

JVC

SERVICE MANUAL

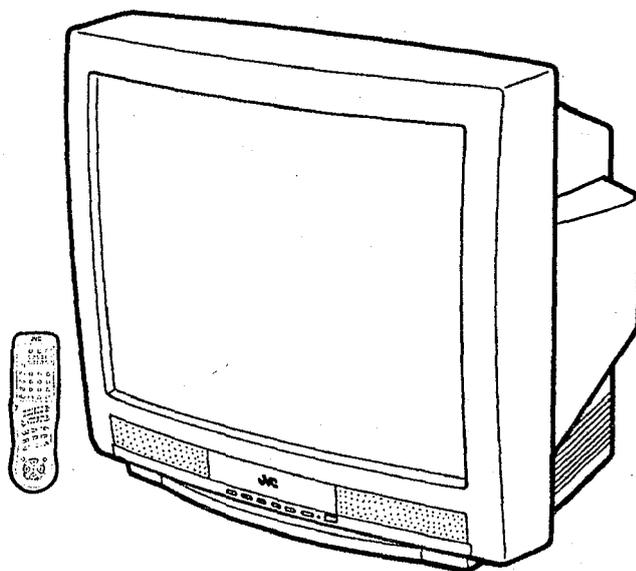
COLOR TELEVISION

AV-31BP6_(US&CA)

AV-31BM6_(US&CA)

BASIC CHASSIS

GK



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SPECIFICATIONS

Item	Content
Dimensions (W×H×D)	30-1/4" × 26-1/8" × 21-5/8" / 76.8cm × 66.4cm × 54.8cm
Mass	115.3 lbs / 52.4kg [AV-31BP6] 115.1lbs / 52.3kg [AV-31BM6]
TV System and Color, Sound System	
TV RF System	CCIR(M)
Color, Sound System	NTSC, BTSC (Multichannel Sound)
TV Receiving Channels and Frequency	
VL Band	(02~06) 54MHz~88MHz
VH Band	(07~13) 174MHz~216MHz
UHF Band	(14~69) 470MHz~806MHz
CATV Receiving Channels and Frequency (Quartz Synthesizer System)	
Low Band	(02~06,) by (02~06)
High Band	(07~13) by (07~13)
Mid Band	(A~I) by (14~22)
Super Band	(J~W) by (23~36)
Hyper Band	(W+1~W+28) by (37~64)
ULTRA Band	(W+29~W+84) by (65~94,100~125)
Sub Mid Band	(A-8, A-4~A-1) by (01, 96~99)
TV / CATV Total Channel	180 Channels
Intermediate Frequency	
Video IF Carrier	45.75MHz
Sound IF Carrier	41.25MHz (4.5MHz)
Color Sub Carrier	3.58MHz
Antenna terminal	75Ω (VHF / UHF) Terminal, F-Type Connector
Power Input	120V AC, 60Hz
Power Consumption [US]	135W (max.), 95W (avg.)
Input current [CA]	1.8A
Picture Tube	31"(79cm) measured diagonally, Full Square
Viewable Picture Size (W×H)	24-13/16" × 18-5/8" / 63.0cm × 47.2cm
High Voltage	31.0kV ± 1.3kV (at zero beam current)
Speaker	2" × 4-3/4" (5 × 12cm) Oval Type, × 2
Audio Power Output	3W + 3W
Input (1, 2)	Video : 1 Vp-p 75Ω (RCA pin jack)
(Input 2 = AV-31BP6 ONLY)	Audio : 500 mV rms (-4dBs), High Impedance (RCA pin jack)
S-VIDEO IN	Y:1 Vp-p positive (negative sync provided,when terminated with 75Ω) C:0.286 Vp-p (burst signal, when terminated with 75Ω)
Variable / Fix Audio Output	Variable : More than 0~1550mV rms (+ 6dBs) Low Impedance (400Hz when modulated 100%) (RCA pin jack)
	Fix : 500 mV rms (-4dBs) Low Impedance (400Hz when modulated 100%) (RCA pin jack)
AV Compulink Input (AV-31BP6 ONLY)	RECEIVER / AMP : 3.5mm mini jack VCR ONLY : 3.5mm mini jack
Remote Control Unit	RM-C729 (AAA/R03 dry battery × 2) : [AV-31BP6] RM-C728 (AAA/R03 dry battery × 2) : [AV-31BM6]

(54MHz~804MHz)

Design & specification subject to change without notice.

SAFETY PRECAUTIONS

- 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.
- 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.
- 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 (▲) 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.
- Use isolation transformer when hot chassis.**
The chassis and any sub-chassis contained in some products are connected to one side of the AC power line. An isolation transformer of adequate capacity should be inserted between the product and the AC power supply point while performing any service on some products when the HOT chassis is exposed.
- Don't short between the LIVE side ground and ISOLATED(NEUTRAL) side ground or EARTH side ground when repairing.**
Some model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (⊥) side GND, the ISOLATED(NEUTRAL) : (⏏) side GND and EARTH : (⊕) side GND. Don't short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND and never measure with a measuring apparatus (oscilloscope etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND at the same time.
If above note will not be kept, a fuse or any parts will be broken.
- If any repair has been made to the chassis, it is recommended that the B₁ setting should be checked or adjusted (See ADJUSTMENT OF B₁ POWER SUPPLY).
- 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.
- 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.
- When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.

10. Isolation Check

(Safety for Electrical Shock Hazard)

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

(1) Dielectric Strength Test

The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 1100V AC (r.m.s.) for a period of one second.

(... Withstand a voltage of 1100V AC (r.m.s.) to an appliance rated up to 120V, and 3000V AC (r.m.s.) to an appliance rated 200V or more, for a period of one second.)

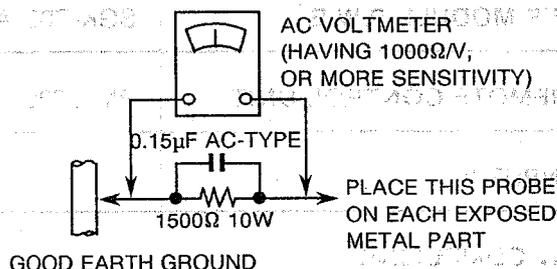
This method of test requires a test equipment not generally found in the service trade.

(2) 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.).

• 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 ohms 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 0.35V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.).

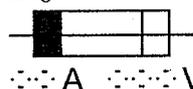


11. High voltage hold down circuit check.

After repair of the high voltage hold down circuit, this circuit shall be checked to operate correctly.

See item "How to check the high voltage hold down circuit".

This mark shows a fast operating fuse, the letters indicated below show the rating.



FEATURES

- New chassis design enables use of a main board with simplified circuitry.
- Comb filter improved picture quality.
- Provided with miniature tuner (TV / CATV)
- Full-square CRT (cathode ray tube) reproduces fine textured picture in every detail.
- PLL synthesizer system TV / CATV totaling 180 channels.
- AV COMPU LINK terminals allow simultaneous mode switching of the TV, connected receiver (or amplifier) and/or VCR. **(AV-31BP6 ONLY)**
- Closed-caption broadcasts can be viewed.
- With AUDIO. VIDEO INPUT terminal.
- S-VIDEO input terminal for taking best advantage of Super VHS.
- Variable audio output terminal.
- Built-in PIP system. **(AV-31BP6 ONLY)**
- An auto demonstration function demonstrates the features of this model.
- I²C bus control utilizes single chip ICs.

DIFFERENCE OF MODELS

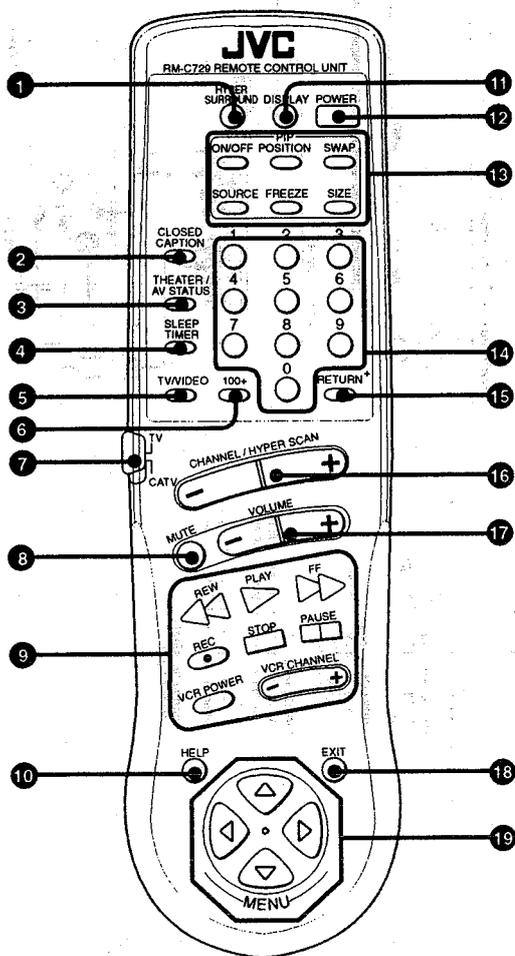
Model	AV-31BP6 (US&CA)	AV-31BM6 (US&CA)
MAIN P.W.B	SGK-1004A-H2	SGK-1003A-H2
CRT SOCKET P.W.B	SGK-3002A-H2	SGK-3001A-H2
AV SELECTOR P.W.B	SGK-8002A-H2	SGK-8001A-H2
PIP MODULE P.W.B	SGK-P001A-H2	NON
REMOTE CONTROL UNIT	RM-C729-1A	RM-C728-1A
INPUT 2	○	NON
AV COMPULINK	○	NON

OPERATING INSTRUCTIONS

- The operating instructions are the same as for AV-27BP6(US&CA), AV-27BM6(US&CA), AV-2796S(CA), AV-2776S(CA) (No.50951). Therefore, please refer to the AV-27BP6(US&CA), AV-27BM6(US&CA), AV-2796S(CA), AV-2776S(CA) (No.50951) SERVICE MANUAL for detailed instructions.

Locations of Remote Control buttons

— AV-27BP6, AV-31BP6, AV-35BP6, AV-27BM6, AV-31BM6



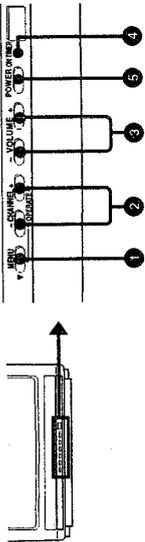
Note:

- These illustrations show the AV-27BP6/AV-31BP6/AV-35BP6 remote control. The AV-27BM6/AV-31BM6 remote control has the same layout but has no PIP buttons.

① HYPER SURROUND button	p.16
② CLOSED CAPTION button	p.22
③ THEATER/AV STATUS button	p.16
④ SLEEP TIMER button	p.20
⑤ TV/VIDEO button	p.10
⑥ 100+ button	p.10
⑦ TV/CATV selector	p.26
⑧ MUTE button	p.17
⑨ VCR operation buttons	p.26
⑩ HELP button	p.14
⑪ DISPLAY button	p.22
⑫ POWER button	p.8
⑬ PIP buttons (except AV-27BM6, AV-31BM6)	p.12
⑭ Number keys	p.10
⑮ RETURN+ button	p.18
⑯ CHANNEL/HYPER SCAN (-/+) button	p.10
⑰ VOLUME (-/+) button	p.11
⑱ EXIT button	p.14
⑲ MENU (▼▲◀▶) buttons	p.14

Locations of TV Buttons and Parts

FRONT PANEL



1 MENU (▼) button	p.6
2 OPERATE (◀▶) CHANNEL (+/-) buttons	p.6,10
3 VOLUME (+/-) buttons	p.11
4 POWER/ON TIMER lamp	p.8,20
5 POWER button	p.8

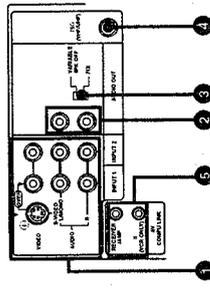
How to use the MENU (▼) button:

- Press this button to display a list of functions. Press this button again to select the desired function from the list, then make a selection using OPERATE (◀▶) CHANNEL (+/-).
- To use other buttons, refer to the respective page of this user guide.
- The front panel does not have a MENU button. To release MENU, use the VOLUME button.
- You cannot set SET LOCK CODE, TIME GUARD, or channel guard from the front panel.
- When you activate MENU mode from the front panel, the first page of the FRONT PANEL CONTROL menu is displayed. Other than the first page, menus accessed from the front panel are the same as menus accessed from the remote control (refer to page 14).

Notes:

- These illustrations show the AV-27BP6 front and rear panels. Other models have the same layout as the AV-27BP6, but the AV-27BM6/AV-31BM6/AV-2776S rear panel has no INPUT 2, AV COMPU LINK jack.

REAR PANEL



1 INPUT jacks	p.23
2 AUDIO OUT jacks	p.23
3 AUDIO OUT switch	p.23
4 Antenna terminal	p.7
5 AV COMPU LINK jacks (except AV-27BM6, AV-31BM6, AV-2776S)	p.24

Notes (also refer to "CONNECTION" on pages 23 to 29):

AUDIO OUT jacks:
Outputs the sound of the picture appearing on the TV.
Refer to page 23.

INPUT jacks:
Audio output from monaural equipment should be connected to the L/MONO jack.
Connect nothing to the S-VIDEO jack when using the VIDEO INPUT 1 jack.

Antenna terminal:
Refer to page 7.

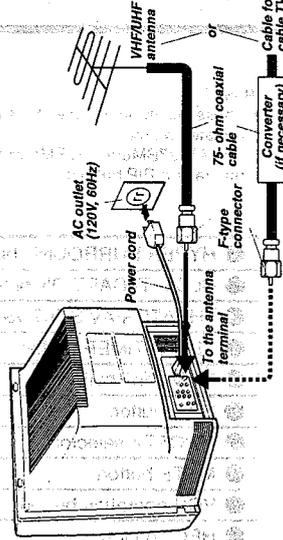
PREPARATION

1. Connecting antenna and power cord

Conditions:

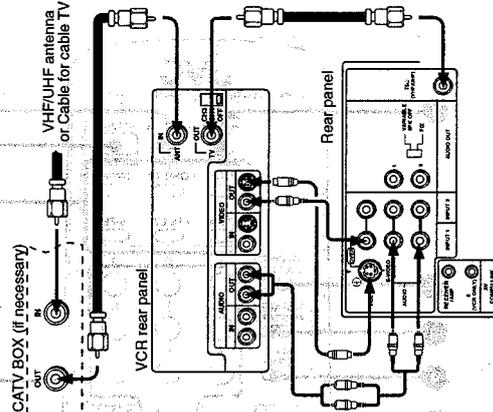
- Before connecting external devices, be sure to disconnect the TV from the AC outlet.
- When you want to use a connected device such as a VCR, change the TV input mode using TV/VIDEO. Refer to step 2 on page 10.

(Example) no VCR connected



- Notes:**
- When connecting both a cable (75-ohm coaxial) and a UHF antenna (300-ohm feeder), use an optional antenna mixer (CE41467) to make a single connection. With this antenna mixer, reception of cable channels higher than "Channel W+17" is not possible.
 - The power cord has a polarized plug. Therefore, it will only fit one way into the wall outlet. DO NOT DEFEAT THE POLARIZED PLUG. If you have problems, consult your local dealer.
 - Some cable companies require a converter box to receive any programs at all. Others require it for subscription or "premium" programming. Consult your local cable company for correct installation.

(Example) VCR connected



- Notes:**
- Refer to the manuals provided with the other devices.
 - Interference from connected devices can affect picture quality to deteriorate. If picture noise occurs, turn off devices that you are not using or move them further apart.
 - Connect the video signal of an S-VHS VCR to the S-VIDEO jack.

SPECIFIC SERVICE INSTRUCTIONS

REPLACEMENT OF CHIP COMPONENT

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.

SOLDERING IRON

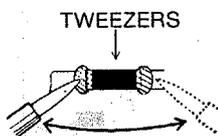
1. Use a high insulation soldering iron with a thin pointed end of it.
2. A 30w soldering iron is recommended for easily removing parts.

REPLACEMENT STEPS

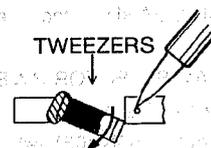
1. How to remove Chip parts

- Resistors, capacitors, etc

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

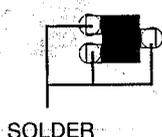


- (2) Shift with tweezers and remove the chip part.



- 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.

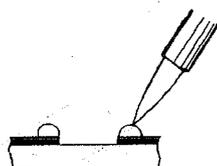


Note: After removing the part, remove remaining solder from the pattern.

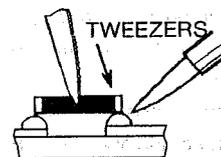
2. How to install Chip parts

- 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.



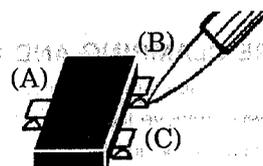
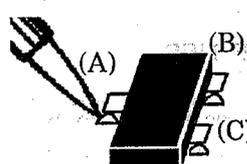
- Transistors, diodes, variable resistors, etc

- (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.



DISASSEMBLY PROCEDURE

REMOVING THE REAR COVER

1. Unplug the power supply cord.
2. Remove the fourteen screws marked ① as shown in Fig. 3.

* When reinstalling the rear cover, carefully push it inward after inserting the main board into the rear cover groove.

REMOVING THE CHASSIS

1. As shown in Fig. 3 slide and pull out the CHASSIS BASE in the direction of arrow marked ④ as shown in Fig. 3. (If necessary, take off the wire clamp and connectors...etc.).

REMOVING THE TERMINAL BOARD & AV SELECTOR PWB

* After removing the rear cover.

1. Remove the two screws marked ② as shown in Fig. 3.
2. While widening the four claws marked ③, remove the TERMINAL BOARD in the direction of arrow marked ④ as shown in Fig. 1.
3. Raise the AV SELECTOR PWB in the arrow direction marked ⑤ as shown in Fig. 1.
4. The connector (CN003) will then be free and the AV SELECTOR PWB can be removed.

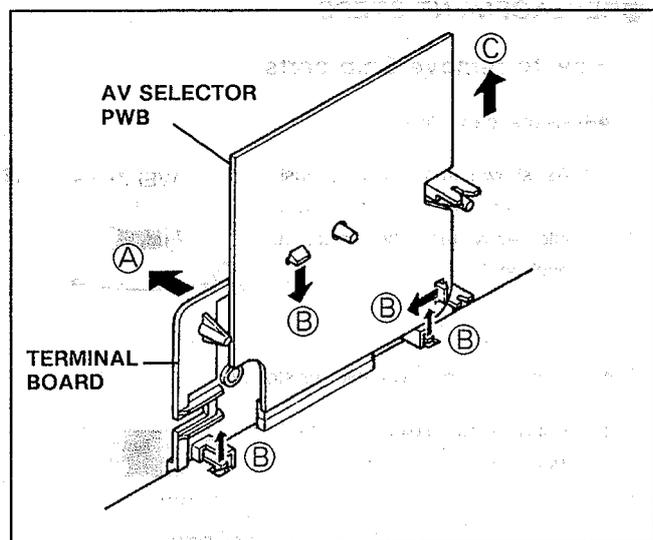


Fig.1

REMOVING THE PIP MODULE PWB (ONLY AV-31BP6)

* After removing the rear cover.

1. While widening the three claws marked ⑥ as shown in Fig. 2.
2. Raise the PIP MODULE PWB in the arrow direction marked ⑦ as shown in Fig. 2.
3. The connector will then be free and the PIP MODULE PWB can be removed.

CHECKING THE MAIN PW BOARD

1. To check the back side of the MAIN PW Board.
 - 1) Pull out the chassis. (Refer to REMOVING THE CHASSIS).
 - 2) Erect the chassis vertically so that you can easily check the back side of the MAIN PW Board.

[CAUTION]

- When erecting the chassis, be careful so that there will be no contacting with other PWB.
- Before turning on power, make sure that the wire connector is properly connected.

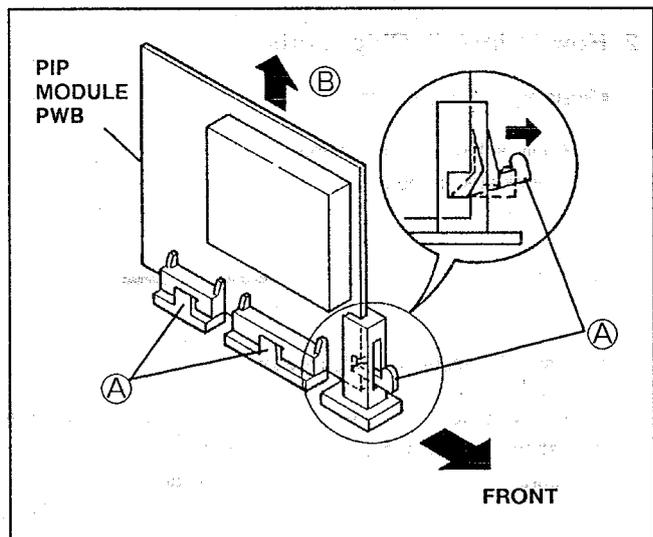


Fig.2

WIRE CLAMPING AND CABLE TIES

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.

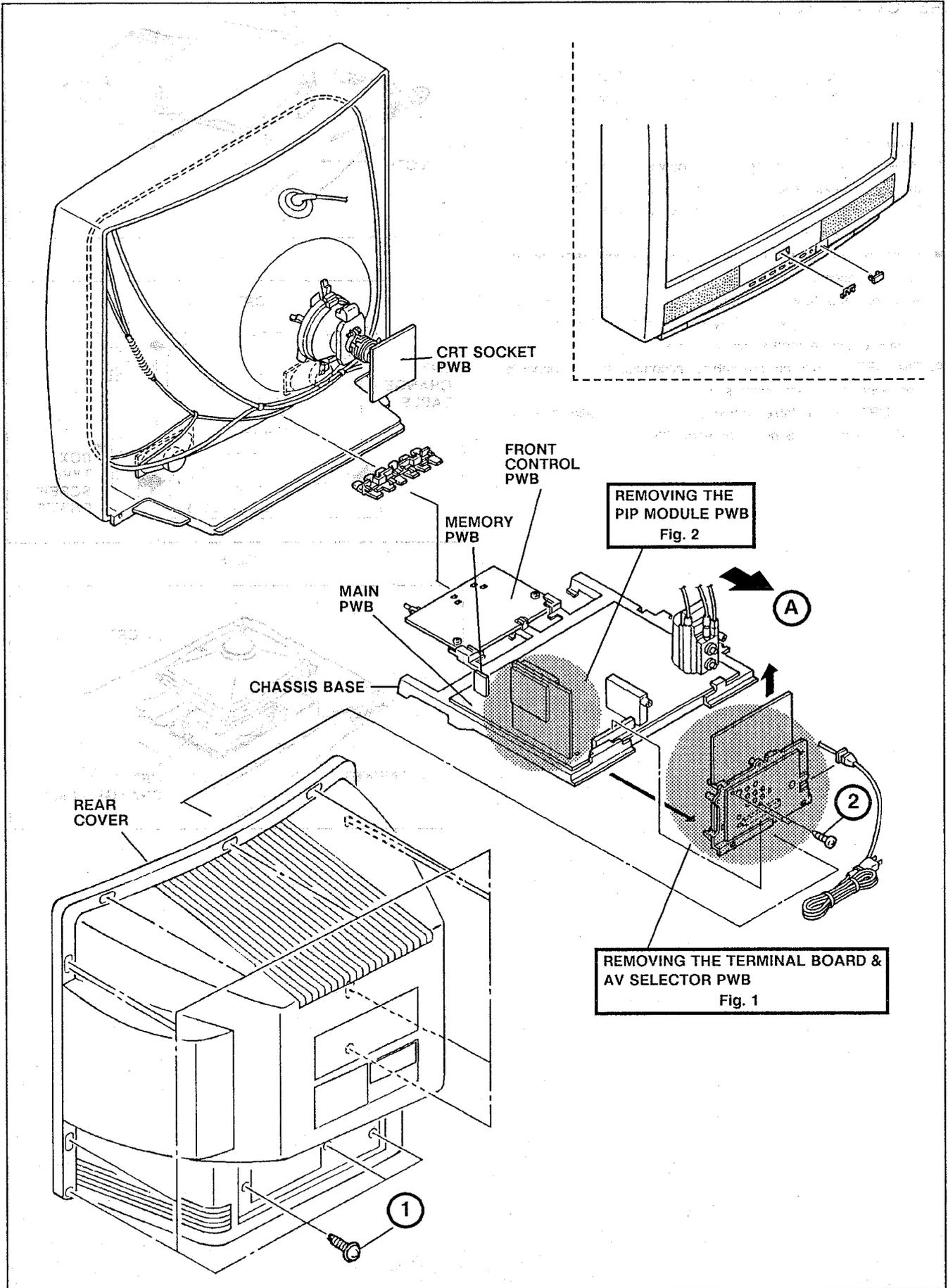


Fig. 3

REMOVING THE CRT.

- * Replacement of the CRT should be performed by two or more persons.
- After removing the rear cover, chassis and SP grill ass'y etc.,
- 1. Putting the CRT change table on soft cloth, the CRT change table should also be covered with such soft cloth. (shown in Fig. 4)
- 2. While keeping the surface of CRT down, mount the TV set on the CRT change table balanced will as shown in Fig. 5.
- 3. Remove four nuts marked by arrows with a box type screw driver as shown in Fig. 5.
- Since the cabinet will drop when nuts have been removed, be sure to support the cabinet with hands.
- 4. After four nuts have been removed, put the cabinet slowly on cloth (At this time, be carefully so as not to damage the front surface of the cabinet) shown in Fig.6.
- The CRT should be assembled according to the opposite sequence of its dismounting steps.
- * The CRT change table should preferably be smaller than the CRT surface, and its height be about 35cm.

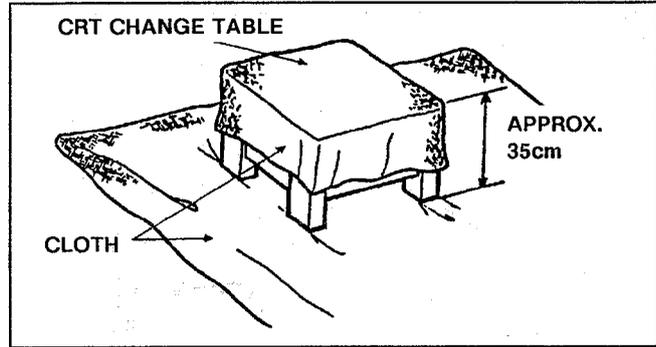


Fig. 4

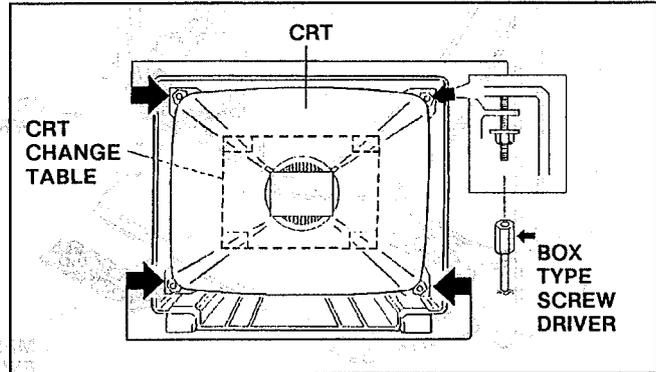


Fig. 5

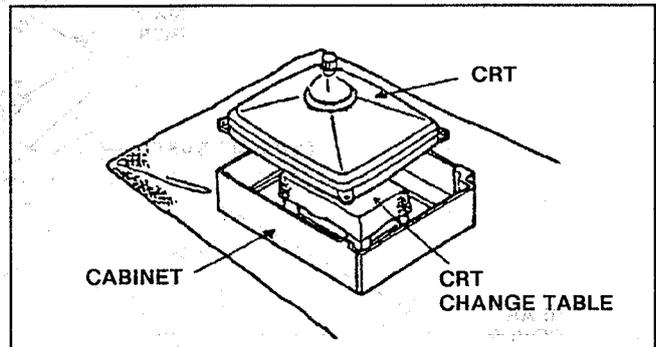


Fig. 6

MEMORY IC REPLACEMENT

1. Memory IC

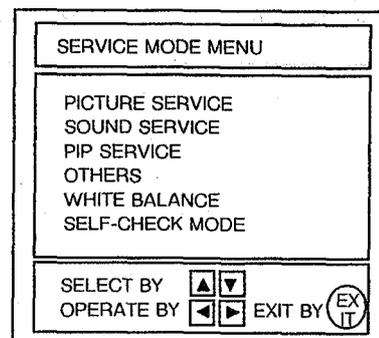
This product uses memory IC (EEP-ROM IC).

A memory IC stores data for properly operating Video and deflection circuits.

When replacing ICs, be sure to use ICs storing data (initial setting values).

2. Steps for replacing memory ICs

STEPS
(1) Turn off the power and pull out the power cord from the outlet.
(2) Replace memory ICs. (Be sure to use memory ICs with initial setting values stored.)
(3) Plug the power cord into the outlet and turn on the power.
(4) Setting receive channels: Set the receive channel (CHANNEL PRESET). Refer to the OPERATING INSTRUCTIONS for this setting.
(5) User setting. Check the user setting value of Table 1, and if setting value is different, set the correct value. Refer to the OPERATING INSTRUCTIONS for setting.
(6) Setting SERVICE MODE MENU Verify what to set in the SERVICE MODE MENU, and set whatever is necessary. (Fig. 1) Refer to the SERVICE ADJUSTMENT for setting.



(Fig. 1)

TABLE 1 (User Setting)

Setting Item	Setting Value	Setting Item	Setting Value
1. Use remote controller keys POWER CHANNEL VOLUME TV / VIDEO CLOSED CAPTION HYPER SURROUND	OFF 02 Proper sound volume TV OFF OFF	DISPLAY THEATER / AV STATUS SLEEP TIMER PIP SOURCE PIP POSITION PIP SIZE	OFF RESET 0 MIN. TV (AV-31BP6) Lower left (AV-31BP6) 1/9 (large) (AV-31BP6)
2. Settings from MENU TINT COLOR PICTURE BRIGHT DETAIL NOTCH NOISE MUTE SET AV STATUS BASS TREBLE BALANCE MTS SET CLOCK ON / OFF TIMER TIME GUARD SET LOCK CODE	CENTER CENTER CENTER CENTER CENTER OFF OFF CENTER (CHOICE) CENTER CENTER CENTER STEREO NON SETTING NO NON SETTING NON SETTING	CHANNEL SUMMARY AUTO TUNER SET UP TUNER MODE CLOSED CAPTION AUTO DEMO	Set optionally Stations 02 — CBS 04 — NBC 07 — ABC OTHERS AIR CAPTION : CC1 TEXT : T1 BACKGROUND : BLACK NON SETTING
3. Others AUDIO OUT SW	FIX		

SERVICE ADJUSTMENTS

ADJUSTMENT PREPARATION:

1. You can make the necessary adjustments for this unit with either the Remote Control Unit or with the adjustment tools and parts as before.
2. Adjustment with the Remote Control Unit is made on the basis of the initial setting values; however, the new setting values which set the screen to its optimum condition may differ from the initial settings.
3. Turn on the power for the set and test equipment before use, and start the adjustment procedures after waiting at least 30 minutes.
4. Make sure that AC power (120V AC) is turned on correctly.
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 adjustment - variable resistors, transformers, condensers, etc.
7. Presetting before adjustment.

Unless otherwise specified in the adjustment instructions, preset the following functions with the Remote Control Unit :

(1) THEATER / AV STATUS	RESET	(3) HYPER SURROUND	OFF
(2) NOTCH	OFF	(4) BASS, TREBLE, BALANCE	CENTER

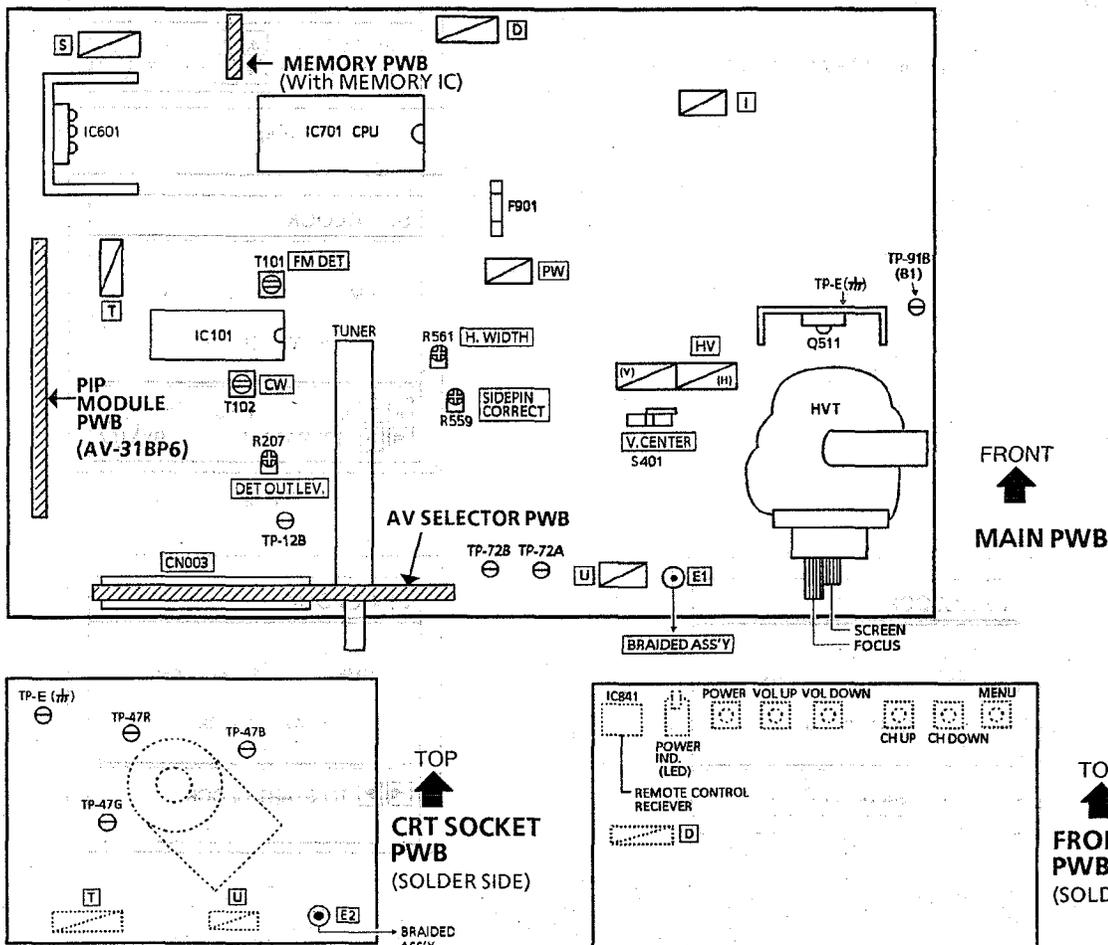
TESTERS & TOOLS

1. DC voltmeter (or digital voltmeter)
2. Oscilloscope
3. Signal generator (Pattern generator) [NTSC]
4. TV audio multiplex signal generator
5. Frequency counter
6. Remote control unit

ADJUSTMENT ITEMS

Adjustment items	Adjustment items
Verify B1 voltage	Adjust DEFLECTION circuit
Adjust VIDEO DETECTOR LEVEL	Adjust VIDEO/CHROMA circuit
Adjust RF AGC	Adjust PIP circuit
Adjust FOCUS	Adjust MTS circuit

ADJUSTMENT LOCATIONS



BASIC OPERATION OF SERVICE MODE MENU

1. The SERVICE MODE MENU is operated with the Remote Control Unit.

2. Broadly classified, the SERVICE MODE MENU sets (adjusts) the following 5 items and verifies the operation of the SELF-CHECK MODE.

- (1) PICTURE SERVICE ... Sets the setting values (adjustment values) of the VIDEO / CHROME circuit and the DEFLECTION circuit.
- (2) SOUND SERVICE Sets the setting values (adjustment values) of the MULTI SOUND circuit
- (3) PIP SERVICE Sets the setting values (adjustment values) of the PICTURE-IN-PICTURE circuit.
- (4) OTHERS Sets the setting values (adjustment values) of the OTHERS circuit.
- (5) WHITE BALANCE Sets the setting values (adjustment values) of WHITE BALANCE.

3. Basic operation of SERVICE MODE MENU

(1) Entering SERVICE MODE MENU

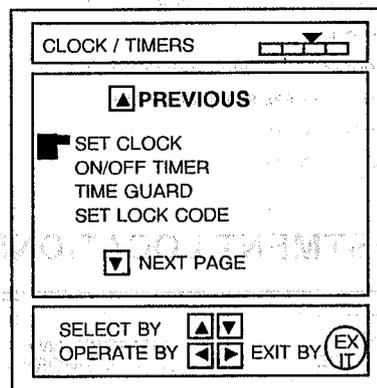
1] Press the UP/DOWN key of the REMOTE CONTROL UNIT menu, and select SET CLOCK. (Fig. 1)

Then press the LEFT / RIGHT key of the menu, and get the SET CLOCK screen of Fig. 2.

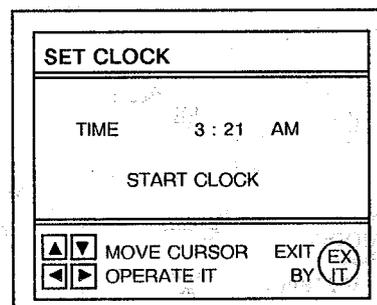
2] Using the LEFT/RIGHT and UP/DOWN keys, set the time at 3:21 AM. (Fig. 2)

With the UP/DOWN key, select START CLOCK and start it with the LEFT/RIGHT key. (Fig. 3)

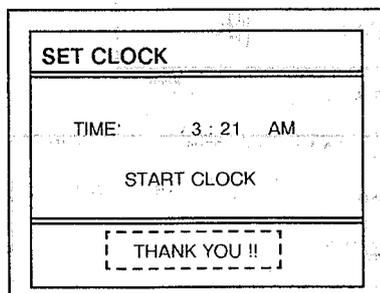
3] As soon as the clock starts, it will say "THANK YOU!!". (Fig. 4)



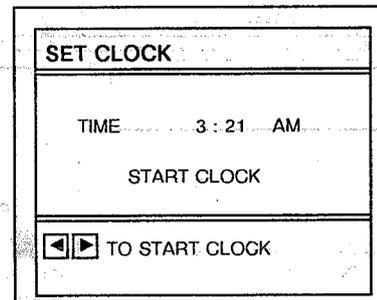
(Fig. 1)



(Fig. 2)

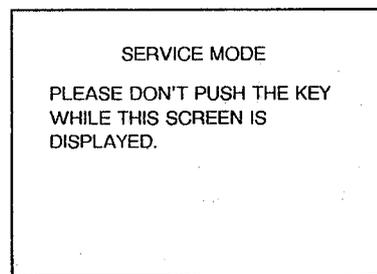


(Fig. 4)

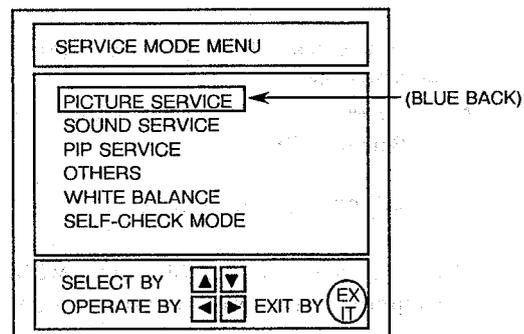


(Fig. 3)

- 4] While the "THANK YOU!!" display is on, press the MUTE key and the UP/DOWN key immediately thereafter, and get the SERVICE MODE screen of Fig. 5.
- 5] While the screen of Fig. 5 is on, press the UP/DOWN key and the SERVICE MODE MENU will come back. (Fig. 6)



(Fig. 5)



(Fig. 6)

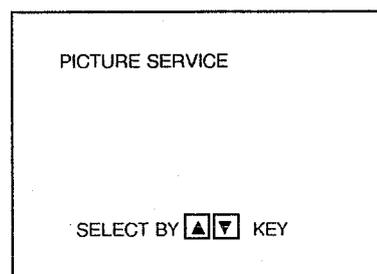
(2) Selecting SERVICE MODE MENU screen

- 1] Press the UP/DOWN key and select one of the following items. (Fig. 6)

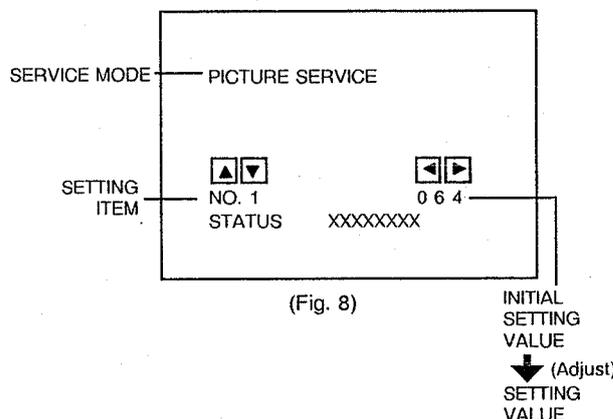
- ▶ PICTURE SERVICE
- ▶ SOUND SERVICE
- ▶ PIP SERVICE
- ▶ OTHERS
- ▶ WHITE BALANCE
- ▶ SELF-CHECK MODE

- 2] Temporarily select the PICTURE SERVICE, press the LEFT/RIGHT key and get the screen of Fig. 7.

- 3] Press the UP/DOWN key again, and you will get the PICTURE SERVICE screen for PICTURE SERVICE adjustment. (Fig. 8)



(Fig. 7)



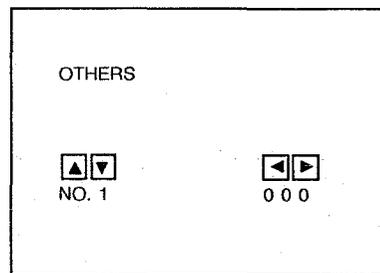
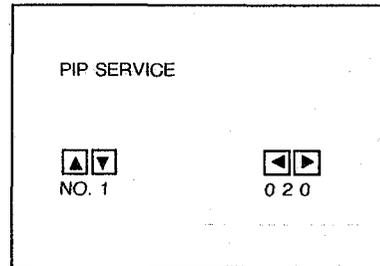
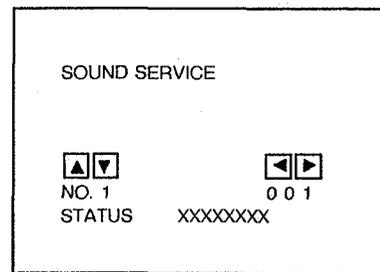
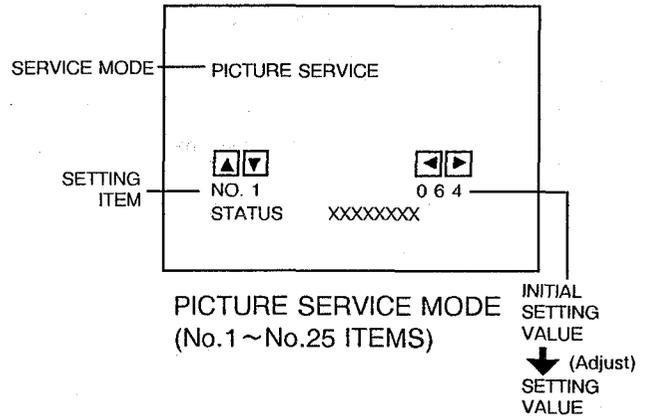
(Fig. 8)

(3) Setting method

- 1] UP/DOWN key of the menu :
Selects the SETTING ITEM.
 - 2] LEFT/RIGHT key of the menu :
Selects (adjusts) the SETTING VALUE of the SETTING ITEM.
When the key is left, the SETTING VALUE will be stored (memorized).
 - 3] EXIT key : Returns to the previous screen.
- For setting the WHITE BALANCE, refer to the page on ADJUSTMENT.
 - For details of the SELF-CHECK MODE, refer to the page on the SELF-CHECK MODE.

(4) Releasing SERVICE MODE MENU

- 1] After returning to the SERVICE MODE MENU upon completion of the setting (adjustment) work, press the EXIT key again.



INITIAL SETTING VALUE OF SERVICE MODE MENU

1. Adjustment of the SERVICE MODE MENU is made on the basis of the initial setting values; however, the new setting values which set the screen in its optimum condition may differ from the initial setting.
2. Do not change the Initial Setting Values of the Setting (Adjustment) items not listed in "ADJUSTMENT."

● PICTURE SERVICE MODE

No.	Setting (Adjustment) item	Display	Variable range	Initial setting value	
				AV-31BP6	AV-31BM6
1.	COLOR	1. COLOR	0~127	57	
2.	TINT	2. TINT	0~127	74	
3.	BRIGHT	3. BRIGHT	0~127	50	64
4.	PICTURE	4. PICT.	0~127	66	
5.	DETAIL	5. DETAIL	0~63	32	
6.	R CUTOFF	6. R CUT.	0~255	20	
7.	G CUTOFF	7. G CUT.	0~255	20	
8.	B CUTOFF	8. B CUT.	0~255	20	
9.	G DRIVE	9. G DRV.	0~255	82	74
10.	B DRIVE	10. B DRV.	0~255	81	86
11.	V. PHASE	11. V. PH.	0~7	0	
12.	H. PHASE	12. H PH	0~31	19	
13.	AFC	13. AFC	0~1	0	
14.	WPL	14. WPL	0~1	0	
15.	V. SIZE	15. V SIZE	0~63	38	
16.	PIF VCO	16. PIF VC	0~127	63	
17.	ATTENUATOR	17. ATTEN.	0~63	0	
18.	BALANCE	18. BALANC	0~63	0	
19.	RF AGC	19. RF AGC	0~63	48	
20.	B. P. FILTER TV	20. BPF TV	0~1	1	
21.	B. P. FILTER VIDEO	21. BPF V	0~1	0	
22.	BLANKING	22. BLANK.	0~1	0	
23.	A. SW	23. A. SW	0~1	0	
24.	V. SW	24. V. SW	0~1	0	
25.	D0/D1	25. D0/D1	0~3	0	

● SOUND SERVICE MODE

No.	Setting (Adjustment) item	Display	Variable range	Initial setting value	
				AV-31BP6	AV-31BM6
1.	NOISE	1. NOISE	0~1	1	
2.	INPUT LEVEL	2. IN LEV.	0~63	32	
3.	FH MONITOR	3. FH MON	0~1	0	
4.	STEREO VCO	4. ST. VCO	0~63	16	
5.	PILOT CANCELER	5. PILOT	0~1	0	
6.	FILTER	6. FILTER	0~63	24	
7.	LOW SEPARATION	7. L. SEP.	0~63	36	
8.	HI. SEPARATION	8. H. SEP.	0~63	23	
9.	5FH MONITOR	9. 5FH MON	0~1	0	
10.	SAP VCO	10. SAP VC	0~63	21	
11.	INPUT GAIN	11. GAIN	0~1	0	

● PIP SERVICE MODE (AV-31BP6)

No.	Setting (Adjustment) item	Display	Variable range	Initial setting value	
				AV-31BP6	
1.	ASPECT 1/9	1. ASP. 9	0~31	20	
2.	V. POSI TOP 1/9	2. V TOP 9	0~255	18	
3.	V. POSI BOTTOM 1/9 OFFSET	3. V OF 9	0~255	60	
4.	H. POSI LEFT 1/9	4. H LEF 9	0~255	42	
5.	H. POSI RIGHT 1/9 OFFSET	5. H OF 9	0~255	84	
6.	ASPECT 1/16	6. ASP. 16	0~31	26	
7.	V. POSI TOP 1/16	7. V TOP 16	0~255	18	
8.	V. POSI BOTTOM 1/16 OFFSET	8. V OF 16	0~255	69	
9.	H. POSI LEFT 1/16	9. H LEF 16	0~255	54	
10.	H. POSI RIGHT 1/16 OFFSET	10. H OF 16	0~255	122	
11.	Y/C DELAY	11. YC DL.	0~3	1	
12.	FRAME WIDTH	12. FRAME	0~3	2	
13.	CLAMP POS	13. CLAMP	0~3	1	
14.	H AREA	14. H AREA	0~3	0	
15.	V AREA	15. V AREA	0~3	2	
16.	TINT	16. TINT	0~255	180	
17.	COLOR	17. COLOR	0~255	195	
18.	CONT	18. CONT	0~255	100	
19.	SHARP	19. SHARP	0~255	170	
20.	G DRIVE	20. G DRV.	0~255	150	
21.	B DRIVE	21. B DRV.	0~255	150	

● OTHERS MODE

No.	Setting (Adjustment) item	Display	Variable range	Initial setting value	
				AV-31BP6	AV-31BM6
1.	TIME DEBUG	1. TM DBG	0~1	0	
2.	OSD	2. OSD	0~10	0	
3.	TEXT	3. TEXT	7~31	22	
4.	SEARCH	4. SEARCH	0~5	0	
5.	MODE	5. MODE	0~1	0	
6.	60Hz	6. 60Hz	0~1	0	
7.	THEATER G DRIVE OFFSET	7. T G DR	-127~ +127	-35	
8.	THEATER B DRIVE OFFSET	8. T B DR	-127~ +127	-60	-66
9.	THEATER R CUTOFF OFFSET	9. T R CO	-127~ +127	0	
10.	THEATER G CUTOFF OFFSET	10. T G CO	-127~ +127	-4	-1
11.	THEATER B CUTOFF OFFSET	11. T B CO	-127~ +127	-13	-6
12.	THEATER PICTURE OFFSET	12. T PICT	-127~ +127	-30	
13.	THEATER TINT OFFSET	13. T TINT	-127~ +127	-4	
14.	THEATER COLOR OFFSET	14. T COL	-127~ +127	-7	
15.	THEATER BRIGHT OFFSET	15. T BRT.	-127~ +127	+3	
16.	THEATER DETAIL OFFSET	16. T DET.	-127~ +127	0	
17.	THEATER BASS OFFSET	17. T BASS	-127~ +127	0	
18.	THEATER TREBLE OFFSET	18. T TRBL	-127~ +127	0	
19.	BRIGHT ROOM G DRIVE OFFSET	19. B G DR	-127~ +127	0	
20.	BRIGHT ROOM B DRIVE OFFSET	20. B B DR	-127~ +127	0	
21.	BRIGHT ROOM R CUTOFF OFFSET	21. B R CO	-127~ +127	0	
22.	BRIGHT ROOM G CUTOFF OFFSET	22. B G CO	-127~ +127	0	
23.	BRIGHT ROOM B CUTOFF OFFSET	23. B B CO	-127~ +127	0	
24.	BRIGHT ROOM PICTURE OFFSET	24. B PICT	-127~ +127	0	
25.	BRIGHT ROOM TINT OFFSET	25. B TINT	-127~ +127	0	
26.	BRIGHT ROOM COLOR OFFSET	26. B COL.	-127~ +127	0	
27.	BRIGHT ROOM BRIGHT OFFSET	27. B BRT.	-127~ +127	0	
28.	BRIGHT ROOM DETAIL OFFSET	28. B DET.	-127~ +127	0	
29.	BRIGHT ROOM BASS OFFSET	29. B BASS	-127~ +127	0	
30.	BRIGHT ROOM TREBLE OFFSET	30. B TRBL	-127~ +127	0	
31.	PICTURE MUTE OFFSET	31. P MUTE	-127~ +127	-90	

ADJUSTMENTS

VERIFICATION OF B1 VOLTAGE

Item	Measuring instrument	Test point	Adjustment part	Description
Verification of B1 voltage	Signal generator DC Voltmeter	TP-91B TP-E (77)		<ol style="list-style-type: none"> 1. Receive a monoscope pattern signal. 2. Connect a DC voltmeter to TP-91B. 3. Verify that the voltage is DC134V \pm 3V.

ADJUSTMENT OF VIDEO DETECTOR LEVEL

Item	Measuring instrument	Test point	Adjustment part	Description
Adjustment of V. DET. LEVEL	Signal generator Oscilloscope [H-rate]	TP-12B	DET. LEVEL VR (R207)	<ol style="list-style-type: none"> 1. Receive a full field color bar signal (including 100% white). 2. Connect an oscilloscope to TP-12B. 3. Adjust the DET. LEVEL VR. and make the wave detector output (synchronous tip ~ white peak) 1Vp-p.

ADJUSTMENT OF RF AGC

Item	Measuring instrument	Test point	Adjustment part	Description
Adjustment of RF. AGC	Remote control unit		No.19 RF AGC	<ol style="list-style-type: none"> 1. Receive a broadcast. 2. Select "No.19 RF AGC" of the PICTURE SERVICE MODE. 3. Press the MUTE key and turn off color. 4. With the MENU LEFT key, get noise in the screen image. (0 side of setting value) 5. Press the MENU RIGHT key and stop when noise disappears from the screen. 6. Change to other channels and make sure that there is no irregularity. 7. Press the MUTE key and get color out.

ADJUSTMENT OF FOCUS

Item	Measuring instrument	Test point	Adjustment part	Description
Adjustment of FOCUS	Signal generator		FOCUS VR [built-in HVT]	<ol style="list-style-type: none"> 1. Receive a crosshatch signal. 2. While looking at the screen, adjust FOCUS VR so that the vertical and horizontal lines will be clear and in fine detail. 3. Make sure that the picture is in focus even when the screen gets darkened.

ADJUSTMENT OF DEFLECTION CIRCUIT

Item	Measuring instrument	Test point	Adjustment part	Description
Adjustment of V.PHASE, V.SIZE and V.POSITION	Signal generator Remote control unit		No.11 V. PHASE No.15 V. SIZE V. CENTER SW (S1401)	<ol style="list-style-type: none"> 1. Receive a crosshatch signal. 2. Make sure that the "No.11 V.PHASE" of the PICTURE SERVICE MODE is 0. 3. Press the LEFT/RIGHT keys of the MENU to set the initial setting value for the No.15 V.SIZE. 4. Adjust the vertical SCREEN size to 92% with the No.15 V.SIZE and S1401 (V.CENTER SW).
Adjustment of H. WIDTH, SIDEPIN CORRECT and H.PHASE			No.12 H. PHASE SIDEPIN CORRECT. VR (R1559) H. WIDTH VR (R1561)	<ol style="list-style-type: none"> 1. Receive a crosshatch signal. 2. Adjust the SIDEPIN CORRECT. VR(R1559) so that vertical lines at both side of the crosshatch are straight. 3. Select the "No.12 H.PHASE" of the PICTURE SERVICE MODE. 4. Press the LEFT/RIGHT keys of the MENU to set the initial setting value for the "No.12 H. PHASE". 5. Adjust the "No.12 H.PHASE" until the screen will be horizontally centered. 6. Adjust the H. WIDTH VR (R1561) so that 92% of the overall crosshatch is displayed on the screen. 7. As required, repeat above steps 2 and 6.

ADJUSTMENT OF VIDEO / CHROMA CIRCUIT

Item	Measuring instrument	Test point	Adjustment part	Description
<p>Adjustment of WHITE BALANCE (LOW LIGHT)</p>	<p>Signal generator Remote control unit</p>		<p>No.6 R CUT OFF No.7 G CUT OFF No.8 B CUT OFF SCREEN VR</p>	<ol style="list-style-type: none"> 1. Receive a black-and-white signal (Color off). 2. Select the "No.6 R CUT OFF, No.7 G CUT OFF, No.8 B CUT OFF" of the PICTURE SERVICE MODE, and set the corresponding initial setting values. 3. Set the "No.3 BRIGHT" at the initial setting value. 4. Press the EXIT key, return to the SERVICE MODE MENU and select the WHITE BALANCE MODE. 5. Press the 1 key of the Remote Control Unit and display one horizontal line. 6. Turn the SCREEN VR fully to the left. 7. Start turning the SCREEN VR from the left end to right, and make red, blue and green colors faintly glitter. 8. Press KEY 2 and cancel one horizontal line. Use KEYS 4 to 9 of the remote control unit to adjust two colors other than the first color so the low light becomes white. (Increase the BRIGHT level when the screen is dark and is difficult to see at this time.) 9. Check the PIP brightness according to the PIP model and adjust it by the screen VR when it is not optimum. (AV-31BP6)
<p style="text-align: center;">WHITE BALANCE MODE</p> <div style="text-align: center;"> <pre> graph TD BRIGHT --> XXX1[XXX] RED --> XXX2[XXX] GREEN --> XXX3[XXX] BLUE --> XXX4[XXX] </pre> </div> <div style="text-align: center;"> <pre> graph TD subgraph RC [REMOTE CONTROL UNIT] H1[H. LINE ON] --> 1((1)) H2[H. LINE OFF] --> 2((2)) 3((3)) 4((4)) 5((5)) 6((6)) 7((7)) 8((8)) 9((9)) RED --> 7 GREEN --> 8 BLUE --> 9 end 6 --> UP[UP (Color produced direction)] 9 --> DOWN[DOWN (Color extinguished direction)] </pre> </div>				
<p>Adjustment of WHITE BALANCE (HIGH LIGHT)</p>	<p>Signal generator Remote control unit</p>		<p>No.9 G DRIVE No.10 B DRIVE</p>	<ol style="list-style-type: none"> 1. Receive a black-and-white signal (Color off). 2. Select the "No.9 G DRIVE, No.10 B DRIVE" of the PICTURE SERVICE MODE. 3. Set the corresponding initial setting values with the LEFT/RIGHT key of the menu. 4. Adjust the "No.9 G DRIVE, No.10 B DRIVE" so that the screen will become white.

Item	Measuring instrument	Test point	Adjustment part	Description
Adjustment of SUB BRIGHT	Remote control unit		No.3 BRIGHT	<ol style="list-style-type: none"> 1. Receive a broadcast. 2. Select "No.3 BRIGHT" of the PICTURE SERVICE MODE. 3. Set the initial setting value of the No.3 BRIGHT with the LEFT/RIGHT key of the menu. 4. If the brightness is not the best with the initial setting value, make fine adjustment of the "No.3 BRIGHT" until you get the optimum brightness.
Adjustment of SUB CONTRAST	Remote control unit		No.4 PICTURE	<ol style="list-style-type: none"> 1. Receive a broadcast. 2. Select "No.4 PICTURE" of the PICTURE SERVICE MODE. 3. Set the initial setting value of the No.4 PICTURE with the LEFT/RIGHT key of the menu. 4. If the contrast is not the best with the initial setting value, make fine adjustment of the "No.4 PICTURE" until you get the optimum contrast.
Adjustment of SUB COLOR	Remote control unit		No.1 COLOR	<ol style="list-style-type: none"> 1. Receive a broadcast. 2. Select "No.1 COLOR" of the PICTURE SERVICE MODE. 3. Set the initial setting value of the No.1 COLOR with the LEFT/RIGHT key of the menu. 4. If the color is not the best with the initial setting value, make fine adjustment of the "No.1 COLOR" until you get the optimum color.
Adjustment of SUB TINT	Remote control unit		No.2 TINT	<ol style="list-style-type: none"> 1. Receive a broadcast. 2. Select "No.2 TINT" of the PICTURE SERVICE MODE. 3. Set the initial setting value of the No.2 TINT with the LEFT/RIGHT key of the menu. 4. If the tint is not the best with the initial setting value, make fine adjustment of the "No.2 TINT" until you get the optimum tint.

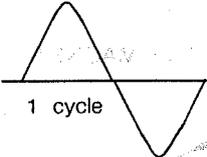
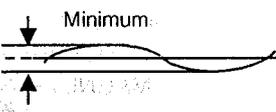
ADJUSTMENT OF PIP CIRCUIT (AV-31BP6)

Item	Measuring instrument	Test point	Adjustment part	Description																						
Adjustment of PIP WHITE BALANCE	Signal generator Remote control unit		No.20 G DRIVE No.21 B DRIVE	<ol style="list-style-type: none"> 1. Receive a black-and-white signal. (Color off) 2. Select the "No.20 G DRIVE, No.21 B DRIVE" of the PIP SERVICE MODE. 3. Set the corresponding initial setting values with the LEFT/RIGHT key of the menu. 4. Adjust the "No.20 G DRIVE, No.21 B DRIVE" until the screen becomes white. 																						
Adjustment of PIP FRAME WIDTH	Signal generator Remote control unit		No.12 FRAME WIDTH	<ol style="list-style-type: none"> 1. Receive a black-and-white signal. (Color off) 2. Select the "No.12 FRAME WIDTH" of the PIP SERVICE MODE. 3. Adjust the "No.12 FRAME WIDTH" so that the width of the PIP screen frame will be left to right equal (A = B). 																						
Adjustment of PIP DISPLAY POSITION	Signal generator Remote control unit		No.2 V. POSI TOP 1/9 No.4 H. POSI LEFT 1/9 No.7 V. POSI TOP 1/16 No.9 H. POSI LEFT 1/16	<ol style="list-style-type: none"> 1. Receive a black-and-white signal. (Color off) 2. Select the "No.2 V.POSI TOP 1/9" OF THE PIP SERVICE MODE. 3. Set the initial setting value of the No.2 V.POSI TOP 1/9" with the LEFT/RIGHT key of the menu. 4. Adjust the "No.2 V.POSI TOP 1/9" so that the position of the PIP screen at the top right will be at X1 as shown. 5. Adjust the corresponding modes of "No.4, No.7, No.9" with the same steps as 2~4 above: 																						
<table border="1"> <thead> <tr> <th rowspan="2">PIP SERVICE MODE NO.</th> <th rowspan="2">PIP SCREEN SIZE</th> <th colspan="2">PIP SETTING POSITION</th> </tr> <tr> <th>Approx (mm)</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>1/9 SIZE (X1)</td> <td>30</td> <td>80 ± 2%</td> </tr> <tr> <td>4</td> <td>1/9 SIZE (Y1)</td> <td>40</td> <td>80 ± 2%</td> </tr> <tr> <td>7</td> <td>1/16 SIZE (X1)</td> <td>30</td> <td>80 ± 2%</td> </tr> <tr> <td>9</td> <td>1/16 SIZE (Y1)</td> <td>40</td> <td>80 ± 2%</td> </tr> </tbody> </table>					PIP SERVICE MODE NO.	PIP SCREEN SIZE	PIP SETTING POSITION		Approx (mm)	%	2	1/9 SIZE (X1)	30	80 ± 2%	4	1/9 SIZE (Y1)	40	80 ± 2%	7	1/16 SIZE (X1)	30	80 ± 2%	9	1/16 SIZE (Y1)	40	80 ± 2%
PIP SERVICE MODE NO.	PIP SCREEN SIZE	PIP SETTING POSITION																								
		Approx (mm)	%																							
2	1/9 SIZE (X1)	30	80 ± 2%																							
4	1/9 SIZE (Y1)	40	80 ± 2%																							
7	1/16 SIZE (X1)	30	80 ± 2%																							
9	1/16 SIZE (Y1)	40	80 ± 2%																							

Item	Measuring instrument	Test point	Adjustment part	Description
Adjustment of PIP SUB CONTRAST	Remote control unit		No.18 CONT.	<ol style="list-style-type: none"> 1. Receive a broadcast. 2. Select "No.18 CONT" of the PIP SERVICE MODE. 3. Set the initial setting value of the "No.18 CONT" with the LEFT/RIGHT key of the menu. 4. If the contrast is not the best with the initial setting value, make fine adjustment of the "No.18 CONT" until you get the optimum contrast.
Adjustment of PIP SUB COLOR	Remote control unit		No.17 COLOR	<ol style="list-style-type: none"> 1. Receive a broadcast. 2. Select "No.17 COLOR" of the PIP SERVICE MODE. 3. Set the initial setting value of the "No.17 COLOR" with the LEFT/RIGHT key of the menu. 4. If the color is not the best with the initial setting value, make fine adjustment of the "No.17 COLOR" until you get the optimum color.
Adjustment of PIP SUB TINT	Remote control unit		No.16 TINT	<ol style="list-style-type: none"> 1. Receive a broadcast. 2. Select "No.16 TINT" of the PIP SERVICE MODE. 3. Set the initial setting value of the "No.16 TINT" with the LEFT/RIGHT key of the menu. 4. If the tint is not the best with the initial setting value, make fine adjustment of the "No.16 TINT" until you get the optimum tint.

ADJUSTMENT OF MTS CIRCUIT

Item	Measuring instrument	Test point	Adjustment part	Description
Adjustment of MTS INPUT LEVEL	Remote control unit		No.2 INPUT LEVEL	<ol style="list-style-type: none"> 1. Select the "No.2 INPUT LEVEL" of the SOUND SERVICE MODE. 2. Verify that the "No.2 INPUT LEVEL" is set at its initial setting value.
Adjustment of MTS STEREO VCO	Signal generator Frequency counter Remote control unit	AUDIO R OUTPUT	No.3 FH MONITOR No.4 STEREO VCO	<ol style="list-style-type: none"> 1. Receive an RF signal - not containing an audio signal - from the antenna terminal. 2. Connect the Frequency Counter to the AUDIO R OUTPUT terminal. 3. Select the "No.3 FH MONITOR" of SOUND SERVICE MODE, and change the setting value from 0 to 1. 4. Select the "No.4 STEREO VCO." 5. Set the initial setting value of the "No.4 STEREO VCO" with the LEFT/RIGHT key of the menu. 6. Adjust the "No.4 STEREO VCO" so that the Frequency Counter will display $15.73\text{KHz} \pm 0.1\text{KHz}$. 7. Select the "No.3 FH MONITOR" of the SOUND SERVICE MODE, and reset the setting value from 1 to 0.
Verification of MTS FILTER	Remote control unit		No.6 FILTER	<ol style="list-style-type: none"> 1. Select the "No.6 FILTER" of the SOUND SERVICE MODE. 2. Verify that the "No.6 FILTER" is set at its initial setting value.

Item	Measuring instrument	Test point	Adjustment part	Description
Adjustment of MTS SEPARATION	TV audio multiplex signal generator Oscilloscope Remote control unit		No.7 LOW F SEPARATION No.8 HI. F SEPARATION	<ol style="list-style-type: none"> 1. Input a stereo L signal (300Hz) from the TV Audio Multiplex Signal Generator to the antenna terminal. 2. Connect an oscilloscope to the AUDIO L OUTPUT terminal, and display one cycle portion of the 300Hz signal. 3. Change the connection of the oscilloscope to the AUDIO R OUTPUT terminal, and enlarge the voltage axis. 4. Select the "No.7 LOW F SEPARATION" of the SOUND SERVICE MODE. 5. Set the initial setting value of the "No.7 LOW F SEPARATION" with the LEFT/RIGHT key of the menu. 6. Adjust the "No.7 LOW F SEPARATION" so that the stroke element of the 300Hz signal will become minimum. 7. Change the signal to 3kHz, and similarly adjust the "No.8 HI. F SEPARATION."
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>L-Channel signal waveform</p>  <p>1 cycle</p> </div> <div style="text-align: center;"> <p>R-Channel crosstalk portion</p>  <p>Minimum</p> </div> </div>				
Adjustment of MTS SAP VCO	Signal generator Frequency counter Remote control unit	AUDIO R OUTPUT	No.9 5FH MONITOR No.10 SAP VCO	<ol style="list-style-type: none"> 1. Receive an RF signal - not containing an audio signal - from the antenna terminal. 2. Connect the Frequency Counter to the AUDIO R OUTPUT terminal. 3. Select the "No.9 5FH MONITOR" of the SOUND SERVICE MODE, and reset the setting value from 0 to 1. 4. Select the "No.10 SAP VCO." 5. Set the initial setting value of "No.10 SAP VCO" with the LEFT/RIGHT key of the menu. 6. Adjust the "No.10 SAP VCO" so that the Frequency Counter will display 78.67KHz ± 0.5KHz. 7. Select the "No.9 5FH MONITOR" of the SOUND SERVICE MODE, and reset the setting value from 1 to 0.

PURITY, CONVERGENCE

PURITY ADJUSTMENT

1. Demagnetize CRT with the demagnetizer.
2. Loosen the retainer screw of the deflection yoke.
3. Remove the wedge.
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. 3)
7. Adjust the gap between two lugs so that the Green Raster will come into the center of the screen. (Fig. 4)
8. Move the deflection yoke forward, and fix the position of the deflection yoke so that the whole screen will become green.
9. Insert the wedge to the top side of the deflection yoke so that it will not move.
10. Input a crosshatch signal.
11. Verify that the screen is horizontal.
12. Input red and Blue Raster signals, and make sure that purity is properly adjusted.

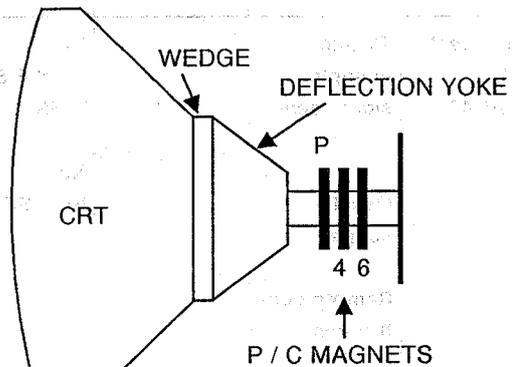


Fig. 1

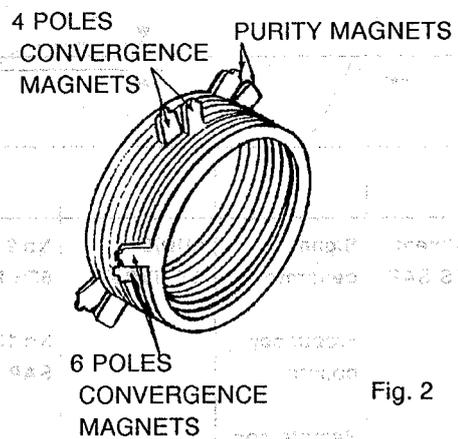
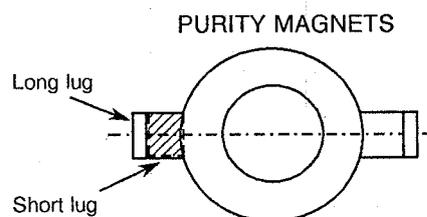


Fig. 2



Bring the long lug over the short lug and position them horizontally.

Fig. 3

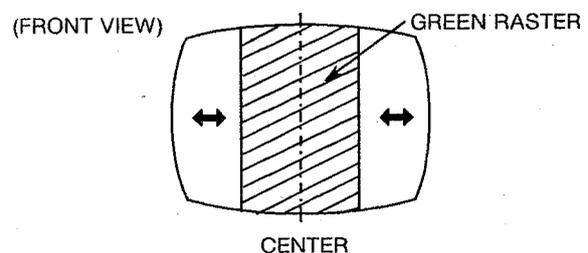


Fig. 4

STATIC CONVERGENCE ADJUSTMENT

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

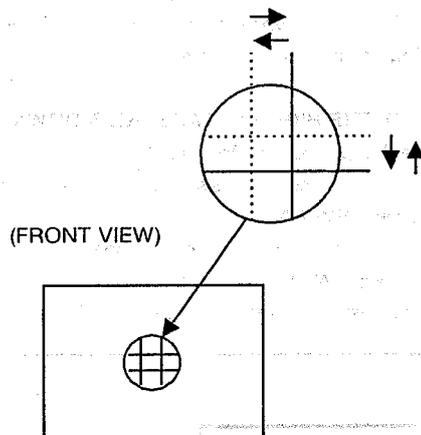


Fig. 1

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. If the lines are not aligned, as shown in Fig. 4, correct it with the differential coil attached to the deflection yoke.

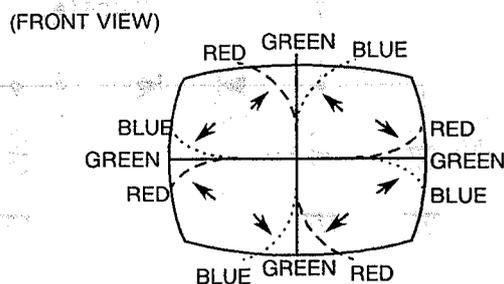


Fig. 2

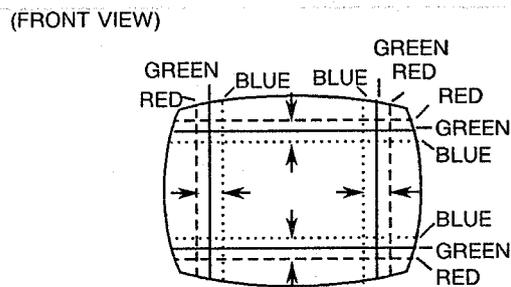


Fig. 3

- After adjustment, fix the wedge at the original position. Fasten the retainer screw of the deflection yoke. Fix the 6 magnets with glue.

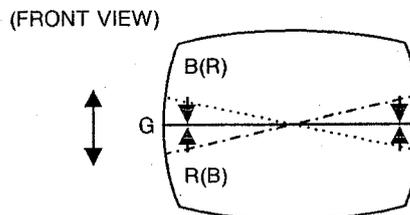


Fig. 4

HOW TO CHECK THE HIGH VOLTAGE HOLD DOWN CIRCUIT

1. HIGH VOLTAGE HOLD DOWN CIRCUIT

After repairing of the high voltage hold down circuit shown in Fig. 1.
This circuit shall be checked to operate correctly.

2. CHECKING OF THE HIGH VOLTAGE HOLD DOWN CIRCUIT.

- (1) Make sure that the power SW is at OFF.
- (2) As shown in Fig. 1, set the resistor (between TP-72A and TP-72B).
- (3) Turn the power SW ON.
- (4) Make sure that the screen picture disappears.
- (5) Turn the power SW OFF.
- (6) Remove the resistor between TP-72A and TP-72B.

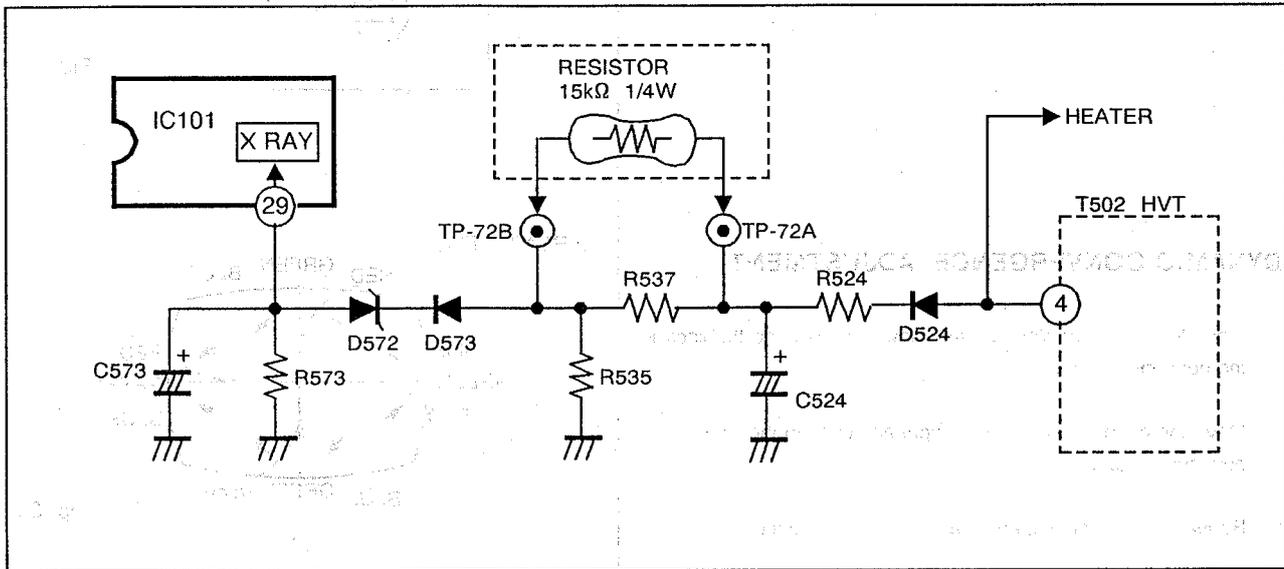


Fig. 1

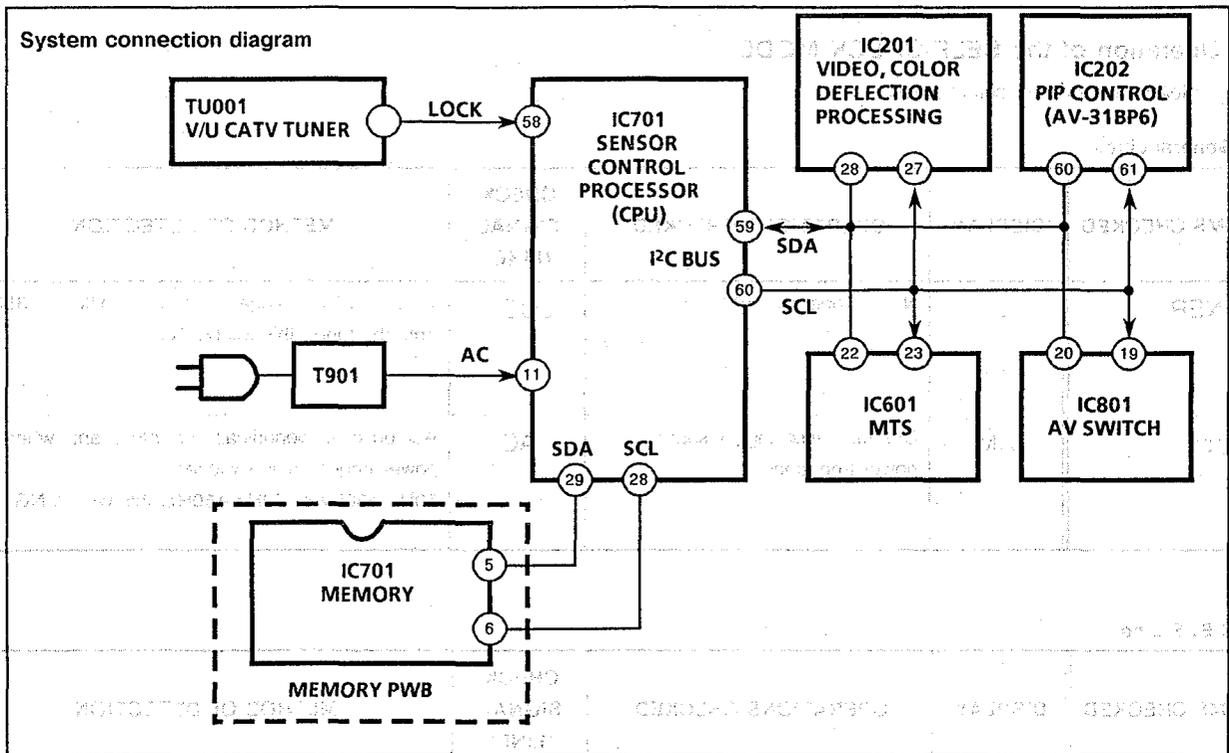
SELF-CHECK MODE

1. Summary

This model is loaded with a SELF-CHECK MODE which checks the circuits operation, then displays and records any errors or irregularities when they occur.

Error detection is performed in the input data mode from the I²C BUS line and for each control line connected to the main CPU. When circuit errors or malfunctions occur, the SELF-CHECK MODE screen will display "NG."

The result of the circuit check will be recorded in the memory IC.



2. Using SELF-CHECK MODE

(1) Entering SELF-CHECK MODE

- 1] Enter SERVICE MODE MENU. (Refer to the basic operation of the SERVICE MODE MENU)
- 2] Select SELF-CHECK MODE of the SERVICE MODE MENU.
- 3] The SELF-CHECK MODE screen shown at right will be on display.

(2) Notes on the SELF-CHECK MODE screen

- 1] The screen will display "GOOD" when checked items are normal, and "NG" when there is an error.
- 2] The frequency of errors will be counted and shown after the letters "NG" up to number 9. If the frequency of errors counted is more than 9, this display will remain at 9.
* Only SYNC (existence or non-existence of synchronous signal) will not be counted.
- 3] The counted frequency will remain stored in the memory unless it is deleted (reset).

(3) Releasing SELF-CHECK MODE

- 1] When keeping counted frequency
Press the EXIT-key of the Remote Control Unit twice, and return to the normal screen.
- 2] When deleting the display of counted frequency
Turn off the power while the SELF-CHECK MODE screen is on.

< SELF-CHECK MODE >

BUS			
TUN	NG1	MEM	GOOD
B1	GOOD	VCD	NG1
XRAY	GOOD	TONE	
SYNC	GOOD	/MTS	NG3
TIM	GOOD	SW	GOOD
		PIP	GOOD

Item

GOOD : NORMAL

NG 3

Frequency of ERROR

ERROR

★ "B1" and "X RAY" is displayed on the screen, but dose not function.

(4) In addition to circuit errors (malfunctions), the following conditions will be regarded as malfunctions, and the message "NG" and the number of counted errors will be displayed:

- 1] Temporary transmission malfunctions between circuits due to mixture of pulse, etc.
- 2] If many items display "NG" due to the timing lag of the IC Voltage (VCC) connected to the I²C BUS line which occurs when the power is turned on and off, this may interfere with the self-checking.

If an abnormal condition may occur again, delete (reset) number of counted the errors, and re-start the SELF-CHECK MODE.

3. Operation of the SELF-CHECK MODE

The following items are self-checked:

• General Lines

ITEMS CHECKED	DISPLAY	OPERATIONS CHECKED	CHECK SIGNAL (LINE)	METHOD OF DETECTION
TUNER	TUN	Normal operation of tuner	LOCK	When a LOCK signal is not transmitted in 350ms from the tuner, this will be NG.
Timer	TIM	Change (switching) of source power frequency	AC	AC pulse is periodically counted, and when the power frequency is switched 50Hz→60Hz or 60Hz→50Hz, this will be NG.

• I²C BUS Line

ITEMS CHECKED	DISPLAY	OPERATIONS CHECKED	CHECK SIGNAL (LINE)	METHOD OF DETECTION
Existence or non-existence of synchronous signal	SYNC	Existence or non-existence of input of synchronous signal. [IC201]	SDA	When data do not return from IC201 when data is transmitted from CPU, this will be NG.
MEMORY	MEM	Normal operation of read / write of memory IC [IC741]	MEMORY SDA	Read specific data written in memory IC, and if they are wrong data, this will be NG.
VIDEO, COLOR, DEF., PROCESSING	VCD	Normal operation of IC [IC201]	SDA	When data do not return from IC201 when data is transmitted from CPU, this will be NG.
MTS	TONE /MTS	Normal operation of IC [IC601]	SDA	When data do not return from IC601 when data is transmitted from CPU, this will be NG.
AV SWITCH	SW	Normal operation of IC [IC801]	SDA	When data do not return from IC801 when data is transmitted from CPU, this will be NG.
PIP CONTROL (AV-31BP6)	PIP	Normal operation of IC [IC202]	SDA	When data do not return from IC202 when data is transmitted from CPU, this will be NG.

PARTS LIST

CAUTION

- The parts identified by the \triangle 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 .
 - As a rule, the resistors and capacitors which are indicated as shown in "HOW TO EXPRESS PARTS NUMBERS OF STANDARD PARTS" are not shown in the list of the parts on the board .
- When ordering the service parts, confirm the resistance/rated power, capacitance/rated voltage, and type of the parts, then order by the part No. indicated according to "HOW TO EXPRESS PARTS NUMBERS OF STANDARD PARTS" .

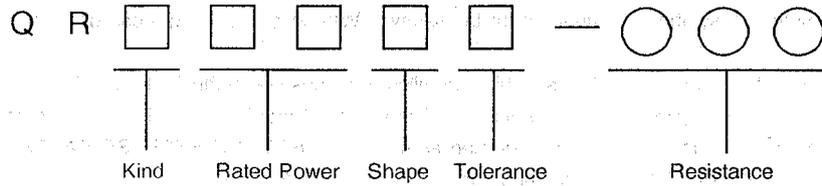
ABBREVIATIONS OF RESISTORS, CAPACITORS AND TOLERANCES

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

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

HOW TO EXPRESS PARTS NUMBERS OF STANDARD PARTS

■ RESISTOR



Symbol	Part Name
C	COMP.R
D	C R
S	CH MG R

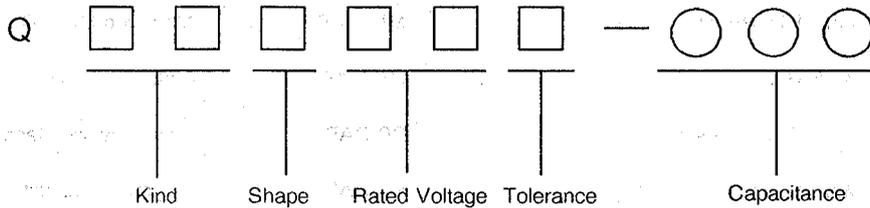
Symbol	Rated Power
0.1	1 w
1.2	1/2 w
1.4	1/4 w
1.6	1/6 w
1.8	1/8 w

Symbol	Shape
1	Straight lead
8	Chip

Indicate with first two-figure expressed by Ω and following 0.
Please note that, in case of resistance less than 10 Ω , a letter "R" will be effective as point.

EX.
 $2.2 \Omega = 2R2$
 $470 \Omega = 47 \times 10^1 \rightarrow 471$
 $150k\Omega = 15 \times 10^4 \rightarrow 154$

■ CAPACITOR



Symbol	Part Name
CS	C CAP.
CS	CH C CAP.
ET	E CAP.
FM	M CAP.

5Figure \ 6Figure	0	1	2
	A		10V
C		16V	160V
D			200V
E		25V	250V
H		50V	500V
J	6.3V	63V	
V		35V	

Indicate with first two-figure expressed by pF and following 0.
Please note that, in case of capacitance less than 10 pF a letter "R" will be effective as point.

EX
 $5pF = 5R0$
 $1000pF = 10 \times 10^2 \rightarrow 102$
 $47\mu F = 47 \times 10^6 \rightarrow 476$

Symbol	Shape
1	Straight lead
1	Leads in the same direction
8	Chip
A	Leads in the same direction (compact part)

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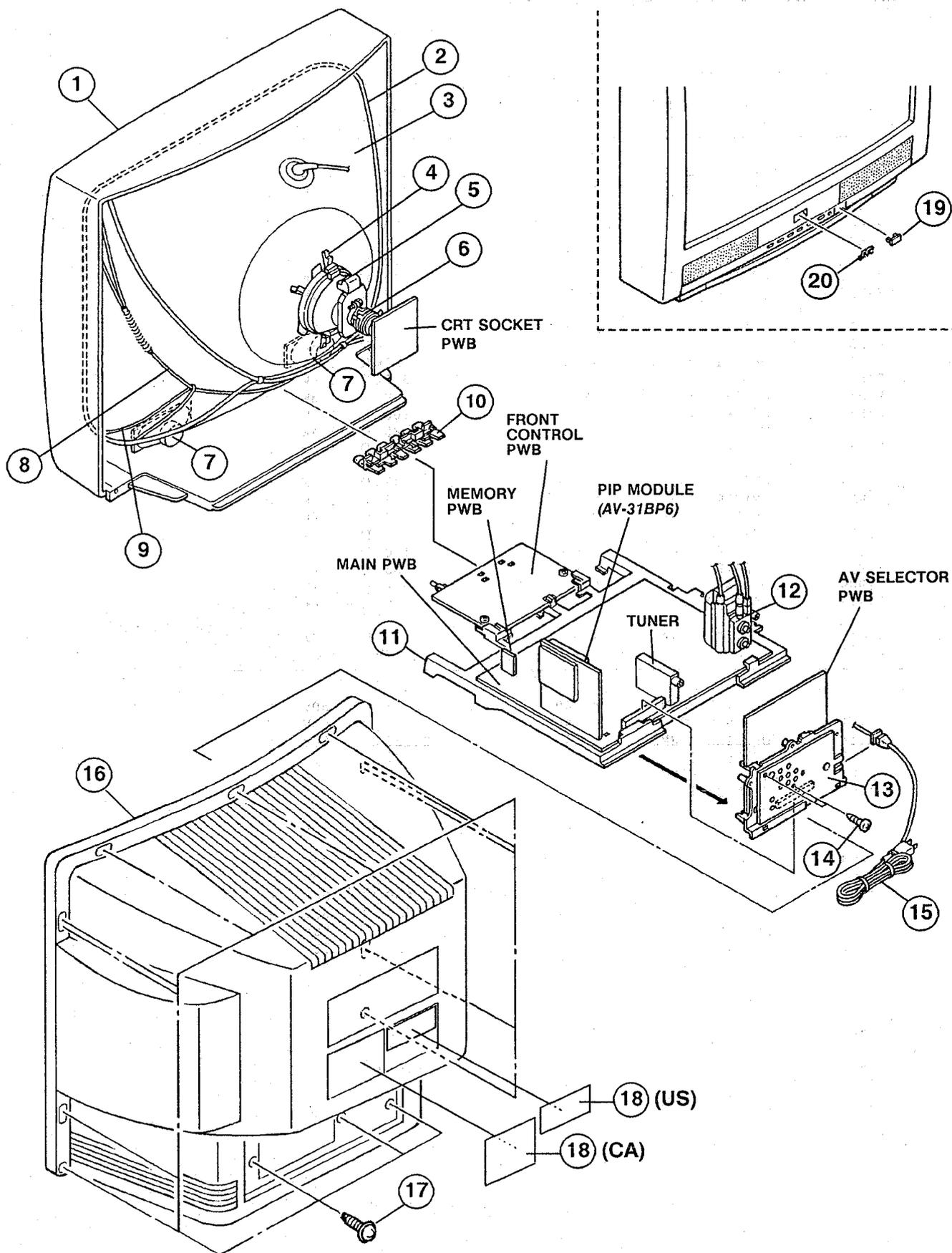
USING P.W. BOARD & REMOTE CONTROL UNIT

Model	AV-31BP6 (US &CA)	AV-31BM6 (US&CA)
P.W.B ASS'Y		
MAIN P.W.B	SGK-1004A-H2	SGK-1003A-H2
CRT SOCKET P.W.B	SGK-3002A-H2	SGK-3001A-H2
FRONT CONTROL P.W.B	SGK-4001A-H2	←
AV SELECTOR P.W.B	SGK-8002A-H2	SGK-8001A-H2
MEMORY P.W.B	SGK0M001A-H2	←
PIP MODULE P.W.B	SGK-P001A-H2	/
REMOTE CONTROL UNIT	RM-C729-1A	RM-C728-1A

EXPLODED VIEW PARTS LIST

Ref. No.	Part No.	Part Name	Description	Local
△ 1	CM12618-A0A-MA	FRONT CABI ASSY	Inc.SPEAKER NET	*
△ 2	CELD028-003J3	DEG.COIL	L01	*
△ 3	A78LCU30X(M)	PICTURE TUBE	V01	*
4	AAM4003-00A-C	WEDGE ASSY	(X4)	*
△ 5	CE20291-00A	DEF YOKE	DY01	*
6	A75034-B	P.C.MAGNET		*
△ 7	CEBSS12D-04KJ2	SPEAKER	(X2)SP01,SP02	*
8	CHGB0015-0E-FA	BRAIDED ASSY		*
9	CHGB0016-0D-FA	SUB BRAIDED ASSY		*
10	CM35776-A01-H	PUSH KNOB		*
11	CM12689-B01-VA	CHASSIS BASE		*
△ 12	CJ28212-00AJ1	H V TRANSF.	T1502	*
△ 13	CM22781-A01-VH	TERMINAL BOARD	AV-31BP6(US&CA)	*
△ 13	CM22781-A02-VH	TERMINAL BOARD	AV-31BM6(US&CA)	*
14	SBSB3010Z	TAPPING SCREW	(X2)	*
△ 15	QMP14G0-185J3	POWER CORD		*
△ 16	CM12418-A61-MA	REAR COVER		*
17	GBSB4016N	TAPPING SCREW	(X14)	*
△ 18	CM48088-002-A	RATING LABEL	(US)	*
△ 18	CM48051-001-A	RATING LABEL	(CA)	*
19	CM35983-001-H	REMOCON WINDOW		*
20	CM43094-006-H	JVC MARK		*

EXPLODED VIEW



PRINTED WIRING BOARD PARTS LIST

AV-31BP6(US&CA)

MAIN PW BOARD ASS'Y (SGK-1004A-H2)

△ Symbol No.	Part No.	Part Name	Description	Local
VARIABLE RESISTOR				
R1207	QVPE611-501HZ	V R(DET OUT LEVEL)	500 Ω B	
R1559	QVPE611-203HZ	V R(SIDEPIN CORRECT)	20k Ω B	
R1561	QVPE611-502HZ	V R(H.WIDTH)	5k Ω B	
RESISTOR				
R1001	QRD129J-4R7S	C R	4.7 Ω 1/2W	J
R1314	QRD123J-221SX	C R	220 Ω 1/2W	J
R1404	QRX029J-1R2A	MF R	1.2 Ω 2W	J
R1504	QRG029J-182A	OM R	1.8k Ω 2W	J
R1505	QRG029J-152A	OM R	1.5k Ω 2W	J
R1513	QRG039J-103A	OM R	10k Ω 3W	J
R1521	QRD129J-150S	C R	15 Ω 1/2W	J
R1522-23	QRX019J-1R0S	MF R	1.0 Ω 1W	J
R1524	QRD129J-4R7S	C R	4.7 Ω 1/2W	J
R1530	QRG039J-153A	OM R	15k Ω 3W	J
△ R1535	QRV141F-3921AY	MF R	3.92k Ω 1/4W	F
△ R1537	QRV141F-6801AY	MF R	6.8k Ω 1/4W	F
R1551	QRG039J-100A	OM R	10 Ω 3W	J
R1571	QRD149J-101S	C R	100 Ω 1/4W	J
R1794	QRV141F-2200AY	MF R	220 Ω 1/4W	F
R1860	QRG029J-180	OM R	18 Ω 2W	J
△ R1901	QRF074K-R47	UNF R	0.47 Ω 7W	K
R1903	QRX029J-R33A	MF R	0.33 Ω 1/2W	J
R1904	QRX029J-R39A	MF R	0.39 Ω 2W	J
R1905	QRG019J-120S	OM R	12 Ω 1W	J
R1906	QRD149J-1R0S	C R	1.0 Ω 1/4W	J
R1907	QRD149J-330S	C R	33 Ω 1/4W	J
R1909	QRD149J-222S	C R	2.2k Ω 1/4W	J
R1910	QRD149J-102S	C R	1k Ω 1/4W	J
R1911	QRX129J-R47A	MF R	0.47 Ω 1/2W	J
△ R1998	QRZ0111-275U	C R	2.7M Ω 1/2W	
CAPACITOR				
C1005	QFLC1HK-103MZ	M CAP.	0.01 μ F 50V	K
C1101	QCT25CH-820AZ	C CAP.	82 p F 50V	J
C1114	QFLC1HK-223MZ	M CAP.	0.022 μ F 50V	K
C1117	QCT25CH-270AZ	C CAP.	27 p F 50V	J
C1124	QFLC1HK-473MZ	M CAP.	0.047 μ F 50V	K
C1152	CEGN004-102	NET CAP.	1000 p F	
C1221	QFLC1HK-104MZ	M CAP.	0.1 μ F 50V	K
C1310	QCT25CH-100AZ	C CAP.	10 p F 50V	J
C1404	QETC1VM-107Z	E CAP.	100 μ F 35V	M
C1405	QFV71HJ-474MZ	TF CAP.	0.47 μ F 50V	J
C1407	QFLC2AK-563MZ	M CAP.	0.056 μ F 100V	K
C1408	QETC1VM-477Z	E CAP.	470 μ F 35V	M
C1409	QFLC1HK-103MZ	M CAP.	0.01 μ F 50V	K
C1411	QFV71HJ-224MZ	TF CAP.	0.22 μ F 50V	J
C1441	QFLC1HJ-563MZ	M CAP.	0.056 μ F 50V	J
C1444	QFN31HK-102ZJ1	M CAP.	1000 p F 50V	K
C1445	QCT25CH-820AZ	C CAP.	82 p F 50V	J
C1446	QFN31HJ-222ZJ1	M CAP.	2200 p F 50V	J
C1503	QETC2CM-105Z	E CAP.	1 μ F 160V	M
△ C1511	QFZ0117-3501S	MPP CAP.	3500 p F 1.4kVH ±2.5%	
△ C1512	QFZ0117-1202S	MPP CAP.	0.012 μ F 1.4kVH ±2.5%	
△ C1514	QFP32GJ-223M	PP CAP.	0.022 μ F 400V	J
△ C1515	QFZ0119-564S	MPP CAP.	0.56 μ F 200V ±3%	
C1517	QEH62EM-225MZ	E CAP.	2.2 μ F 250V	M
C1518-19	QEM61HK-475MZ	E CAP.	4.7 μ F 50V	K
C1521	QETB2EM-336	E CAP.	33 μ F 250V	M

AV-31BP6(US&CA)

△ Symbol No.	Part No.	Part Name	Description	Local
C A P A C I T O R				
C1522	QETB1VM-108	E CAP.	1000 μ F 35V	M
C1524	QETC1VM-107Z	E CAP.	100 μ F 35V	M
C1525	QFLC2AJ-393MZ	M CAP.	0.039 μ F 100V	J
C1526	QFV71HJ-473MZ	TF CAP.	0.047 μ F 50V	J
C1553	QFLC1HK-683MZ	M CAP.	0.068 μ F 50V	K
C1554	QETCOJM-477Z	E CAP.	470 μ F 6.3V	M
C1555	QFLC1HK-683MZ	M CAP.	0.068 μ F 50V	K
C1557	QETC1VM-476Z	E CAP.	47 μ F 35V	M
C1559	QEZO203-107	E CAP.	100 μ F 160V	
C1603	QETCOJM-107Z	E CAP.	100 μ F 6.3V	M
C1608	QETCOJM-107Z	E CAP.	100 μ F 6.3V	M
C1609-10	QFLC1HK-823MZ	M CAP.	0.082 μ F 50V	K
C1612-13	QFV71HJ-104MZ	TF CAP.	0.1 μ F 50V	J
C1616-17	QFV71HJ-224MZ	TF CAP.	0.22 μ F 50V	J
C1704	QFLC1HK-683MZ	M CAP.	0.068 μ F 50V	K
C1731	QFLC1HK-683MZ	M CAP.	0.068 μ F 50V	K
C1732-33	QCT25CH-330AZ	C CAP.	33 p F 50V	J
C1855-57	QFLC1HJ-104MZ	M CAP.	0.1 μ F 50V	J
△ C1901	QFZ9036-104M	MF CAP.	0.1 μ FAC250V	M
△ C1902	QFZ9036-473M	MF CAP.	0.047 μ FAC250V	M
△ C1904	QCZ9052-102A	C CAP.	1000 p FAC125V	
△ C1906	QCZ9033-102A	C CAP.	1000 p FAC250V	K
△ C1907	QCZ9033-102A	C CAP.	1000 p FAC250V	K
△ C1908	QCZ9033-102A	C CAP.	1000 p FAC250V	K
△ C1910	QEZO169-477	E CAP.	470 μ F 200V	M
C1911	QCZ0116-152AZ	C CAP.	1500 p F 1000V	K
C1917	QETC2AM-106Z	E CAP.	10 μ F 100V	M
C1921	QCZ0132-152AZ	C CAP.	1500 p F 500V	K
C1924	QEZO203-107	E CAP.	100 μ F 160V	
△ C1999	QCZ9052-222A	C CAP.	2200 p FAC125V	
T R A N S F O R M E R				
T1101	CELT003-104J1	SIF TRANSF.		
T1102	CELT001-208J1	CW TRANSF.		
T1501	CE42034-002	H.DRIVE TRANSF.		
△ T1901	CETS022-001J1	SW TRANSF.		
C O I L				
L1001	CELP055-271Z	PEAKING COIL	270 μ H	
L1101	CELP041-R82	PEAKING COIL	0.82 μ H	
L1102	CELP055-680Z	PEAKING COIL	68 μ H	
L1104	CELP043-R47	PEAKING COIL	0.47 μ H	
L1105	CELP055-680Z	PEAKING COIL	68 μ H	
L1106	CELP055-220Z	PEAKING COIL	22 μ H	
L1201	CELP055-220Z	PEAKING COIL	22 μ H	
L1221	CELP055-6R8Z	PEAKING COIL	6.8 μ H	
L1301	CELP055-100	PEAKING COIL	10 μ H	
△ L1511	CELL013-002	LINEARITY COIL		
△ L1512	CELC053-801	CHOKE COIL		
△ L1521	CELC901-041J6	HEATER CHOKE		
L1525	CELC058-820Z	CHOKE COIL		
L1701-02	CELP055-4R7Z	PEAKING COIL	4.7 μ H	
L1921-22	CELC058-820Z	CHOKE COIL		
D I O D E				
D1001	MTZJ36(A)-T2	ZENER DIODE		
D1201-02	MTZJ5.6(A)-T2	ZENER DIODE		
D1281-83	1SS133-T2	SI.DIODE		
D1301	MTZJ5.1(A)-T2	ZENER DIODE		
D1361	1SS133-T2	SI.DIODE		
D1363	1SS133-T2	SI.DIODE		
D1365	1SS133-T2	SI.DIODE		
D1366	MTZJ15(C)-T2	ZENER DIODE		
D1401	1N4003-T2	SI.DIODE		

△ Symbol No.	Part No.	Part Name	Description	Local
D I O D E				
D1402-03	MTZJ36(A)-T2	ZENER DIODE		
D1404	MTZJ9.1(B)-T2	ZENER DIODE		
D1501	RH3G-C1	SI.DIODE		
D1502	RU3AM-LFC4	SI.DIODE		
D1521	RH1S-T3	SI.DIODE		
D1522	1SR124-400A-T2	SI.DIODE		
D1523	RU3AM-LFC4	SI.DIODE		
D1524	1SS81-T2	SI.DIODE		
D1526	1SR124-400A-T2	SI.DIODE		
D1529	MTZJ9.1(B)-T2	ZENER DIODE		
D1530	RGP10J(C1)-T3	SI.DIODE		
D1571	MTZJ9.1(B)-T2	ZENER DIODE		
△ D1572	MTZJ7.5S-T2	ZENER DIODE		
△ D1573	1SS133-T2	SI.DIODE		
D1703-04	1SS133-T2	SI.DIODE		
D1710-11	MTZJ5.6(A)-T2	ZENER DIODE		
D1712-13	1SS133-T2	SI.DIODE		
D1791-92	1SS133-T2	SI.DIODE		
D1821	1SS133-T2	SI.DIODE		
△ D1901	D3SBA60-C1	BRIDGE DIODE		
D1902	1SR124-400A-T2	SI.DIODE		
D1904	AG01Z-T2	SI.DIODE		
D1905	1SR124-400A-T2	SI.DIODE		
D1907	1SR124-400A-T2	SI.DIODE		
D1909	MTZJ15(A)-T2	ZENER DIODE		
D1911	1SS133-T2	SI.DIODE		
D1921	RU30A-C1	SI.DIODE		
D1922	RGP10J(C1)-T3	SI.DIODE		
D1923	EL1Z-LFF6	SI.DIODE		
D1924	1SR35-100A-T2	SI.DIODE		
D1926-28	1SS133-T2	SI.DIODE		
D1933	1SS133-T2	SI.DIODE		
T R A N S I S T O R				
Q1101	2SC5083(L-P)-T	SI.TRANSISTOR		
Q1102-03	2SC1815(Y)-T	SI.TRANSISTOR		
Q1201-02	2SC1815(Y)-T	SI.TRANSISTOR		
Q1221-22	2SC1815(Y)-T	SI.TRANSISTOR		
Q1224	2SA1015(Y)-T	SI.TRANSISTOR		
Q1225	2SC1815(Y)-T	SI.TRANSISTOR		
Q1226	2SA1015(Y)-T	SI.TRANSISTOR		
Q1281	2SC1815(Y)-T	SI.TRANSISTOR		
Q1301-03	2SC1815(Y)-T	SI.TRANSISTOR		
Q1441	2SC1815(Y)-T	SI.TRANSISTOR		
Q1501	2SC4212-C1	SI.TRANSISTOR		
△ Q1511	2SD2539-LB	POWER TRANSISTOR	H.OUT	
Q1551	2SC1815(Y)-T	SI.TRANSISTOR		
Q1552	2SA1309A(QR)-T	SI.TRANSISTOR		
Q1553	2SD1408(OY)-LB	POWER TRANSISTOR		
Q1571	2SC1815(Y)-T	SI.TRANSISTOR		
Q1601	2SC1815(Y)-T	SI.TRANSISTOR		
Q1701	2SC1815(Y)-T	SI.TRANSISTOR		
Q1801	2SC1815(Y)-T	SI.TRANSISTOR		
Q1821-27	2SC1815(Y)-T	SI.TRANSISTOR		
Q1921-22	DTC114YS-T	DIGI.TRANSISTOR		
Q1923	2SA966(OY)-T	SI.TRANSISTOR		
Q1924	DTC114YS-T	DIGI.TRANSISTOR		
Q1926	2SA1015(Y)-T	SI.TRANSISTOR		
I C				
IC1101	TA1201ANV	I.C.		
IC1301	TC4066BP	I.C.(DIGI-MOS)		
△ IC1401	UPC1498H	I.C.(MONO-ANA)		
△ IC1601	LA4261	I.C.(MONO-ANA)		

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Symbol No.	Part No.	Part Name	Description	Local
I C				
	IC1701	MN1874862JKY4	I.C.	
	IC1702	MN1280-Q	I.C.(DIGI-MOS)	
	IC1791	AN78L05-Y	I.C.	
	IC1851	AN5860	I.C.(M)	
△	IC1901	STR-S5708	I.C.	
	IC1981	AN78L05-Y	I.C.	
	IC1982	XRA17809T	I.C.(MONO-ANA)	
O T H E R S				
		CM47653-001	PCB HOLDER	(×2)
	CF1001	FTP47.25MF	CERAMIC TRAP	
	CF1102	SFSH4.5MCB-Z	CERAMIC FILTER	
	CF1201-02	CE41505-001	CERAMIC FILTER	
	CF1571	CSB503F30-T2	C RESONATOR	
	CF1701	CSA12.0MT	CER. RESONATOR	
	CN1003	CHA401N-35P-J	HQF CONNECTOR	
△	F1901	QMF0007-5R0J1	FUSE	5A
	K1401	CE42050-001Z	CORE	
	K1701-04	CE42050-001Z	CORE	
	K1902	CE41433-001Z	BEADS CORE	
	K1921	CE41433-001Z	BEADS CORE	
△	LF1901	CELF001-001J1	LINE FILTER	
△	LF1902	CE42335-001J1	LINE FILTER	
△	PC1901	TLP621(GB)	I.C.(PH COUPLER)	
△	PC1902	TLP621(GB)	I.C.(PH COUPLER)	
△	RY1901	CESK028-001	RELAY	
△	RY1921	CESK028-001	RELAY	
	S1401	QSL6A13-C01	LEVER SWITCH	V.CENTER SW
	SF1101	CE41706-201	SAW FILTER	
	TH1501	CEKP004-001	P.THERMISTOR	
△	TH1901	CEKP007-001	P.THERMISTOR	
△	TU1001	CEEM245-B03	TUNER	
△	VA1901	ERZ-C10VK361G	VARISTOR	
	X1301	CE41651-001Z	X-TAL	

CRT SOCKET PW BOARD ASS'Y (SGK-3002A-H2)

△ Symbol No.	Part No.	Part Name	Description	Local
R E S I S T O R				
R3310-15	QRG029J-153	OM R	15kΩ 2W J	
C A P A C I T O R				
C3321	QETC2EM-105Z	E CAP.	1 μF 250V M	
C3361	QETC2EM-105Z	E CAP.	1 μF 250V M	
C3363	QCZ0121-102A	C CAP.	1000 pF 3kV Z	
C O I L				
L3301-03	CELP055-180Z	PEAKING COIL	18 μH	
L3304-06	CELP055-470Z	PEAKING COIL	47 μH	
D I O D E				
D3301-03	1SS133-T2	SI.DIODE		
D3304-06	1SS244-T2	SI.DIODE		
D3307	MTZJ4.7(A)-T2	ZENER DIODE		
D3308	1SS133-T2	SI.DIODE		
D3309	MTZJ4.7(A)-T2	ZENER DIODE		
D3310	1SS133-T2	SI.DIODE		
D3311	MTZJ4.7(A)-T2	ZENER DIODE		
D3312	1SS133-T2	SI.DIODE		
T R A N S I S T O R				
Q3301-03	2SC5083(L-P)-T	SI.TRANSISTOR		
Q3304-06	2SC4544-C1	SI.TRANSISTOR		
O T H E R S				
△ SC3001	CE42535-001J1	CRT SOCKET		

FRONT CONTROL PW BOARD ASS'Y (SGK-4001A-H2)

△ Symbol No.	Part No.	Part Name	Description	Local
D I O D E				
D4715	GL2PR6	L.E.D.(RED)		
I C				
IC4841	TFMS5380ESN	IR DETECT UNIT		
O T H E R S				
S4702	CM46978-A01-H	L.E.D.HOLDER		
S4703	QSP1A11-C19Z	PUSH SWITCH	LEVEL +	
S4704	QSP1A11-C19Z	PUSH SWITCH	LEVEL -	
S4705	QSP1A11-C19Z	PUSH SWITCH	MENU	
S4706	QSP1A11-C19Z	PUSH SWITCH	VOL +	
S4707	QSP1A11-C19Z	PUSH SWITCH	VOL -	
			POWER	

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AV SELECTOR PW BOARD ASS'Y (SGK-8002A-H2)

Symbol No.	Part No.	Part Name	Description	Local
R E S I S T O R				
R8605	QRV141F-1502AY	MF R	15k Ω 1/4W	F
R8606	QRV141F-1501AY	MF R	1.5k Ω 1/4W	F
C A P A C I T O R				
C8206	QEN61CM-476Z	BP E CAP.	47 μ F 16V	M
C8604	QFLC1HK-104MZ	M CAP.	0.1 μ F 50V	K
C8605	QEN61HM-475Z	BP E CAP.	4.7 μ F 50V	M
C8606	QEN61HM-105Z	BP E CAP.	1 μ F 50V	M
C8608	QFLC1HK-473MZ	M CAP.	0.047 μ F 50V	K
C8610-11	QFLC1HK-104MZ	M CAP.	0.1 μ F 50V	K
C8612	QEE61CK-335BZ	TAN. CAP.	3.3 μ F 16V	K
C8614	QEE61CK-106BZ	TAN. CAP.	10 μ F 16V	K
C8619	QFLC1HK-273MZ	M CAP.	0.027 μ F 50V	K
C8622	QFLC1HK-104MZ	M CAP.	0.1 μ F 50V	K
C8625	QFLC1HK-104MZ	M CAP.	0.1 μ F 50V	K
C8666	QEKC1CM-107MZ	E CAP.	100 μ F 16V	M
C8667	QEKC1CM-106GMZ	E CAP.	10 μ F 16V	M
C8668	QEKC1CM-336MZ	E CAP.	33 μ F 16V	M
C8693-94	QEKC1HM-105GMZ	E CAP.	1 μ F 50V	M
C8827-28	QEN61CM-106Z	BP E CAP.	10 μ F 16V	M
C8831	QEN61HM-335Z	BP E CAP.	3.3 μ F 50V	M
C8833	QEKC1CM-106GMZ	E CAP.	10 μ F 16V	M
C8834	QEN61HM-335Z	BP E CAP.	3.3 μ F 50V	M
C O I L				
L8201	CELP055-220Z	PEAKING COIL	22 μ H	
L8202	CELP055-121Z	PEAKING COIL	120 μ H	
D I O D E				
D8661-62	MTZJ9.1(B)-T2	ZENER DIODE		
D8663-65	1SS133-T2	SI. DIODE		
D8701-02	MTZJ6.8(A)-T2	ZENER DIODE		
D8801-10	MTZJ12(C)-T2	ZENER DIODE		
T R A N S I S T O R				
Q8202-03	2SC1815(Y)-T	SI. TRANSISTOR		
Q8204	2SA1015(Y)-T	SI. TRANSISTOR		
Q8205-06	2SC1815(Y)-T	SI. TRANSISTOR		
Q8301-02	2SC1815(Y)-T	SI. TRANSISTOR		
Q8661	2SA1015(Y)-T	SI. TRANSISTOR		
Q8662-63	DTC323TS-T	DIGI. TRANSISTOR		
Q8664	2SC1815(Y)-T	SI. TRANSISTOR		
Q8665	2SA1015(Y)-T	SI. TRANSISTOR		
I C				
IC8601	UPC1851CU-02	I.C.		
IC8661	XRA15218N	I.C. (MONO-ANA)		
IC8801	CXA1545AS	I.C.		
IC8901-02	AN78L09-Y	I.C.		
O T H E R S				
CM8201	CE42561-001	COMB FILTER MOD		
CN8003	CHA401N-35R-J	HQF CONNECTOR		
DL8201	CE42464-001	BPF&DL MODULE		
J8801	QMCC008-C01	DIN JACK		
J8802-03	CEMNO73-001	PIN JACK		
J8804	CEMNO57-001	PIN JACK		
J8805-06	AX49607-020	MINI JACK		
S8801	QSS1F42-C01	SLIDE SWITCH	VARI/FIX SW	

MEMORY PW BOARD ASS'Y (SGK0M001A-H2)

△ Symbol No.	Part No.	Part Name	Description	Local
D I O D E				
D1701-02	MTZJ5.6(A)-T2	ZENER DIODE		
I C				
IC1701	AT24C04-GK	I.C.		

PIP MODULE PW BOARD ASS'Y (SGK-P001A-H2)

△ Symbol No.	Part No.	Part Name	Description	Local
	SGK-P001A-H2	PIP PB ASSY		

PRINTED WIRING BOARD PARTS LIST

AV-31BM6(US&CA)

MAIN PW BOARD ASS'Y (SGK-1003A-H2)

△ Symbol No.	Part No.	Part Name	Description	Local
VARIABLE RESISTOR				
R1207	QVPE611-501HZ	V R (DET OUT LEVEL)	500 Ω B	
R1559	QVPE611-203HZ	V R (SIDE PIN CORRECT)	20k Ω B	
R1561	QVPE611-502HZ	V R (H.WIDTH)	5k Ω B	
RESISTOR				
R1001	QRD129J-4R7S	C R	4.7 Ω 1/2W	J
R1314	QRD123J-221SX	C R	220 Ω 1/2W	J
R1404	QRX029J-1R2A	MF R	1.2 Ω 2W	J
R1504	QRG029J-182A	OM R	1.8k Ω 2W	J
R1505	QRG029J-152A	OM R	1.5k Ω 2W	J
R1513	QRG039J-103A	OM R	10k Ω 3W	J
R1521	QRD129J-150S	C R	15 Ω 1/2W	J
R1522-23	QRX019J-1R0S	MF R	1.0 Ω 1W	J
R1524	QRD129J-4R7S	C R	4.7 Ω 1/2W	J
R1530	QRG039J-153A	OM R	15k Ω 3W	J
△ R1535	QRV141F-3921AY	MF R	3.92k Ω 1/4W	F
△ R1537	QRV141F-6801AY	MF R	6.8k Ω 1/4W	F
R1551	QRG039J-100A	OM R	10 Ω 3W	J
R1571	QRD149J-101S	C R	100 Ω 1/4W	J
R1794	QRV141F-2200AY	MF R	220 Ω 1/4W	F
△ R1901	QRF074K-R47	UNF R	0.47 Ω 1/2W	K
R1903	QRX029J-R33A	MF R	0.33 Ω 2W	J
R1904	QRX029J-R39A	MF R	0.39 Ω 2W	J
R1905	QRG019J-120S	OM R	12 Ω 1W	J
R1906	QRD149J-1R0S	C R	1.0 Ω 1/4W	J
R1907	QRD149J-330S	C R	33 Ω 1/4W	J
R1909	QRD149J-222S	C R	2.2k Ω 1/4W	J
R1910	QRD149J-102S	C R	1k Ω 1/4W	J
R1911	QRX129J-R47A	MF R	0.47 Ω 1/2W	J
△ R1998	QRZ0111-275U	C R	2.7M Ω 1/2W	
CAPACITOR				
C1005	QFLC1HK-103MZ	M CAP.	0.01 μ F 50V	K
C1101	QCT25CH-820AZ	C CAP.	82 p F 50V	J
C1114	QFLC1HK-223MZ	M CAP.	0.022 μ F 50V	K
C1117	QCT25CH-270AZ	C CAP.	27 p F 50V	J
C1124	QFLC1HK-473MZ	M CAP.	0.047 μ F 50V	K
C1152	CECN004-102	NET CAP.	1000 p F	
C1221	QFLC1HK-104MZ	M CAP.	0.1 μ F 50V	K
C1310	QCT25CH-100AZ	C CAP.	10 p F 50V	J
C1404	QETC1VM-107Z	E CAP.	100 μ F 35V	M
C1405	QFV71HJ-474MZ	TF CAP.	0.47 μ F 50V	J
C1407	QFLC2AK-563MZ	M CAP.	0.056 μ F 100V	K
C1408	QETC1VM-477Z	E CAP.	470 μ F 35V	M
C1409	QFLC1HK-103MZ	M CAP.	0.01 μ F 50V	K
C1411	QFV71HJ-224MZ	TF CAP.	0.22 μ F 50V	J
C1441	QFLC1HJ-563MZ	M CAP.	0.056 μ F 50V	J
C1444	QFN31HK-102ZJ1	M CAP.	1000 p F 50V	K
C1445	QCT25CH-820AZ	C CAP.	82 p F 50V	J
C1446	QFN31HJ-222ZJ1	M CAP.	2200 p F 50V	J
C1503	QETC2CM-105Z	E CAP.	1 μ F 160V	M
△ C1511	QFZ0117-3501S	MPP CAP.	3500 p F 1.4kVH ±2.5%	
△ C1512	QFZ0117-1202S	MPP CAP.	0.012 μ F 1.4kVH ±2.5%	
△ C1514	QFP32GJ-223M	PP CAP.	0.022 μ F 400V	J
△ C1515	QFZ0119-564S	MPP CAP.	0.56 μ F 200V ±3%	
C1517	QEH62EM-225MZ	E CAP.	2.2 μ F 250V	M
C1518-19	QEM61HK-475MZ	E CAP.	4.7 μ F 50V	K
C1521	QETB2EM-336	E CAP.	33 μ F 250V	M
C1522	QETB1VM-108	E CAP.	1000 μ F 35V	M

△ Symbol	No.	Part No.	Part Name	Description	Local
C A P A C I T O R					
	C1524	QETC1VM-107Z	E CAP.	100 μ F 35V	M
	C1525	QFLC2AJ-393MZ	M CAP.	0.039 μ F 100V	J
	C1526	QFV71HJ-473MZ	TF CAP.	0.047 μ F 50V	J
	C1553	QFLC1HK-683MZ	M CAP.	0.068 μ F 50V	K
	C1554	QETC0JM-477Z	E CAP.	470 μ F 6.3V	M
	C1555	QFLC1HK-683MZ	M CAP.	0.068 μ F 50V	K
	C1557	QETC1VM-476Z	E CAP.	47 μ F 35V	M
	C1559	QEZO203-107	E CAP.	100 μ F 160V	
	C1603	QETC0JM-107Z	E CAP.	100 μ F 6.3V	M
	C1608	QETC0JM-107Z	E CAP.	100 μ F 6.3V	M
	C1609-10	QFLC1HK-823MZ	M CAP.	0.082 μ F 50V	K
	C1612-13	QFV71HJ-104MZ	TF CAP.	0.1 μ F 50V	J
	C1616-17	QFV71HJ-224MZ	TF CAP.	0.22 μ F 50V	J
	C1704	QFLC1HK-683MZ	M CAP.	0.068 μ F 50V	K
	C1731	QFLC1HK-683MZ	M CAP.	0.068 μ F 50V	K
	C1732-33	QCT25CH-330AZ	C CAP.	33 p F 50V	J
	C1855-57	QFLC1HJ-104MZ	M CAP.	0.1 μ F 50V	J
△	C1901	QFZ9036-104M	MF CAP.	0.1 μ FAC250V	M
△	C1902	QFZ9036-473M	MF CAP.	0.047 μ FAC250V	M
△	C1904	QCZ9052-102A	C CAP.	1000 p FAC125V	
△	C1906	QCZ9033-102A	C CAP.	1000 p FAC250V	K
△	C1907	QCZ9033-102A	C CAP.	1000 p FAC250V	K
△	C1908	QCZ9033-102A	C CAP.	1000 p FAC250V	K
△	C1910	QEZO169-477	E CAP.	470 μ F 200V	M
	C1911	QCZ0116-152AZ	C CAP.	1500 p F 1000V	K
	C1917	QETC2AM-106Z	E CAP.	10 μ F 100V	M
	C1921	QCZ0132-152AZ	C CAP.	1500 p F 500V	K
	C1924	QEZO203-107	E CAP.	100 μ F 160V	
△	C1999	QCZ9052-222A	C CAP.	2200 p FAC125V	
T R A N S F O R M E R					
	T1101	CELT003-104J1	SIF TRANSF.		
	T1102	CELT001-208J1	CW TRANSF.		
	T1501	CE42034-002	H.DRIVE TRANSF.		
△	T1901	CETS022-001J1	SW TRANSF.		
C O I L					
	L1001	CELP055-271Z	PEAKING COIL	270 μ H	
	L1101	CELP041-R82	PEAKING COIL	0.82 μ H	
	L1102	CELP055-680Z	PEAKING COIL	68 μ H	
	L1104	CELP043-R47	PEAKING COIL	0.47 μ H	
	L1105	CELP055-680Z	PEAKING COIL	68 μ H	
	L1106	CELP055-220Z	PEAKING COIL	22 μ H	
	L1201	CELP055-220Z	PEAKING COIL	22 μ H	
	L1221	CELP055-6R8Z	PEAKING COIL	6.8 μ H	
	L1301	CELP055-100	PEAKING COIL	10 μ H	
△	L1511	CELL013-002	LINEARITY COIL		
△	L1512	CELC053-801	CHOKE COIL		
△	L1521	CELC901-041J6	HEATER CHOKE		
	L1525	CELC058-820Z	CHOKE COIL		
	L1701-02	CELP055-4R7Z	PEAKING COIL	4.7 μ H	
	L1921-22	CELC058-820Z	CHOKE COIL		
D I O D E					
	D1001	MTZJ36(A)-T2	ZENER DIODE		
	D1201-02	MTZJ5.6(A)-T2	ZENER DIODE		
	D1281-83	1SS133-T2	SI. DIODE		
	D1301	MTZJ5.1(A)-T2	ZENER DIODE		
	D1361	1SS133-T2	SI. DIODE		
	D1363	1SS133-T2	SI. DIODE		
	D1365	1SS133-T2	SI. DIODE		
	D1366	MTZJ15(C)-T2	ZENER DIODE		
	D1401	1N4003-T2	SI. DIODE		
	D1402-03	MTZJ36(A)-T2	ZENER DIODE		

AV-31BM6(US&CA)

Symbol No.	Part No.	Part Name	Description	Local
D I O D E				
D1404	MTZJ9.1(B)-T2	ZENER DIODE		
D1501	RH3G-C1	SI. DIODE		
D1502	RU3AM-LFC4	SI. DIODE		
D1521	RH1S-T3	SI. DIODE		
D1522	1SR124-400A-T2	SI. DIODE		
D1523	RU3AM-LFC4	SI. DIODE		
D1524	1SS81-T2	SI. DIODE		
D1526	1SR124-400A-T2	SI. DIODE		
D1529	MTZJ9.1(B)-T2	ZENER DIODE		
D1530	RGP10J(C1)-T3	SI. DIODE		
D1571	MTZJ9.1(B)-T2	ZENER DIODE		
△ D1572	MTZJ7.5S-T2	ZENER DIODE		
△ D1573	1SS133-T2	SI. DIODE		
D1703-04	1SS133-T2	SI. DIODE		
D1710-11	MTZJ5.6(A)-T2	ZENER DIODE		
D1712-13	1SS133-T2	SI. DIODE		
D1791-92	1SS133-T2	SI. DIODE		
△ D1901	D3SBA60-C1	BRIDGE DIODE		
D1902	1SR124-400A-T2	SI. DIODE		
D1904	AG01Z-T2	SI. DIODE		
D1905	1SR124-400A-T2	SI. DIODE		
D1907	1SR124-400A-T2	SI. DIODE		
D1909	MTZJ15(A)-T2	ZENER DIODE		
D1911	1SS133-T2	SI. DIODE		
D1921	RU30A-C1	SI. DIODE		
D1922	RGP10J(C1)-T3	SI. DIODE		
D1923	EL1Z-LFF6	SI. DIODE		
D1924	1SR35-100A-T2	SI. DIODE		
D1926-28	1SS133-T2	SI. DIODE		
D1933	1SS133-T2	SI. DIODE		
T R A N S I S T O R				
Q1101	2SC5083(L-P)-T	SI. TRANSISTOR		
Q1102-03	2SC1815(Y)-T	SI. TRANSISTOR		
Q1201-02	2SC1815(Y)-T	SI. TRANSISTOR		
Q1221-22	2SC1815(Y)-T	SI. TRANSISTOR		
Q1224	2SA1015(Y)-T	SI. TRANSISTOR		
Q1225	2SC1815(Y)-T	SI. TRANSISTOR		
Q1226	2SA1015(Y)-T	SI. TRANSISTOR		
Q1281	2SC1815(Y)-T	SI. TRANSISTOR		
Q1301-03	2SC1815(Y)-T	SI. TRANSISTOR		
Q1441	2SC1815(Y)-T	SI. TRANSISTOR		
Q1501	2SC4212-C1	SI. TRANSISTOR		
△ Q1511	2SD2539-LB	POWER TRANSISTOR	H. OUT	
Q1551	2SC1815(Y)-T	SI. TRANSISTOR		
Q1552	2SA1309A(QR)-T	SI. TRANSISTOR		
Q1553	2SD1408(OY)-LB	POWER TRANSISTOR		
Q1571	2SC1815(Y)-T	SI. TRANSISTOR		
Q1601	2SC1815(Y)-T	SI. TRANSISTOR		
Q1701	2SC1815(Y)-T	SI. TRANSISTOR		
Q1801	2SC1815(Y)-T	SI. TRANSISTOR		
Q1821-24	2SC1815(Y)-T	SI. TRANSISTOR		
Q1921-22	DTC114YS-T	DIGI. TRANSISTOR		
Q1923	2SA966(OY)-T	SI. TRANSISTOR		
Q1924	DTC114YS-T	DIGI. TRANSISTOR		
Q1926	2SA1015(Y)-T	SI. TRANSISTOR		
I C				
IC1101	TA1201ANV	I. C.		
IC1301	TC4066BP	I. C. (DIGI-MOS)		
△ IC1401	UPC1498H	I. C. (MONO-ANA)		
△ IC1601	LA4261	I. C. (MONO-ANA)		
IC1701	MN1874862JKY4	I. C.		
IC1702	MN1280-Q	I. C. (DIGI-MOS)		

Symbol No.	Part No.	Part Name	Description	Local
I C				
IC1791	AN78L05-Y	I.C.		
△ IC1901	STR-S5708	I.C.		
IC1981	AN78L05-Y	I.C.		
IC1982	XRA17809T	I.C. (MONO-ANA)		
O T H E R S				
CF1001	FTP47.25MF	CERAMIC TRAP		
CF1102	SFSH4.5MCB-Z	CERAMIC FILTER		
CF1201-02	CE41505-001	CERAMIC FILTER		
CF1571	CSB503F30-T2	C RESONATOR		
CF1701	CSA12.0MT	CER. RESONATOR		
CN1003	CHA401N-35P-J	HQF CONNECTOR		
△ F1901	QMF0007-5R0J1	FUSE	5A	
K1401	CE42050-001Z	CORE		
K1701-04	CE42050-001Z	CORE		
K1902	CE41433-001Z	BEADS CORE		
K1921	CE41433-001Z	BEADS CORE		
△ LF1901	CELF001-001J1	LINE FILTER		
△ LF1902	CE42335-001J1	LINE FILTER		
△ PC1901	TLP621(GB)	I.C. (PH COUPLER)		
△ PC1902	TLP621(GB)	I.C. (PH COUPLER)		
△ RY1901	CESK028-001	RELAY		
△ RY1921	CESK028-001	RELAY		
S1401	QSL6A13-C01	LEVER SWITCH	V. CENTER SW	
SF1101	CE41706-201	SAW FILTER		
TH1501	CEKP004-001	P. THERMISTOR		
△ TH1901	CEKP007-001	P. THERMISTOR		
△ TU1001	CEEM245-B03	TUNER		
△ VA1901	ERZ-C10VK361G	VARISTOR		
X1301	CE41651-001Z	X-TAL		

CRT SOCKET PW BOARD ASS'Y (SGK-3001A-H2)

Symbol No.	Part No.	Part Name	Description	Local
R E S I S T O R				
R3310-15	QRG029J-153	OM R	15kΩ 2W	J
C A P A C I T O R				
C3321	QETC2EM-105Z	E CAP.	1μF 250V	M
C3361	QETC2EM-105Z	E CAP.	1μF 250V	M
C3363	QC20121-102A	C CAP.	1000 pF 3kV	Z
C O I L				
L3301-03	CELP055-180Z	PEAKING COIL	18 μH	
L3304-06	CELP055-470Z	PEAKING COIL	47 μH	
D I O D E				
D3301-03	1SS133-T2	SI. DIODE		
D3304-06	1SS244-T2	SI. DIODE		
D3307	MTZJ5.1(A)-T2	ZENER DIODE		
D3308	1SS133-T2	SI. DIODE		
D3309	MTZJ5.1(A)-T2	ZENER DIODE		
D3310	1SS133-T2	SI. DIODE		
D3311	MTZJ5.1(A)-T2	ZENER DIODE		
D3312	1SS133-T2	SI. DIODE		
T R A N S I S T O R				
Q3301-03	2SC5083(L-P)-T	SI. TRANSISTOR		
Q3304-06	2SC4544-C1	SI. TRANSISTOR		
O T H E R S				
△ SC3001	CE42535-001J1	CRT SOCKET		

AV-31BM6(US&CA)

FRONT CONTROL PW BOARD ASS'Y (SGK-4001A-H2)

Symbol No.	Part No.	Part Name	Description	Local
DIODE				
D4715	GL2PR6	L.E.D. (RED)		
IC				
IC4841	TFMS5380ESN	IR DETECT UNIT		
OTHERS				
	CM46978-A01-H	L.E.D. HOLDER		
S4702	QSP1A11-C19Z	PUSH SWITCH	LEVEL +	
S4703	QSP1A11-C19Z	PUSH SWITCH	LEVEL -	
S4704	QSP1A11-C19Z	PUSH SWITCH	MENU	
S4705	QSP1A11-C19Z	PUSH SWITCH	VOL +	
S4706	QSP1A11-C19Z	PUSH SWITCH	VOL -	
S4707	QSP1A11-C19Z	PUSH SWITCH	POWER	

AV SELECTOR PW BOARD ASS'Y (SGK-8001A-H2)

Symbol No.	Part No.	Part Name	Description	Local
RESISTOR				
R8605	QRV141F-1502AY	MF R	15k Ω 1/4W	F
R8606	QRV141F-1501AY	MF R	1.5k Ω 1/4W	F
CAPACITOR				
C8604	QFLC1HK-104MZ	M CAP.	0.1 μ F 50V	K
C8605	QEN61HM-475Z	BP E CAP.	4.7 μ F 50V	M
C8606	QEN61HM-105Z	BP E CAP.	1 μ F 50V	M
C8608	QFLC1HK-473MZ	M CAP.	0.047 μ F 50V	K
C8610-11	QFLC1HK-104MZ	M CAP.	0.1 μ F 50V	K
C8612	QEE61CK-335BZ	TAN. CAP.	3.3 μ F 16V	K
C8614	QEE61CK-106BZ	TAN. CAP.	10 μ F 16V	K
C8619	QFLC1HK-273MZ	M CAP.	0.027 μ F 50V	K
C8622	QFLC1HK-104MZ	M CAP.	0.1 μ F 50V	K
C8625	QFLC1HK-104MZ	M CAP.	0.1 μ F 50V	K
C8666	QEKC1CM-107MZ	E CAP.	100 μ F 16V	M
C8667	QEKC1CM-106GMZ	E CAP.	10 μ F 16V	M
C8668	QEKC1CM-336MZ	E CAP.	33 μ F 16V	M
C8693-94	QEKC1HM-105GMZ	E CAP.	1 μ F 50V	M
COIL				
L8201	CELP055-220Z	PEAKING COIL	22 μ H	
L8202	CELP055-820Z	PEAKING COIL	82 μ H	
DIODE				
D8601-04	MTZJ9.1(B)-T2	ZENER DIODE		
D8661-62	MTZJ9.1(B)-T2	ZENER DIODE		
D8663-65	1SS133-T2	SI. DIODE		
D8801	MTZJ15(A)-T2	ZENER DIODE		
D8821-22	MTZJ15(A)-T2	ZENER DIODE		
TRANSISTOR				
Q8201-02	2SC1815(Y)-T	SI. TRANSISTOR		
Q8221-22	2SA1015(Y)-T	SI. TRANSISTOR		
Q8223-24	2SC1815(Y)-T	SI. TRANSISTOR		
Q8301-02	2SA1015(Y)-T	SI. TRANSISTOR		
Q8303-04	2SC1815(Y)-T	SI. TRANSISTOR		
Q8661	2SA1015(Y)-T	SI. TRANSISTOR		
Q8662-63	DTC323TS-T	DIGI. TRANSISTOR		
Q8664	2SC1815(Y)-T	SI. TRANSISTOR		

△ Symbol No.	Part No.	Part Name	Description	Local
T R A N S I S T O R				
Q8665	2SA1015(Y)-T	SI. TRANSISTOR		
Q8801	2SA1015(Y)-T	SI. TRANSISTOR		
Q8802	2SC1815(Y)-T	SI. TRANSISTOR		
I C				
IC8601	UPC1851CU-02	I.C.		
IC8661	XRA15218N	I.C. (MONO-ANA)		
IC8801	LA7016	I.C. (MONO-ANA)		
IC8821	LA7222	I.C. (MONO-ANA)		
IC8902	AN78L09-Y	I.C.		
O T H E R S				
CM8201	CE42561-001	COMB FILTER MOD		
CN8003	CHA401N-35R-J	HQF CONNECTOR		
DL8201	CE42464-001	BPF&DL MODULE		
J8801	QMCC008-C01	DIN JACK		
J8802	CEMN073-001	PIN JACK		
J8804	CEMN057-001	PIN JACK		
S8801	QSS1F42-C01	SLIDE SWITCH	VARI/FIX SW	

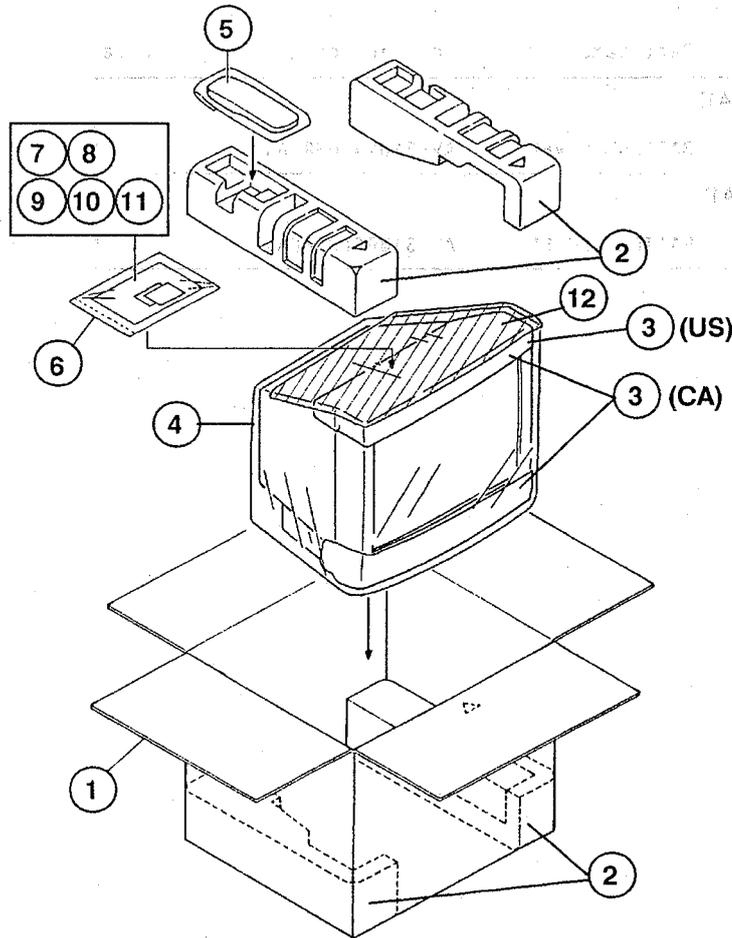
MEMORY PW BOARD ASS'Y (SGK0M001A-H2)

△ Symbol No.	Part No.	Part Name	Description	Local
D I O D E				
D1701-02	MTZJ5.6(A)-T2	ZENER DIODE		
I C				
IC1701	AT24C04-GK	I.C.		

REMOTE CONTROL UNIT PARTS LIST

△ Symbol No.	Part No.	Part Name	Description	Local
■ RM-C728-1A [AV-31BM6(US&CA)]				
	103RRC-049-01AR	BATTERY COVER	AV-31BM6(US&CA)	*
■ RM-C729-1A [AV-31BP6(US&CA)]				
	103RRC-049-01AR	BATTERY COVER	AV-31BP6(US&CA)	*

PACKING



PACKING PARTS LIST

△ Ref.No.	Part No.	Part Name	Description	Local
[America model]				
	1	CP10972-087-A	PACKING CASE	*
	2	CP11251-0AB-A	CUSHION ASSY	4pcs in 1set *
	3	CP30055-002-A	TOP COVER	*
	4	CP30056-004-A	POLY BAG	*
	5	RM-C729-1A	REMOCON UNIT	AV-31BP6(US) *
	5	RM-C728-1A	REMOCON UNIT	AV-31BM6(US) *
	6	CM30751-010	POLY BAG	*
△	7	273135UC-IBA-A	INST BOOK	ENGLISH *
	9	BT-51006-2-A	REGI.CARD	*
[Canada model]				
	1	CP10972-087-A	PACKING CASE	*
	2	CP11251-0AB-A	CUSHION ASSY	4pcs in 1set *
	3	CP30055-002-A	TOP COVER	(X2) *
	4	CP30056-004-A	POLY BAG	*
	5	RM-C729-1A	REMOCON UNIT	AV-31BP6(CA) *
	5	RM-C728-1A	REMOCON UNIT	AV-31BM6(CA) *
	6	CM30751-010	POLY BAG	*
△	7	273135UC-IBA-A	INST BOOK	ENGLISH *
△	8	273135C-IBA-A	INST BOOK(F)	FRENCH *
	10	BT-52002-1-A	WARRANTY CARD	*
	11	BT-20071B-A	SVC CENTER LIST	*
	12	CP30341-001-A	PROTECT SHEET	*



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JVC

AV-31BP6(US&CA) AV-31BM6(US&CA) 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 : Color 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 : R1209 \rightarrow R209

4. INDICATIONS ON THE CIRCUIT DIAGRAM

(1) Resistors

• Resistance value

- No unit : $[\Omega]$
- K : [K Ω]
- M : [M Ω]

• Rated allowable power

- No indication : 1/6[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 : DC 50[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
- MY : Mylar 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(134V)
- : 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 : () side GND and the ISOLATED (NEUTRAL) : () side GND. Therefore, care must be taken for the following points.

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

SEMICONDUCTOR SHAPES (* = Bottom view)

TRANSISTORS

 E C B	2SC4502-T 2SC5083(L-P)	 B C E	2SC2068-LB 2SC4256 2SD1133(CD)	 E C B	2SA933(QR) 2SC2785(JH) 2SA933S(QR) 2SC3311A(QR) 2SA1309A(QR) DTC114YS 2SC1740(QR) DTC124ES 2SC1740S(QR) DTC323TS	 * E B C	* E B C	2SC3811(R)
 E C B	2SC4212	 B C E	2SC4544-C1 2SD1555	 B C E	2SD2539-LB	 * E C B	* E C B	2SA1015(YG) 2SC1360 2SA673(C) 2SC1959(Y) 2SA949(Y) 2SC2655(Y) 2SA966(OY) 2SC2482(C1) 2SB774(RS) 2SC2878(B) 2SC1815(YG)

ICs

 * OUT E IN	AL78L09 AN78L05 AN78L12 RC78L05A-Y TA78L005AP TA78L012AP	 IN E OUT	AN7805F TA78005AP TA78012AP UPC2412HF UPC2405HF	 IN E OUT	XRA17809T	 Vss Vcc OUT	MN1280-K MN1280-Q	 1 2 3	TFMS5380ESN
 1 → 9	STR-S5708 STR-S6301	 1 → 8	UPC1498H	 1 → 8	XRA15218N	 1 → N	LA7952	 1 → N	MSM51C262-80ZS
 1 → N	AN5352N MN12C261D MC14066BCP TC4066BP TEA5114A VUC2003 UPD6326C	 1 → N	MN1874862JKY1 M65109BSP M51365SP TA1201AN TA8662N TA8720AN TA8759AN	 4 → 8, 5	AT24C04-GK	 1 → N	CXA1124BS CXA1545AS CXL5005P FCB61C65-70P LA4261 M37201M6-540SP M50253P M51496P M52005P PCF84C81P/064 SAA5231 SAA5243P/E TDA1526 TDA3810 UPC1851CU		

CHIP ICs

 N	LC74401E	 1 → N	LC7480M-W TA8779F-X	 4 1 5 8	BA7655AF-X
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CHANNEL CHART(US)

CHANNEL CHART(CA)

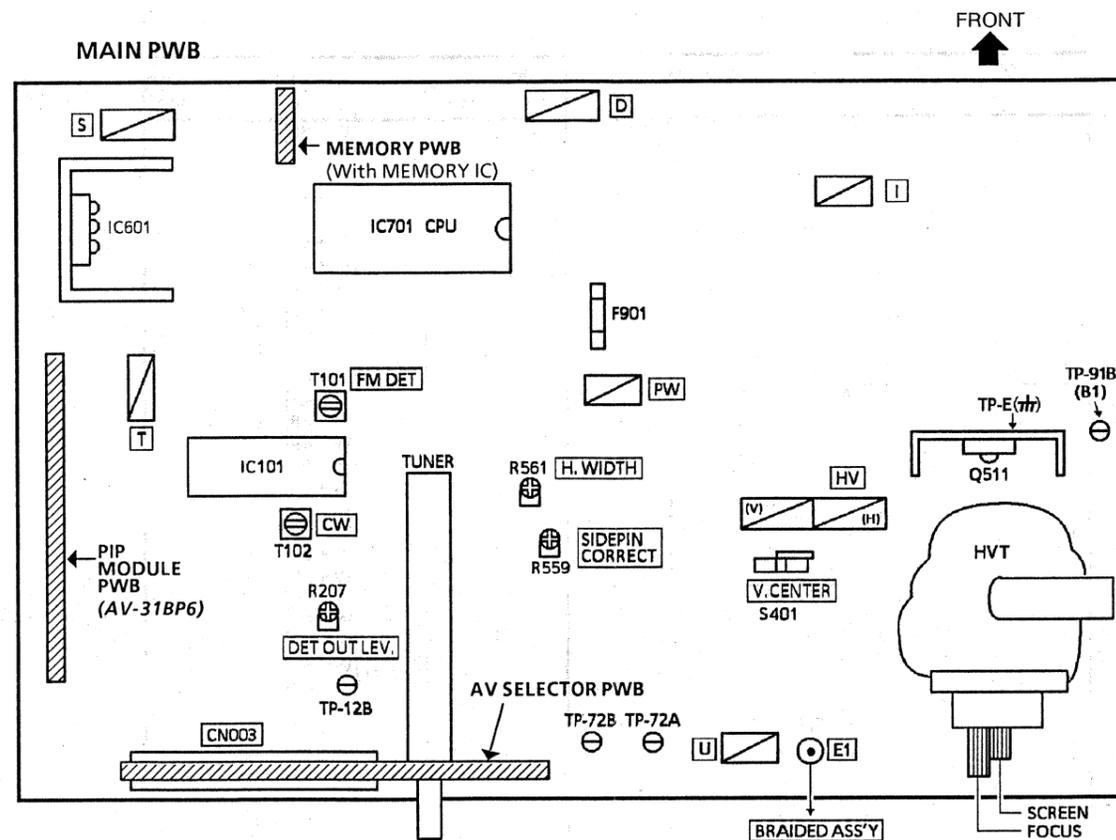
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TV	CATV		REAL	DISP.	
○	○	VL	02		I
			03		
			04		
		05			
		06			
		07			
	VH	08		II	
		09			
		10			
		11			
		12			
		13			
		MID	A		14
15					
B					
C					
D					
E					
F					
G					
H					
I					
SUPER	J	23	II		
		24			
		25			
		26			
		27			
		28			
	K	29			
		30			
		31			
		32			
		33			
		34			
	L	35			
		36			
		37		II	
		38			
		39			
		40			
41					
42					
43					
44					
45					
46					
47					
HYPER	48	IV			
	49				
	50				
	51				
	52				
	53				
	54				
	55				
56					
57					
58					
59					
60					
61					
62					
63					
64					
ULTRA	65		I		
	66				
	67				
	68				
	69				
	70				

MODE		BAND	CHANNEL		TUNER BAND
TV	CATV		REAL	DISP.	
X	○	ULTRA	W+35	71	IV
			W+36	72	
			W+37	73	
			W+38	74	
			W+39	75	
			W+40	76	
			W+41	77	
			W+42	78	
			W+43	79	
			W+44	80	
			W+45	81	
			W+46	82	
			W+47	83	
			W+48	84	
			W+49	85	
			W+50	86	
			W+51	87	
			W+52	88	
W+53	89				
W+54	90				
W+55	91				
W+56	92				
W+57	93				
W+58	94				
W+59	100				
W+60	101				
W+61	102				
W+62	103				
W+63	104				
W+64	105				
W+65	106				
W+66	107				
W+67	108				
W+68	109				
W+69	110				
W+70	111				
W+71	112				
W+72	113				
W+73	114				
W+74	115				
W+75	116				
W+76	117				
W+77	118				
W+78	119				
W+79	120				
W+80	121				
W+81	122				
W+82	123				
W+83	124				
W+84	125				
SUB MID	○	SUB MID	A-8	01	I
			A-4	96	
			A-3	97	
			A-2	98	
			A-1	99	
○	X	UHF	14 S 69	IV	
TOTAL 180CH { VHF 124CH UHF 56CH					
NOTE: TO RECEIVE THE SUBSCRIPTION OR PREMIUM PROGRAMMING FROM CERTAIN CABLE COMPANIES. SPECIAL ADAPTERS MAY BE REQUIRED.					

MODE		BAND	CHANNEL		TUNER BAND
TV	CATV		REAL	DISP.	
○	○	VL	02		I
			03		
			04		
		05			
		06			
		07			
	VH	08		II	
		09			
		10			
		11			
		12			
		13			
		MID	A		14
15					
B					
C					
D					
E					
F					
G					
H					
I					
SUPER	J	23	II		
		24			
		25			
		26			
		27			
		28			
	K	29			
		30			
		31			
		32			
		33			
		34			
	L	35			
		36			
		37		III	
		38			
		39			
		40			
41					
42					
43					
44					
45					
46					
47					
HYPER	48	III			
	49				
	50				
	51				
	52				
	53				
	54				
	55				
56					
57					
58					
59					
60					
61					
62					
63					
64					
ULTRA	65		IV		
	66				
	67				
	68				
	69				
	70				

MODE		BAND	CHANNEL		TUNER BAND
TV	CATV		REAL	DISP.	
X	○	ULTRA	W+35	71	IV
			W+36	72	
			W+37	73	
			W+38	74	
			W+39	75	
			W+40	76	
			W+41	77	
			W+42	78	
			W+43	79	
			W+44	80	
			W+45	81	
			W+46	82	
			W+47	83	
			W+48	84	
			W+49	85	
			W+50	86	
			W+51	87	
			W+52	88	
W+53	89				
W+54	90				
W+55	91				
W+56	92				
W+57	93				
W+58	94				
W+59	100				
W+60	101				
W+61	102				
W+62	103				
W+63	104				
W+64	105				
W+65	106				
W+66	107				
W+67	108				
W+68	109				
W+69	110				
W+70	111				
W+71	112				
W+72	113				
W+73	114				
W+74	115				
W+75	116				
W+76	117				
W+77	118				
W+78	119				
W+79	120				
W+80	121				
W+81	122				
W+82	123				
W+83	124				
W+84	125				
SUB MID	○	SUB MID	A-8	01	I
			A-4	96	
			A-3	97	
			A-2	98	
			A-1	99	
○	X	UHF	14 S 69	IV	
TOTAL 180CH { VHF 124CH UHF 56CH					
NOTE: TO RECEIVE THE SUBSCRIPTION OR PREMIUM PROGRAMMING FROM CERTAIN CABLE COMPANIES. SPECIAL ADAPTERS MAY BE REQUIRED.					

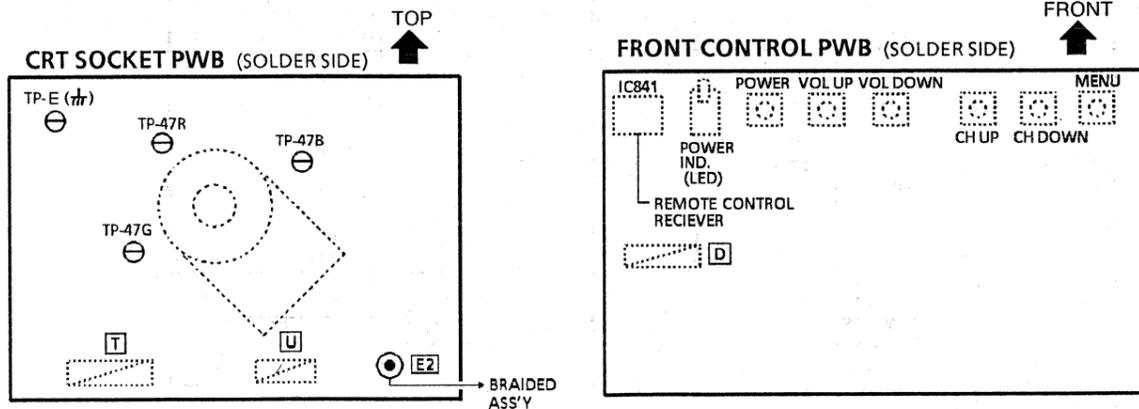
MAIN PARTS LOCATION AND ALIGNMENTS LOCATION



WIRING LIST

P.W.B. or PART NAME	CONNECTOR NAME	WIRE	CONNECTOR NAME	P.W.B. or PART NAME
MAIN PWB ASS'Y	D	↔	D	FRONT CONTROL PWB ASS'Y
MAIN PWB ASS'Y	T	↔	T	CRT SOCKET PWB ASS'Y
MAIN PWB ASS'Y	U	↔	U	CRT SOCKET PWB ASS'Y
MAIN PWB ASS'Y	H/V	↔	WIRE	DEF. YOKE
MAIN PWB ASS'Y	I	↔	WIRE	DEG. COIL
MAIN PWB ASS'Y	PW	↔	—	POWER CORD
MAIN PWB ASS'Y	S	↔	WIRE	SPEAKER (L/R)
MAIN PWB ASS'Y	CRT EARTH	↔	EARTH WIRE	CRT (BRAIDED ASS'Y)
CRT SOCKET PWB ASS'Y	CRT EARTH	↔	EARTH WIRE	CRT (BRAIDED ASS'Y)

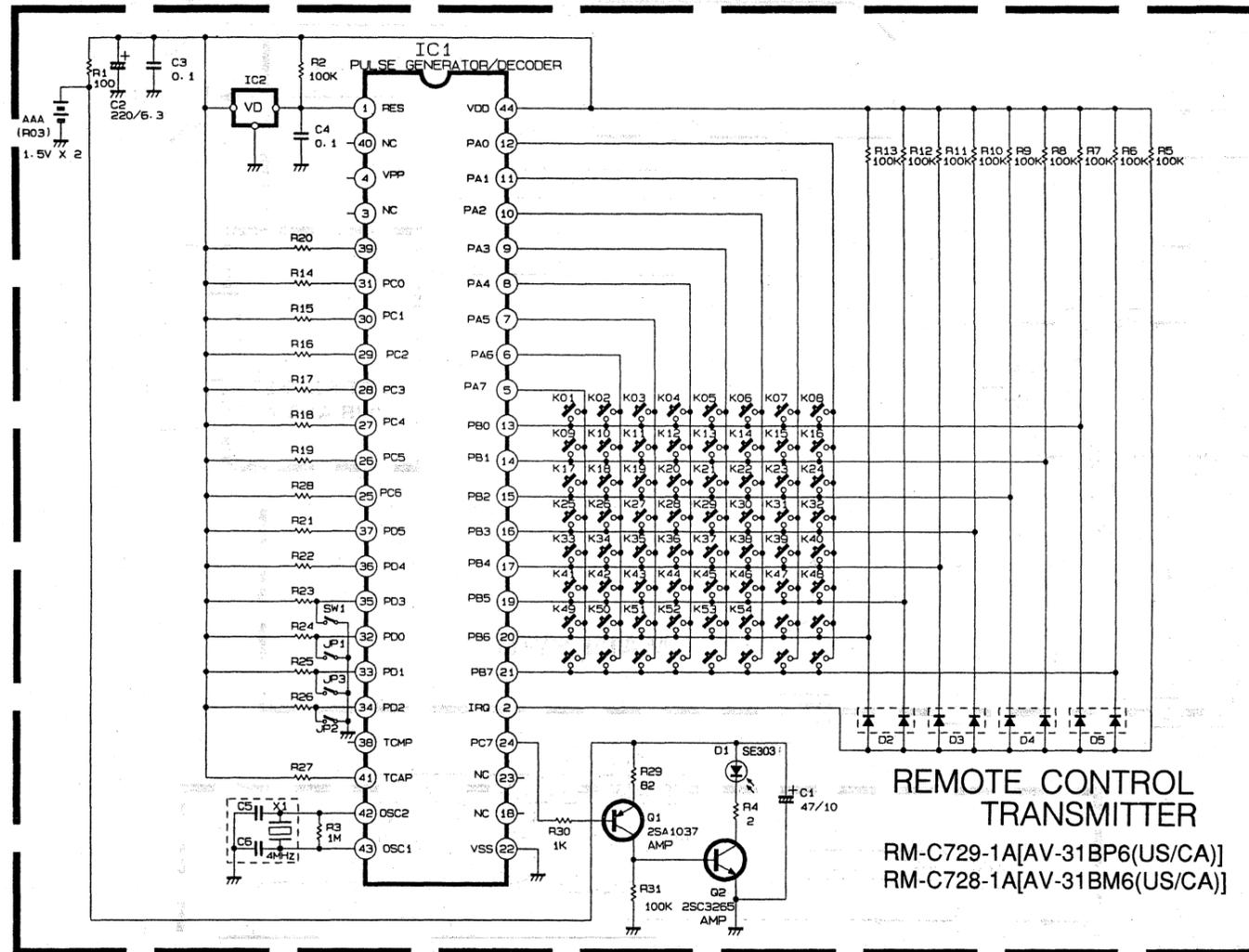
● NOTE :Refer to Main Parts and Alignment Locations (Page 2-5) for detailed connector positions.



USING P.W. BOARD

Model	AV-31BP6 (US & CA)	AV-31BM6 (US&CA)
P.W.B ASS'Y		
MAIN P.W.B	SGK-1004A-H2	SGK-1003A-H2
CRT SOCKET P.W.B	SGK-3002A-H2	SGK-3001A-H2
FRONT CONTROL P.W.B	SGK-4001A-H2	←
AV SELECTOR P.W.B	SGK-8002A-H2	SGK-8001A-H2
MEMORY P.W.B	SGK0M001A-H2	←
PIP MODULE P.W.B	SGK-P001A-H2	

REMOTE CONTROL TRANSMITTER CIRCUIT DIAGRAM



REMOTE CONTROL TRANSMITTER
RM-C729-1A[AV-31BP6(US/CA)]
RM-C728-1A[AV-31BM6(US/CA)]

● KEY FUNCTIONS

KEY NO.	FUNCTION	KEY NO.	FUNCTION
1	---	28	RETURN +
2	HYPER SURROUND	29	HYPER SCAN -
3	DISPLAY	30	CH -
4	POWER	31	CH +
5	---	32	HYPER SCAN +
6	PIP ON/OFF	33	MUTE
7	PIP POSITION	34	VOL -
8	PIP SWAP	35	VOL +
9	---	36	REW ◀◀
10	PIP SOURCE	37	PLAY ▶
11	PIP FREEZE	38	FF ▶▶
12	PIP SIZE	39	REC ●
13	CLOSED CAPTION	40	STOP ■
14	1	41	PAUSE ■■
15	2	42	VCR POWER
16	3	43	VCR CH -
17	THEATER/AVSTATUS	44	VCR CH +
18	4	45	HELP
19	5	46	---
20	6	47	---
21	SLEEP TIMER	48	EXIT
22	7	49	MENU ^
23	8	50	MENU (
24	9	51	MENU)
25	TV/VIDEO	52	MENU v
26	100+		
27	0		

(KEY NO. 6-NO. 12: NO USE RM-C728-1A)

● NOTE

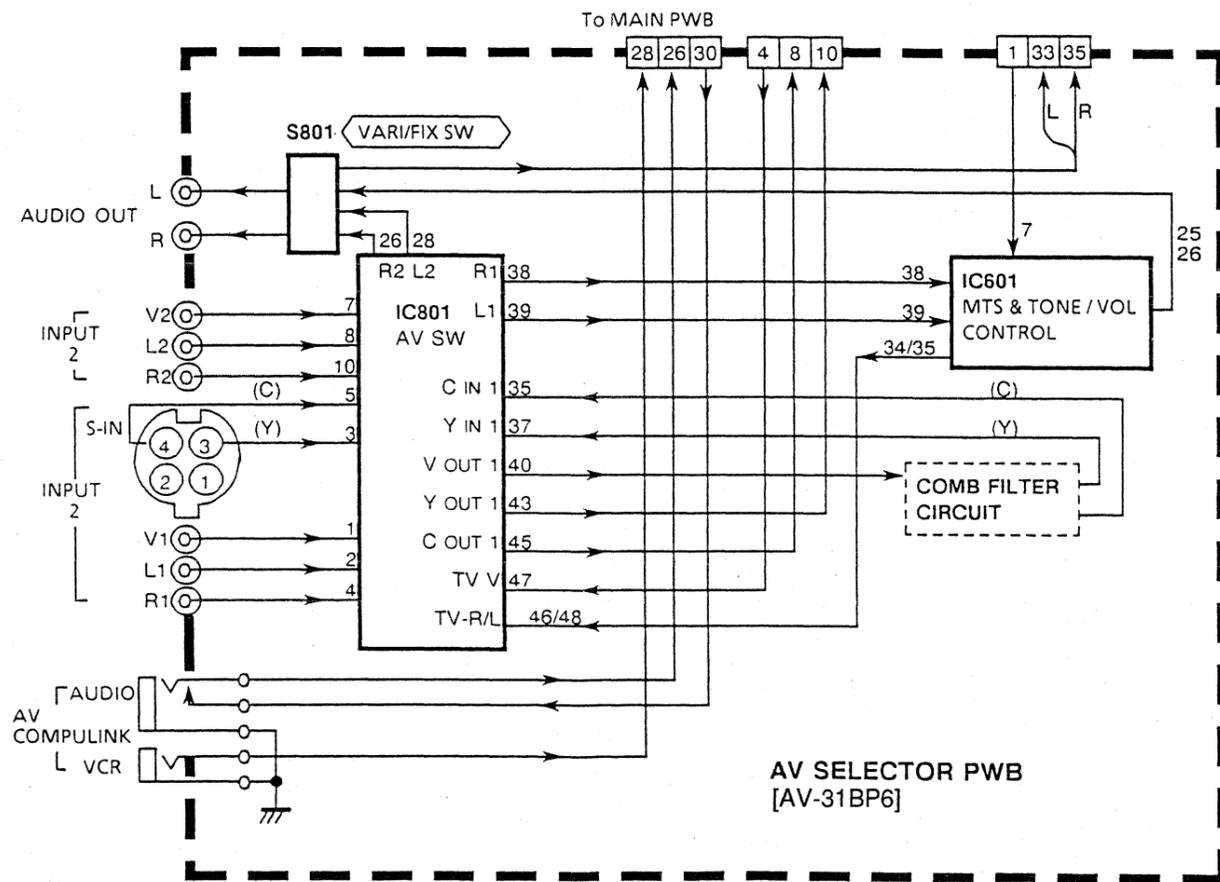
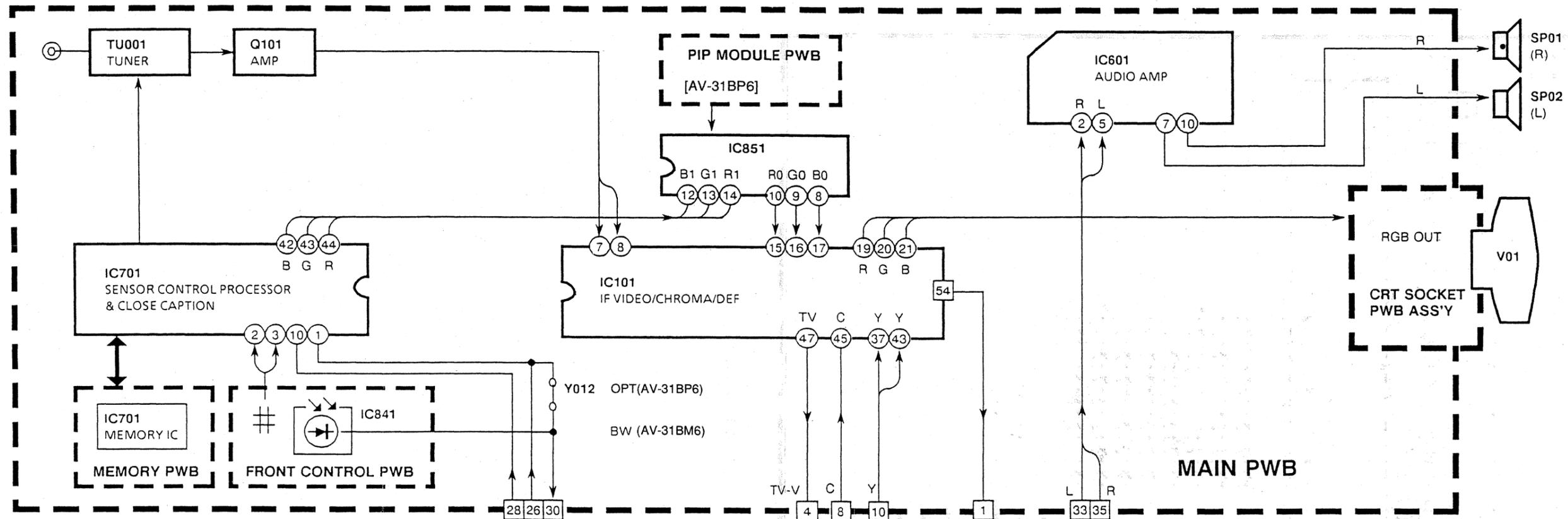
REMOCON NO.	JP1	JP2	JP3
RM-C722	BW	OPEN	OPEN
RM-C723	BW	OPEN	OPEN
RM-C724	BW	OPEN	OPEN
RM-C725	OPEN	BW	OPEN
RM-C726	OPEN	OPEN	BW
RM-C728-1A	OPEN	OPEN	BW
RM-C729-1A	BW	OPEN	OPEN
RM-C730	OPEN	BW	OPEN

* BW: BUS WIRE

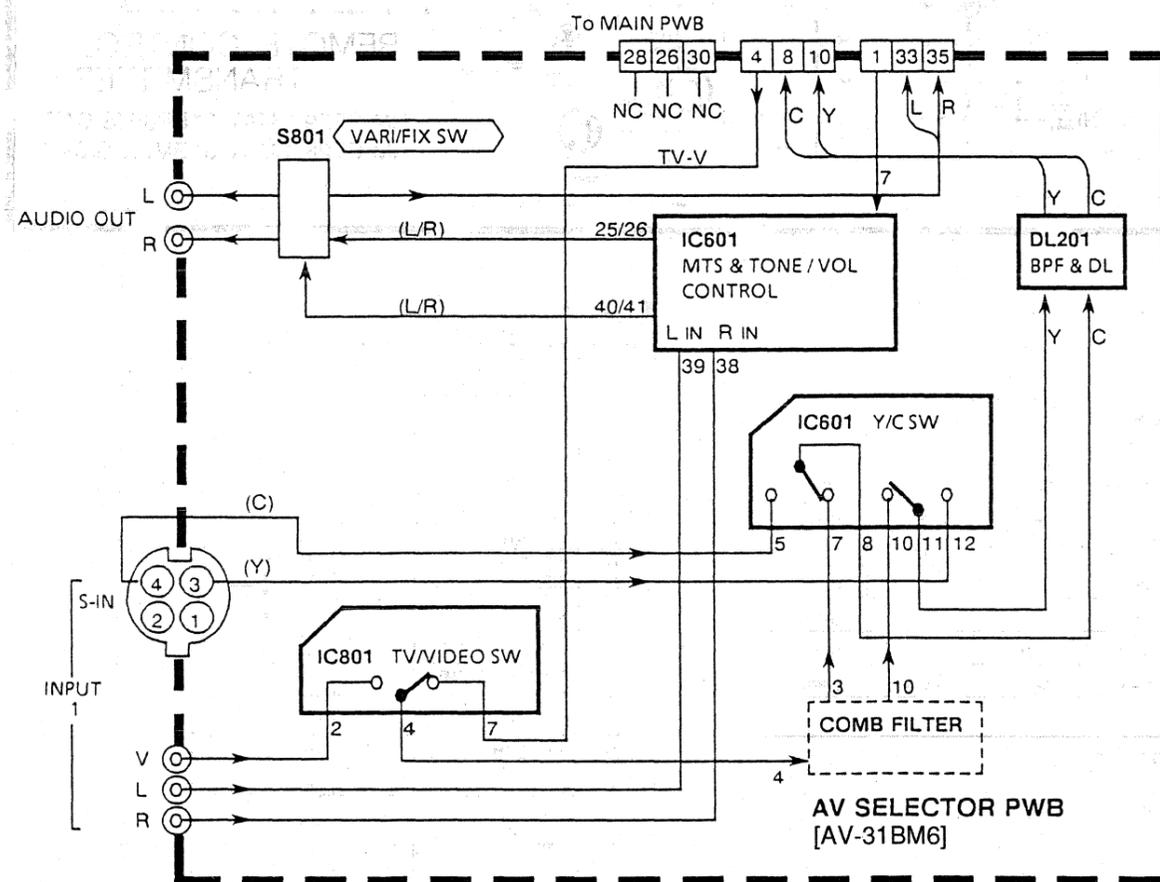
AV-31BP6
AV-31BM6

AV-31BP6
AV-31BM6

BLOCK DIAGRAM

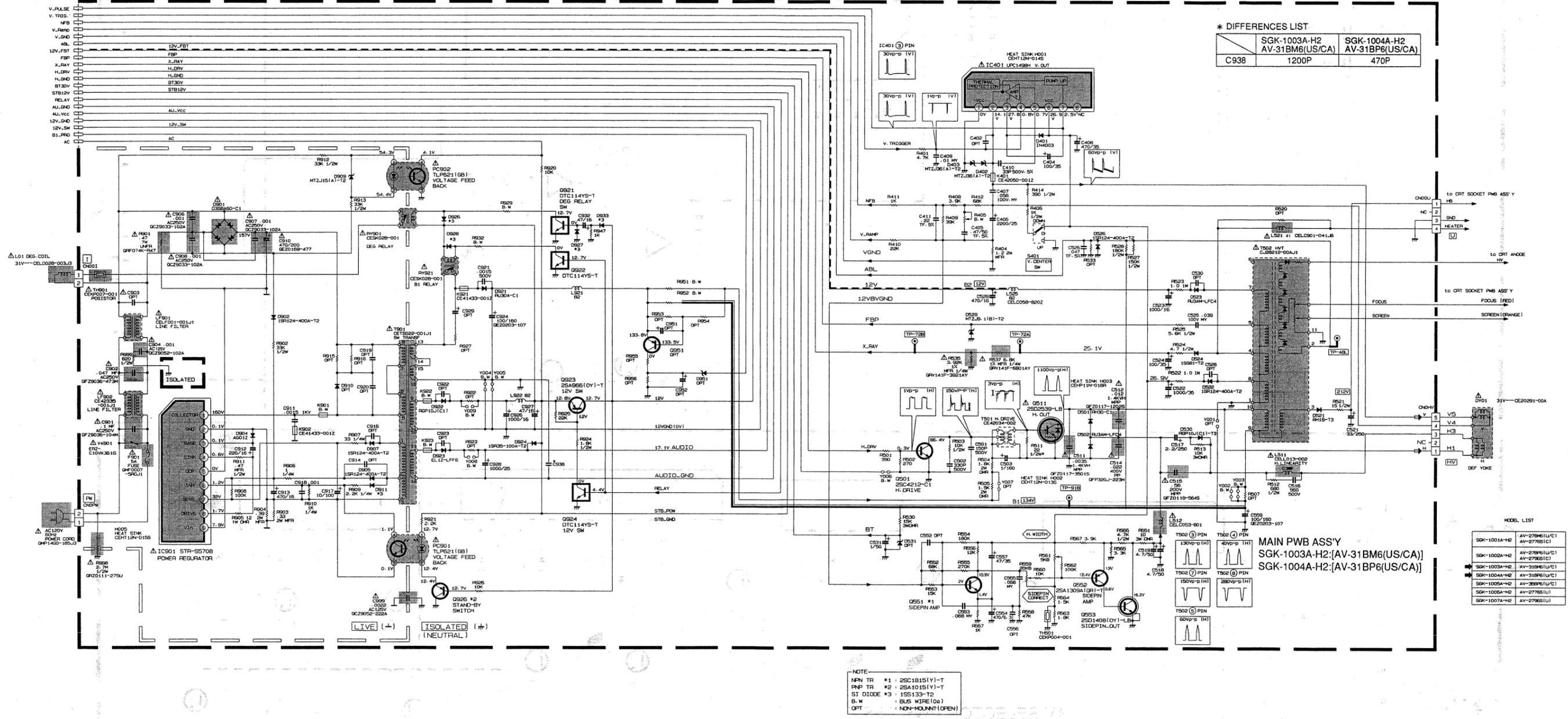


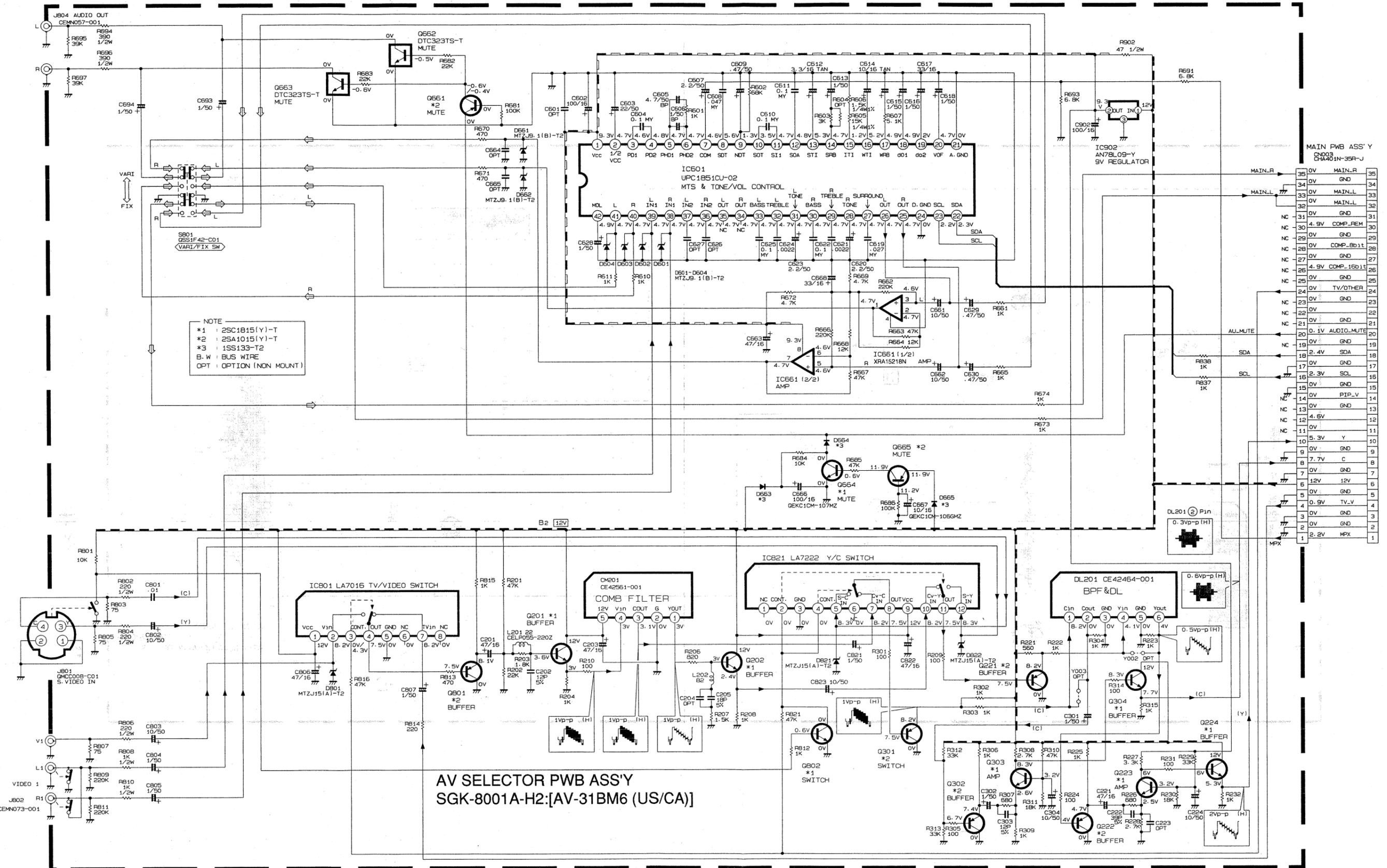
(No.50952) 2-9



2-10 (No.50952)

Refer to the following PWB pattern : MAIN PWB PATTERN page 2-23, 2-24, FRONT CONTROL PWB PATTERN page 2-30,
MEMORY PWB PATTERN page 2-30.



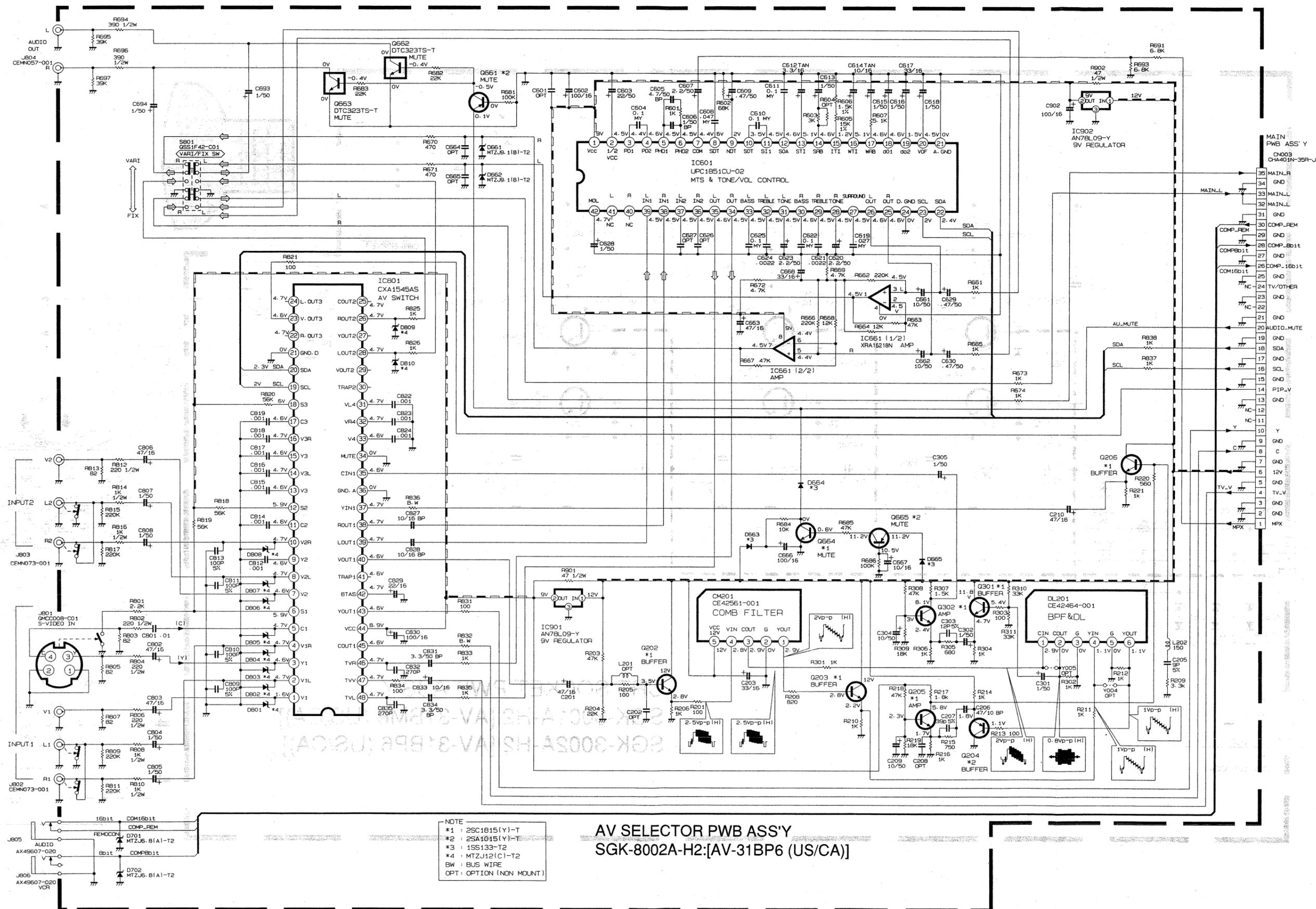


NOTE
 *1 : 2SC1815(Y)-T
 *2 : 2SA1015(Y)-T
 *3 : 1SS133-T2
 B.W : BUS WIRE
 OPT : OPTION (NON MOUNT)

MAIN PWB ASS'Y

35	0V	MAIN_R	35
34	0V	GND	34
33	0V	MAINLL	33
32	0V	MAIN-L	32
31	0V	GND	31
30	4.5V	COMP_REM	30
29	0V	GND	29
28	0V	COMP_801t	28
27	0V	GND	27
26	4.5V	COMP_1601t	26
25	0V	GND	25
24	0V	TV/OTHER	24
23	0V	GND	23
22	0V	GND	22
21	0V	GND	21
20	0.1V	AUDIO_MUTE	20
19	0V	GND	19
18	2.4V	SDA	18
17	0V	GND	17
16	2.3V	SCL	16
15	0V	GND	15
14	0V	PIP_V	14
13	0V	GND	13
12	4.5V	GND	12
11	0V	GND	11
10	5.3V	Y	10
9	0V	GND	9
8	7.7V	C	8
7	0V	GND	7
6	12V	12V	6
5	0V	GND	5
4	0.9V	TV_V	4
3	0V	GND	3
2	0V	GND	2
1	2.2V	MPX	1

AV SELECTOR PWB ASS'Y
 SGK-8001A-H2:[AV-31BM6 (US/CA)]



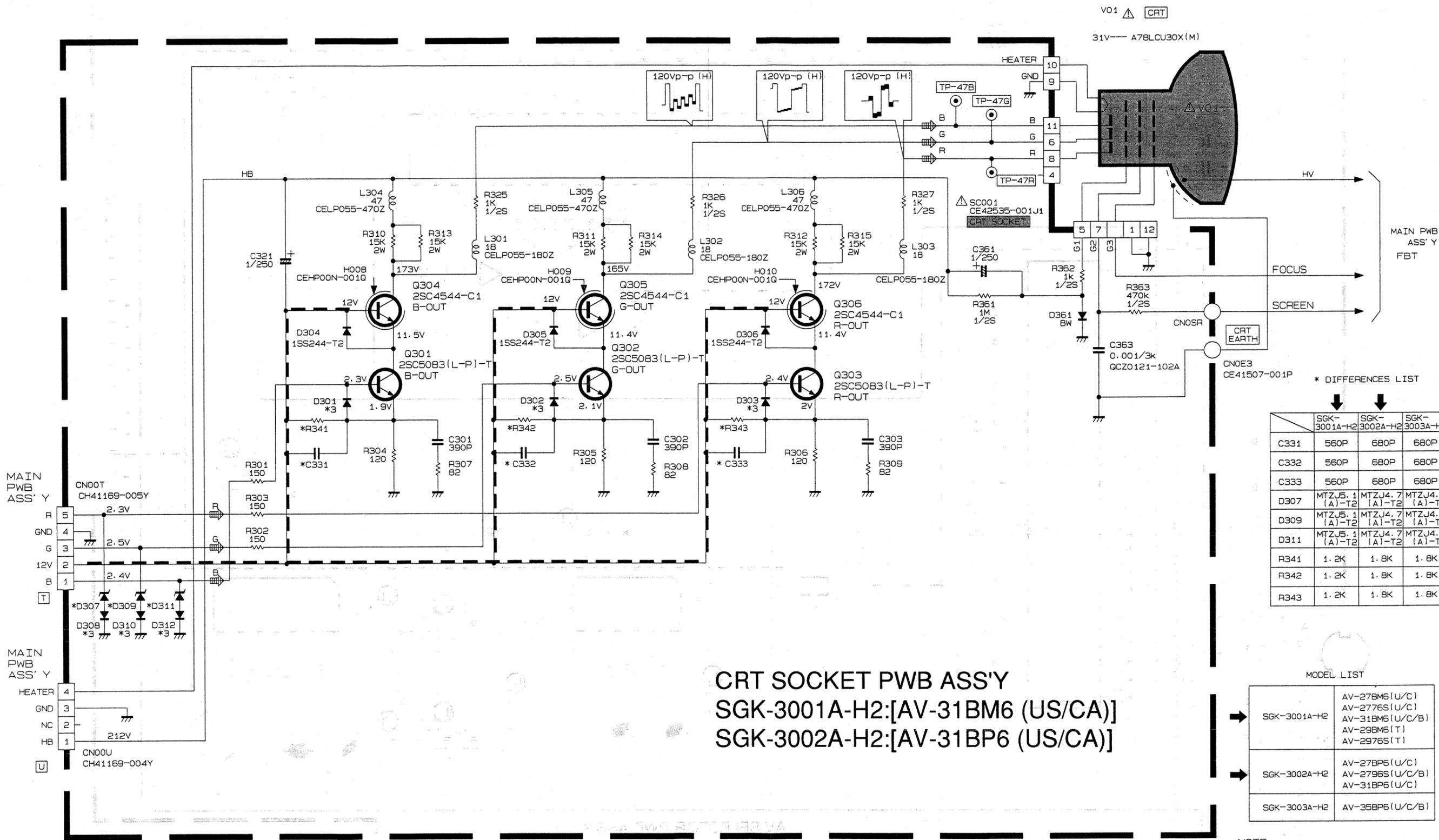
AV SELECTOR PWB ASS'Y
SGK-8002A-H2:[AV-31BP6 (US/CA)]

AV-31BP6
AV-31BM6

AV-31BP6
AV-31BM6

CRT SOCKET PWB CIRCUIT DIAGRAM

Refer to the following PWB pattern : CRT SOCKET PWB PATTERN page 2-29.



* DIFFERENCES LIST

	SGK-3001A-H2	SGK-3002A-H2	SGK-3003A-H2
C331	560P	680P	680P
C332	560P	680P	680P
C333	560P	680P	680P
D307	MTZJ5.1 (A)-T2	MTZJ4.7 (A)-T2	MTZJ4.7 (A)-T2
D309	MTZJ5.1 (A)-T2	MTZJ4.7 (A)-T2	MTZJ4.7 (A)-T2
D311	MTZJ5.1 (A)-T2	MTZJ4.7 (A)-T2	MTZJ4.7 (A)-T2
R341	1.2K	1.8K	1.8K
R342	1.2K	1.8K	1.8K
R343	1.2K	1.8K	1.8K

CRT SOCKET PWB ASS'Y
SGK-3001A-H2:[AV-31BM6 (US/CA)]
SGK-3002A-H2:[AV-31BP6 (US/CA)]

MODEL LIST

SGK-3001A-H2	AV-27BM6(U/C) AV-2776S(U/C) AV-31BM6(U/C/B) AV-29BM6(T) AV-2976S(T)
SGK-3002A-H2	AV-27BP6(U/C) AV-2796S(U/C/B) AV-31BP6(U/C)
SGK-3003A-H2	AV-35BP6(U/C/B)

NOTE
SI DIODE *3 : 1SS133-T2
BW : BUS WIRE (0Ω)
OPT : NON-MOUNT (OPEN)

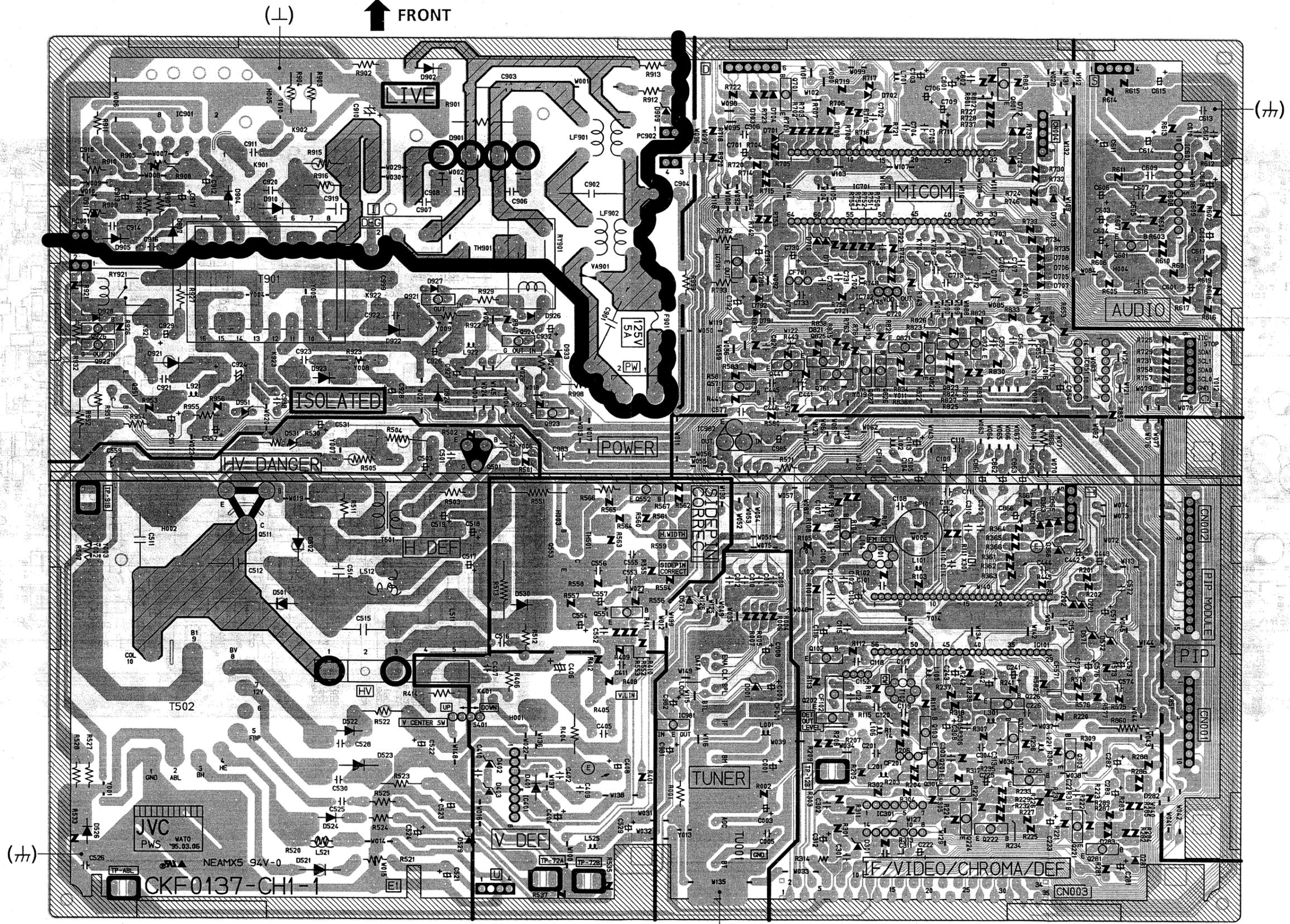
AV-31BP6
AV-31BM6

AV-31BP6
AV-31BM6

MAIN PWB PATTERN

[SGK-1003A-H2 (AV-31BM6(US&CA))]
[SGK-1004A-H2 (AV-31BP6(US&CA))]

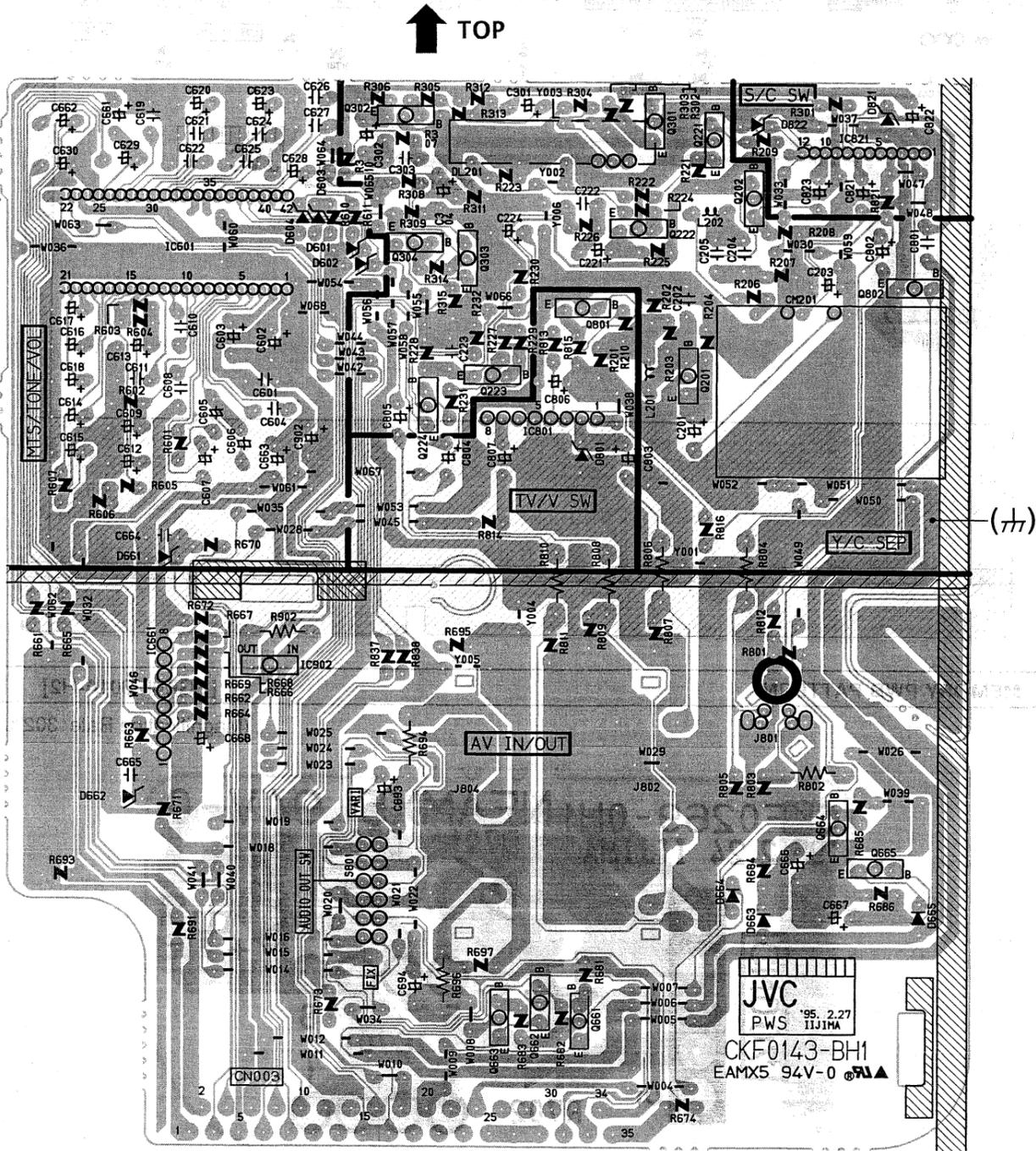
(Magnification Rate 92%)



AV SELECTOR PWB PATTERN

[SGK-8001A-H2 (AV-31BM6(US&CA))]

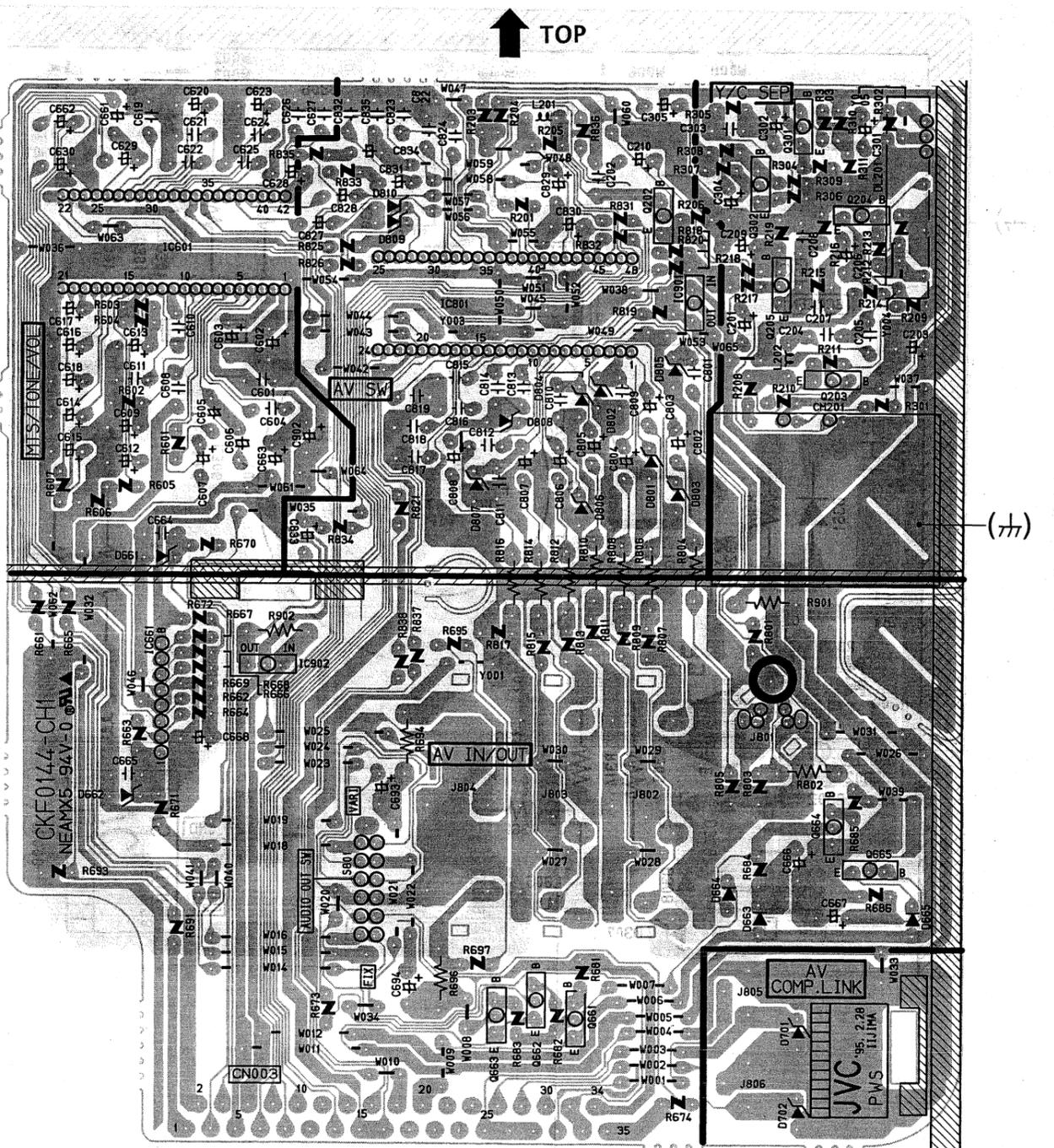
(Magnification Rate 104%)



AV SELECTOR PWB PATTERN

[SGK-8002A-H2 (AV-31BP6(US&CA))]

(Magnification Rate 104%)



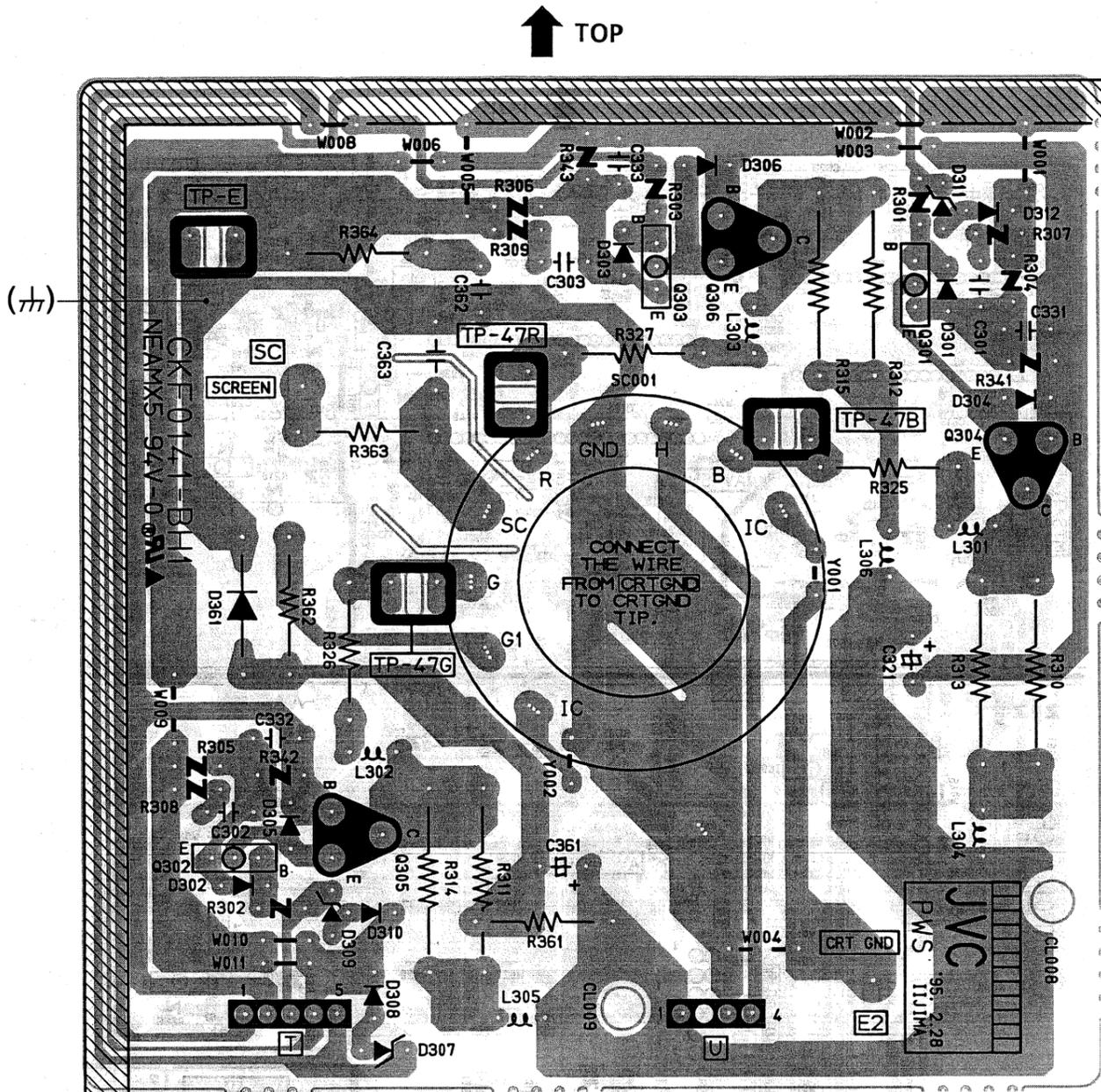
AV-31BP6
AV-31BM6

AV-31BP6
AV-31BM6

CRT SOCKET PWB PATTERN

[SGK-3001A-H2 (AV-31BM6(US&CA))]
[SGK-3002A-H2 (AV-31BP6(US&CA))]

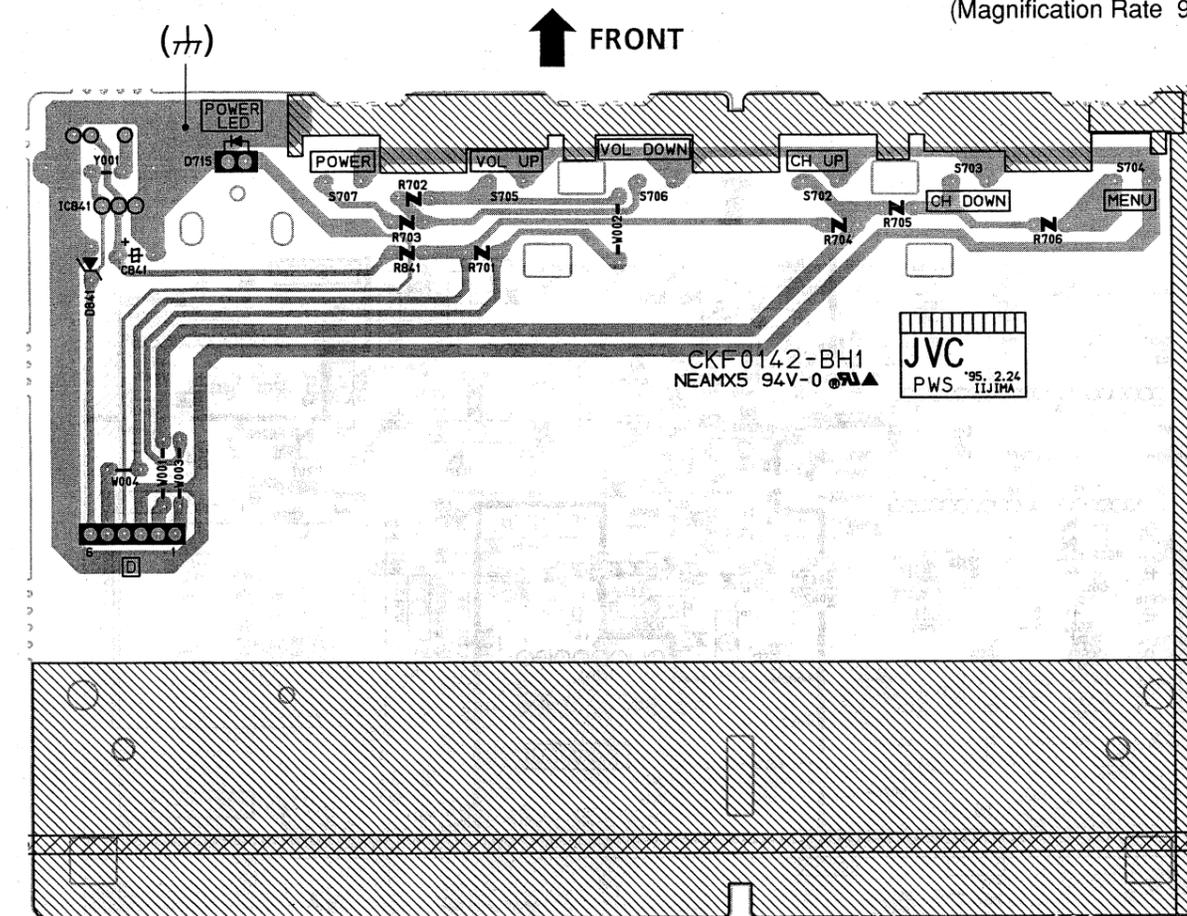
(Magnification Rate 148%)



FRONT CONTROL PWB PATTERN

[SGK-4001A-H2]

(Magnification Rate 96%)



MEMORY PWB PATTERN

[SGK0M001A-H2]

(Magnification Rate 302%)

