FERRITE BEADS	
R811	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	K702	QQR1113-001Z	FERRITE BEADS	
R812	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	K901	QQR1114-001Z	FERRITE BEADS	
R813	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	K902	QQR1113-001Z	FERRITE BEADS	
R814	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	K921	QQR1114-001Z	FERRITE BEADS	
R815	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	K922	QQR1113-001Z	FERRITE BEADS	
R816	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	K951	QQR1114-001Z	FERRITE BEADS	
R901	QRF154K-2R2	UNF WW RESISTOR	2.2Ω 15W K	K952	QQR1114-001Z	FERRITE BEADS	
R902	QRL039J-823	OMF RESISTOR	82kΩ 3W J	K953	QQR1113-001Z	FERRITE BEADS	
R921	QRE121J-101Y	C RESISTOR	100Ω 1/2W J	K954	QQR1113-001Z	FERRITE BEADS	
R922	QRZ0237-R18	UNF WW RESISTOR	0.18Ω 3W J	K955	QQR1113-001Z	FERRITE BEADS	
R923	QRT029J-R47	MF RESISTOR	0.47Ω 2W J	LC801	QQR1199-001	EMI FILTER	
R924	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	LC802	QQR1199-001	EMI FILTER	
R929	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	LC803	QQR1199-001	EMI FILTER	
R930	QRL039J-473	OMF RESISTOR	47kΩ 3W J	LC804	QQR1199-001	EMI FILTER	
△R932	QRZ9017-100	FUSI RESISTOR	10Ω 1/4W J	△LF902	QQR1356-001	LINE FILTER	
R933	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	SF102	QAX0731-001	SAW FILTER	
R934	QRE121J-182Y	C RESISTOR	1.8kΩ 1/2W J	TU001	QAU0383-001	TUNER	
R935	QRE121J-102Y	C RESISTOR	1kΩ 1/2W J	X701	QAX0799-001Z	CRYSTAL	
R951	QRE121J-102Y	C RESISTOR	1kΩ 1/2W J				
R953	QRE121J-332Y	C RESISTOR	3.3kΩ 1/2W J				
R954	QRE121J-332Y	C RESISTOR	3.3kΩ 1/2W J				
R955	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J				
R956	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J				
R957	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J				
R958	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J				
R959	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J				
R960	QRE121J-223Y	C RESISTOR	22kΩ 1/2W J				
R962	QRL029J-223	OMF RESISTOR	22kΩ 2W J	IC351	TDA6107AJF/N1	IC	
R965	QRT039J-R47	MF RESISTOR	0.47Ω 3W J	Q203	KTC3199/YG-T	TRANSISTOR	
R970	QRE121J-182Y	C RESISTOR	1.8kΩ 1/2W J	Q204	KTC3199/YG-T	TRANSISTOR	
R973	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	Q206	KTA1267/YG-T	TRANSISTOR	
R974	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	Q208	2SA2140/QP/	POW TRANSISTOR	
R975	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	Q209	2SC5993/QP/	POW TRANSISTOR	
R976	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J				
R978	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	D201	MA111-X	SI DIODE	
R980	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	D202	MA111-X	SI DIODE	
R981	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	D203	FR105GT-T3	SI DIODE	
△R991	QRZ9046-825Z	C RESISTOR	8.2MΩ 1/2W K	D204	FR105GT-T3	SI DIODE	
				D350	MA8075/M/-X	Z DIODE	
L001	QQL244K-8R2Z	PEAKING COIL	8.2uH K	D354	FR105SGT-T2	SI DIODE	
L002	QQL244J-4R7Z	PEAKING COIL	4.7uH J	D355	FR105SGT-T2	SI DIODE	
L003	QQL244J-4R7Z	PEAKING COIL	4.7uH J	D856	FR105SGT-T2	SI DIODE	
L101	QQL244K-1R0Z	PEAKING COIL	1uH K	D357	FR105SGT-T2	SI DIODE	
L421	QQL26AK-220Z	CHOKE COIL	22uH K				
L521	QQR1138-001	CHOKE COIL		C201	QETN1CM-227Z	E CAPACITOR	220uF 16V M
L522	QQR1243-001	LINEARITY COIL		C203	QETN1HM-106Z	E CAPACITOR	10uF 50V M
L530	QQL244K-220Z	PEAKING COIL	22uH K	C204	NDC31HJ-471X	C CAPACITOR	470pF 50V J
L651	QQL244J-4R7Z	PEAKING COIL	4.7uH J	C205	NCB31HK-561X	C CAPACITOR	560pF 50V K
L701	NQL812K-100X	P COIL	10uH K	C206	QETN1HM-335Z	E CAPACITOR	3.3uF 50V M
L702	NQL812K-100X	P COIL	10uH K	C207	QCS31HJ-5R0Z	C CAPACITOR	5pF 50V J
L703	NQL812K-100X	P COIL	10uH K	C209	QETN1CM-107Z	E CAPACITOR	100uF 16V M
L704	NQL812K-100X	P COIL	10uH K	C211	NDC31HJ-821X	C CAPACITOR	820pF 50V J
L705	NQL812K-100X	P COIL	10uH K	C212	QCB32HK-472Z	C CAPACITOR	4700pF 500V K
L706	NQL812K-100X	P COIL	10uH K	C213	NCB31HK-102X	C CAPACITOR	1000pF 50V K
L707	NQL812K-100X	P COIL	10uH K	C214	QETN2CM-106Z	E CAPACITOR	10uF 160V M
L708	NQL812K-100X	P COIL	10uH K	C215	QCB32HK-472Z	C CAPACITOR	4700pF 500V K
L709	NQL812K-100X	P COIL	10uH K	C216	QETN2CM-106Z	E CAPACITOR	10uF 160V M
L710	NQL812K-100X	P COIL	10uH K	C217	QETN1AM-107Z	E CAPACITOR	100uF 10V M
L711	NQL812K-100X	P COIL	10uH K	C218	QETN1AM-107Z	E CAPACITOR	100uF 10V M
L712	NQL812K-100X	P COIL	10uH K	C219	QETN1AM-337Z	E CAPACITOR	330uF 10V M
L713	NQL812K-100X	P COIL	10uH K	C220	QCS32HJ-680Z	C CAPACITOR	68pF 500V J

CRT SOCKET P.W. BOARD ASS'Y (SCW-3009A-CK)

△Ref No.	Part No.	Part Name	Description Local
IC351	TDA6107AJF/N1	IC	
Q203	KTC3199/YG-T	TRANSISTOR	
Q204	KTC3199/YG-T	TRANSISTOR	
Q206	KTA1267/YG-T	TRANSISTOR	
Q208	2SA2140/QP/	POW TRANSISTOR	
Q209	2SC5993/QP/	POW TRANSISTOR	
D201	MA111-X	SI DIODE	
D202	MA111-X	SI DIODE	
D203	FR105GT-T3	SI DIODE	
D204	FR105GT-T3	SI DIODE	
D350	MA8075/M/-X	Z DIODE	
D354	FR105SGT-T2	SI DIODE	
D355	FR105SGT-T2	SI DIODE	
D856	FR105SGT-T2	SI DIODE	
D357	FR105SGT-T2	SI DIODE	
C201	QETN1CM-227Z	E CAPACITOR	220uF 16V M
C203	QETN1HM-106Z	E CAPACITOR	10uF 50V M
C204	NDC31HJ-471X	C CAPACITOR	470pF 50V J
C205	NCB31HK-561X	C CAPACITOR	560pF 50V K
C206	QETN1HM-335Z	E CAPACITOR	3.3uF 50V M
C207	QCS31HJ-5R0Z	C CAPACITOR	5pF 50V J
C209	QETN1CM-107Z	E CAPACITOR	100uF 16V M
C211	NDC31HJ-821X	C CAPACITOR	820pF 50V J
C212	QCB32HK-472Z	C CAPACITOR	4700pF 500V K
C213	NCB31HK-102X	C CAPACITOR	1000pF 50V K
C214	QETN2CM-106Z	E CAPACITOR	10uF 160V M
C215	QCB32HK-472Z	C CAPACITOR	4700pF 500V K
C216	QETN2CM-106Z	E CAPACITOR	10uF 160V M
C217	QETN1AM-107Z	E CAPACITOR	100uF 10V M
C218	QETN1AM-107Z	E CAPACITOR	100uF 10V M
C219	QETN1AM-337Z	E CAPACITOR	330uF 10V M
C220	QCS32HJ-680Z	C CAPACITOR	68pF 500V J

△Ref No.	Part No.	Part Name	Description Local	△Ref No.	Part No.	Part Name	Description Local
C351	NDC31HJ-102X	C CAPACITOR	1000pF 50V J	C965	QETN1CM-107Z	E CAPACITOR	100uF 16V M
C352	QETN2EM-475Z	E CAPACITOR	4.7uF 250V M	R301	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
C353	QFKC2EK-104Z	MM CAPACITOR	0.1uF 250V K	R303	NRSA63J-683X	MG RESISTOR	68kΩ 1/16W J
C359	QCZ0131-222	C CAPACITOR	2200pF 2kV K	R304	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
R207	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	R305	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
R208	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	R307	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
R209	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	R482	NRSA63J-124X	MG RESISTOR	120kΩ 1/16W J
R210	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J	R483	NRSA63J-683X	MG RESISTOR	68kΩ 1/16W J
R211	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	R484	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J
R212	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J	R485	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J
R213	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	R486	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J
R214	QRJ146J-100X	UNF C RESISTOR	10Ω 1/4W J	R487	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J
R219	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	R488	NRSA63J-154X	MG RESISTOR	150kΩ 1/16W J
R220	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	R489	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J
R221	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	R491	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
R222	QRE121J-563Y	C RESISTOR	56kΩ 1/2W J	R492	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J
R223	QRE121J-563Y	C RESISTOR	56kΩ 1/2W J	R494	NRSA63J-683X	MG RESISTOR	68kΩ 1/16W J
R224	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	R495	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J
R225	NRSA63J-390X	MG RESISTOR	39Ω 1/16W J	R496	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J
R226	QRE121J-2R7Y	C RESISTOR	2.7Ω 1/2W J	R497	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J
R227	QRE121J-2R7Y	C RESISTOR	2.7Ω 1/2W J	R499	QRE121J-561Y	C RESISTOR	560Ω 1/2W J
R228	NRSA63J-390X	MG RESISTOR	39Ω 1/16W J	R601	QRE121J-271Y	C RESISTOR	270Ω 1/2W J
R229	QRE121J-121Y	C RESISTOR	120Ω 1/2W J	R602	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J
R232	QRL029J-391	OMF RESISTOR	390Ω 2W J	R603	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J
R351	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	R604	QRE121J-271Y	C RESISTOR	270Ω 1/2W J
R352	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	R801	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J
R353	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	R802	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J
R354	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	R803	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J
R355	QRE121J-561Y	C RESISTOR	560Ω 1/2W J	R806	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
R356	QRE121J-561Y	C RESISTOR	560Ω 1/2W J	R809	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
R357	QRE121J-561Y	C RESISTOR	560Ω 1/2W J	R811	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
R358	QRZ0107-152Z	C RESISTOR	1.5kΩ 1/2W K	R812	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J
R359	QRZ0107-152Z	C RESISTOR	1.5kΩ 1/2W K	R813	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J
R360	QRZ0107-152Z	C RESISTOR	1.5kΩ 1/2W K	R814	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J
△R369	QRZ9023-1R2	FUSI RESISTOR	1.2Ω 2W J	R815	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J
R374	QRZ0107-474Z	C RESISTOR	470kΩ 1/2W K	R816	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J
L351	QQL244J-5R6Z	COIL	5.6uH J	R901	QRZ0107-474Z	C RESISTOR	470kΩ 1/2W K
△FR201	QRZ9021-561	FUSI RESISTOR	560Ω 1W J	R960	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J
K201	QQR1114-001Z	FERRITE BEADS		R961	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J
K202	QQR1114-001Z	FERRITE BEADS		L401	QQL244K-820Z	PEAKING COIL	82uH K
K203	QQR1114-001Z	FERRITE BEADS		△F901	QMF51E2-4R0J4	FUSE	4A AC250V
K205	QQR1114-001Z	FERRITE BEADS		J801	QNS0155-001	3.5 JACK	HEADPHONE
K206	QQR1114-001Z	FERRITE BEADS		J802	QNN0279-003	PIN JACK	VIDEO3 V IN
K208	QQR1113-001Z	FERRITE BEADS		J803	QNN0279-002	PIN JACK	VIDEO3 L IN
△SK351	QNZ0536-001	CRT SOCKET		J804	QNN0657-001	PIN JACK	VIDEO3 R IN

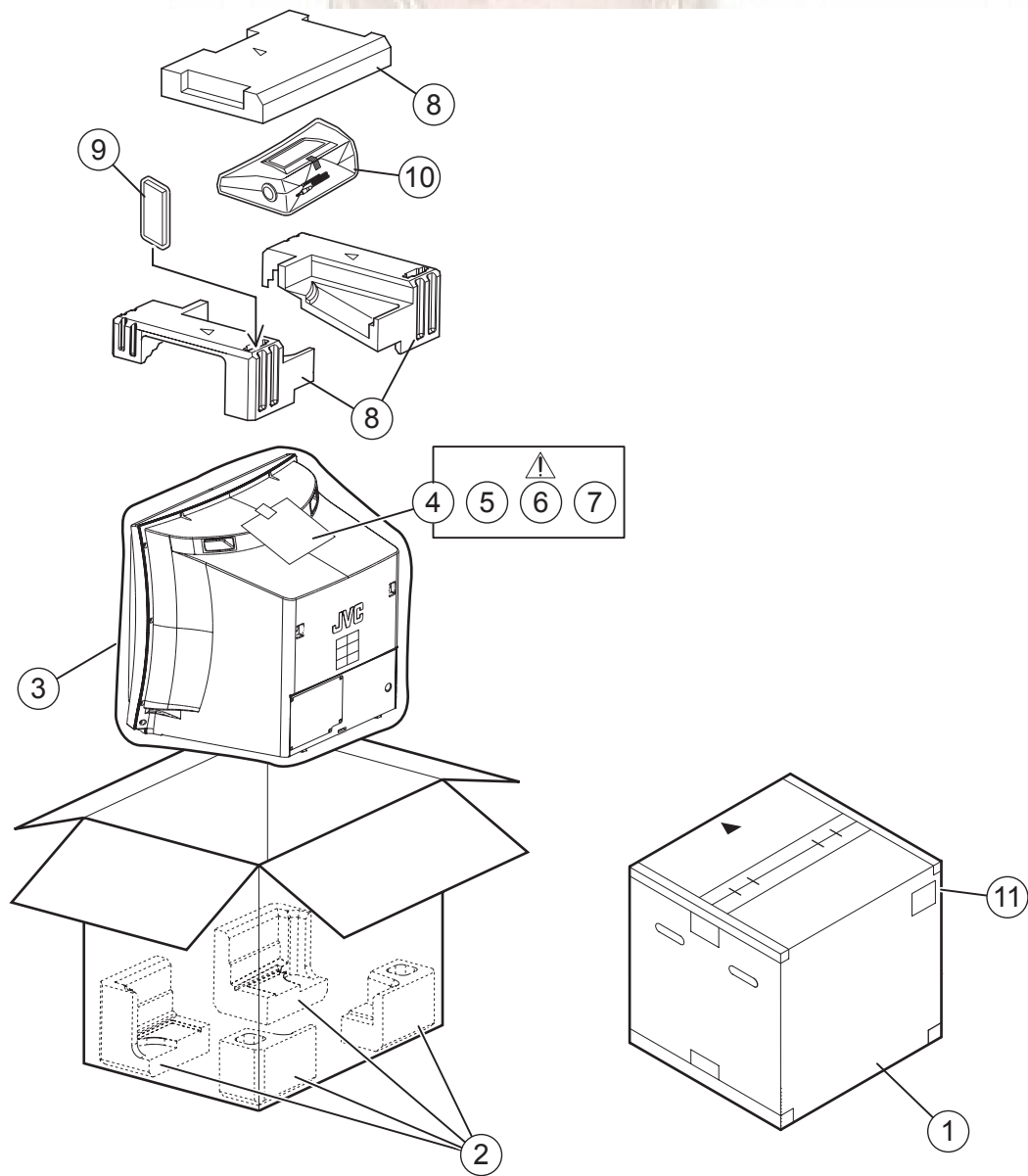
FRONT CONTROL P.W. BOARD ASS'Y (SCW-8009A-CK)

△Ref No.	Part No.	Part Name	Description Local	△Ref No.	Part No.	Part Name	Description Local
IC301	S9066-11	PHOTO CONDUCTOR		S801	QSW0619-003Z	TACT SWITCH	CH+
IC481	LA6515	IC		S802	QSW0619-003Z	TACT SWITCH	CH-
IC801	RPM7238-H5	IR DETECT UNIT		S803	QSW0619-003Z	TACT SWITCH	MENU
Q481	2SC3928A/QR/-X	TRANSISTOR		S804	QSW0619-003Z	TACT SWITCH	TV/VIDEO
Q482	2SA1530A/QR/-X	TRANSISTOR		S805	QSW0619-003Z	TACT SWITCH	VOL+
Q955	2SC3928A/QR/-X	TRANSISTOR		S806	QSW0619-003Z	TACT SWITCH	VOL-
D801	LH22440-T16	LED	POWER	△S901	QSW0750-001	PUSH SWITCH	POWER
D803	MA8091/H/-X	Z DIODE		△TH901	QAD0145-2R3	P THERMISTOR	2.3Ω
D804	NCB21HK-152X	C CAPACITOR	1500pF 50V K	△VA901	QAF0060-621	VARISTOR	620V
D805	NCB21HK-152X	C CAPACITOR	1500pF 50V K	LC41232-001A-H	EE HOLDER		
D956	MA111-X	SI DIODE		LC30349-001A-H	LED HOLDER		
D957	MA111-X	SI DIODE					
C301	QETN1HM-105Z	E CAPACITOR	1uF 50V M				
C481	NCB31CK-224X	C CAPACITOR	0.22uF 16V K				
C482	NCB31CK-224X	C CAPACITOR	0.22uF 16V K				
C483	NCB31CK-224X	C CAPACITOR	0.22uF 16V K				
C484	NCB31CK-224X	C CAPACITOR	0.22uF 16V K				
C485	QETN1CM-476Z	E CAPACITOR	47uF 16V M				
C487	QFLC1HJ-103Z	M CAPACITOR	0.01uF 50V J				
C488	QETN1HM-226Z	E CAPACITOR	22uF 50V M				
C489	NDC31HJ-561X	C CAPACITOR	560pF 50V J				
C490	QETN1HM-226Z	E CAPACITOR	22uF 50V M				
C601	QETN1EM-108Z	E CAPACITOR	1000uF 25V M				
C602	QETN1EM-108Z	E CAPACITOR	1000uF 25V M				
C801	NCB31HK-104X	C CAPACITOR	0.1uF 50V K				
C802	QETN1CM-107Z	E CAPACITOR	100uF 16V M				
△C901	QFZ9072-224	MM CAPACITOR	0.22uF AC250V K				
△C902	QFZ9072-224	MM CAPACITOR	0.22uF AC250V K				

REMOTE CONTROL UNIT PARTS LIST (RM-C1281-2H)

△ 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	GG10078-037A-E	PACKING CASE		
2	GG10279-001A-H	BOTTOM CUSHION ASS'Y	4pcs in 1set	
3	GG30033-003A-E	POLY BAG		
4	GG30034-001A-E	POLY BAG		
5		BATTERY	AA/R6 (x2)	
△ 6	GGT0051-001D-E	INST BOOK		
7	CEAB005-00AJ1	MATCHING BOX		
8	GG10290-001A-H	TOP CUSHION ASS'Y	3pcs in 1set	
9	RM-C1281-2H	REMOCON UNIT		
10	GG30033-004A-E	POLY BAG		
11	GG30074-033A	SERIAL LABEL		