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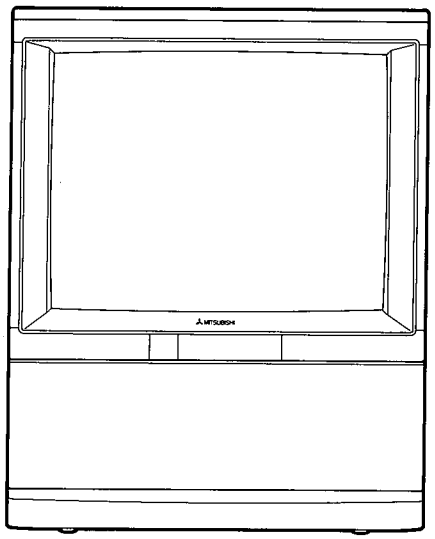
1991

MITSUBISHI

Service Manual



35″ CONSOLE COLOR TV
CHASSIS Family WA−C

1258

MODEL

CK-3526R
CK-3527R

CAUTION

Before servicing this chassis, it is important that the serviceman reads the ″ SAFETY PRECAUTIONS″ and ″ PRODUCT SAFETY NOTICE″ in this service manual.

SPECIFICATIONS

· **Power Input**	AC 120V ; 60Hz
· **Power Consumption**	240W
· **Reception Frequency**	VHF 54~168MHz, 174~468MHz UHF 470~890MHz
· **Intermediate Frequency**	Video IF Carrier 45.75MHz Sound IF Carrier 41.25MHz Color Sub−carrier 42.17MHz
· **Speaker**	4″ Round 2pcs 8Ω
Picture tube	M89KRP11X 35″ V 110° Deflection
· **Cabinet Dimensions**	44.3″ (H) ×34.8″ (W) ×24.0″ (D) 〔CK-3526R〕 43.0″ (H) ×36.5″ (W) ×24.3″ (D) 〔CK-3527R〕
· **Weight (Net)**	260.0lbs 〔CK-3526R〕 262.5lbs 〔CK-3527R〕

· **Special Features**

* New″ WA″ chassis 100% solid state.
* 10 key Frequency Synthesizer tuning system. (FS−A91)
* Multichannel sound reception.
* High quality audio.
* 43 Function Infra−red Remote control.
* Mid, Super, Hyper & Ultra band Cable−ready. (181ch).
* CRT display.
* Full−square Black Matrix D−II picture tube.
* S−Video IN terminal.(Ext−1)
* Video IN (Ext−1/Ext−2) /OUT terminal. Audio IN (Ext−1/Ext−2),(L/R) /OUT terminal (L/R).
* Noise Reduction.
* Peak ACL.
* Scanning Velocity Modulation.
* Color Temperature control.
* Black level correction.
* Dynamic γ Correction.

MITSUBISHI ELECTRONICS AMERICA, INC.
5757 Plaza Drive P.O. Box 6007 Cypress, Califrnia 90630-0007.

SAFETY PRECAUTIONS

NOTICE : Observe all cautions and safety related notes located inside the receiver cabinet and on the receiver chassis.

WARNING

1. Operation of this receiver outside the cabinet or with the cover removed presents a shock hazard from the receiver power supplies. Work on the receiver should not be attempted by anyone who is not thoroughly familiar with the precautions necessary when working on high-voltage equipment.
2. Do not install, remove or handle the picture tube in any manner unless shatter-proof goggles are worn. People not so equipped should be kept away while the picture tube is being handled. Keep the picture tube away from the body while handling.

X-RADIATION WARNING

The surface of the picture tube may generate X-Radiation. Precaution during service and, if possible, the use of a lead apron is recommended for shielding while handling.

When replacing the picture tube, use only the designated replacement part since it is a critical component with regard to X-Radiation as noted above. (No high-voltage adjustments are provided.) The high-voltage specification is described on cover page.

LEAKAGE CURRENT CHECK

Before returning the receiver to the customer, it is recommended that leakage current be measured according to the following methods.

1. Cold Check

With the AC plug removed from the 120V AC source, place a jumper across the two AC plug prongs. Turn the receiver AC switch on. Using an ohm-meter, connect one lead to the AC plug and touch the other lead to each exposed metal part (antennas, handle bracket, metal cabinet, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistance reading of 1 meg ohm. Any resistance below this value indicates an abnormality which requires corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

2. Hot Check

Use the circuit in Fig. 1 to perform this test.

(1) With switch S1 open, connect the receiver to the measuring circuit. Immediately after connection, measure the leakage current using both positions of switch S2, and with the switching devices in the receiver in all of their operating positions.

(2) Switch S1 is then closed, energizing the receiver. Immediately after closing the switch, measure the leakage current using both positions of switch S2, and with the switching devices in the receiver in all of their operating positions. Current measurements of items (1) and (2) are to be repeated aftrer the receiver has reached thermal stabilization. The leakage current shall not be more than 0.5 milliampere.

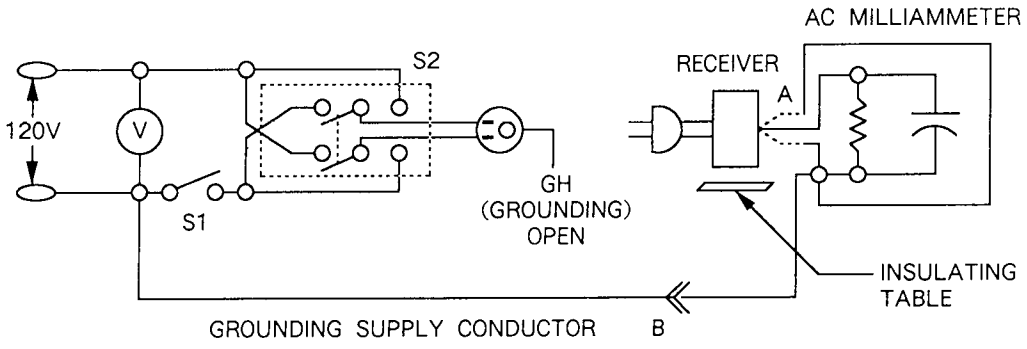


Fig. 1

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the television receivers 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 this service manual.
Electrical components having such features are identified by shading on the schematic diagram and the parts list of this service manual and by marking of the supplementary sheet for this chassis to be issued subsequently.
Therefore replacements for any safety parts should be identical in value and characteristics.

DISASSEMBLY PROCEDURE

REMOVAL OF PCB
- PCB-DEFL
- PCB-SIGNAL
- PCB-Y/C
- PCB-CONTROL
- PCB-PIP
- PCB-CRT
- PCB-SPWR/DBF

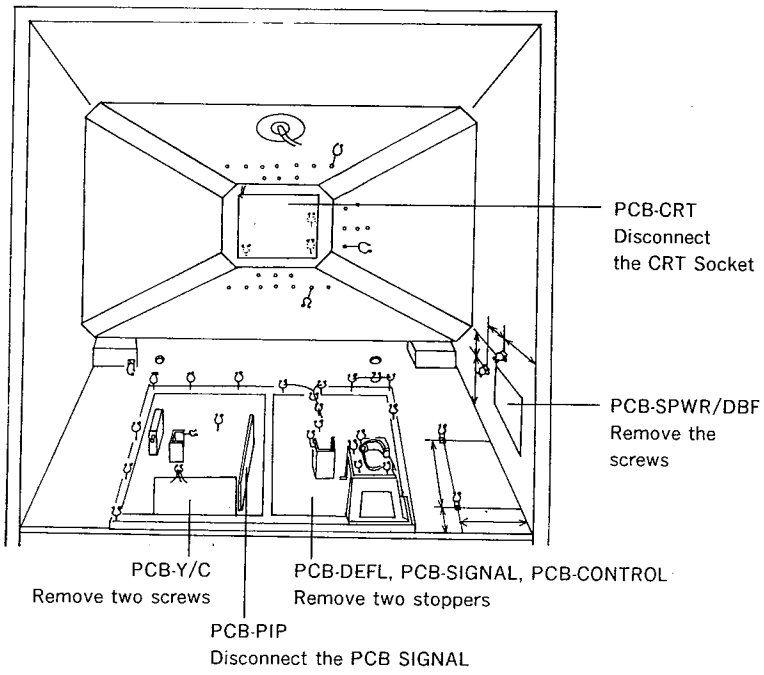


Fig. 1−1

※When servicing PCB-Y/C and PCB-PIP use the service JIG (Parts No. 859C431020) for easier service.

CAUTION

When the connector-lead [P V] is used pin4-pin4, insert the connector following.

① Insert connector-lead to connector [P V] on PCB-DEFL as shown.

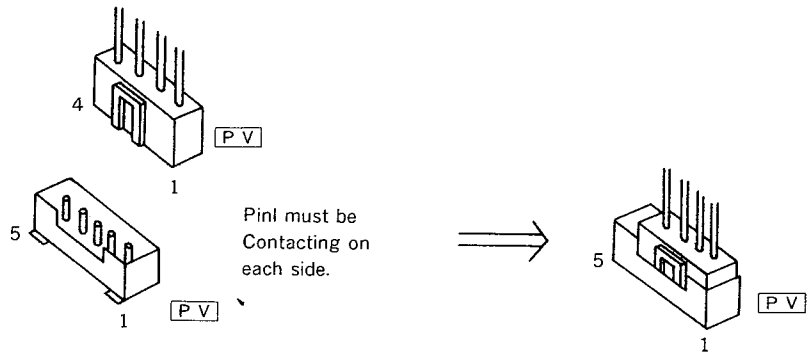


Fig. 1−2

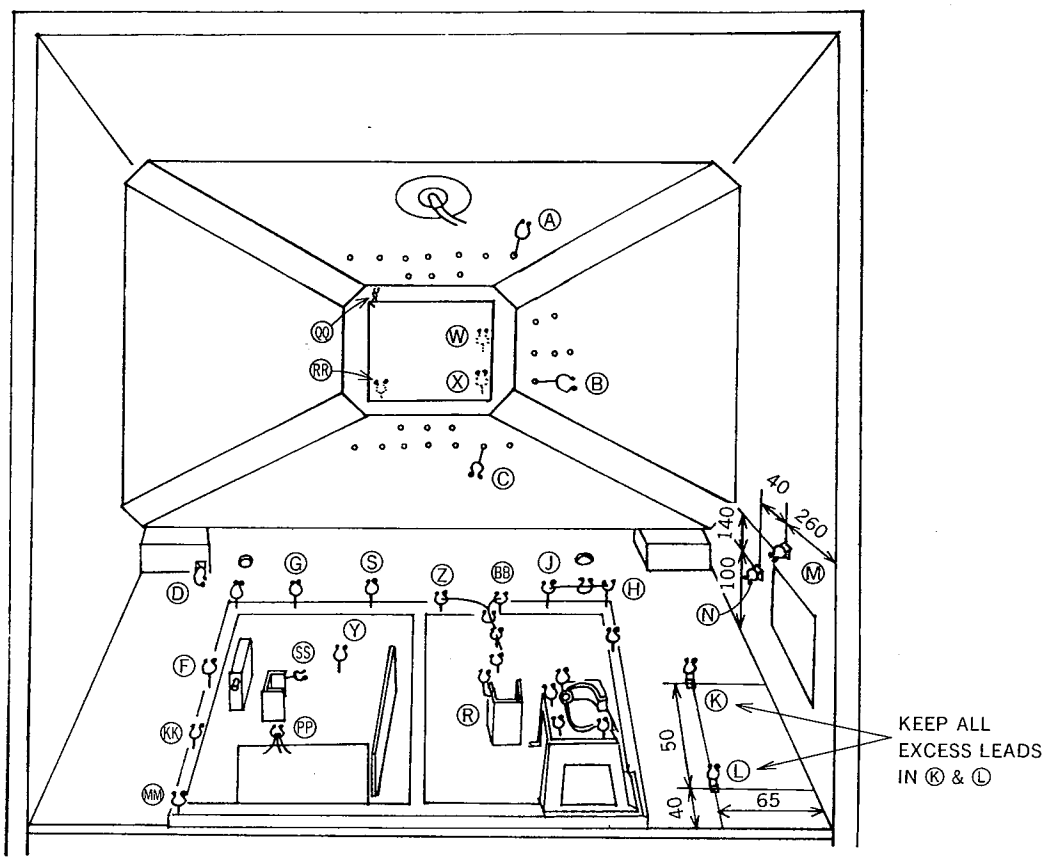
LEAD DRESSING

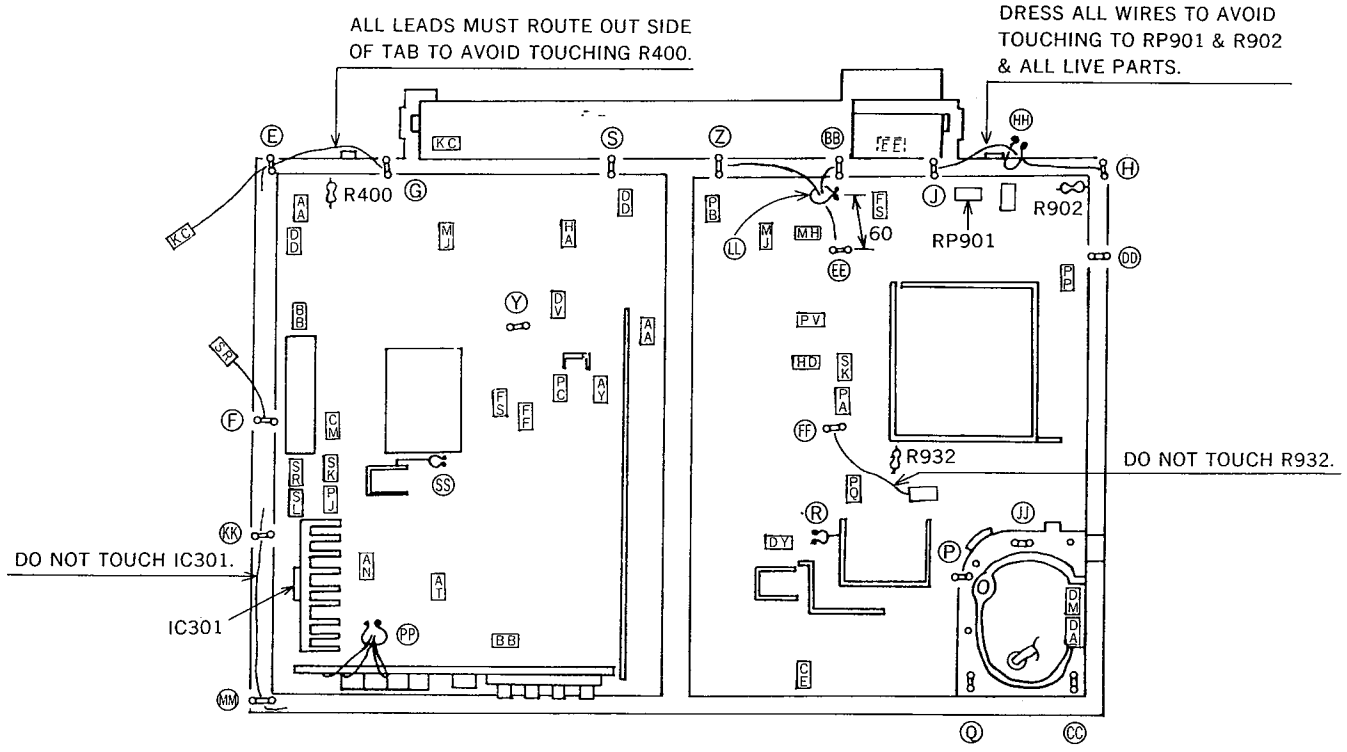
Wiring

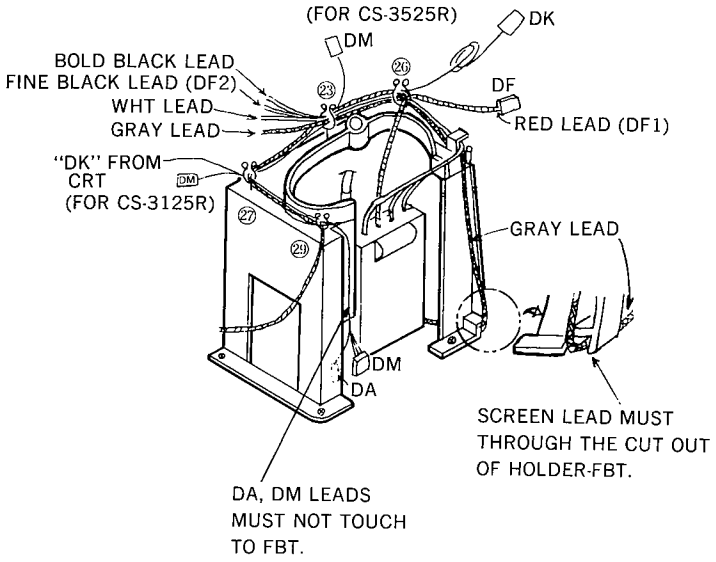
The lead wires to be clamped are listed in the table below.

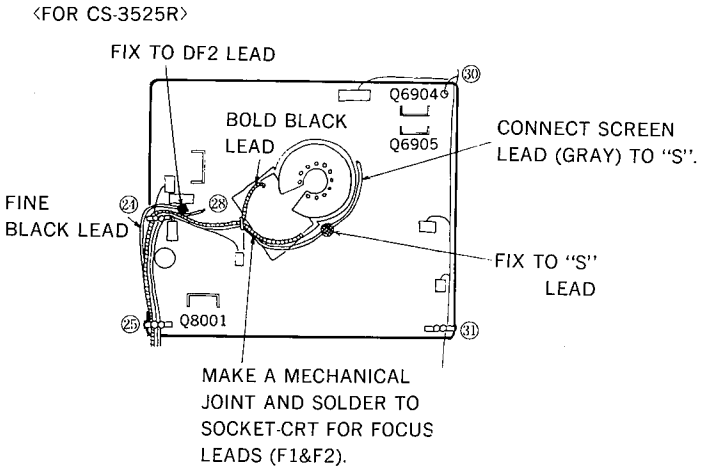
Note: •The inner wires are routed or clamped so that they do not come close to the heat generating or high-tension parts. After servicing route all wires in their original position.

The anode lead wires are routed so no tensile strength is applied to the anode cap. If the mounting angle of the anode cap and the route of the anode lead wires are changed, return them to the initial angle and route.









CLAMPER LIST FOR CONNECTOR LEAD

CONNECTOR LEAD	CLAMPER MARK
ANODE-LEAD	A—B
COAXIAL-CABLE	KK—MM
FOCUS-LEAD-1	JJ—P—X—W—AA
FOCUS-LEAD-2	JJ—P—X—W—AA
SCREEN-LEAD	JJ—P—X—W—AA
EARTH-LEAD	C
AA	E—G
AN	PP
AT	PP
AY	SS—PP
BB	SS
CB	W—X
CC	W—X
CE	Q—P—R—C
CM	KK—MM
DA	CC—Q—X—W
DC	J—H—N—M
DD	E—G—S
DF	CC—L
DF1	JJ—P—Q—CC
DF2	JJ—P—X
DK	L—CC—Q—X—W
DM	CC—Q—X—W

CONNECTOR LEAD	CLAMPER MARK
DV	Y—SS—RR—QQ
DY	C
FF	Y—S—G—E—D
FS	Y—S—Z—BB
HA	Y—SS—RR
HD	FF—R—X—W
KC	D
MH	EE—FF
MJ	S—Z—LL
PA	FF—R—RR
PB	Z—J—HH—H—K
PC	Y—S—Z—BB—J—H—N—M
PP	HH—H—DD—K
PQ	FF—EE—LL—BB—J—HH—H—K—L
PS	F—E—G—S—Z—BB—J—HH—H—N—M
PV	EE—LL—BB—J—HH—H—N—M
SK	F—E—G—S—Z—LL—EE
SL	F—E—D
SR	F—E—D

REPLACING THE PICTURE TUBE

Note : Replacement of the CRT requires the use of 3 persons. Follow the procedure as outlined below.

1. Remove the 15 screws retaining the BACK BOARD, as shown in Fig. 2-1.
2. Remove the lead clamper and connector anode cap.
3. Remove the PCB-DEFL, PCB-SIGNAL, PCB-SPWR/DBF and PCB-CRT.
4. Remove 4 screws retaining the shield cover, as shown in Fig. 2-2.

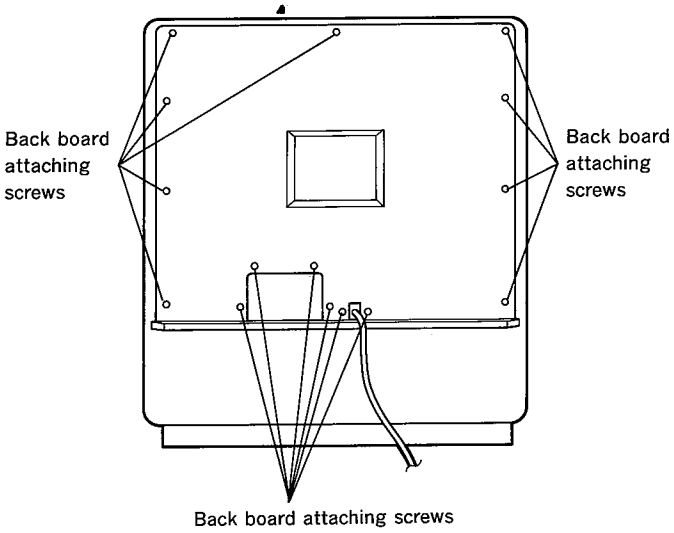


Fig. 2−1

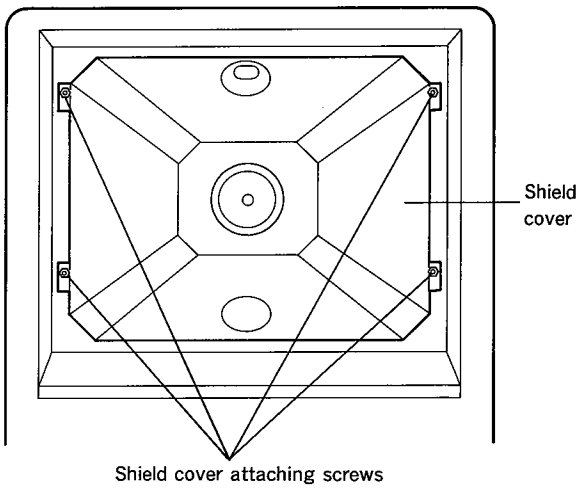


Fig. 2−2

5. Mount the set on the base so that center of picture tube is aligned with the center of the base, as shown in Fig. 2-3.

Note : Support both sides of the set so that the CRT does NOT carry the weight of the CABINET.

6. Remove the 4 CRT lock nuts, using the T driver (JIG No. 859C 358020).
7. Lower the cabinet slowly.
8. Replace the CRT with new one. For installation of the picture tube, reverse the above procedure, as shown in Fig. 2-4.

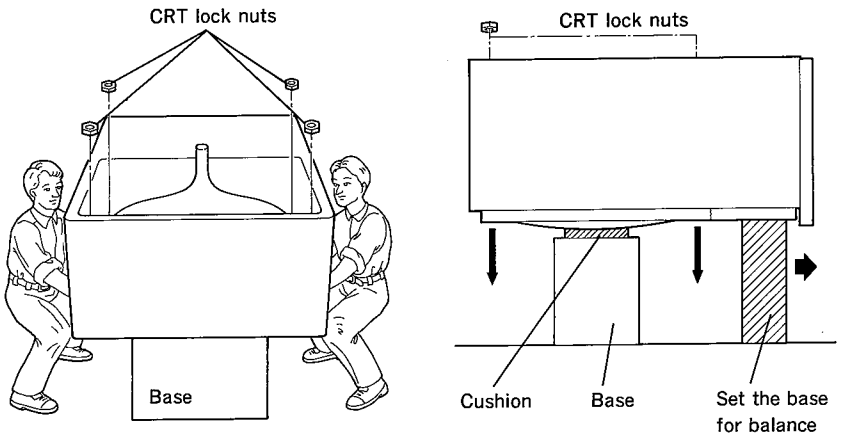


Fig. 2−3

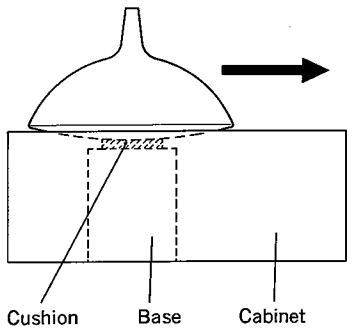


Fig. 2−4

ITC adjustment

PURITY AND CONVERGENCE

Before adjusting the INTEGRATED TUBE COMPONENT, run the CRT for more than an hour with a monochrome signal applied to give normal beam current flow.
Degauss not only the fornt and rear of the CRT but also the external magnetic shield, CRT honder, etc.
(Insufficient degaussing causes magnetization, giving an unfavorable effect on color purity adjustment.)

Purity and Convergence adjustment should be performed in the following sequence when replacing either the Picture Tube, Deflection Yoke or Purity & Convergence Magnetic Assembly.

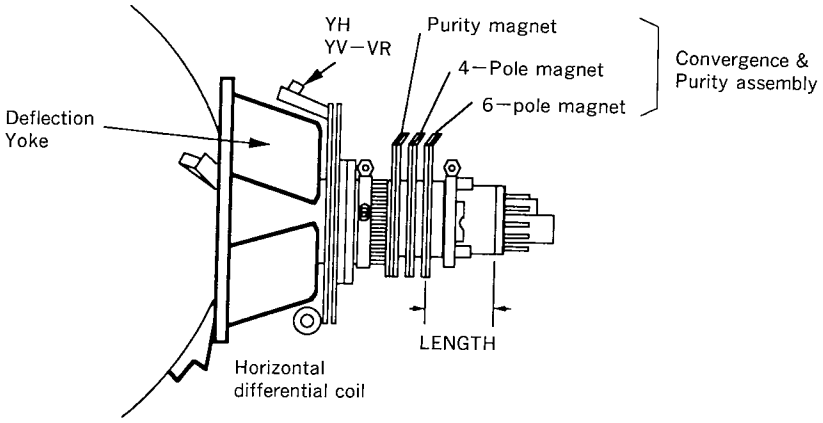
Note 1 : The picture tube provided for service is supplied in the form of an assembly with Picture Tube, Deflection Yoke and Purity Convergence magnetic assembly.
As a rule, Purity & Convergence adjustment have already been preset.at the factory, so that the regular adjustment only is required.

Note 2 : When replacing either the Deflection Yoke or Purity & Convergence Magnetic Assembly, follow procedures (1) through (5).

Note 3 : If purity adjustment only is required, with no components replaced, follow "REGULAR ADJUSTMENT".

Procedure

(1) Remove the deflection yoke and rubber wedges from the picture tube cone with care not to strike or scratch the cone surface.
(2) Clean the remaining coment off the deflection yoke and the surface of the picture tube cone.
(3) Put the deflection yoke on the neck of the picture tube, fully forward against cone.
(4) Put the Purity & Convergence assembly on the neck of the picture tube so that the distance between the 6−pole magnet and the base of the tube is 1.77±0.04 inches (45±1.0mm) as shown in Fig. 5−1, and tighten screw by hand.
(5) Demagnetize the front and sides of the picture tube with a degaussing coil.



CRT	LENGTH
M89KRP11X	1.77±0.04inches (45±1.0mm)

Fig. 5−1

Preliminary Adjustment

1. Purity

(1) Tune receiver to a monochrome signal.
(2) Set the B−CUT−OFF switch S6902 to up side position (switch "ON") on PCB CRT to produce a yellow raster.
(3) With the deflection yoke positioned fully forward, adjust the purity magnet so that the yellow bar is at the center of the screen with normal vertical centering.
(4) Slide the deflection yoko slowly backwards to produce a uniform yellow raster.
(5) Produce the primary color rasters: red, green and blue, and make sure no contamination is observed for each color.
To produce a red raster, set the B−CUT−OFF switch S6902 and the G−CUT−OFF witch S6901 to up side position (switch "ON") on PCB CRT.
To produce green and blue primary color, short−circuit the base and emitter of Q6904 (R−OUT) or set the B−CUT−OFF switch S6902 and the G−CUT−OFF switch S6901 to up side position (switch "ON") on PCB CRT.
Temporarily fasten the deflection yoke.
(6) Re−set S6902 and S6901 to center position (switch "OFF") on PCB CRT.

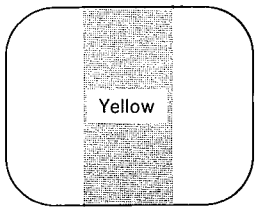


Fig. 5−2

2. Static Convergence Adjustment

(1) Tune the receiver to a crosshatch signal.
(2) Set the BRIGHTNESS control to center position and CONTRAST control to maximum position.
(3) Adjust the degree of ohe angle of the 4−pole magnet and the angular position of them to converge the "B" beam and "R" of the screen.
[Refer to Fig. 5−3 (b)]
(4) Adjust the degree of the angle between the tabs of the 6−pole magnet and the angular position of them to converge the 'B" beam and "R" to the center beam "G" at the center of the screen. [Refer to Fig. 5−3 (c)]
(5) If necessary, repeat the above steps.

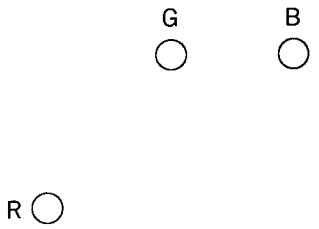


Fig. 5−3 (a)
Before Adjustment

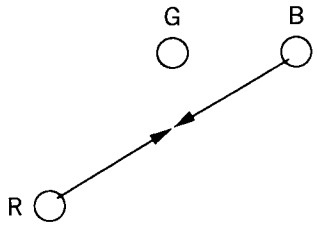


Fig. 5−3 (b)
Adjustment by
4−pole Magnet

Fig. 5−3 (c)
Adjustment by
6−pole Magnet

Note :

* The 4−pole magnet moves "B" and "R" beams in opposite direction the same distance.
* The 6−pole magnet moves "B" and "R" geams in the same direction the same distance.
* The center beam "G" is not movable by the 4−pole and 6−pole magnet.

3. Focus Adjustment

(1) Suppy a gray scale signal with window.
(2) Observing around the vertical line, adjust FOCUS−2 control for best overall focus.
(3) Observing around the horizontal line, adjust FOCUS−1 control for best overall focus.
(4) Repeat step 2 and 3 three times or more until no further improvement is noted.

Regular Adjustment

1. Purity

Tune receiver to a monochrome signal.

(1) Set the B−CUT−OFF switch S6902 to up side position (switch "ON") on PCB CRT to produce a yellow raster.
(2) Loosen the deflection yoke screw and move it forward. Make certain that the yellow bar is at the horizontal center. If necessary, adjust purity magnets to center it.
(3) Slide the yoke backwards to produce a uniform yellow raster.
(4) Using the same procedure as for Preliminary adjustment, produce red, blue and green primary color raster and make sure no contamination is observed for each color.
(5) If necessary, repeat above steps.
(6) Tighten the yoke in position.
(7) Re−set S6902 and S6901 to center position (switch "OFF") on PCB CRT.

Note: When adjusting the deflection yoke position, never touch any portion of the yoke other than the screw. Do not touch the purity ring magnet unless absolutely, necessary, in which case carry out the preliminary purity adjustment procedures again.

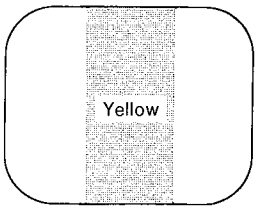


Fig. 5−4

Screen corner landing compensation

* The steps described below are for correcting outward color beam divergence at screen corners. Take reversal placement of the magnetic pieces for correcting inward divergence.
(1) Degauss the unit.
* Do not use any degaussing coil other than the built−in degaussing coil since the external coil may fail degaussing and worse, will magnetize the TV set.
(2) Receive the red, green or blue signal.
(3) Make sure that the color other than the received color does not appear at a corner of the screen. If appears, attach magnetic pieces (up to 3 pieces at a position) on the funnel of the CRT so that the color disappears.
(Magnetic piece part number : 461D033020)

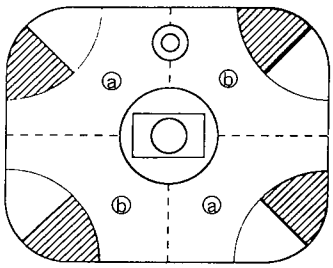


Fig. 5−5

When an undesirable color appears at the area ⓐ in the figure above, attach the magnetic pieces on the opposite surface of the funnel with the magnetic pieces on the opposite surface facing outside.

When an undesirable color appears at the area ⓑ in the figure above, attach the magnetic pieces on the opposite surface of the funnel with the surface facing inside.

(CAUTION)

The magnetic piece will distort raster and disturb convergence system. Do not place amagnetic piece at a distance less than 1.97inches (50mm) away from the bobbin of the deflection yoke.

If an undesirable color appear at area shown [ ], move the magnetic piece leftward (counterclockwise) until the color disappears.

If an undesirable color appear at area shown [ ], move tge magnetic piece rightward (clockwise) until the color disappears.

After correction, degauss the set and then check the screen corners for discoloration. If exists, fine adjust the magnetic pieces for that corner.

Repeat degaussing and checking.

2. Focus Adjustment

(1) Supply a gray scale signal with window.
(2) Observing around the vertical line, adjust FOCUS−2 control for best overall focus.
(3) Observing around the horizontal line, adjust FOCUS−1 control for best overall focus.
(4) Repeat step 2 and 3 three times or more until no further improvement is noted.

3. Static Convergence Adjustment

(1) Tune the receiver to a crosshatch signal.
(2) Set the BRIGHTNESS control and CONTRAST control in the standard positions.
(3) Adjust the degree of the angle of the 4−pole magnet and the anguler position of them to converge the "B" beam and "R" of the screen.
[Refer to Fig. 5−3 (b)]
(4) Adjust the degree of the angle between the tubs of the 6−pole magnet and the angular position of them to converge the "B" beam and "R" to the center beam "G" at the center of the screen. [Refer to Fig. 5−3 (c)]
(5) If necessary, repeat above steps.

Note 1 :

* The 4−pole magnet moves "B" and "R" beams in opposite direction the same distance.
* The 6−pole magnet moves "B" and "R" beams in the same direction the same distance.
* The center beam "G" is not movable by the 4−pole and the 6−pole magnet.

Note 2 :

Never perform focus adjustment after convergence adjustments. If focus is adjusted after convergence adjustment, check convergence.

4. Dynamic convergence

YH adjustment

When color beams do not converge as they deflected upper and lower portions of the Y axist as shown at the left side of the figure below, turn the adjusting potentiometer, YH (T), on upper of the deflection yoke counterclockwise and then turn the potentiometer YH (B) clockwise until the beams come at the correct aperture mask.

* Note that the potentiometer YH (T) affects the beams at upper portion of the screen while the YH (B) at lower portion.
  [Displacement amount : +1.8mm to −1.2mm]
* Read the counterclockwise and clockwise as clockwise and counterclockwise when the beam diverging directions are opposite to the example shown in the figure below.

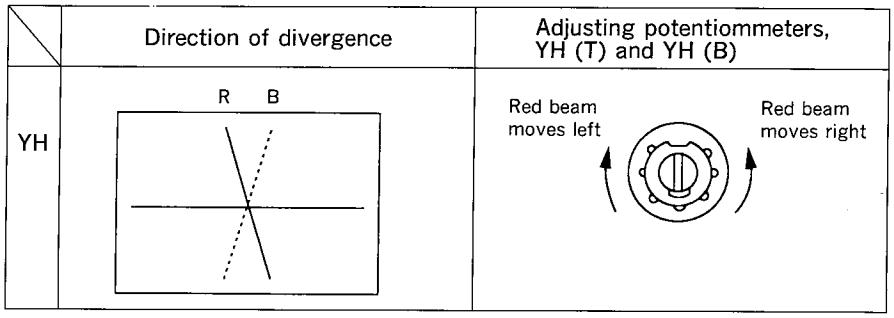


Fig. 5−6 (a)

* At their full travel end, the YH potentiometers can move the beams to approx 4.0mm. Do not turn them more than 1.5 graduations.

Fig. 5−6 (b)

YV adjustment

When beam lines do not converge at upper and lower portion of the screen, turn the adjusting potentiometer, YV, at upper of the defelection yoke clockwise.
[Displacement amount : ±1.0mm]
Read the clockwise as counterclockwise when the beam diverging directions are opposite to the example shown in the figure below.

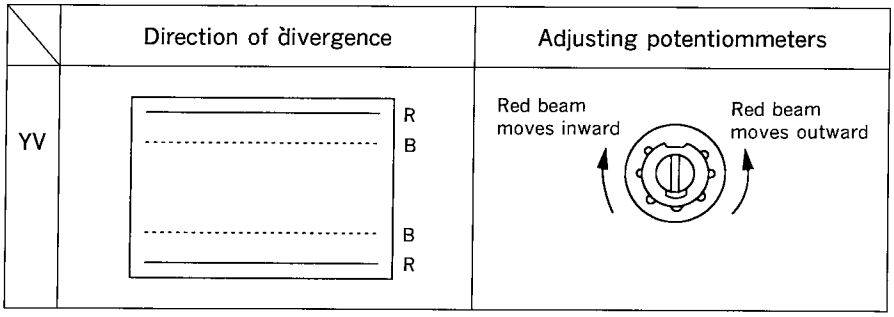


Fig. 5−6(c)

XV adjustment	Adjust vertical cross (XV) with the horizontal differential coil as illustrated below.

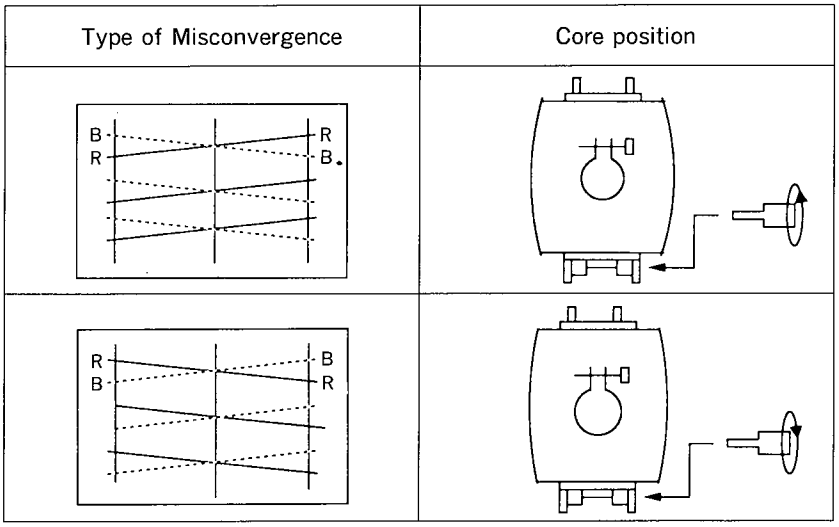
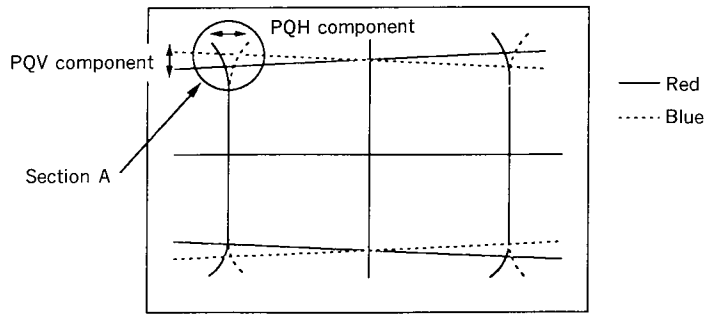
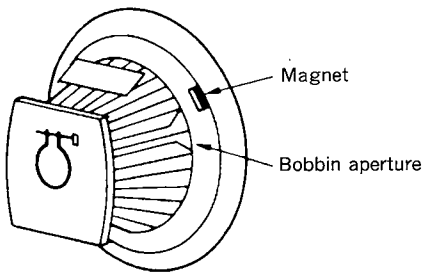


Fig. 5−7

If convergence is poor at corners, place the magent at the aperture of the deflection yoke bobbin as shown in Fig. 5−8 so that PQH (Pin cushion quality H) and PQV (Pin cushion quality V) components shall be minimized.
To correct the A section of the screen in Fig. 5−8, stick a magnets to the position shown in Fig. 5−8 below.
(Part No. of the magnet : 461D017010)



(Misconversion pattern)



Magnet mounting position
(Rear view of deflection yoke).

Fig. 5−8

5. After the position of the wedges have been decided, gently turn up the end of the wedge and strip the tape from the rear of the end to expose the adhesive material, then adhere to the picture tube cone.
Apply, silicone grease TSE392−C (Parts No. 859D106020) between wedges and the picture tube cone. (Fig. 5−10)

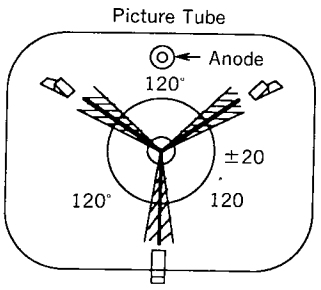


Fig. 5−9

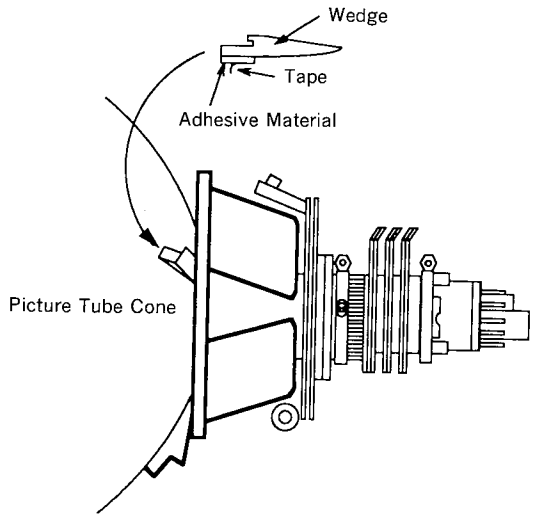
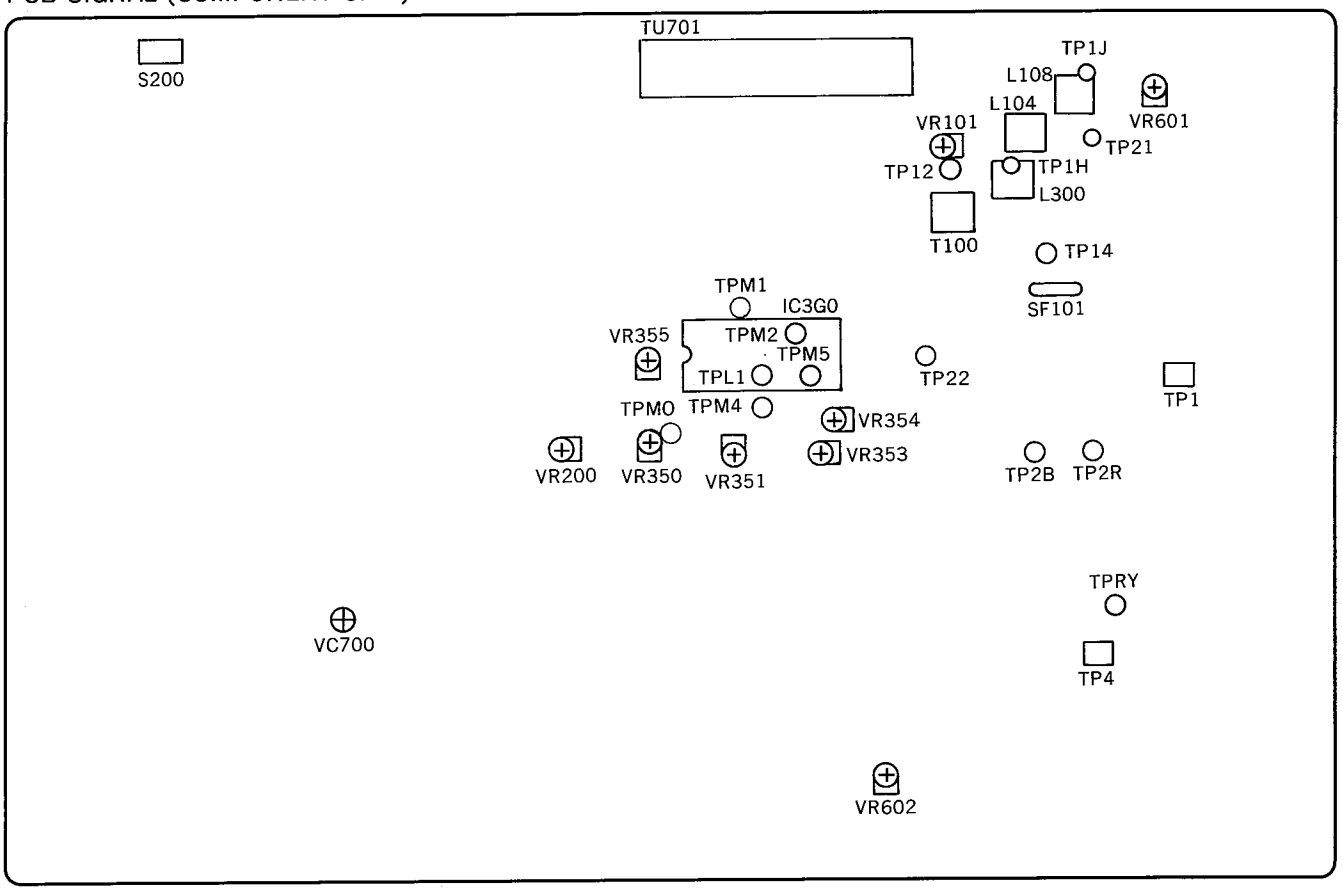


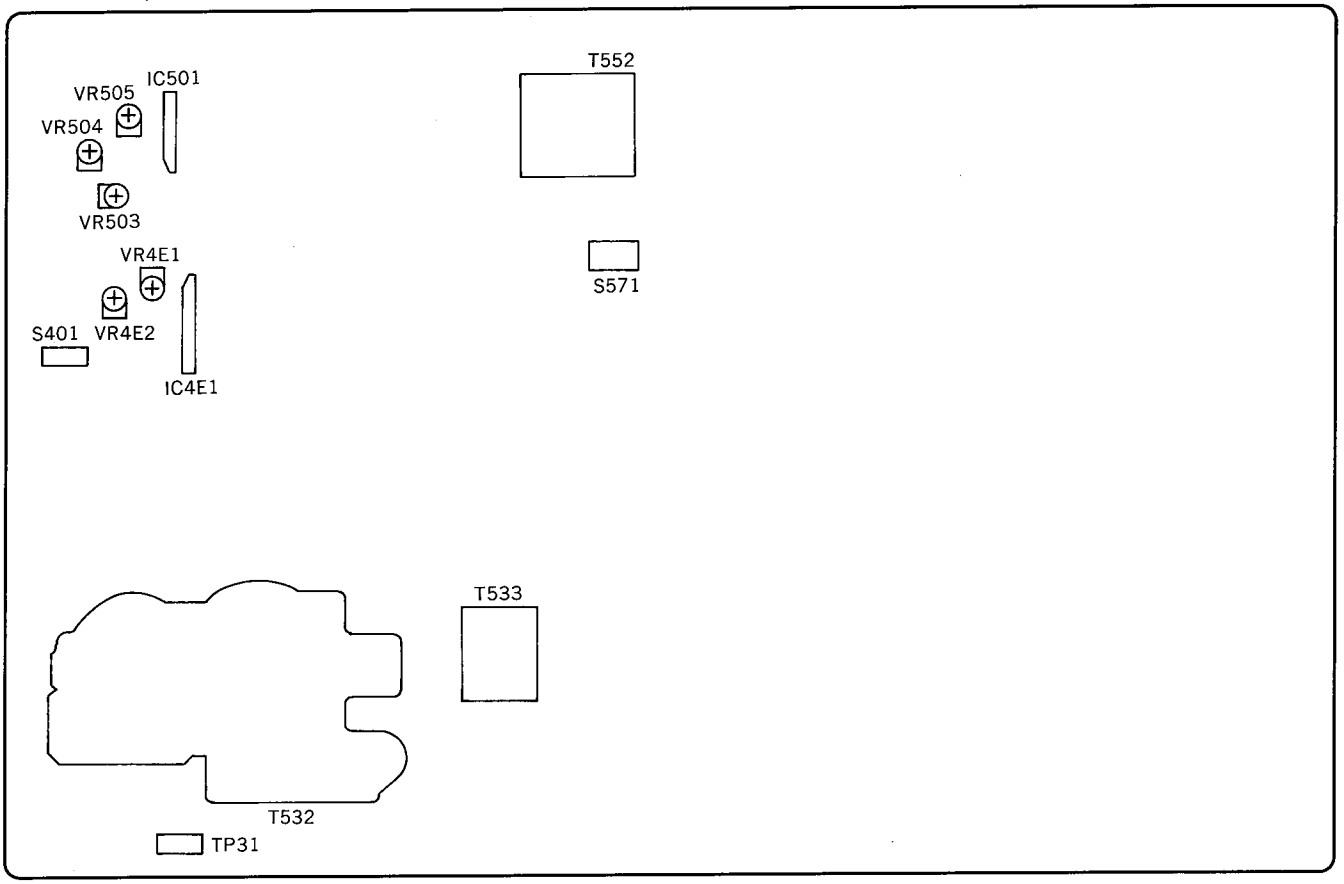
Fig. 5−10

LOCATION OF TEST POINTS AND ADJUSTMENTS

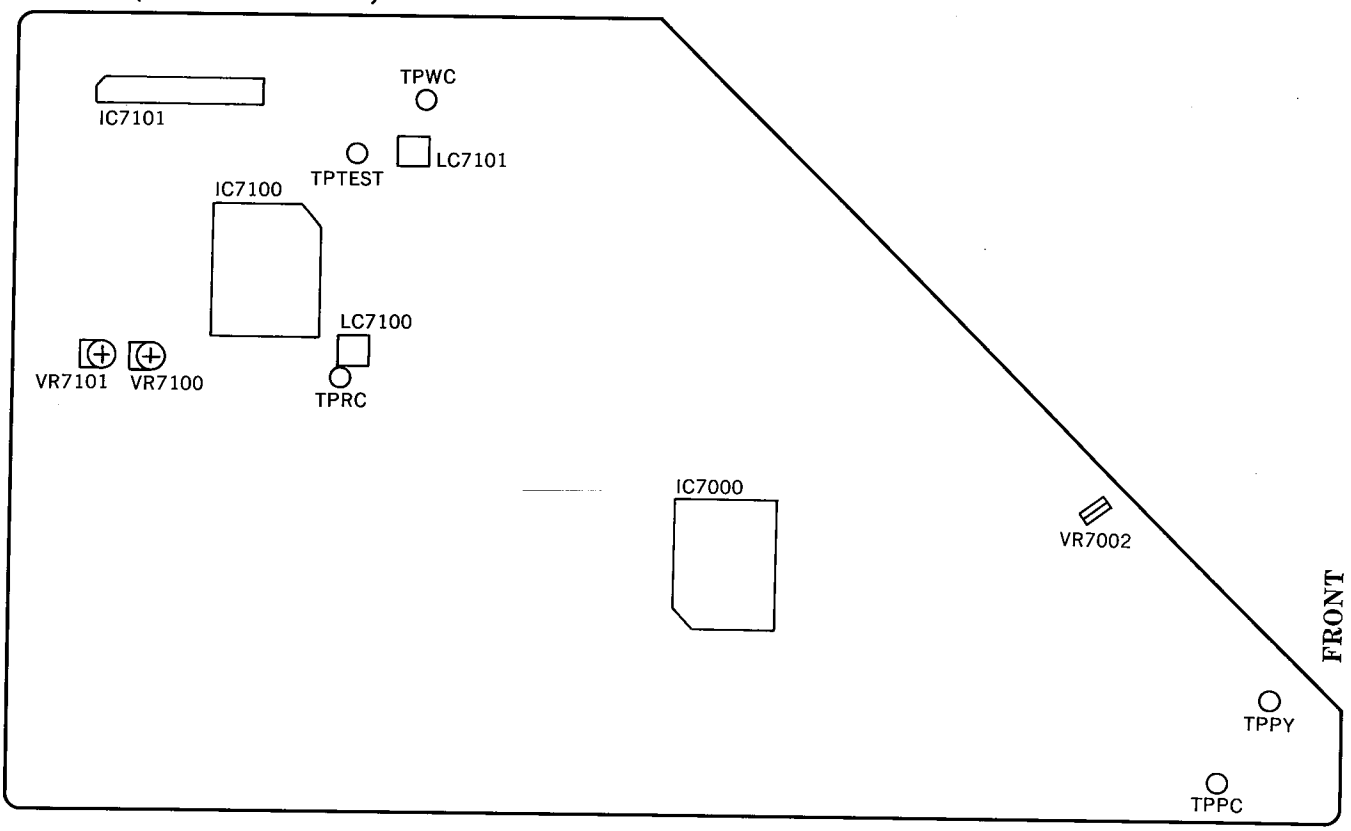
PCB SIGNAL (COMPONENT SIDE)



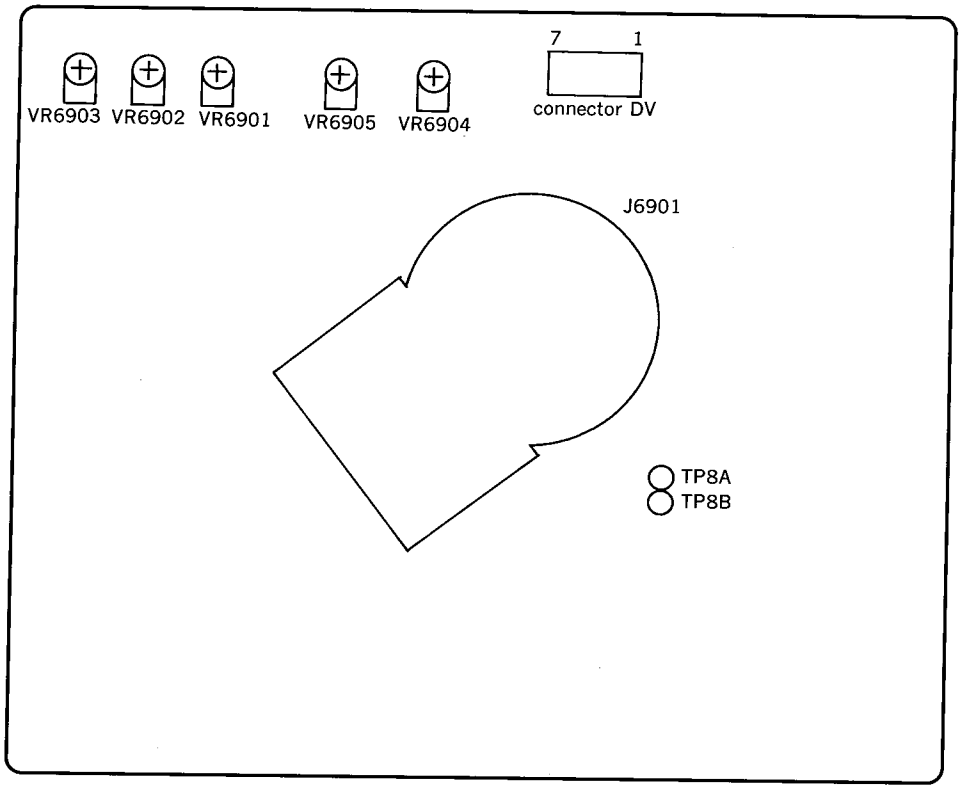
PCB DEFL (COMPONENT SIDE)



PCB PIP (COMPONENT SIDE)



PCB CRT (COMPONENT SIDE)



Jigs of Adjustment

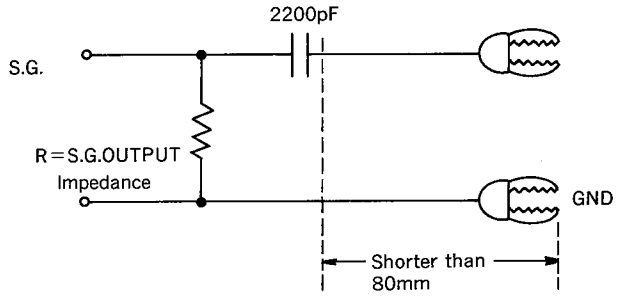


Fig. A

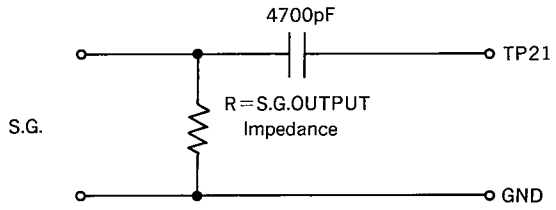


Fig. B

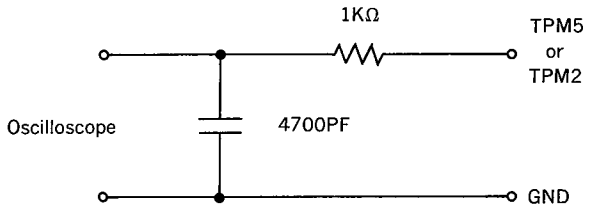
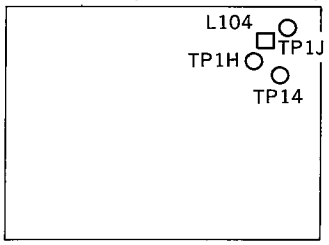
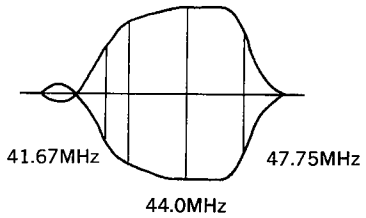
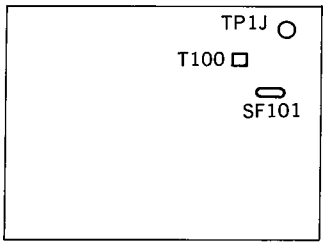
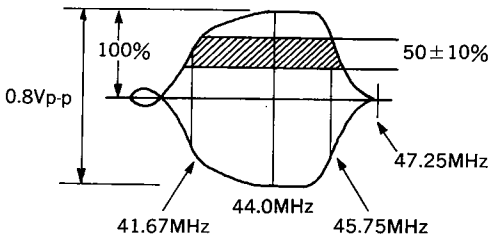
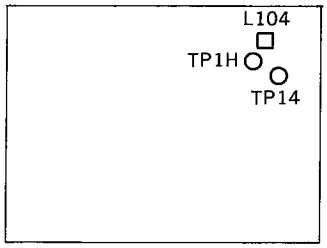
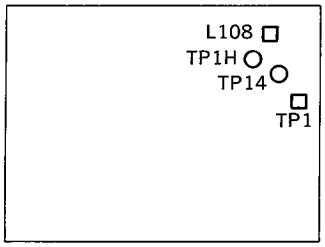
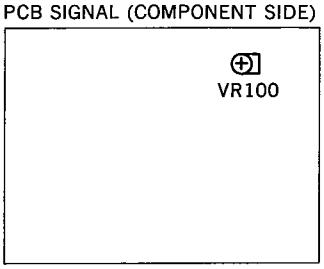
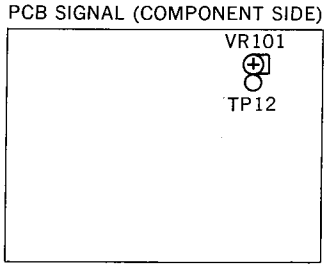
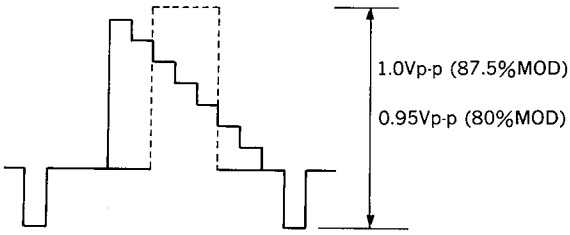
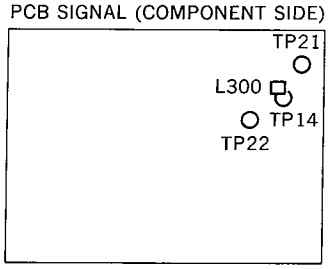
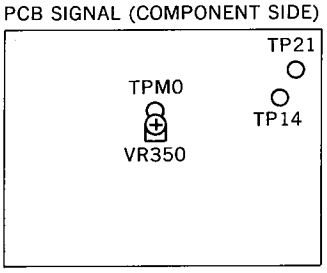
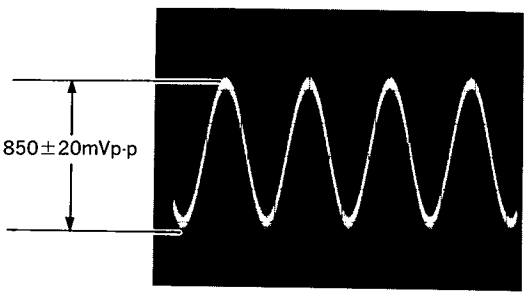
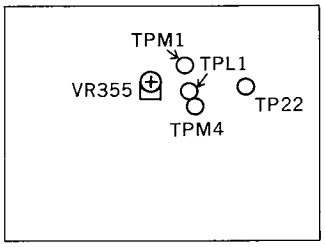
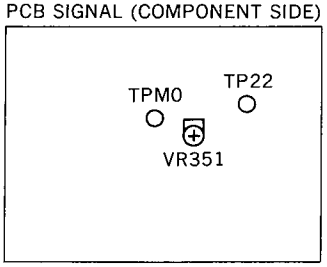
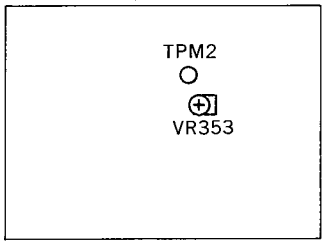


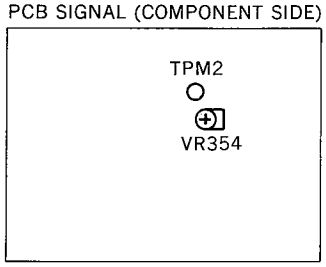
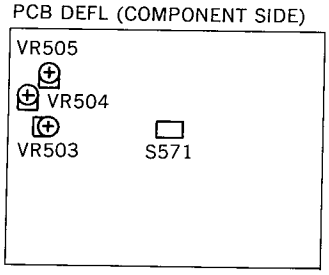
Fig. C

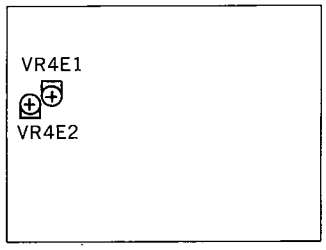
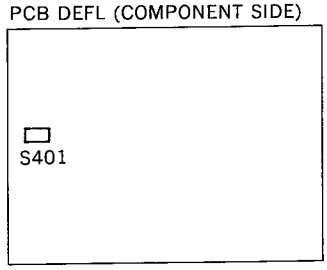
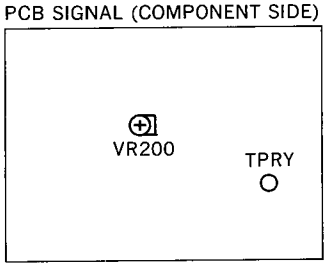
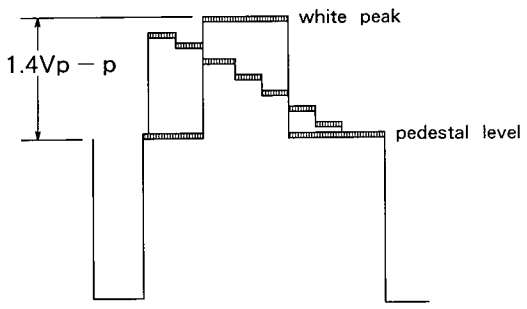
NO.	ITEM	ADJ. METHOD	ADJUSTMENT PROCEDURE
		IF Circuit	
1	VCO Free run Frequency (Coarse adjustment)	· Connect oscilloscope to TP1J. (1:10) · Referring to Fig. A, page 14, connect sweep generator to the tuner test point. · Connect an adjustable power supply to TP14. PCB SIGNAL (COMPONENT SIDE)  	1. Select VHF-High band. Set the tuning voltage to 20V. 2. Connect ground to the tuner AGC terminal. 3. Apply the TP1H to ground through C-ELE (35V, 22μF). 4. Set the output of sweep generator to 75 $\pm$ 2dBμ/ load. 5. Adjust the voltage to TP14 so that the waveform on the oscilloscope is 0.8 Vp-p. 6. Adjust L104 so that the zero beat point is aligned with 45.75MHz marker on the oscilloscope. 
2	VIF ALL Over Response	· Connect oscilloscope to TP1J. (1:10) PCB SIGNAL (COMPONENT SIDE)  	This adjustment must follow the adjustment in item 1. Leave the connections made in item 1 as they are. 1. Connect C-C (B50V, 2200pF) across pins ① and ④ of SF101. 2. Adjust T100 to tune the trap frequency to 47.25MHz. 3. Remove the capacitor C-C from the pins ① and ④ of SF101. 4. Adjust the IF coil of the tuner so that the waveform on the oscilloscope becomes peak amplitude at around 44.0MHz. Make sure that the amplitude at 41.67MHz and 45.75MHz are almost the same as shown the illustration. **Note:** Make sure that there is no dip around at 44.0MHz. 

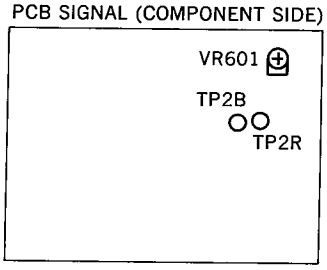
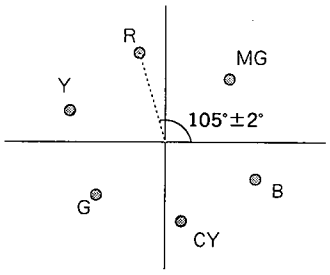
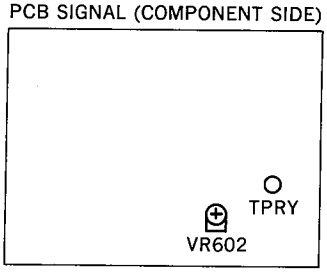
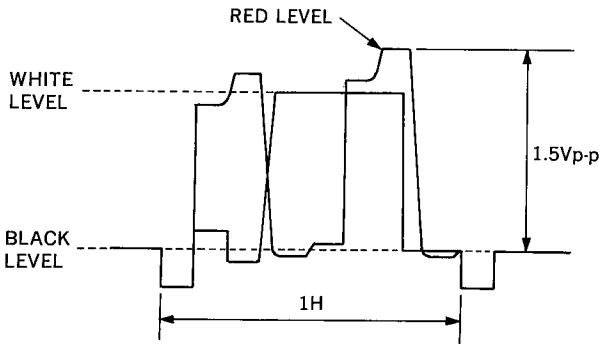
No.	ITEM	ADJ. METHOD	ADJUSTMENT PROCEDURE
3	VCO Free run Frequency (Fine adjustment)	· Connect a digital voltmeter to TP1H. PCB SIGNAL (COMPONENT SIDE)  	This adjustment must follow 100 seconds or more after power-on. 1. Connect TP14 to ground. 2. Measure the voltage on TP1H. 3. Open TP14. 4. Change the sweep generator to signal generator mode. Set the generator to 45.75MHz, sine wave and connect to the tuner test point through the circuit shown in Fig. A, page 14. 5. Adjust L104 so that the voltage reading on TP1H is the value within ± 30mV the reading measured in step 2.
4	AFT	· Open TP14 and TP1H. · Connect the signal generator (45.75MHz, 30 ± 5mVrms) to the tuner test point as shown in Fig. A, page 14. PCB SIGNAL (COMPONENT SIDE)  	This adjustment must follow the adjustment in item 3. 1. Connect the D.V.M. to TP1 (Positive lead to pin ②, negative to pin ① .) 2. Adjust L108 so that the digital voltmeter reads 2.2 ± 0.1V.
5	RF-AGC	PCB SIGNAL (COMPONENT SIDE)  	This adjustment must follow the adjustment in item 4. This adjustment should be done when there is cross modulation or the picture tears horizontally. 1. Supply RF signal. (program) 2. Turn on AFT. 3. Adjust VR100 until the symptom disappears.

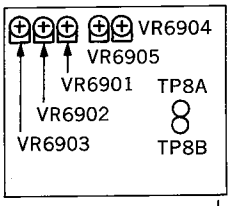
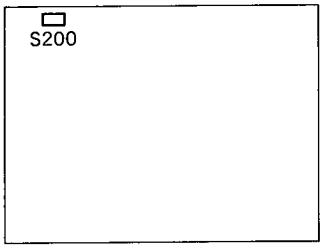
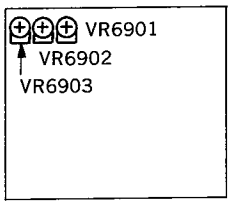
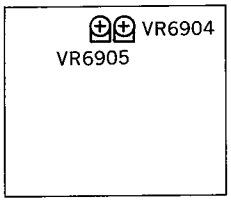
No.	ITEM	ADJ. METHOD	ADJUSTMENT PROCEDURE
6	Video Level	· Connect oscilloscope to TP12. 	This adjustment must follow the adjustment in item 4. 1. Receive color bar signal. 2. Adjust VR101 so that the signal level is 1.0 Vp-p (87.5% MOD), 0.95 Vp-p (80.0% MOD). 
		Audio Circuit	
7	FM Multiplex Audio Detect	· Connect digital voltmeter to TP22. · Set signal generator output to 4.5MHz. sine wave, 90dBμ. 	1. Apply a DC 3 ± 0.3V to TP14. 2. Referring to Fig. B, page 14, connect the signal generator to TP21. 3. Adjust L300 so that the voltmeter reads 4.0 ± 0.1V.
8	Composite Level	· Set signal generator output to 4.5MHz, sine wave, 90dBμ. · Connect oscilloscope to TPM0. 	1. Apply a DC 3 ± 0.3V to TP14. 2. 100% modulate the signal generator output with 400Hz. Connect the modulated signal to TP21 as shown in Fig. B, page 14. 3. Adjust VR350 so that the waveform on the oscilloscope is 850 ± 20mVp-p. 

No.	ITEM	ADJ. METHOD	ADJUSTMENT PROCEDURE
9	Stereo VCO	· Connect a frequency counter to TPM1. PCB SIGNAL (COMPONENT SIDE)  	1. Connect a 1/4W, 100kΩ resistor between TPL1 and TPM4. 2. Connect TP22 to ground through C-ELE (16V or more, 2200μF) 3. Adjust VR355 for 15.73 ± 0.05kHz reading on the frequency counter.
10	Filter	· Connect signal generator to TPM0 through C-ELE (50V, 10μF). · Connect oscilloscope to TPM5 through the circuit shown in Fig. C, page 14. PCB SIGNAL (COMPONENT SIDE)  	1. Connect TP22 to ground through C-ELE (16V or more, 2200μF) 2. Connect IC3G0 pin27 to ground. 3. Set the signal generator output to 15.73kHz, 100mV r.m.s. sine wave. 4. Adjust VR351 so that the waveform on the oscilloscope is minimum.
11	Separation	· Connect oscilloscope to TPM2 through the circuit shown in Fig. C, page 14. · Set multiplex audio signal generator to L-CH only, NR ON, PILOT ON, SAP OUT OFF, TELEMETRY OUT OFF with modulation at 300Hz. · Set the output level to −11 dBm. · Set RF modulator to MONO, NR OFF, PILOT OFF, SAP OUT OFF, TELEMETRY OUT OFF, and set to AUDIO mode with 25kHz deviation.	1. Set RF modulator output to 0dBm. 2. Adjust VR353 so that the waveform on the oscilloscope is minimum. PCB SIGNAL (COMPONENT SIDE) 

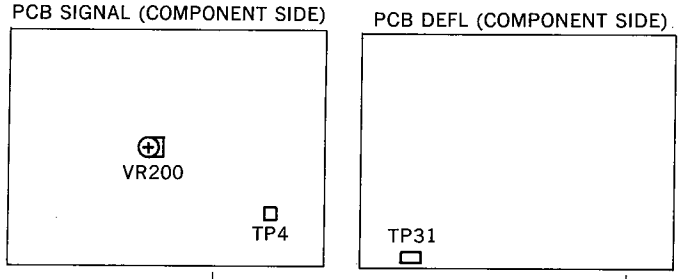
No.	ITEM	ADJ. METHOD	ADJUSTMENT PROCEDURE
12	Spectral	· Set multiplex audio signal generator to the same as in item 11. · Modulate the signal with 3kHz. · Set RF modulator output to the same as in item 11. · Connect the oscilloscope to TPM2 through the circuit shown in Fig.C, page 14. PCB SIGNAL (COMPONENT SIDE)  	This adjustment must follow the adjustment in item 11. 1. Set the output of RF modulator to 0dBm. 2. Adjust VR354 so that amplitude of 3kHz on oscilloscope is minimum.
		Video/CRT Circuit	
13	Horizontal Width and PCC Amp	PCB DEFL (COMPONENT SIDE)  	1. Connect a VCR and play an alignment tape (Monoscope). 2. Adjust VR505 so that the horizontal width to 6.5 at the sum of markers. 3. Supply EXT signal (cross hatch). 4. Observing the third vertical line from out side. 5. Adjust VR504 so that L.R. pincushion distortion is minimum. 6. Adjust VR503 for the best pincushion phase. 7. Reduce horizontal sweep width using VR505 until both right and left edges of the raster just disappear. 8. Adjust S571 to center the horizontal raster. 9. Adjust horizontal width with VR505 so that the sum of markers is 6.5.

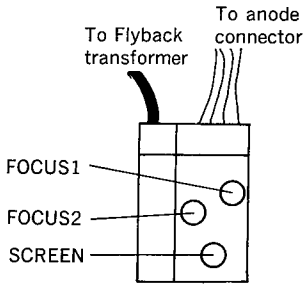
No.	ITEM	ADJ. METHOD	ADJUSTMENT PROCEDURE
14	Vertical Height Vertical Linearity	PCB DEFL (COMPONENT SIDE)  	1. Connect a VCR and play an alignment tape (Monoscope). 2. Press the "RESET" button. 3. Adjust VR4E1 so that amplitude will be 90% of the total height of screen. 4. Adjust VR4E2 to get linearity in which picture is symmetrical with respect to the center horizontal line. 5. Adjust VR4E1 so that the large circle of the monoscope, the sum of marker will be 4. **Note:** At this time, bottom side markers value must be 1.8 or more. 6. If necessary, fine adjust each VR by repeating the above steps.
15	Vertical Center Position	PCB DEFL (COMPONENT SIDE)  	1. Connect a VCR and play an alignment tape (Monoscope). 2. Press the "RESET" button. 3. Set up S401 so that U/D balance will be optimum at U/D the maker however, bottom side maker value must be 1.8 or more.
16	Sub-CONT (Preliminary Adjustment)	· Connect oscilloscope to TPRY PCB SIGNAL (COMPONENT SIDE)  	1. Supply EXT signal (split field stair step) 2. Press the "RESET" button. 3. Adjust VR200 so that the white peak is 1.4Vp-p above the pedestal level of the video signal. 

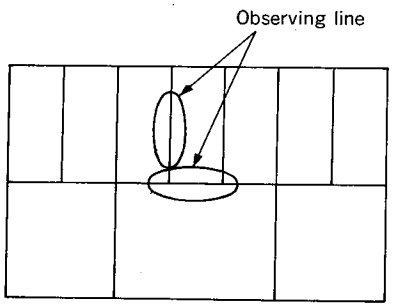
No.	ITEM	ADJ. METHOD	ADJUSTMENT PROCEDURE
17	SUB−TINT	• Oscilloscope's X−axis to TP2B • Oscilloscope's Y−axis to TP2R PCB SIGNAL (COMPONENT SIDE)  	This adjustment must follow the adjustment in item 16. 1. Supply EXT signal (color bar). 2. Adjust VR601 so that the angle of the red color vector is 105 ±2° 
18	SUB COLOR	• Connect oscilloscope to TPRY PCB SIGNAL (COMPONENT SIDE)  	1. Supply EXT signal (color bar). 2. Adjust VR602 so that the amplitude from black level to red level is 1.5Vp-p. 

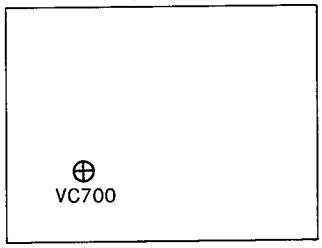
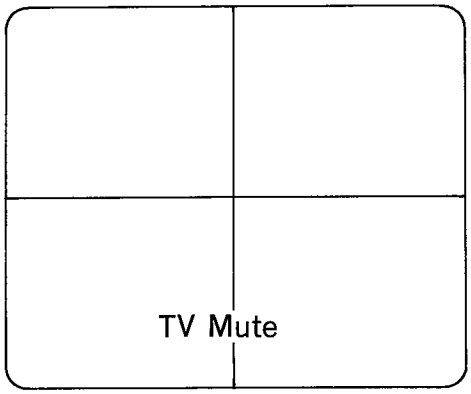
No.	ITEM	ADJ. METHOD	ADJUSTMENT PROCEDURE
19	CRT Bias PCB CRT (COMPONENT SIDE)  PCB SIGNAL (COMPONENT SIDE)  		This adjustment must be followed by item 20. 1. Connect VCR and play alignment tape (Monoscope). 2. Set the R. G. B CRT−CUT−OFF VRs (VR6901, VR6902, VR6903) must be turned fully clockwise. RED, BLUE, DRIVE ADJUST VR (VR6904, VR6905) to about 2/3 of the adjust range clockwise. 3. Display a horizontal line on the screen by service switch S200. 4. Set SCREEN VR to a point where one RED, GREEN or BLUE line becomes just visible. **Note:** If color unevenness shows on horizontal line marking adjustment difficult, short TP8A, TP8B.
20	CRT Cut Off	PCB CRT (COMPONENT SIDE)  	This adjustment must be followed by item 21. 1. Adjust RED, GREEN and BLUE CRT CUT OFF VRs so that the horizontal line will be white.
21	White	· Set COLOR TEMP switch to HIGH. **Note:** Access the On−Screen menu. PCB CRT (COMPONENT SIDE)  	1. Supply EXT signal (white). 2. Adjust VR6904 and VR6905 so that entire screen is in pure white.

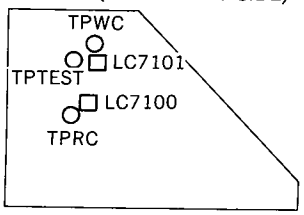
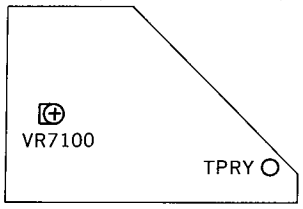
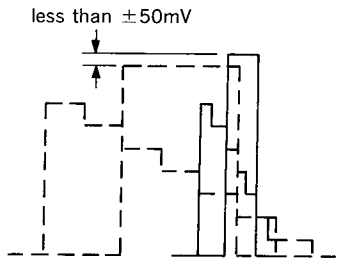
No.	ITEM	ADJ. METHOD	ADJUSTMENT PROCEDURE
22	Sub CONT	Connect D.V.M. to TP31: ⊕ to pin ⑤, ⊖ to pin ③.	1. Supply EXT signal (gray scale). 2. Short the pins ① and ② of TP4. 3. Adjust VR200 for the reading is 2630μA.
23	Focus		1. Supply EXT signal (split field stair step). 2. Observing around the vertical line, adjust FOCUS−2 control for best focus. 3. Observing around the horizontal line, adjust FOCUS−1 control for best focus. 4. Repeat step 2 and 3 three times or more.

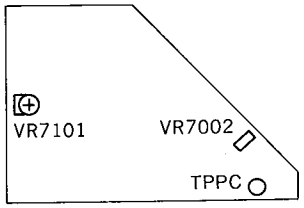
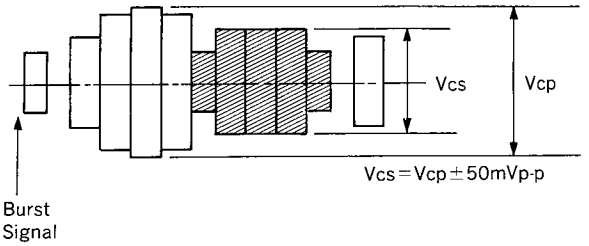
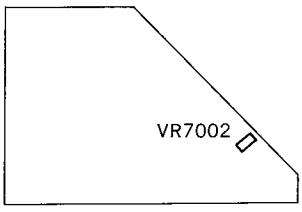






No.	ITEM	ADJ. METHOD	ADJUSTMENT PROCEDURE
24	On Screen Display	PCB SIGNAL (COMPONENT SIDE)  	1. Supply EXT signal (center cross). 2. Display "TV Mute" 3. Adjust VC700 so that the left side of the "u" is at the center of the screen width. 

No.	ITEM	ADJ. METHOD	ADJUSTMENT PROCEDURE
		PIP Circuit	
25	PIP White and Read Clock	· Connect frequency counter to TPWC · Connet frequency counter to TPRC. PCB PIP (COMPONENT SIDE)  	This adjustment should be performed with PIP PCB ASSY mounted, after preheating for a few minutes. 1. Supply RF signal (program). 2. Display the same picture for sub picture and main picture with PIP button on the remote hand unit. 3. Connect TPTEST to GND. 4. Adjust LC7101 so that the frequency is 13900 ±50 kHz. 5. Adjust LC7100 so that the frequency is 15900 ± 50kHz. 6. Open TPTEST.
26	PIP Y−Level	· Connect Oscilloscope to TPPY PCB PIP (COMPONENT SIDE)  	1. Supply EXT signal (color bar). 2. Display the same color bar for sub picture and main picture with PIP button on the remote hand unit. 3. Adjust VR7100 so that the amplitude of main and sub picture is equal (less than ±50mV difference). 

No.	ITEM	ADJ. METHOD	ADJUSTMENT PROCEDURE
27	PIP Sub— Chroma—Gain	· Connect Osillosope to TPPC PCB PIP (COMPONENT SIDE)  	1. Supply EXT signal (color bar). 2. Display the same color bar for sub picture and main picture with PIP button on the remote hand unit. 3. Set VR7002 to the center position. 4. Adjust VR7101 so that the chroma component of the sub picture (Vcs) corresponds with the chroma component of the main picture (Vcp) to decrease the difference of chroma gain between sub picture and main picture. 
28	PIP Sub Tint	PCB PIP (COMPONENT SIDE)  	This adjustment should be performed, after preheating for a few minutes. 1. Supply EXT signal (color bar). 2. Display the same color bar for sub picture and main picture with PIP button on the remote hand unit. 3. Set the TINT of the main picture to the reset position. 4. Adjust VR7002 so that the hue of the sub picture corresponds with the hue of the main picture.

PARTS LIST

MODEL : CK – 3526R/CK – 3527R

In order to expedite delivery of replacement part orders.
Specify : 1. Model number/Serial number
2. Part number and Description
3. Quantity
Unless full information is supplied, delay in execution of orders will result.
* : Warranty return items
▨ : Critical components

MARK	B	C	D	F	G	J	K
TOLERANCE (%)	± 0.1	± 0.25	± 0.5	± 1	± 2	± 5	± 10

MARK	M	N	V	X	Z	P	Q
TOLERANCE (%)	± 20	± 30	+ 10 – 10	+ 40 – 20	+ 80 – 20	+ 100 – 0	+ 30 – 10

MARK	B	C	D	F	G
TOLERANCE (pF)	± 0.1	± 0.25	± 0.5	± 1	± 2

ABBREVIATION

[3526] : CK – 3526R
[3527] : CK – 3527R

[3526] : CK – 3526R [3527] : CK – 3527R

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
		TUBES	
V 271	255B011001	CRT ASSY	
		INTEGRATED CIRCUITS	
IC200	272P630010	IC	LA7670
IC201	272P629010	IC	AN5341K
IC202	266P064010	IC	M51320P
IC2X0	266P931010	IC	L78M09
IC2000	272P628010	IC	TA8720AN
IC2001	266P016010	IC	LA7016
IC2002	272P658010	IC	MM1031XS
IC2004	272P394010	IC	LA7956
IC301	272P440010	IC	LA4282
IC3G0	272P351020	IC	μPC1871CU
IC3000	272P139010	IC	LA7953
IC3004	272P237010	IC	LA6324N
IC4E1	272P239040	IC	LA7838
IC501	272P132010	IC	AN 5551
IC600	272P631010	IC	AN91A14K
IC6X0	266P934040	IC	μPC7812H
IC700	263P545020	IC	M37250M6-561SP
IC701	274P008030	IC	MN1380-M
IC702	263P170030	IC	CAT35C102HP
IC703	266P922010	IC	μPC78M05H
IC704	263P546010	IC	M66320P
IC7A0	266P197010	IC	LA7911
IC7X0	263P798010	IC	M50560-145P
IC7000	272P648010	IC	HA11569FS
IC7100	272P657010	IC	HD49412FS
IC7101	263P548010	IC	M5M4C264L-12
IC7200	266P934060	IC	μPC7805H
IC901	272P255010	IC	STR-S5141G
IC9A1	267P916020	IC	STR-12006
		TRANSISTORS	
Q 100	260P356010	TRANSISTOR	2SC1906
Q 101	260P356010	TRANSISTOR	2SC1906
Q 102	260P559030	TRANSISTOR	2SC1740S
Q 103	260P560040	TRANSISTOR	2SA933S-S
Q 105	260P559030	TRANSISTOR	2SC1740S
Q 200	260P559030	TRANSISTOR	2SC1740S
Q 201	260P559030	TRANSISTOR	2SC1740S
Q 202	260P559030	TRANSISTOR	2SC1740S
Q 203	260P559030	TRANSISTOR	2SC1740S
Q 205	260P255040	TRANSISTOR	2SA950-Y
Q 206	260P560040	TRANSISTOR	2SA933S-S
Q 207	260P559030	TRANSISTOR	2SC1740S
Q 208	260P559030	TRANSISTOR	2SC1740S
Q 209	260P559030	TRANSISTOR	2SC1740S
Q 210	260P559030	TRANSISTOR	2SC1740S
Q 220	260P559030	TRANSISTOR	2SC1740S
Q 221	260P560040	TRANSISTOR	2SA933S-S
Q 2A0	260P560040	TRANSISTOR	2SA933S-S
Q 2Z1	260P559030	TRANSISTOR	2SC1740S
Q 2Z9	260P559030	TRANSISTOR	2SC1740S
Q 2000	260P559030	TRANSISTOR	2SC1740S
Q 2010	260P559030	TRANSISTOR	2SC1740S
Q 301	260P559030	TRANSISTOR	2SC1740S
Q 351	260P559030	TRANSISTOR	2SC1740S
Q 353	260P559050	TRANSISTOR	2SC1740S-E
Q 4A1	260P387030	TRANSISTOR	2SC2236-Y
Q 505	260P428020	TRANSISTOR	2SC2168-O, Y
Q 531	260P422010	TRANSISTOR	2SC2482
Q 532	260P608010	TRANSISTOR	2SD1879
Q 5A4	260P559030	TRANSISTOR	2SC1740S
Q 5A5	260P559030	TRANSISTOR	2SC1740S
Q 5H1	260P559030	TRANSISTOR	2SC1740S
Q 5H3	260P560040	TRANSISTOR	2SA933S-S
Q 5H4	260P560040	TRANSISTOR	2SA933S-S
Q 5000	260P664030	TRANSISTOR	2SC4636
Q 5001	260P664030	TRANSISTOR	2SC4636
Q 5002	260P559050	TRANSISTOR	2SC1740S-E
Q 5003	260P560040	TRANSISTOR	2SA933S-S
Q 5004	260P559050	TRANSISTOR	2SC1740S-E
Q 5005	260P559050	TRANSISTOR	2SC1740S-E
Q 600	260P559030	TRANSISTOR	2SC1740S
Q 651	260P559030	TRANSISTOR	2SC1740S
Q 652	260P559030	TRANSISTOR	2SC1740S
Q 6B0	260P560040	TRANSISTOR	2SA933S-S
Q 6901	260P559030	TRANSISTOR	2SC1740S
Q 6902	260P559030	TRANSISTOR	2SC1740S
Q 6903	260P559030	TRANSISTOR	2SC1740S
Q 6904	260P571010	TRANSISTOR	2SC3789-C, D
Q 6905	260P571010	TRANSISTOR	2SC3789-C, D
Q 6906	260P571010	TRANSISTOR	2SC3789-C, D
Q 700	260P560040	TRANSISTOR	2SA933S-S
Q 701	260P559030	TRANSISTOR	2SC1740S
Q 702	260P559030	TRANSISTOR	2SC1740S
Q 703	260P559030	TRANSISTOR	2SC1740S
Q 704	260P559030	TRANSISTOR	2SC1740S
Q 705	260P559030	TRANSISTOR	2SC1740S
Q 706	260P559030	TRANSISTOR	2SC1740S
Q 707	260P559030	TRANSISTOR	2SC1740S
Q 708	260P559030	TRANSISTOR	2SC1740S
Q 710	260P560040	TRANSISTOR	2SA933S-S
Q 711	260P559030	TRANSISTOR	2SC1740S
Q 712	260P559030	TRANSISTOR	2SC1740S
Q 720	260P559030	TRANSISTOR	2SC1740S
Q 722	260P559030	TRANSISTOR	2SC1740S
Q 723	260P559030	TRANSISTOR	2SC1740S
Q 725	260P559030	TRANSISTOR	2SC1740S
Q 726	260P559030	TRANSISTOR	2SC1740S
Q 7X0	260P559030	TRANSISTOR	2SC1740S
Q 7X1	260P559030	TRANSISTOR	2SC1740S
Q 7X2	260P559030	TRANSISTOR	2SC1740S
Q 7000	260P560040	TRANSISTOR	2SA933S-S
Q 7001	260P560040	TRANSISTOR	2SA933S-S
Q 7002	260P560040	TRANSISTOR	2SA933S-S
Q 7003	260P560040	TRANSISTOR	2SA933S-S

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
Q 7004	260P560040	TRANSISTOR	2SA933S-S
Q 7005	260P560040	TRANSISTOR	2SA933S-S
Q 7006	260P560040	TRANSISTOR	2SA933S-S
Q 7007	260P560040	TRANSISTOR	2SA933S-S
Q 7008	260P560040	TRANSISTOR	2SA933S-S
Q 7009	260P560040	TRANSISTOR	2SA933S-S
Q 7010	260P559030	TRANSISTOR	2SC1740S
Q 7011	260P559030	TRANSISTOR	2SC1740S
Q 7012	260P560040	TRANSISTOR	2SA933S-S
Q 7013	260P559030	TRANSISTOR	2SC1740S
Q 7014	260P559030	TRANSISTOR	2SC1740S
Q 7015	260P560040	TRANSISTOR	2SA933S-S
Q 7016	260P559030	TRANSISTOR	2SC1740S
Q 7017	260P559030	TRANSISTOR	2SC1740S
Q 7100	260P559030	TRANSISTOR	2SC1740S
Q 8001	260P573020	TRANSISTOR	2SB940A-P
Q 8002	260P574020	TRANSISTOR	2SD1264A-P
Q 8003	260P559050	TRANSISTOR	2SC1740S-E
Q 8004	260P560040	TRANSISTOR	2SA933S-S
Q 8005	260P559050	TRANSISTOR	2SC1740S-E
Q 902	260P559030	TRANSISTOR	2SC1740S
Q 903	260P559030	TRANSISTOR	2SC1740S
Q 906	260P561010	TRANSISTOR	2SA1371
		DIODES	
D 101	264P502010	DIODE	HZ5ALL
D 202	264P045040	DIODE	1S2471
D 203	264P045040	DIODE	1S2471
D 207	264P501050	DIODE	HZ3BLL
D 208	264P501040	DIODE	HZ3ALL
D 210	264P045040	DIODE	1S2471
D 211	264P045040	DIODE	1S2471
D 212	264P045040	DIODE	1S2471
D 213	264P045040	DIODE	1S2471
D 2Z1	264P502010	DIODE	HZ5ALL
D 2Z2	264P045040	DIODE	1S2471
D 2Z3	264P463010	DIODE	EQA02-08B/RD8.2EB1
D 2Z5	264P502010	DIODE	HZ5ALL
D 2Z6	264P045040	DIODE	1S2471
D 2Z7	264P045040	DIODE	1S2471
D 2000	264P485060	DIODE	RD7.5FB2
D 2001	264P485060	DIODE	RD7.5FB2
D 2002	264P460060	DIODE	EQA02-05C/RD5.1EB1
D 2003	264P463050	DIODE	EQA02-09CD
D 301	264P045040	DIODE	1S2471
D 302	264P045040	DIODE	1S2471
D 3E1	264P285010	DIODE	S5500D/EM 1Z
D 3001	264P045040	DIODE	1S2471
D 3002	264P045040	DIODE	1S2471
D 4E1	264P464060	DIODE	EQA02-10D
D 4E2	264P825010	DIODE	ERA15-02
D 4E4	264P491090	DIODE	RD30FB3
D 500	264P045040	DIODE	1S2471
D 501	264P045040	DIODE	1S2471
D 509	264P487090	DIODE	RD12FB3

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
D 537	264P157040	DIODE	MB-1FS/RH-2FS
D 538	264P102020	DIODE	RU 3B
D 549	264P528010	DIODE	RP 1H
D 551	264P825010	DIODE	ERA15-02
D 571	264P295020	DIODE	TVR1G/ES 1
D 5G5	264P231010	DIODE	TVR1G
D 5G6	264P244020	DIODE	HZT33-02
D 5G7	264P471010	DIODE	EQA02-33A/RD7.5EB1
D 5G8	264P501090	DIODE	HZ4CLL
D 5G9	264P825010	DIODE	ERA15-02
D 5H0	264P471020	DIODE	EQA02-33B/RD36EB2
D 5000	264P045040	DIODE	1S2471
D 5001	264P045040	DIODE	1S2471
D 5002	264P465060	DIODE	EQA02-12B
D 5004	264P045040	DIODE	1S2471
D 5005	264P045040	DIODE	1S2471
D 5006	264P543010	DIODE	EG01
D 5007	264P543010	DIODE	EG01
D 5900	264P528020	DIODE	RP 1H
D 601	264P045040	DIODE	1S2471
D 602	264P045040	DIODE	1S2471
D 651	264P045040	DIODE	1S2471
D 652	264P045040	DIODE	1S2471
D 653	264P045040	DIODE	1S2471
D 654	264P045040	DIODE	1S2471
D 656	264P045040	DIODE	1S2471
D 6Z1	264P045040	DIODE	1S2471
D 6907	264P285010	DIODE	S5500D/EM 1Z
D 700	264P045040	DIODE	1S2471
D 701	264P045040	DIODE	1S2471
D 702	264P045040	DIODE	1S2471
D 707	264P045040	DIODE	1S2471
D 709	264P045040	DIODE	1S2471
D 710	264P045040	DIODE	1S2471
D 711	264P045040	DIODE	1S2471
D 713	264P045040	DIODE	1S2471
D 714	264P045040	DIODE	1S2471
D 715	264P045040	DIODE	1S2471
D 716	264P045040	DIODE	1S2471
D 731	264P045040	DIODE	1S2471
D 732	264P045040	DIODE	1S2471
D 735	264P502030	DIODE	HZ5CLL
D 7A1	264P483080	DIODE	RD5.1FB2
D 7A2	264P463090	DIODE	EQA02-09D/RD10EB1
D 7B0	264P045040	DIODE	1S2471
D 7B1	264P045040	DIODE	1S2471
D 7X0	264P203020	DIODE	TLG124A-E
D 7X1	264P501050	DIODE	HZ3BLL
D 7X2	264P045040	DIODE	1S2471
D 7000	264P045040	DIODE	1S2471
D 7001	264P045040	DIODE	1S2471
D 7002	264P045040	DIODE	1S2471
D 7003	264P045040	DIODE	1S2471
D 7004	264P045040	DIODE	1S2471
D 7100	264P045040	DIODE	1S2471

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
D 7101	264P045040	DIODE	1S2471
D 8001	264P045040	DIODE	1S2471
D 8002	264P045040	DIODE	1S2471
D 8003	264P285010	DIODE	S5500D/EM 1Z
D 8004	264P285010	DIODE	S5500D/EM 1Z
D 8007	264P488020	DIODE	RD13ED1
D 900	264P535010	DIODE	RBV-608
D 902	264P522010	DIODE	RU 1P
D 904	264P102020	DIODE	RU 3B
D 905	264P543010	DIODE	EG01
D 906	264P358070	DIODE	RU 4AM
D 907	264P521030	DIODE	EU 2
D 908	264P521040	DIODE	EU 1A
D 909	264P358090	DIODE	RU 4YX
D 910	264P358070	DIODE	RU 4AM
D 912	264P825010	DIODE	ERA15-02
D 913	264P825010	DIODE	ERA15-02
D 915	264P521040	DIODE	EU 1A
D 916	264P045040	DIODE	1S2471
D 917	264P358090	DIODE	RU 4YX
D 9A1	264P512020	DIODE	RBV-40C
D 9A2	264P522010	DIODE	RU 1P
D 9A3	264P521030	DIODE	EU 2
D 9A6	264P521030	DIODE	EU 2
D 9A7	264P358070	DIODE	RU 4AM
D 9A8	264P566010	DIODE	FMP-G12S
		OTHER SEMICONDUCTORS	
RP901	265P071040	POSITIVE THERMISTOR	PTH451C260BF5R0M
		FILTERS	
BF7000	349P195010	BAND PASS FILTER	
BF7001	349P195010	BAND PASS FILTER	
CF100	296P024020	CERAMIC FILTER	TPS4.5MB7
CF300	296P067010	CERAMIC FILTER	SFS4.5MB2
CF500	299P154010	CERAMIC RESONATOR	
CF7X0	299P083010	CERAMIC RESONATOR	KBR393B1
CF7000	299P051010	CERAMIC RESONATOR	
CF7001	299P051010	CERAMIC RESONATOR	
LC7100	349P190010	LOW PASS FILTER	
LC7101	349P190010	LOW PASS FILTER	
LF7000	349P194010	LOW PASS FILTER	
LF7001	349P189010	LOW PASS FILTER	
SF101	296P096030	SAW FILTER	
		DELAY LINES	
DL200	337P147020	DELAY LINE	
DL2A0	337P096070	DELAY LINE	
DL2A1	337P142010	DELAY LINE	
		COILS	
	409B058020	CANCEL COIL	
	409B054030	DEGAUSSING COIL	
L 100	325C124030	PEAKING COIL	0.22 μH-M

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
L 101	325C120020	PEAKING COIL	1.2 μH-M
L 102	325C120040	PEAKING COIL	1.8 μH-M
L 104	323P111020	VIF COIL	45MHz
L 105	325C161040	PEAKING COIL	12 μH-K
L 108	323P171010	VIF COIL	45.75MHz
L 200	325C122040	PEAKING COIL	82 μH-K
L 201	325C161030	PEAKING COIL	10 μH-K
L 202	325C122040	PEAKING COIL	82 μH-K
L 203	325C161050	PEAKING COIL	15 μH-K
L 210	325C122040	PEAKING COIL	82 μH-K
L 251	325C162010	PEAKING COIL	47 μH-K
L 300	327P072010	SIF COIL	
L 310	325C122040	PEAKING COIL	82 μH-K
L 491	330P179010	DEFLECTION YOKE COIL	
L 4E1	411D009020	FERRITE CORE FILTER	
L 552	321D019010	RF COIL	0.47 μH-M
L 553	411P001010	FERRITE LEAD	
L 555	333P018010	H-LIN. COIL	
L 571	409P006080	FILTER COIL	
L 5000	411P001040	FERRITE LEAD	
L 600	325C111030	PEAKING COIL	10 μH-K
L 6901	325C302030	PEAKING COIL	68 μH-K
L 6902	325C302030	PEAKING COIL	68 μH-K
L 6903	325C302030	PEAKING COIL	68 μH-K
L 6904	325C101050	PEAKING COIL	15 μH-K
L 6908	325C302030	PEAKING COIL	68 μH-K
L 6909	325C302030	PEAKING COIL	68 μH-K
L 6910	325C302030	PEAKING COIL	68 μH-K
L 700	325C121030	PEAKING COIL	10 μH-K
L 701	325C108070	PEAKING COIL	1000 μH-J
L 702	325C121030	PEAKING COIL	10 μH-K
L 704	325C121080	PEAKING COIL	27 μH-K
L 705	325C121030	PEAKING COIL	10 μH-K
L 706	325C121030	PEAKING COIL	10 μH-K
L 707	325C121030	PEAKING COIL	10 μH-K
L 708	321C011040	RF COIL	6800 μH-J
L 709	325C121030	PEAKING COIL	10 μH-K
L 710	325C121030	PEAKING COIL	10 μH-K
L 732	325C121030	PEAKING COIL	10 μH-K
L 7X0	325C121030	PEAKING COIL	10 μH-K
L 7X1	325C121030	PEAKING COIL	10 μH-K
L 7X2	325C121030	PEAKING COIL	10 μH-K
L 7001	325C121030	PEAKING COIL	10 μH-K
L 7002	325C121030	PEAKING COIL	10 μH-K
L 7003	325C121030	PEAKING COIL	10 μH-K
L 7004	325C121030	PEAKING COIL	10 μH-K
L 7005	325C121030	PEAKING COIL	10 μH-K
L 7006	325C122050	PEAKING COIL	100 μH-K
L 7100	321C031040	RF COIL	10 μH-K
L 7101	325C121030	PEAKING COIL	10 μH-K
L 7102	325C121030	PEAKING COIL	10 μH-K
L 7103	325C120010	PEAKING COIL	1 μH-M
L 7104	325C120010	PEAKING COIL	1 μH-M
L 7105	325C120010	PEAKING COIL	1 μH-M
L 7106	325C120010	PEAKING COIL	1 μH-M

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
L 7108	325C106060	PEAKING COIL	18μH-J
L 7200	325C121030	PEAKING COIL	10μH-K
L 8001	411D009020	FERRITE CORE FILTER	
L 902	321C130070	RF COIL	6.8μH-K
L 903	321C130070	RF COIL	6.8μH-K
L 904	321C130070	RF COIL	6.8μH-K
L 905	325C112090	PEAKING COIL	220μH-K
L 906	321C130070	RF COIL	6.8μH-K
L 907	321C130030	RF COIL	3μH-K
L 908	321D019010	RF COIL	0.47μH-M
L 909	411P012010	BEAD FERRITE	
L 911	411P011010	BEAD FERRITE	ZBF503S-P
L 913	351P090010	LINE FILTER	
L 914	351P090010	LINE FILTER	
L 917	411P001040	FERRITE LEAD	
L 918	321C131040	RF COIL	22μH-K
L 920	321C131040	RF COIL	22μH-K
L 921	321C130030	RF COIL	3μH-K
L 9A2	411P001040	FERRITE LEAD	
L 9A3	411D009020	FERRITE CORE FILTER	
L 9A4	321C130030	RF COIL	3μH-K
L 9A5	321C130030	RF COIL	3μH-K
LF7100	409P402030	EMI FILTER	DSS306-55FZ103N100
LF7101	409P402030	EMI FILTER	DSS306-55FZ103N100
LF7102	409P402030	EMI FILTER	DSS306-55FZ103N100
LF7103	409P402020	EMI FILTER	DSS306-55B102M100
LF7104	409P402010	EMI FILTER	DSS306-55B101M100
LF7105	409P402020	EMI FILTER	DSS306-55B102M100
LF7106	409P402030	EMI FILTER	DSS306-55FZ103N100
LF7107	409P402010	EMI FILTER	DSS306-55B101M100
LF7108	409P402020	EMI FILTER	DSS306-55B102M100
LF7109	409P402020	EMI FILTER	DSS306-55B102M100
T 100	320P026030	TRAP COIL	
		TRANSFORMERS	
BP2A0	349P186010	CHROMA-BP	
T 531	336P017010	H. DRIVE	
T 532	334P205090	FLYBACK	
T 533	349P122050	SIDE PCC	
T 552	349P145030	SIDE PCC	
T 905	350P534010	POWER	
T 9A1	350P528010	POWER	
		VARIABLE RESISTORS	
VR100	127C080080	VR-SEMIFIXED	1/5W B10KΩ-M
VR101	127C080040	VR-SEMIFIXED	1/5W B1KΩ-M
VR200	127C080080	VR-SEMIFIXED	1/5W B10KΩ-M
VR350	127C080060	VR-SEMIFIXED	1/5W B3KΩ-M
VR351	127C080090	VR-SEMIFIXED	1/5W B20KΩ-M
VR353	127C080070	VR-SEMIFIXED	1/5W B5KΩ-M
VR354	127C080070	VR-SEMIFIXED	1/5W B5KΩ-M
VR355	127C091010	VR-SEMIFIXED	1/5W B50KΩ-M
VR4E1	127C091010	VR-SEMIFIXED	1/5W B50KΩ-M
VR4E2	127C080080	VR-SEMIFIXED	1/5W B10KΩ-M

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
VR503	127C080070	VR-SEMIFIXED	1/5W B5KΩ-M
VR504	127C080070	VR-SEMIFIXED	1/5W B5KΩ-M
VR505	127C090090	VR-SEMIFIXED	1/5W B20KΩ-M
VR601	127C081020	VR-SEMIFIXED	1/5W B100KΩ-M
VR602	127C080080	VR-SEMIFIXED	1/5W B10KΩ-M
VR6901	127C020030	VR-SEMIFIXED	1/5W B500Ω-N
VR6902	127C020030	VR-SEMIFIXED	1/5W B500Ω-N
VR6903	127C020030	VR-SEMIFIXED	1/5W B500Ω-N
VR6904	127C020050	VR-SEMIFIXED	1/5W B2KΩ-N
VR6905	127C020050	VR-SEMIFIXED	1/5W B2KΩ-N
VR7002	127C191010	VR-SEMIFIXED	1/10W B50KΩ-M
VR7100	127C090030	VR-SEMIFIXED	1/5W B500Ω-M
VR7101	127C090030	VR-SEMIFIXED	1/5W B500Ω-M
		RESISTORS	
R 2008	103P419090	R-CARBON	1/4W 75Ω-J
R 4H5	103P390070	FUSE	1/2W 33Ω-J
R 545	109D074050	CEMENT METAL	5W 4.7KΩ-K/J
R 5534	103P392020	FUSE	1/2W 560Ω-J
R 5536	103P392020	FUSE	1/2W 560Ω-J
R 5537	103P392020	FUSE	1/2W 560Ω-J
R 5901	103P372020	FUSE	1/4W 560Ω-J
R 6934	103P438050	FUSE METAL	2W 2.7Ω-K/J
R 709	103P542070	NETWORK	1/8W 1.5KΩ-JX4
R 776	103P419010	R-CARBON	1/4W 8.2Ω-J
R 901	109D073080	CEMENT WIRE	20W 2.2Ω-K
R 907	102P106090	WIRE	2W 0.12Ω-K
R 908	102P106090	WIRE	2W 0.12Ω-K
R 910	109D061070	CEMENT WIRE	7W 22Ω-J
R 959	109D055010	CEMENT WIRE	5W 1.2Ω-K
R 9C2	109D061030	CEMENT WIRE	7W 2.2Ω-K/J
		CAPACITORS AND TRIMMERS	
C 3H1	189D028070	C-TANT	25V 10μF-K
C 3H2	189D028080	C-TANT	25V 3.3μF-K
C 524	189P071020	C-M-PLASTIC-PP	200V 0.51μF-J
C 541	189P081050	C-M-PP	200V 0.1μF-J
C 5J0	189P081050	C-M-PP	200V 0.1μF-J
C 730	189P092030	C-LYTIC-DBL-LAYER	FU5.5V 0.22F
C 907	185D062060	ELECTROLYTIC-C	H180V 820μF-M
C 913	189P081090	C-M-PLASTIC-PP	200V 0.047μF-J
C 929	185D063030	ELECTROLYTIC-C	H180V 820μF-M
C 9A4	185D064040	ELECTROLYTIC-C	H180V 330μF-M 105C
CR971	149P008010	CR-MULTIPLE	470P 2μF-4M
VC700	202P109050	TRIMMER CAPACITOR	9.8pF-60pF
		SWITCHES	
S 200	434C024010	LEVER SWITCH	
S 401	434C024010	LEVER SWITCH	
S 571	431C059020	SLIDE SWITCH	
S 6901	434C024010	LEVER SWITCH	
S 6902	434C024010	LEVER SWITCH	
S 7X0	432P100010	KEY BOARD SWITCH	1-1 H=4.3
S 7X1	432P100010	KEY BOARD SWITCH	1-1 H=4.3
S 7X2	432P100010	KEY BOARD SWITCH	1-1 H=4.3

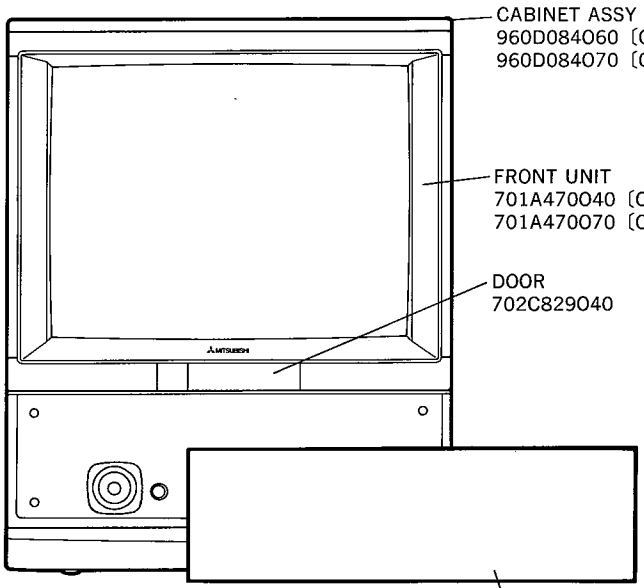
SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
S 7X3	432P100010	KEY BOARD SWITCH	1-1 H=4.3
S 7X4	432P100010	KEY BOARD SWITCH	1-1 H=4.3
S 7X5	432P100010	KEY BOARD SWITCH	1-1 H=4.3
S 7X6	432P100010	KEY BOARD SWITCH	1-1 H=4.3
S 7X7	432P100010	KEY BOARD SWITCH	1-1 H=4.3
S 7X8	432P100010	KEY BOARD SWITCH	1-1 H=4.3
S 7X9	432P100010	KEY BOARD SWITCH	1-1 H=4.3
S 7Y0	432P100010	KEY BOARD SWITCH	1-1 H=4.3
S 7Y1	432P100010	KEY BOARD SWITCH	1-1 H=4.3
S 7Y2	432P100010	KEY BOARD SWITCH	1-1 H=4.3
S 7Y3	432P100010	KEY BOARD SWITCH	1-1 H=4.3
S 7Y4	432P100010	KEY BOARD SWITCH	1-1 H=4.3
S 7Y5	432P100010	KEY BOARD SWITCH	1-1 H=4.3
S 7Z1	431C068030	SLIDE SWITCH	2-3 NON-SHORT
S 7Z2	431C067010	SLIDE SWITCH	2-2 NON SHORT
		MISCELLANEOUS	
	338P025020	CPM ASSY	
	641D758010	WEDGE	
AG5001	224D019040	AIR GAP	2KV
F 901	283D060030	FUSE	S6.3A
J 2000	440B095020	TERMINAL JACK	
J 6901	449C085030	CRT SOCKET	
K 301	287P060020	POWER RELAY	
K 901	287P049020	POWER RELAY	
K 902	287P049020	POWER RELAY	
RV901	265P086010	VARISTOR	SNR-271KD10
SP391	480P383060	SPEAKER	C100P03M6960
SP392	480P383060	SPEAKER	C100P03M6960
* TU701	295P273010	TUNER	EC-CU-6720
X 600	285P029050	CRYSTAL RESONATOR	
X 700	285P029030	CRYSTAL RESONATOR	
X 7000	285P066010	CRYSTAL RESONATOF	
X 7001	285P066010	CRYSTAL RESONATOR	
Z 700	939P241040	PREAMP UNIT	
		PRINTED CIRCUIT BOARD ASSY'S	
*	920D391010	AV PCB ASSY	
*	920D392010	CONTROL PCB ASSY	
*	920D390010	CRT/SVM PCB ASSY	
*	930B498003	DEFL PCB ASSY	
*	930B500001	PIP PCB ASSY	
*	930B497003	SIGNAL PCB ASSY	
*	930B501004	SPWR/DBF PCB ASSY	
		MECHANICAL PARTS	
	669D171030	SCREW	M3X12
	669D220010	SCREW	3X6 46LA005
	669D220020	SCREW	3X8 46LA005
	669D220030	SCREW	3X10 46LA005
	669D221040	SCREW	4X12 46LA005
	669D221080	SCREW	4X25 46LA005
	669D212010	SCREW	3X12

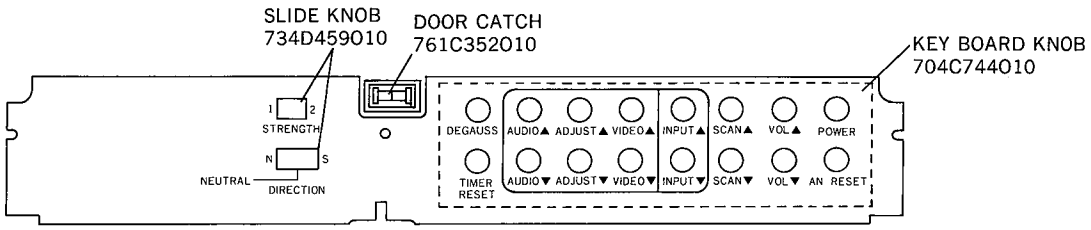
SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION	
		COSMETIC PARTS		
	242C957020	AC POWER CORD		
	762A195010	BACK BOARD ASSY		[3526]
	762A195030	BACK BOARD ASSY		[3527]
	960D084060	CABINET ASSY		[3526]
	960D084070	CABINET ASSY		[3527]
	224D243010	CRT CAP		
	641D173010	CLIP	(A40R)	
	761B162030	CRT COVER		
	702C829040	DOOR		
	761C352010	DOOR CATCH		
	701A470040	FRONT UNIT		[3526]
	701A470070	FRONT UNIT		[3527]
	761A088020	GRILLE SPEAKER		[3526]
	761B190010	GRILLE SPEAKER		[3527]
	704C744010	KEY BOARD KNOB		
	734D459010	SLIDE KNOB		
	440A011010	TERMINAL BOARD		
		PACKING PARTS AND ACCESSORY		
	871C901060	INSTRUCTION BOOK		
	802B336010	PACKING CASE		[3526]
	802B336020	PACKING CASE		[3526]
	802B336030	PACKING CASE		[3526]
	802B336040	PACKING CASE		[3526]
	802B318050	PACKING CASE		[3527]
	802B318010	PACKING CASE		[3527]
	802B318030	PACKING CASE		[3527]
	802B318040	PACKING CASE		[3527]
	831C060040	PACKING BAG		
	831D191030	PACKING BAG		
	829D149010	PACKING SHEET		
	829D149020	PACKING SHEET		
*	939P434010	REMOTE HAND UNIT		
		OTHER CRITICAL COMPONENTS		
C 544	172P171050	C-M-PLASTIC-PP	1600V 0.015μF-J	
C 545	189P063090	C-PLASTIC-PP	800V 0.015μF-J	
C 546	172P085050	C-PLASTIC-PP	400V 0.027μF-J	
C 547	154P251000	C-CERAMIC	R2KV 220pF-K	
C 548	154P251000	C-CERAMIC	R2KV 220pF-K	
C 565	181P181080	C-ELECTROLYTIC	04W 200V 47μF-M 105C	
C 568	172P170030	C-M-PLASTIC-PP	1600V 1500pF-J	
C 5E6	154P251040	C-CERAMIC	R2KV 470pF-K	
C 5H6	181P352090	C-ELECTROLYTIC	CE04W 16V 2200μF-M	
C 5H8	181P355010	C-ELECTROLYTIC	CE04W 50V 1μF-M	
C 5H9	181P355050	C-ELECTROLYTIC	CE04W 50V 10μF-M	
C 902	189P033050	C-M-MF/PP-AC	AC125V/250V 0.1μF-M	
C 904	142P014000	C-CERAMIC	E500V 2200pF-P	
C 905	189P060060	C-CERAMIC	E AC250V 2200pF-Z	
C 906	189P060060	C-CERAMIC	E AC250V 2200pF-Z	
C 914	181P186030	C-ELECTROLYTIC	04W 50V 470μF-M 105C	
C 918	189P143010	C-M-POLYESTER-AC	AC125V/250V 0.01μF-M	
C 919	189P143020	C-M-POLYESTER-AC	AC125V/250V 0.022μF-M	

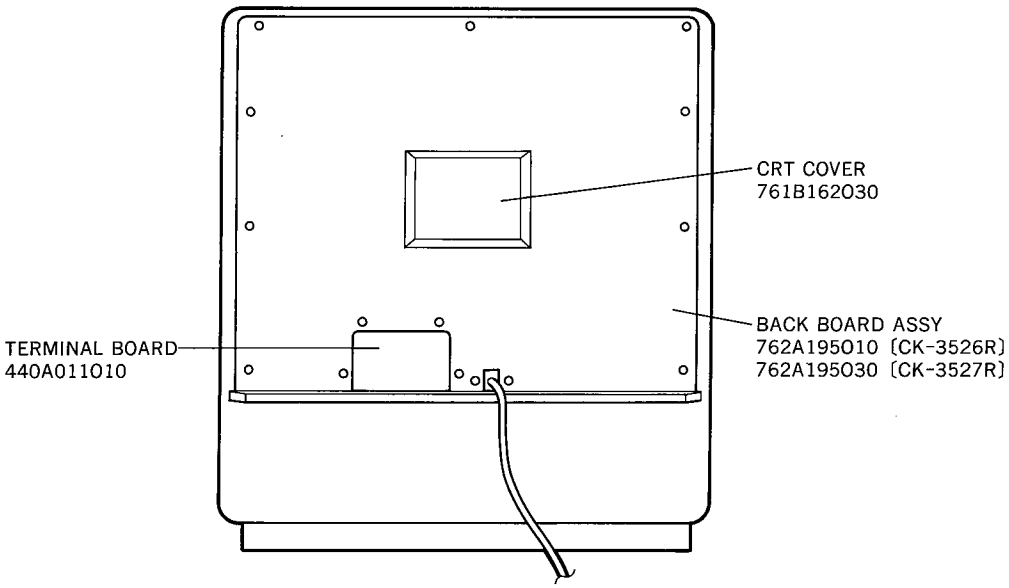
SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
C 921	181P184070	C-ELECTROLYTIC	04W 35V 2200μF-M 105C
C 925	181P184070	C-ELECTROLYTIC	04W 35V 2200μF-M 105C
C 926	181P186050	C-ELECTROLYTIC	04W 35V 1000μF-M 105C
C 930	181P184070	C-ELECTROLYTIC	04W 35V 2200μF-M 105C
C 935	181P351050	C-ELECTROLYTIC	CE04W 10V 220μF-M
C 951	189P033050	C-M-MF/PP-AC	AC125V/250V 0.1μF-M
C 9A8	181P203040	C-ELECTROLYTIC	04W 25V 100μF-M
R 357	103P338040	R-CARBON-25	1/4W 2.2Ω-J
R 358	103P338040	R-CARBON-25	1/4W 2.2Ω-J
R 4E1	103P411090	R-CARBON	1/4W 330Ω-J
R 500	103C192000	R-METAL	3W 390Ω-J
R 558	103P415010	R-CARBON	1/4W 150KΩ-J
R 559	103P415000	R-CARBON	1/4W 120KΩ-J
R 593	103C182000	R-METAL	2W 390Ω-J
R 5E9	103P411070	R-CARBON	1/4W 220Ω-J
R 5K1	103C198030	R-METAL	3W 1.8Ω-J
R 5K2	103P465030	R-METAL	1/4W 15KΩ-F
R 5K3	103P462070	R-METAL	1/4W 1.2KΩ-F
R 5K5	103P714020	R-CARBON	1/6W OR 1/4W 27KΩ-J
R 5K6	103P714030	R-CARBON	1/6W OR 1/4W 33KΩ-J
R 5K7	103C184030	R-METAL	2W 33KΩ-J
R 5L6	103P713090	R-CARBON	1/6W OR 1/4W 15KΩ-J
R 5M1	103P465090	R-METAL	1/4W 27KΩ-F
R 5M5	103P711000	R-CARBON	1/6W OR 1/4W 56Ω-J
R 6921	103C293060	R-METAL-CP	3W 8.2KΩ-J
R 6925	103C293060	R-METAL-CP	3W 8.2KΩ-J
R 6929	103C293060	R-METAL-CP	3W 8.2KΩ-J
R 719	103P414070	R-CARBON	1/4W 68KΩ-J
R 744	103P413030	R-CARBON	1/4W 4.7KΩ-J
R 750	103P412070	R-CARBON	1/4W 1.5KΩ-J
R 751	103P412040	R-CARBON	1/4W 820Ω-J
R 7A1	103C171050	R-METAL	1W 150Ω-J
R 7J3	103P710050	R-CARBON	1/6W OR 1/4W 22Ω-J
R 7X0	103P712050	R-CARBON	1/6W OR 1/4W 1KΩ-J
R 8002	580H139090	SVGS-1	JISC2411 4-WHT
R 8045	103P711040	R-CARBON	1/6W OR 1/4W 120Ω-J
R 902	101P824030	R-COMPOSITION	101N001A 1/2W 820KΩ-K
R 904	103C194040	R-METAL	3W 39KΩ-J
R 909	103C190030	R-METAL	3W 15Ω-J
R 912	103P140080	R-CARBON	1/2W 39Ω-J
R 913	109D036030	R-COMPOSITION	1/2W 1.0MΩ-K
R 914	103C177040	R-METAL	1W 0.33Ω-J
R 916	103P338010	R-CARBON-25	1/4W 1.2Ω-J
R 918	103C187020	R-METAL	2W 0.22Ω-J
R 920	103P411030	R-CARBON	1/4W 100Ω-J
R 922	103P713040	R-CARBON	1/6W OR 1/4W 5.6KΩ-J
R 928	109D036030	R-COMPOSITION	1/2W 1.0MΩ-K
R 960	103C187020	R-METAL	2W 0.22Ω-J
R 970	103P413030	R-CARBON	1/4W 4.7KΩ-J
R 9A2	103C194050	R-METAL	3W 47KΩ-J
R 9A3	103C194070	R-METAL	3W 68KΩ-J
R 9A5	103C181030	R-METAL	2W 100Ω-J
R 9A7	103C187020	R-METAL	2W 0.22Ω-J
R 9A8	103C187040	R-METAL	2W 0.33Ω-J

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION

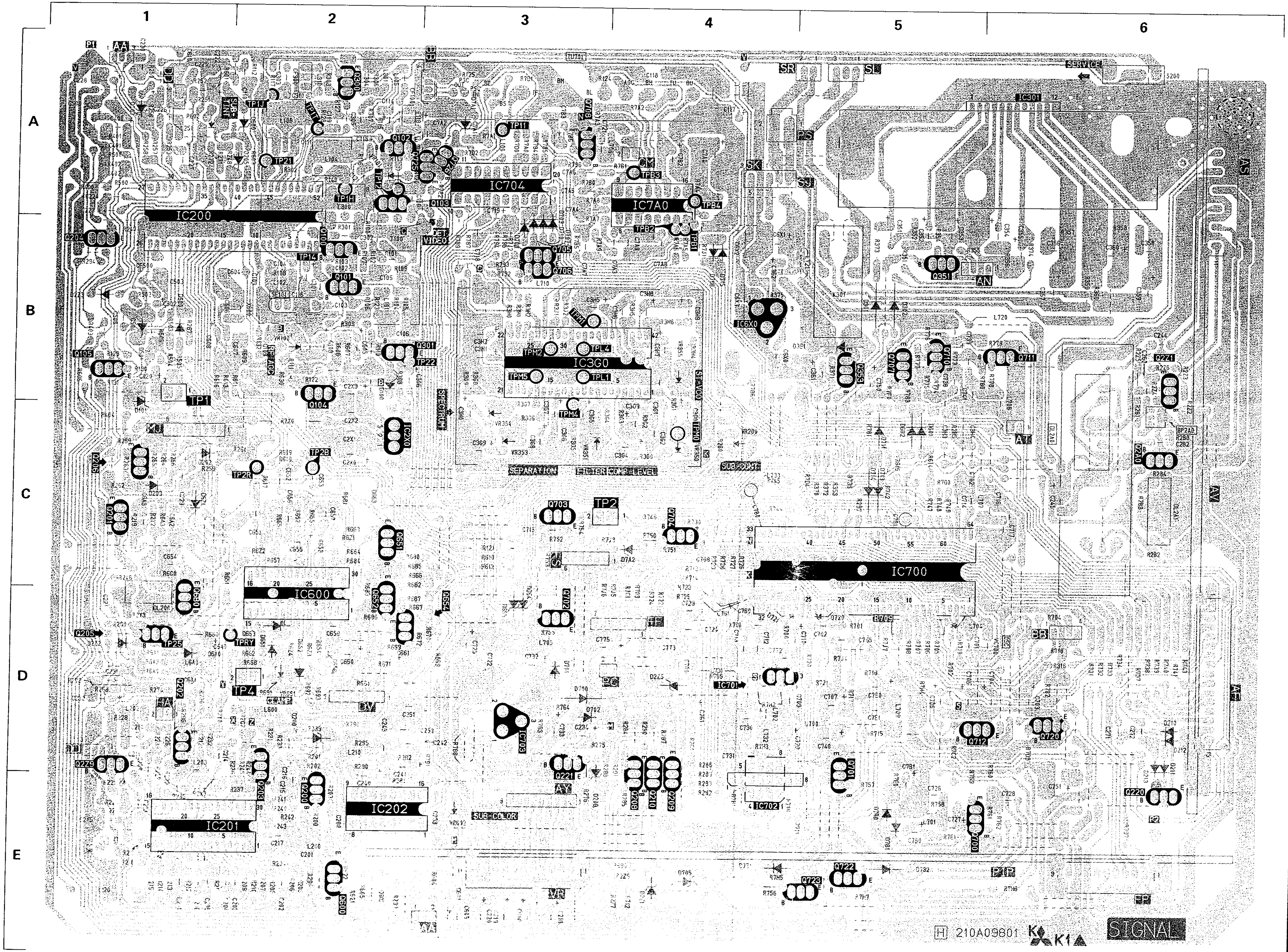
COSMETIC PARTS REFERENCE







PCB-SIGNAL



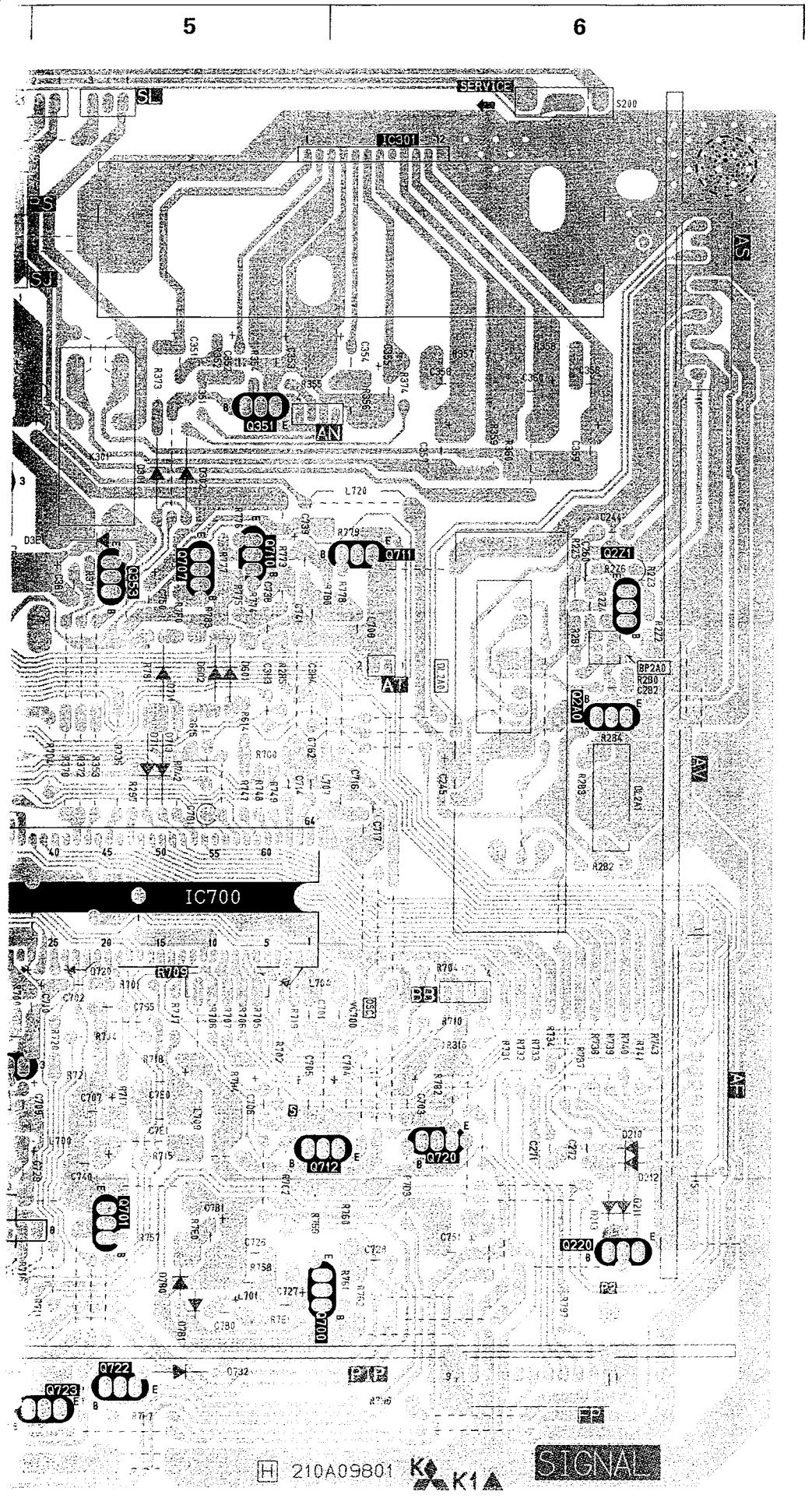
PCB – SIGNAL

SYMBOL NO.	ADDRESS
BP2A0	C-6
CF100	A-2
CF300	A-2
CF500	B-1
D100	B-2
D101	C-1
D200	D-2
D202	C-1
D203	C-1
D205	A-2
D207	A-1
D208	E-3
D210	D-6
D211	D-6
D212	D-6
D213	D-6
D2Z1	E-4
D2Z2	D-1
D2Z3	B-1
D2Z5	D-4
D301	B-5
D302	B-5
D3E1	B-5
D500	B-1
D501	B-1
D600	A-2
D601	C-5
D602	C-5
D651	D-2
D652	D-2
D653	D-2
D654	D-3
D655	D-3
D6A0	D-1
D6Z1	C-1
D700	D-3
D701	D-3
D702	D-3
D705	E-4
D707	B-3
D708	B-3
D709	A-3
D710	B-3
D711	C-5
D713	C-5
D714	C-5
D715	B-4
D716	B-4
D720	D-5
D721	D-4
D731	E-4
D732	E-5
D7A1	A-3
D7A2	C-4
D7B0	E-5
D7B1	E-5
DL200	D-1

SYMBOL NO.	ADDRESS
DL2A0	C-6
DL2A1	C-6
IC200	A-1
IC201	E-2
IC202	E-2
IC2X0	C-2
IC301	A-6
IC3G0	B-3
IC600	D-2
IC6X0	B-4
IC700	C-5
IC702	E-4
IC703	D-3
IC704	A-3
IC7A0	A-4
K301	B-5
L100	A-3
L101	B-2
L102	B-2
L104	A-2
L105	A-2
L108	A-2
L200	E-2
L201	E-1
L202	D-1
L203	D-1
L210	D-2
L251	A-1
L300	A-2
L301	A-2
L310	A-2
L600	D-2
L6A0	D-1
L700	D-5
L702	D-4
L704	D-5
L705	D-3
L706	A-4
L707	C-6
L708	B-6
L709	D-5
L710	B-3
L720	B-6
L721	B-5
L731	D-4
L732	D-4
L733	C-4
Q100	B-2
Q101	B-2
Q102	A-2
Q103	A-3
Q104	B-2
Q105	B-1
Q200	E-2
Q201	C-1
Q202	D-1

SYM N
Q20
Q20
Q20
Q20
Q20
Q20
Q21
Q22
Q22
Q2A
Q2Z
Q2Z
Q30
Q30
Q35
Q35
Q60
Q65
Q65
Q65
Q6B
Q70
Q70
Q70
Q70
Q70
Q705
Q706
Q707
Q708
Q710
Q711
Q712
Q720
Q722
Q723
Q725
Q726
S200
SF10
T100
TP1
TP11
TP12
TP14
TP1H
TP1J
TP1T
TP2
TP21
TP22
TP25
TP2B
TP2R
TP4
TPB1

PCB – SIGNAL



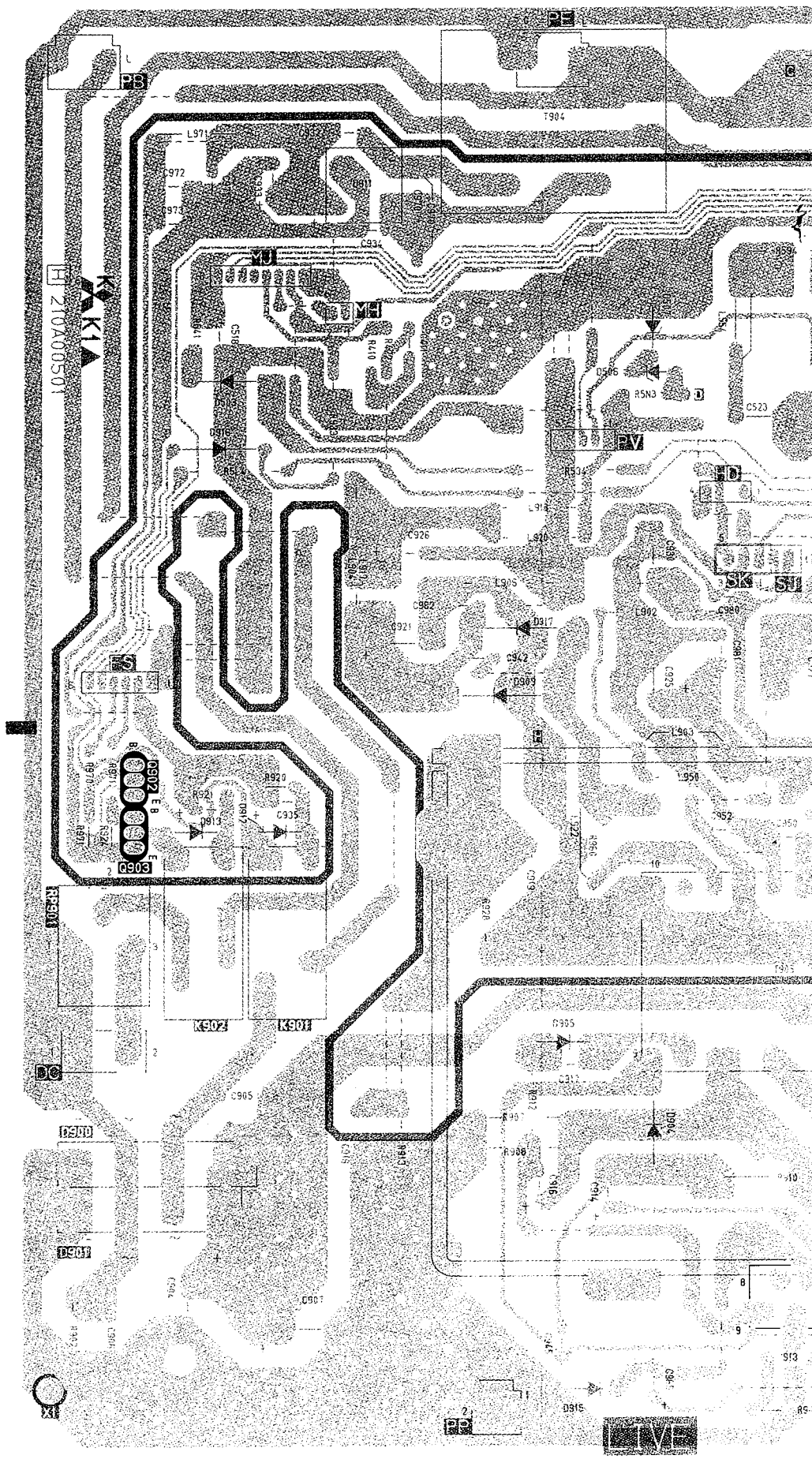
SYMBOL NO.	ADDRESS
BP2A0	C-6
CF100	A-2
CF300	A-2
CF500	B-1
D100	B-2
D101	C-1
D200	D-2
D202	C-1
D203	C-1
D205	A-2
D207	A-1
D208	E-3
D210	D-6
D211	D-6
D212	D-6
D213	D-6
D2Z1	E-4
D2Z2	D-1
D2Z3	B-1
D2Z5	D-4
D301	B-5
D302	B-5
D3E1	B-5
D500	B-1
D501	B-1
D600	A-2
D601	C-5
D602	C-5
D651	D-2
D652	D-2
D653	D-2
D654	D-3
D655	D-3
D6A0	D-1
D6Z1	C-1
D700	D-3
D701	D-3
D702	D-3
D705	E-4
D707	B-3
D708	B-3
D709	A-3
D710	B-3
D711	C-5
D713	C-5
D714	C-5
D715	B-4
D716	B-4
D720	D-5
D721	D-4
D731	E-4
D732	E-5
D7A1	A-3
D7A2	C-4
D7B0	E-5
D7B1	E-5
DL200	D-1

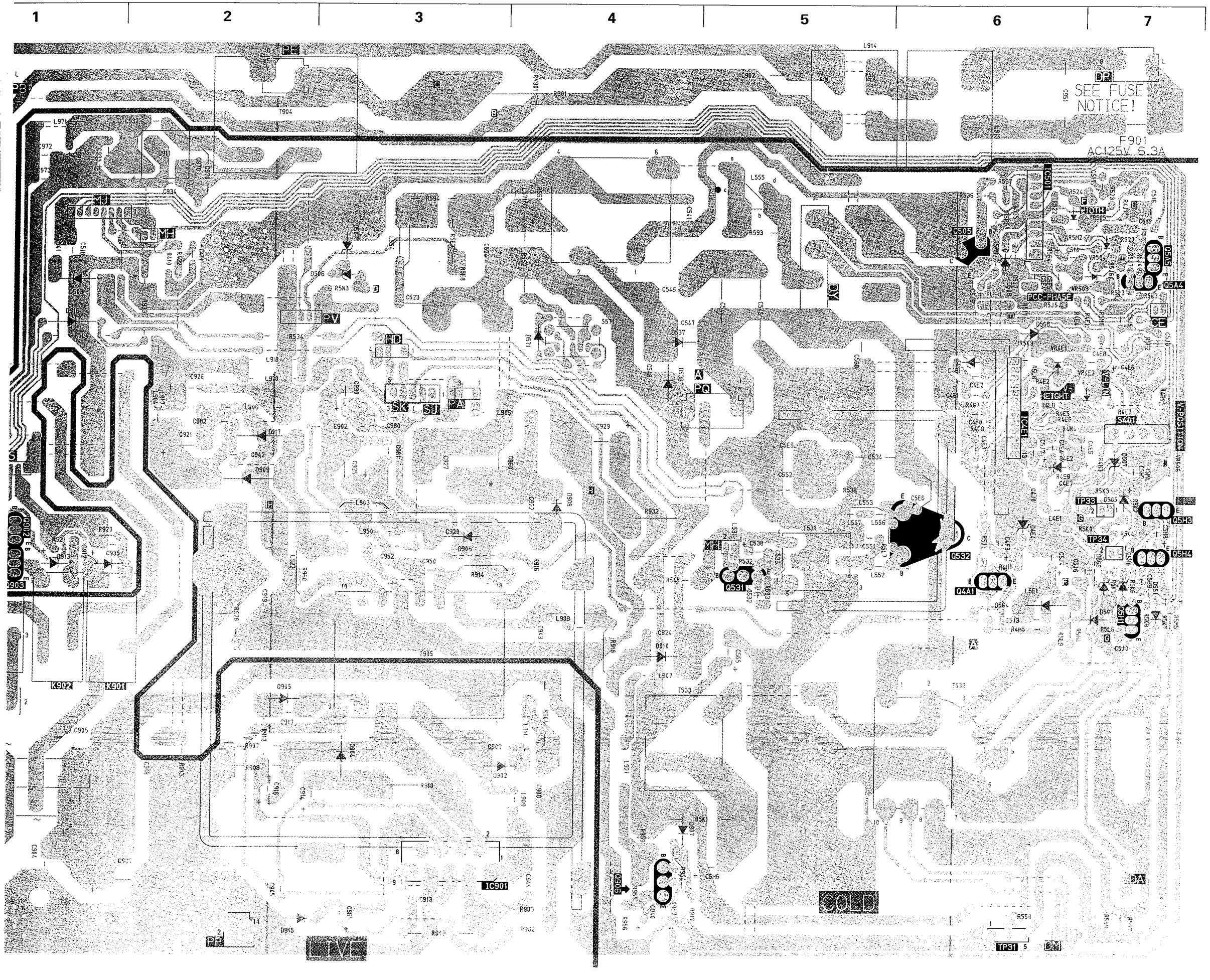
SYMBOL NO.	ADDRESS
DL2A0	C-6
DL2A1	C-6
IC200	A-1
IC201	E-2
IC202	E-2
IC2X0	C-2
IC301	A-6
IC3G0	B-3
IC600	D-2
IC6X0	B-4
IC700	C-5
IC702	E-4
IC703	D-3
IC704	A-3
IC7A0	A-4
K301	B-5
L100	A-3
L101	B-2
L102	B-2
L104	A-2
L105	A-2
L108	A-2
L200	E-2
L201	E-1
L202	D-1
L203	D-1
L210	D-2
L251	A-1
L300	A-2
L301	A-2
L310	A-2
L600	D-2
L6A0	D-1
L700	D-5
L702	D-4
L704	D-5
L705	D-3
L706	A-4
L707	C-6
L708	B-6
L709	D-5
L710	B-3
L720	B-6
L721	B-5
L731	D-4
L732	D-4
L733	C-4
Q100	B-2
Q101	B-2
Q102	A-2
Q103	A-3
Q104	B-2
Q105	B-1
Q200	E-2
Q201	C-1
Q202	D-1

SYMBOL NO.	ADDRESS
Q203	E-2
Q204	B-1
Q205	D-1
Q206	C-1
Q208	E-4
Q209	E-4
Q210	E-4
Q220	E-6
Q221	D-3
Q2A0	C-6
Q2Z1	B-6
Q2Z9	D-1
Q300	A-2
Q301	B-3
Q351	B-5
Q353	B-5
Q600	E-2
Q651	C-2
Q652	D-2
Q654	D-3
Q6B0	D-1
Q700	E-6
Q701	D-5
Q702	D-3
Q703	C-3
Q704	C-4
Q705	B-3
Q706	B-3
Q707	B-5
Q708	A-3
Q710	B-5
Q711	B-6
Q712	D-5
Q720	D-6
Q722	E-5
Q723	E-5
Q725	A-2
Q726	A-3
S200	A-6
SF101	B-2
T100	B-2
TP1	B-1
TP11	A-3
TP12	A-2
TP14	B-2
TP1H	A-2
TP1J	A-2
TP1T	A-2
TP2	C-4
TP21	A-2
TP22	B-3
TP25	D-1
TP2B	C-2
TP2R	C-2
TP4	D-2
TPB1	B-4

SYMBOL NO.	ADDRESS
TPB2	B-4
TPB3	A-4
TPB4	A-4
TPL1	B-3
TPL4	B-3
TPM0	C-4
TPM1	B-3
TPM2	B-3
TPM4	C-3
TPM5	B-3
TPRY	D-2
VC700	D-6
VR100	B-2
VR101	A-2
VR200	C-4
VR350	C-4
VR351	C-3
VR353	C-3
VR354	C-3
VR355	B-4
VR601	A-2
VR602	E-3
VR651	D-2
X600	B-2
X700	D-4

PCB-DEFL



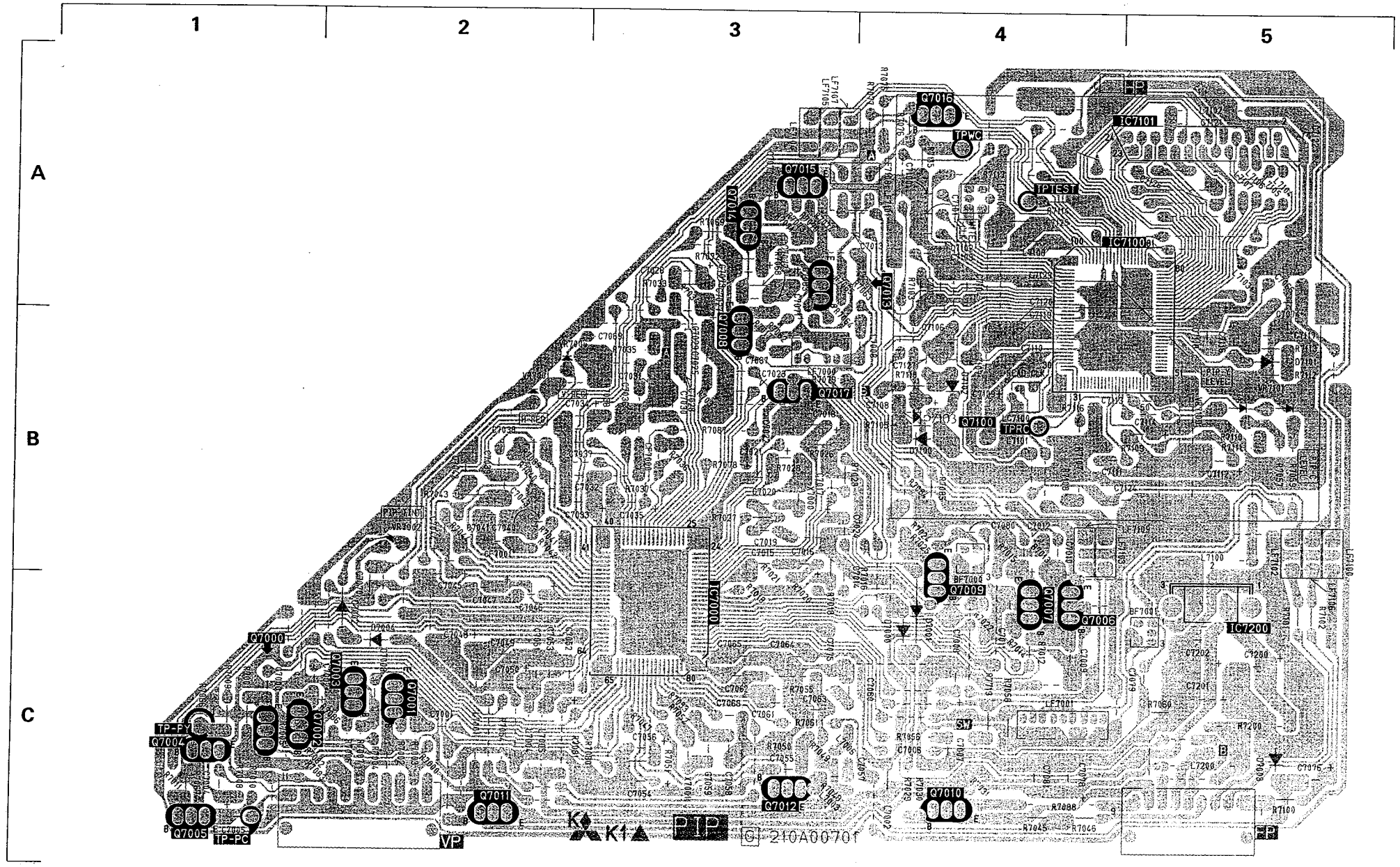


PCB – DEFL

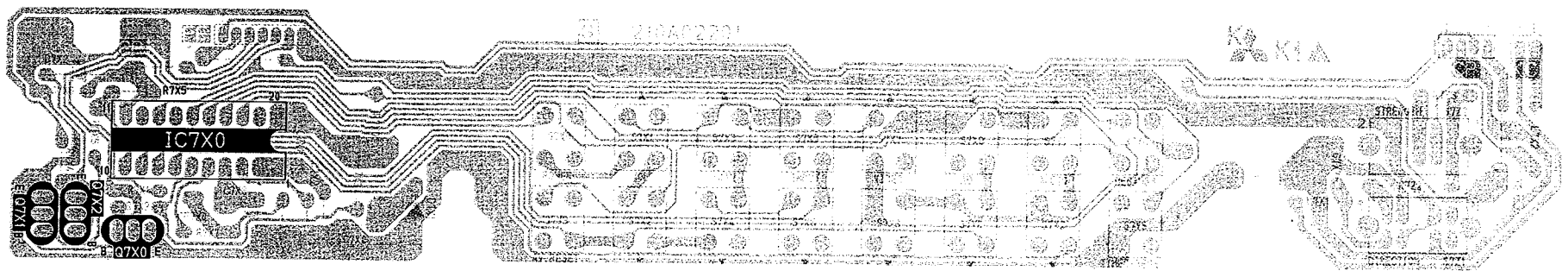
SYMBOL NO.	ADDRESS
D4E1	B-6
D4E2	C-6
D4E4	C-6
D503	B-1
D506	B-3
D507	B-3
D509	B-6
D537	B-4
D538	B-4
D551	C-7
D571	B-4
D5G4	D-6
D5G5	C-7
D5G6	C-7
D5G7	C-7
D5G8	B-6
D5G9	D-7
D5H0	C-7
D900	D-1
D901	E-1
D902	D-3
D904	D-3
D905	D-2
D906	C-3
D907	E-4
D908	C-4
D909	C-2
D910	D-4
D911	A-2
D912	C-1
D913	C-1
D915	E-2
D916	B-1
D917	C-2
F901	A-7
IC4E1	C-6
IC501	A-6
IC901	E-3
K901	D-1
K902	D-1
L4E1	C-6
L531	C-5
L552	C-5
L553	C-5
L554	B-3
L555	A-5
L556	C-5
L557	C-5
L571	A-4
L5E1	C-6
L902	C-3
L903	C-3
L904	B-2
L905	C-3
L906	B-2
L907	D-4

SYMBOL NO.	ADDRESS
L908	D-4
L909	E-4
L911	D-4
L913	A-6
L914	A-5
L917	B-2
L918	B-2
L920	B-2
L921	D-4
L922	C-2
L950	C-3
L971	A-1
Q4A1	C-6
Q505	B-6
Q531	C-5
Q532	C-6
Q5A4	B-7
Q5A5	B-7
Q5H1	D-7
Q5H3	C-7
Q902	C-1
Q903	C-1
Q906	E-4
RP901	D-1
RV901	A-4
S401	C-7
S571	B-4
T531	C-5
T532	D-6
T533	D-4
T552	B-4
T904	A-2
T905	D-3
TP31	E-6
TP33	C-7
TP34	C-7
VR4E1	B-6
VR4E2	B-6
VR503	B-6
VR504	B-7
VR505	A-7
VR506	C-7

PCB-PIP



PCB-CONTROL

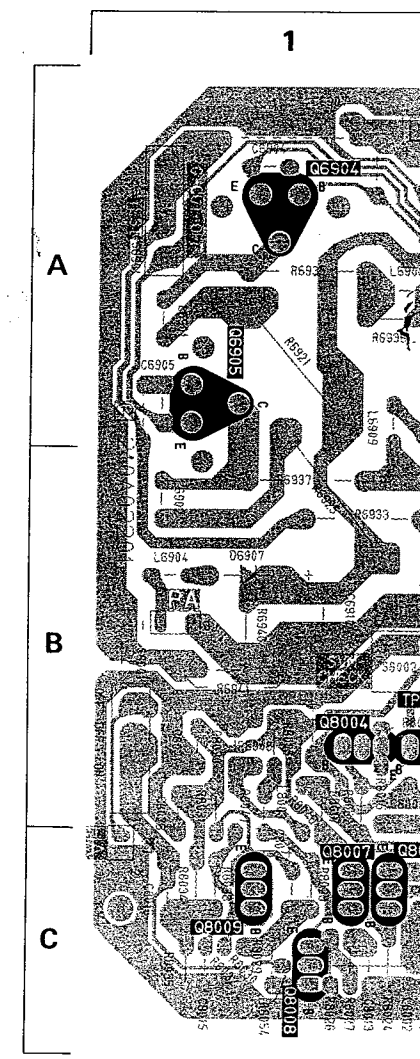


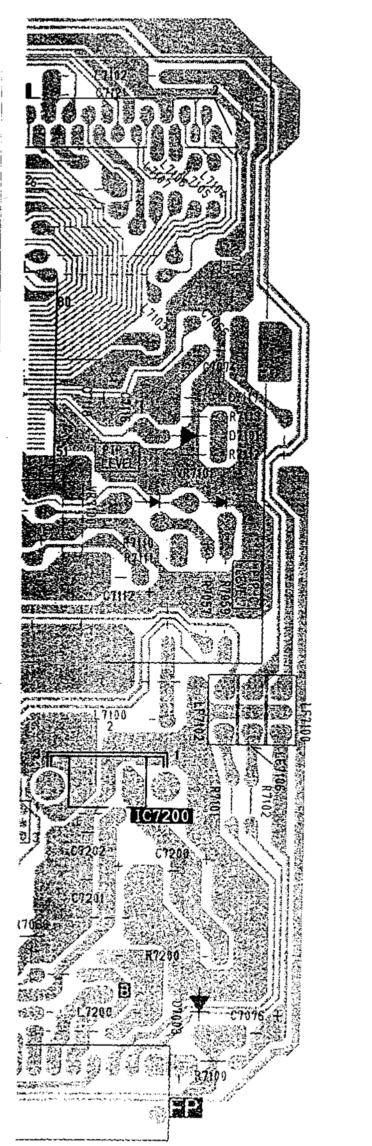
PCB – PIP

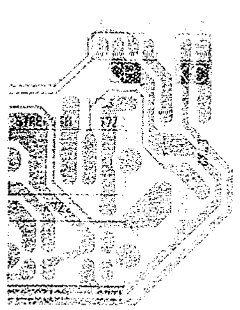
SYMBOL NO.	ADDRESS
BF7000	C-4
BF7001	C-5
CF7000	B-3
CF7001	B-2
D7000	C-4
D7001	C-4
D7002	C-2
D7003	C-5
D7004	C-2
D7100	B-4
D7102	B-4
D7103	B-4
IC7000	C-3
IC7100	A-5
IC7101	A-5
IC7200	C-5
L7001	C-2
L7002	C-4
L7003	C-3
L7004	C-2
L7005	C-2
L7006	C-3
L7008	B-4
L7100	B-5
L7101	B-4
L7102	A-5
L7103	A-5
L7104	A-5
L7105	A-5
L7106	A-5
L7107	A-5
L7108	A-4
L7200	C-5
LC7100	B-4
LC7101	A-4
LF7000	B-3
LF7001	C-4
LF7100	B-5
LF7101	A-4

SYMBOL NO.	ADDRESS
LF7102	B-5
LF7103	B-5
LF7104	A-3
LF7105	A-3
LF7106	C-5
LF7107	A-3
LF7108	A-4
LF7109	B-5
Q7000	C-1
Q7001	C-2
Q7002	C-2
Q7003	C-2
Q7004	C-1
Q7005	C-1
Q7006	C-4
Q7007	C-4
Q7008	B-3
Q7009	C-4
Q7010	C-4
Q7011	C-2
Q7012	C-3
Q7013	A-4
Q7014	A-3
Q7015	A-3
Q7016	A-4
Q7017	B-3
Q7100	B-4
TP-PC	C-1
TP-PY	C-1
TPRC	B-4
TPTEST	A-4
TPWC	A-4
VR7000	B-2
VR7001	B-2
VR7002	B-2
VR7100	B-5
VR7101	B-5
X7000	B-3
X7001	C-3

PCB-CRT





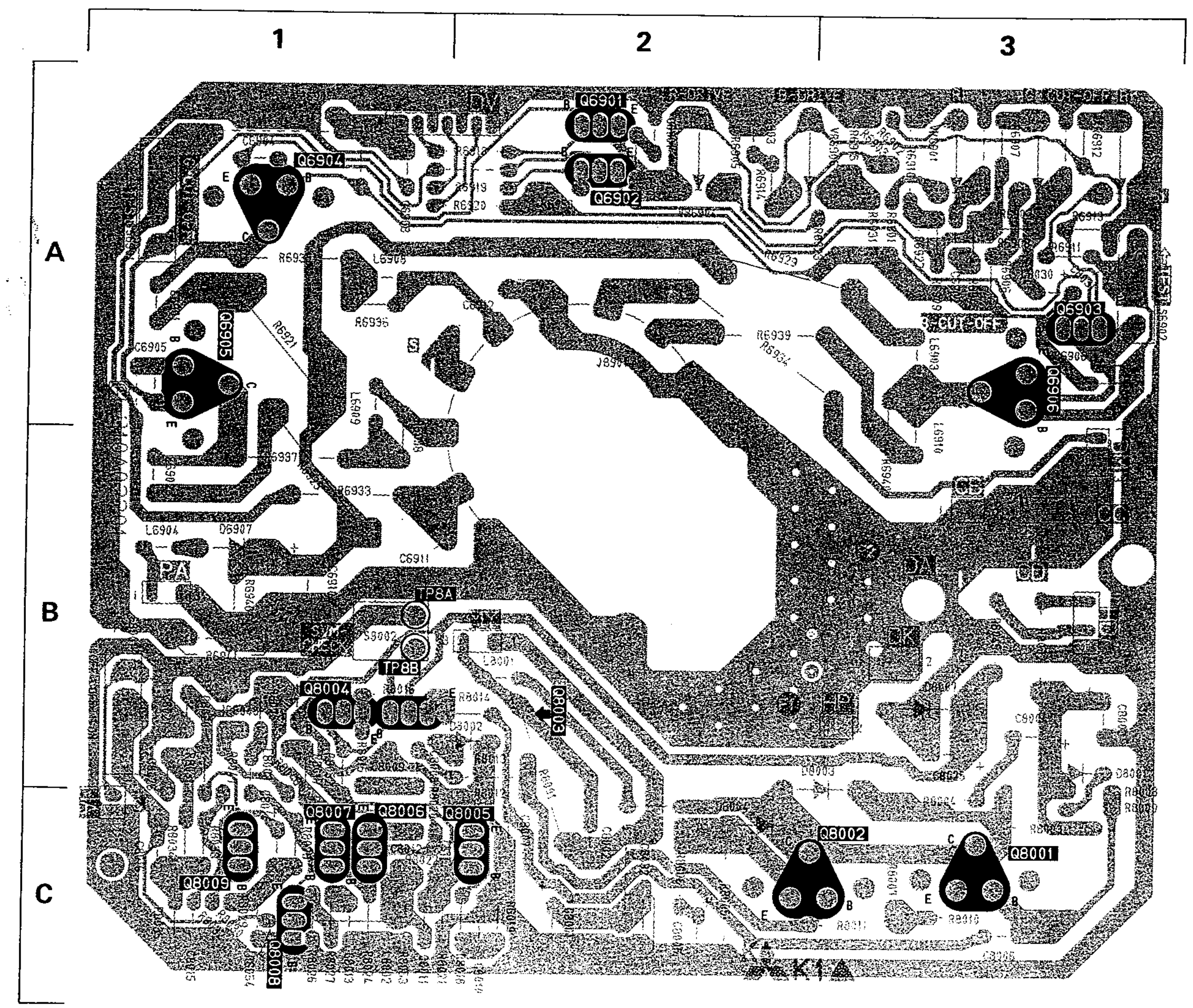


PCB – PIP

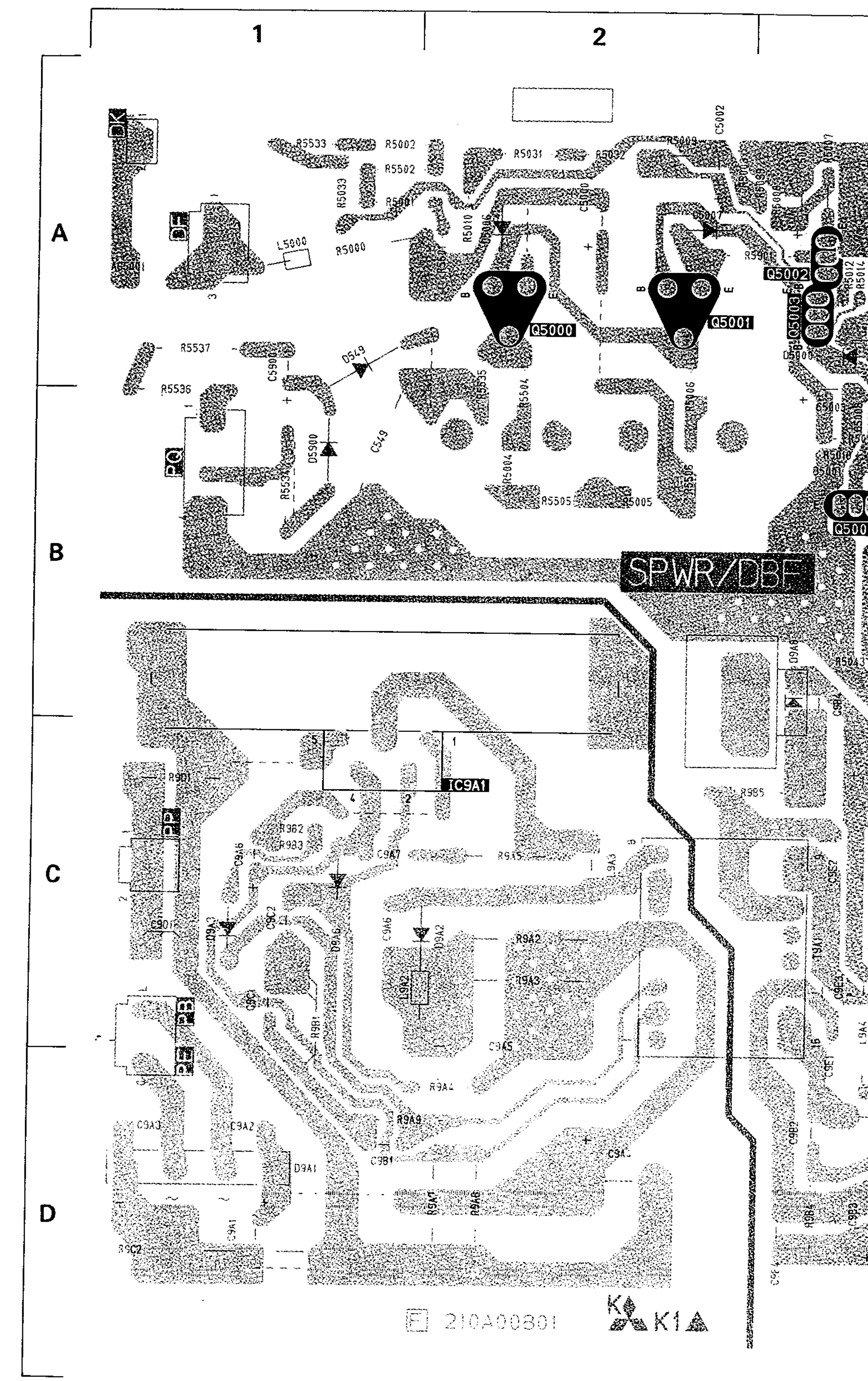
SYMBOL NO.	ADDRESS
BF7000	C-4
BF7001	C-5
CF7000	B-3
CF7001	B-2
D7000	C-4
D7001	C-4
D7002	C-2
D7003	C-5
D7004	C-2
D7100	B-4
D7102	B-4
D7103	B-4
IC7000	C-3
IC7100	A-5
IC7101	A-5
IC7200	C-5
L7001	C-2
L7002	C-4
L7003	C-3
L7004	C-2
L7005	C-2
L7006	C-3
L7008	B-4
L7100	B-5
L7101	B-4
L7102	A-5
L7103	A-5
L7104	A-5
L7105	A-5
L7106	A-5
L7107	A-5
L7108	A-4
L7200	C-5
LC7100	B-4
LC7101	A-4
LF7000	B-3
LF7001	C-4
LF7100	B-5
LF7101	A-4

SYMBOL NO.	ADDRESS
LF7102	B-5
LF7103	B-5
LF7104	A-3
LF7105	A-3
LF7106	C-5
LF7107	A-3
LF7108	A-4
LF7109	B-5
Q7000	C-1
Q7001	C-2
Q7002	C-2
Q7003	C-2
Q7004	C-1
Q7005	C-1
Q7006	C-4
Q7007	C-4
Q7008	B-3
Q7009	C-4
Q7010	C-4
Q7011	C-2
Q7012	C-3
Q7013	A-4
Q7014	A-3
Q7015	A-3
Q7016	A-4
Q7017	B-3
Q7100	B-4
TP-PC	C-1
TP-PY	C-1
TPRC	B-4
TPTEST	A-4
TPWC	A-4
VR7000	B-2
VR7001	B-2
VR7002	B-2
VR7100	B-5
VR7101	B-5
X7000	B-3
X7001	C-3

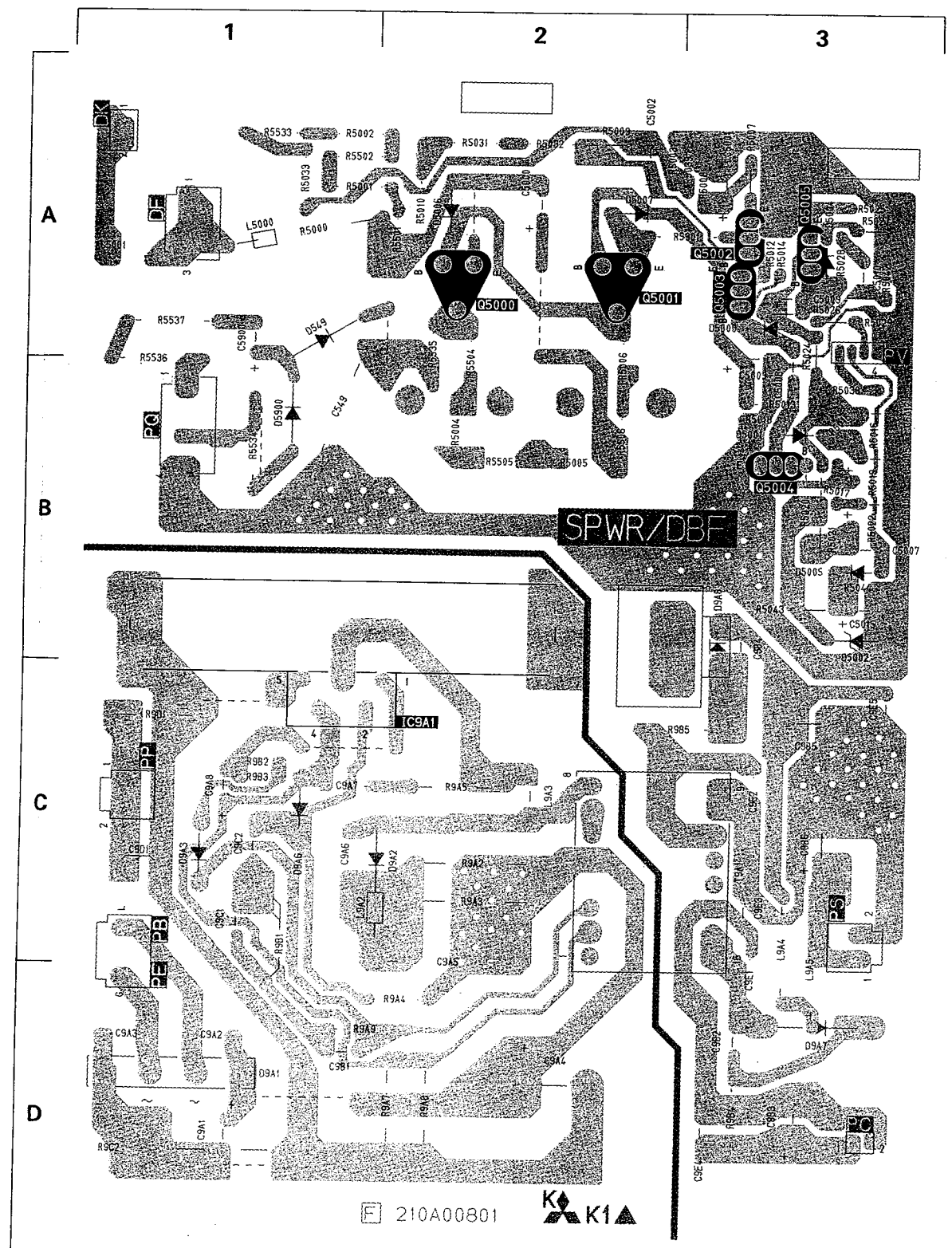
PCB-CRT



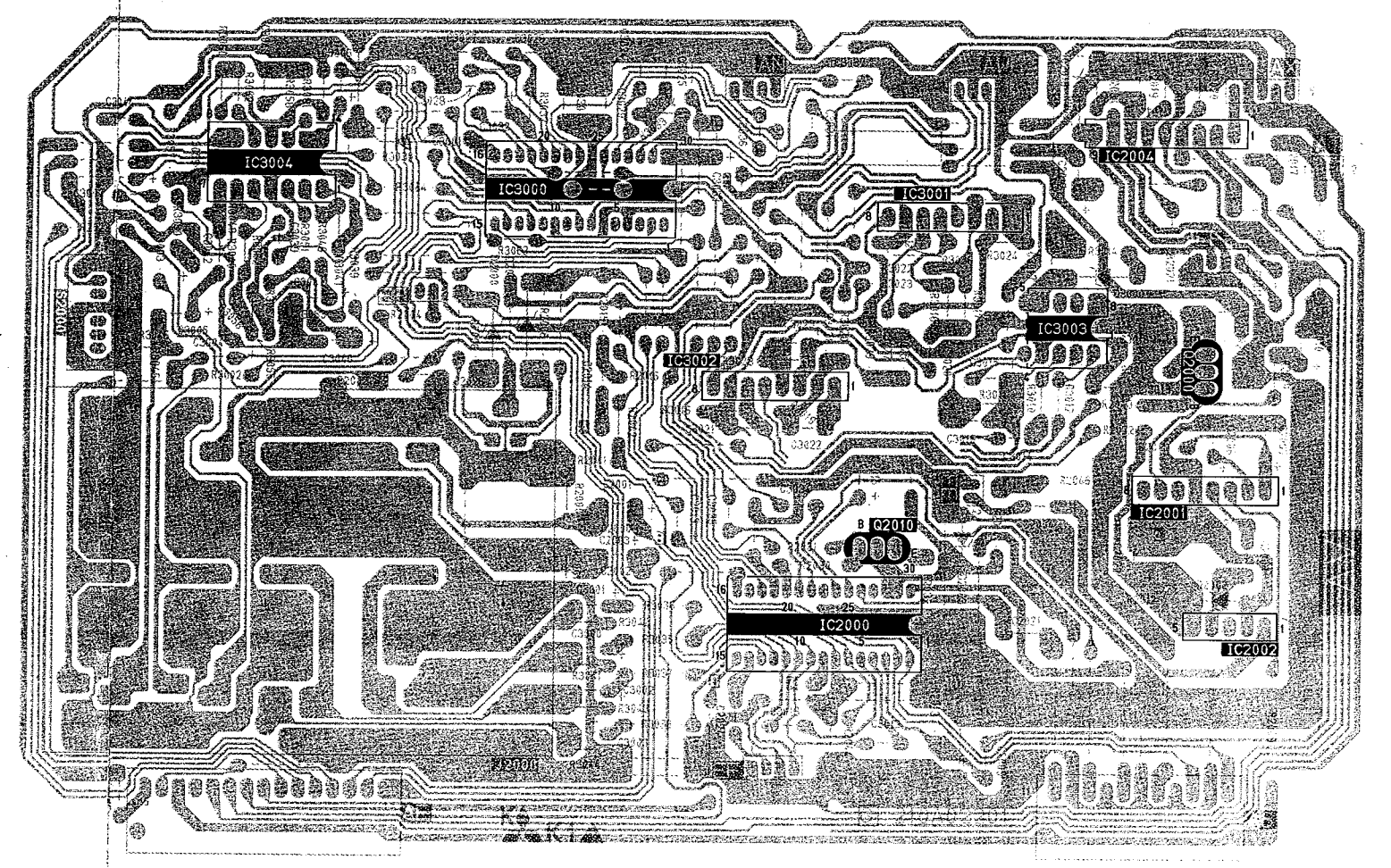
PCB-SPWR/DBF



PCB-SPWR/DBF



PCB-AV



PCB – CRT

SYMBOL NO.	ADDRESS
D6907	B-1
D8001	B-3
D8002	B-2
D8003	B-3
D8004	C-2
D8007	B-3
L6901	A-1
L6902	B-1
L6903	A-3
L6904	B-1
L6908	A-1
L6909	A-1
L6910	B-3
L8001	B-2
L8002	C-1
L8003	B-1

SYMBOL NO.	ADDRESS
Q6901	A-2
Q6902	A-2
Q6903	A-3
Q6904	A-1
Q6905	A-1
Q6906	A-3
Q8001	C-3
Q8002	C-3
Q8003	B-2
Q8004	B-1
Q8005	C-2
Q8006	C-1
Q8007	C-1
Q8008	C-1
Q8009	C-1

PCB – SPWR/DBF

SYMBOL NO.	ADDRESS
S6901	A-1
S6902	A-3
S8001	B-1
S8002	B-1
TP88	B-1
TP8A	B-1
VR6901	A-3
VR6902	A-3
VR6903	A-3
VR6904	A-2
VR6905	A-3

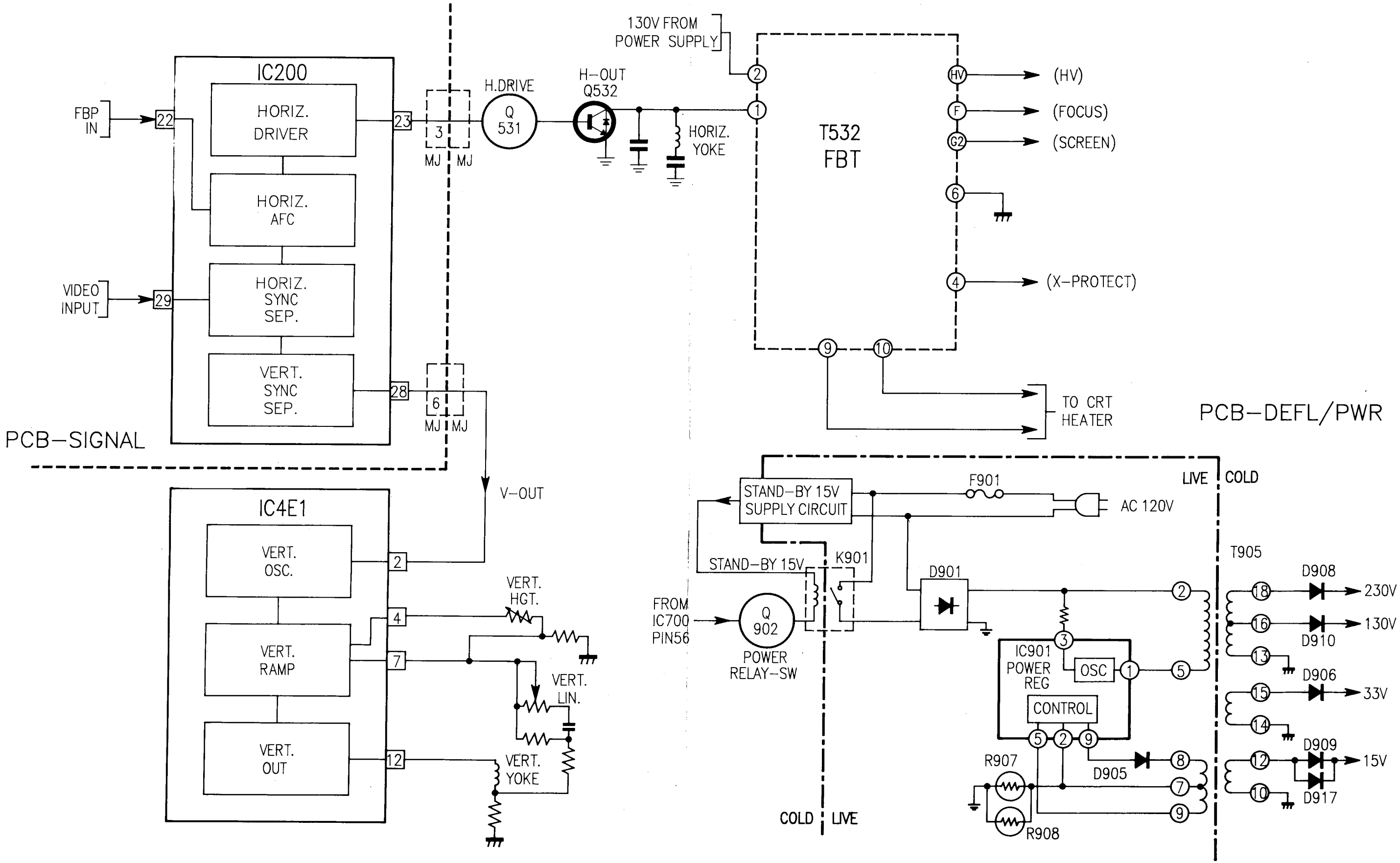
SYMBOL NO.	ADDRESS
AG5001	A-1
D5000	A-3
D5001	B-3
D5002	B-3
D5004	A-3
D5005	B-3
D5006	A-2
D5007	A-2
D549	A-1
D5900	B-1
D9A2	C-2
D9A3	C-1
D9A6	C-1
D9A7	C-3
D9A8	B-3

SYMBOL NO.	ADDRESS
IC9A1	C-2
L5000	A-1
L9A2	C-2
L9A3	C-2
L9A4	C-3
L9A5	C-3
Q5000	A-2
Q5001	A-2
Q5002	A-3
Q5003	A-3
Q5004	B-3
Q5005	A-3
T9A1	C-3

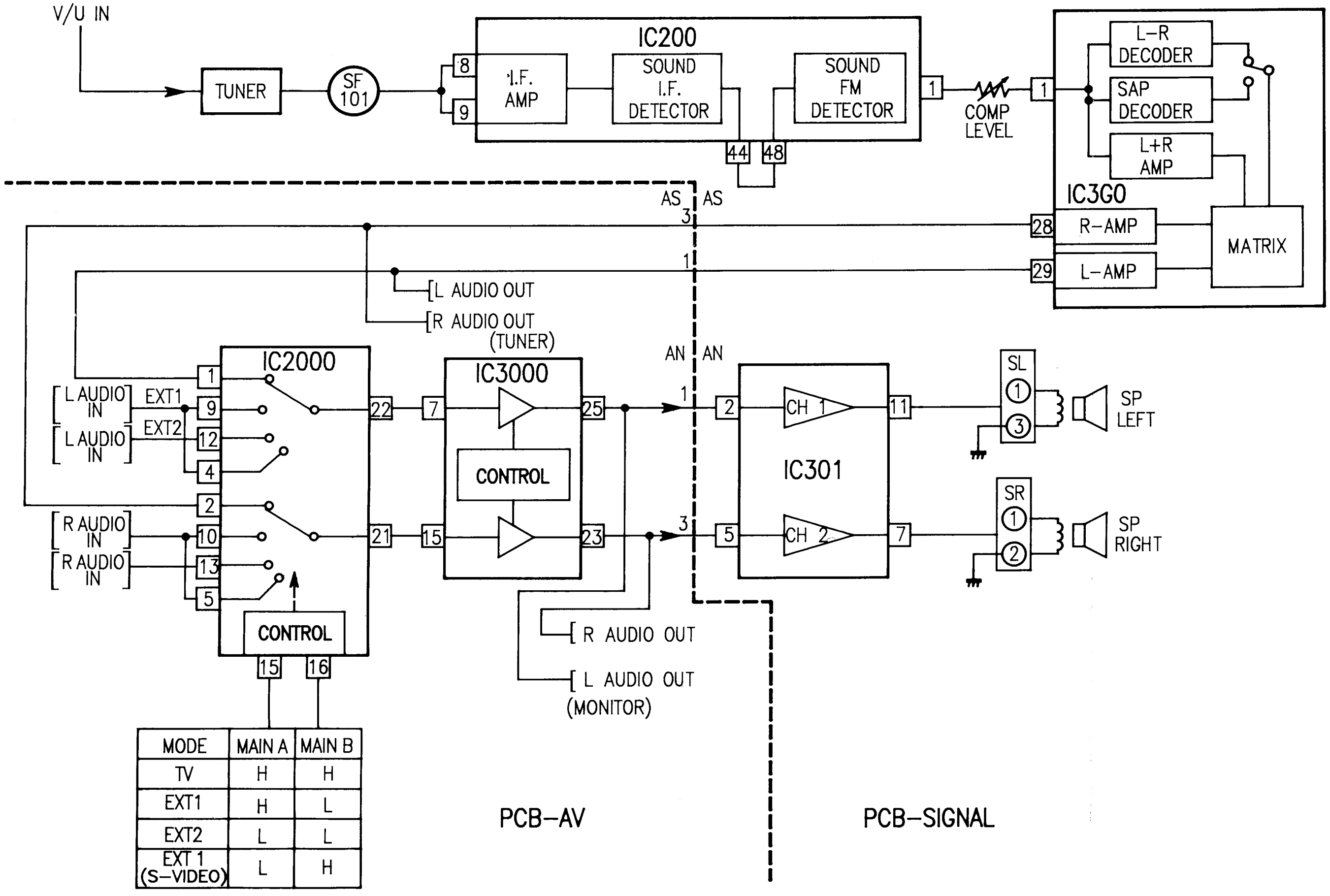
PCB – AV

SYMBOL NO.	ADDRESS
D2000	A-2
D2001	A-2
D2002	B-4
D2003	B-3
D3000	A-4
D3001	A-2
D3002	A-2
IC2000	B-3
IC2001	B-4
IC2002	B-4
IC2004	A-4
IC3000	A-2
IC3001	A-3
IC3002	B-2
IC3003	A-4
IC3004	A-1

SYMBOL NO.	ADDRESS
J2000	C-2
Q2000	B-4
Q2010	B-3
S2000	A-1

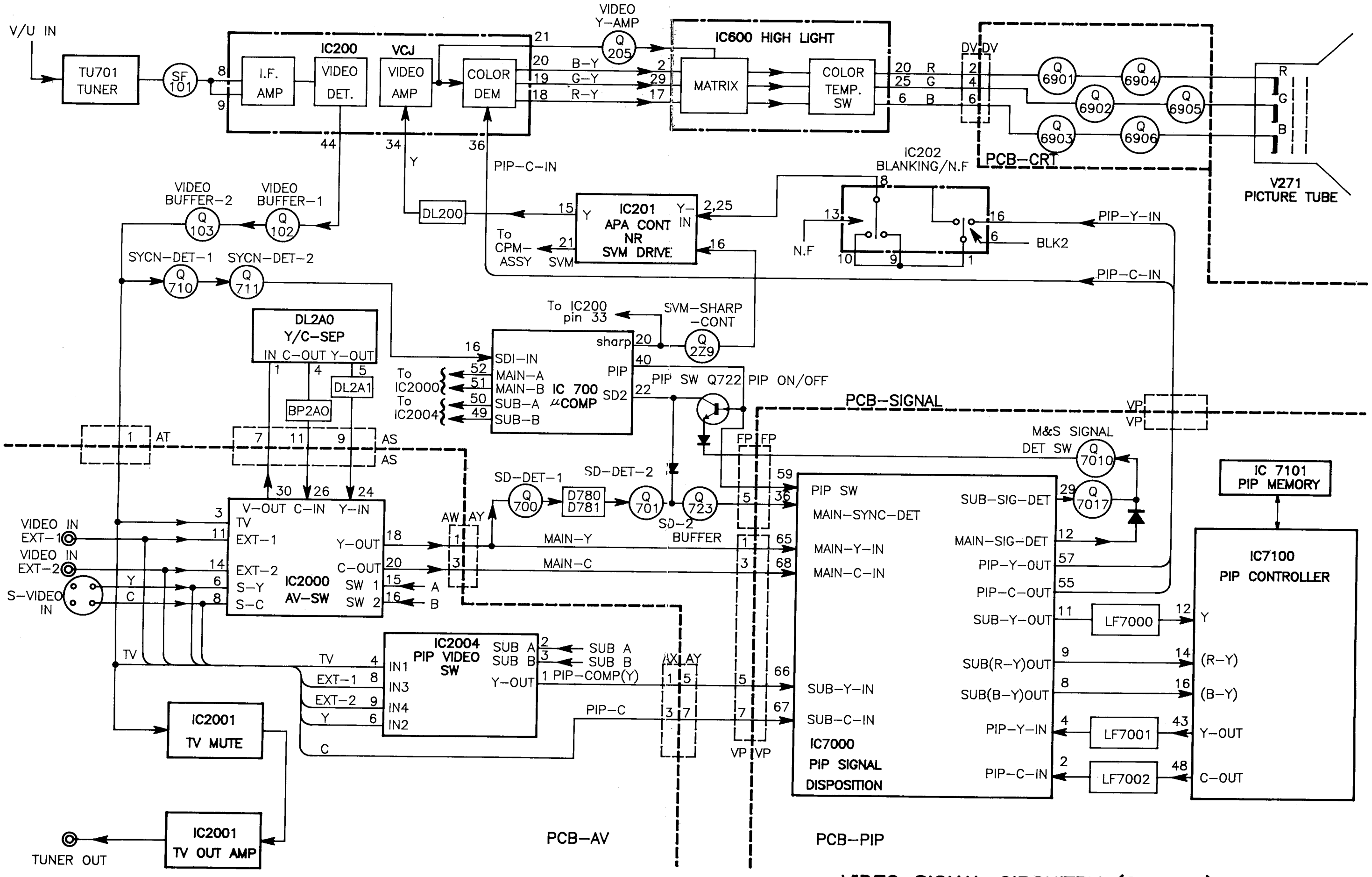


POWER SUPPLY AND DEFLECTION CIRCUITRY (25R604)



MODE	MAIN A	MAIN B
TV	H	H
EXT1	H	L
EXT2	L	L
EXT 1 (S–VIDEO)	L	H

AUDIO SIGNAL PATH (25R603)



VIDEO SIGNAL CIRCUITRY (25R602)

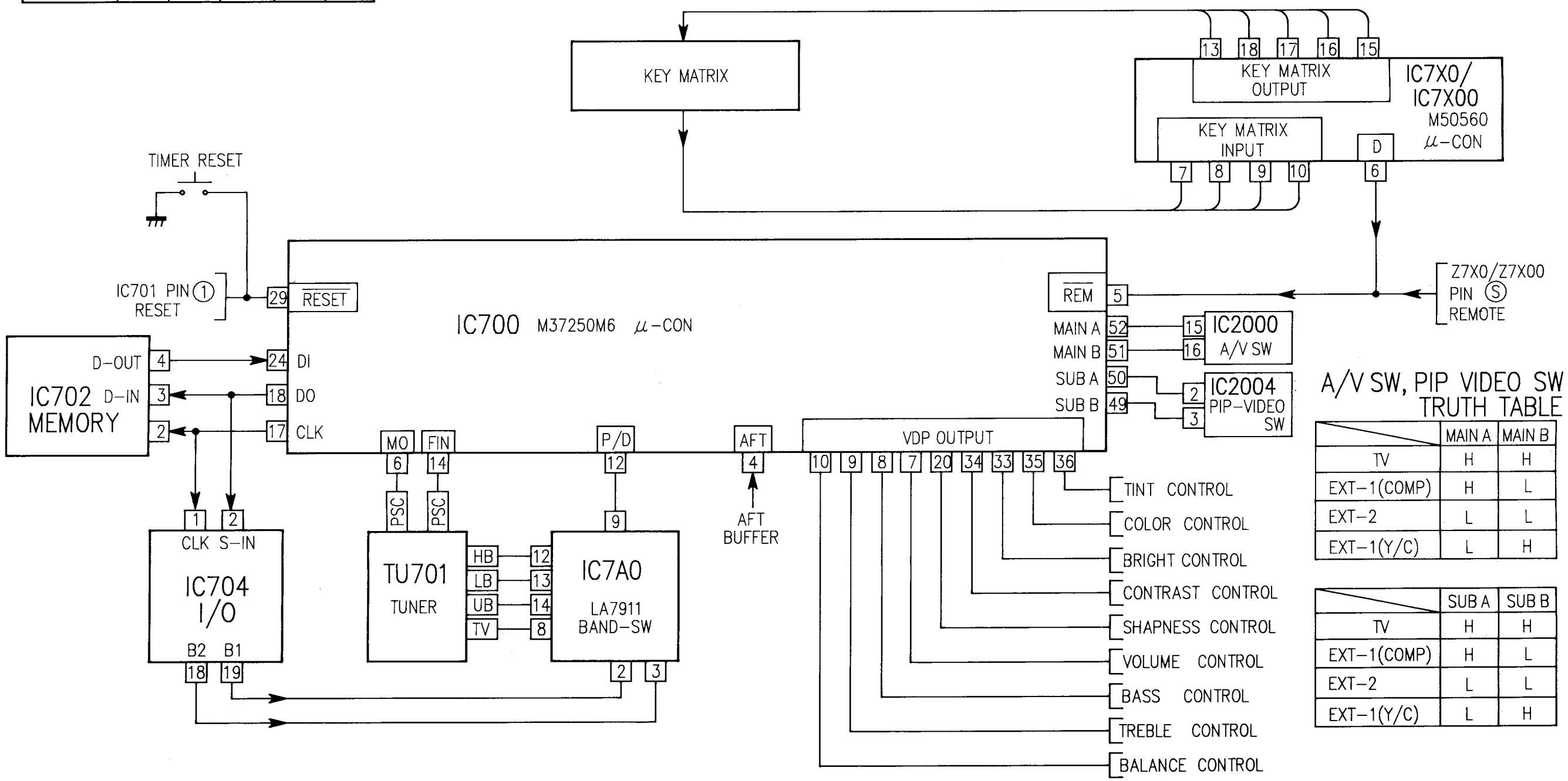
KEY MATRIX

SCAN / INPUT	F_0 (18)	F_1 (17)	F_2 (16)	F_3 (15)	F_5 (13)
E_0 (7)	POWER	—	AUDIO ▲	AUDIO ▼	—
E_1 (8)	VOL ▲	VOL ▼	ADJ ▲	ADJ ▼	AV RESET
E_2 (9)	CH ▲	CH ▼	VIDEO ▲	VIDEO ▼	—
E_3 (10)	INPUT ▲	INPUT ▼	—	—	—

BAND SWITCHING TRUTH TABLE

SYMBOL NO.	IC704		IC7A0			TUNER		
	(19)	(18)	(14)	(13)	(12)	LB	HB	UB
UHF HYP/ULTRA	L	H	12V	Z	Z	0	0	12V
VHF-L /MID	H	L	Z	12V	Z	12V	0	0
MID/VHF-H SUP/HYP	H	H	Z	Z	12V	0	12V	0

Z: HIGH IMPEDANCE



A/V SW, PIP VIDEO SW TRUTH TABLE

	MAIN A	MAIN B
TV	H	H
EXT-1(COMP)	H	L
EXT-2	L	L
EXT-1(Y/C)	L	H

	SUB A	SUB B
TV	H	H
EXT-1(COMP)	H	L
EXT-2	L	L
EXT-1(Y/C)	L	H

TUNING SYSTEM FUNCTIONAL BLOCK DIAGRAM (25R601)

PCB-SIGNAL

PCB-LED

PCB-CONTROL

SCHEMATIC DIAGRAM

MODEL : CK-3526R/CK-3527R

NOTE 1:

1. The unit of resistance is "ohm" with no symbol.
   Accordingly, K = 1000 ohms
   M = 1000K ohms.
2. The wattage of resistors, if not specifically designated, is 1/4 or 1/6 watt.
3. **Resistors, if not specifically designated, are carbon resistors.**
4. The marks of resistors are as follows:
   - CE : Cemented resistor
   - MB : Metal oxide film resistor (type B)
   - MFC : Metal plate cement resistor.
   - CM : Cement metal oxide film resistor.
   - : Fixed composition resistor
   - : Wire wound resistor
   - : Metal film resistor
5. The tolerance of resistor value is:
   Not specified=±5%, K=±10% M=±20%
6. The unit of capacitance, if not specifically designated, is:
   a) μF, for numbers less than 1
   b) PF, for numbers more than 1
7. Capacitors, if not specifically designated are Ceramic capacitors except electrolytic capacitors.
8. The marks of capacitors are as follows:
   - ALM : Aluminus electrolytic capacitor
   - MF : Polyester capacitor
   - PP : Polypropylene film capacitor
   - TANT : Tantalum capacitor
   - TF : Twin film capacitor.
   - MF.PP : Polyester polypropylene film capacitor.
   - MPP : Metallize plastic film capacitor.
   - NP : Non polarized electrolytic capacitor.
   - SC : Semi conductor capacitor.
   - PS : Styrol capacitor.
   - + : Electrolytic capacitor
9. The DC working voltage of capacitor, if not specifically designated is: 50V
10. The tolerance of capacitor value, if not specifically designated is: ±10% for polyester capacitor
    ±5% for ceramic capacitor
    and J =±5% K =±10% M =±20% P = +100% −0%
    C =±0.25PF D =±0.5PF F =±1PF Z = +80% −20% N=±30%

SPECIFIC SYMBOL	
Zener Diode	Varistor
Varicap	Crystal unit
Positor	Air Gap
Thermistor	Part (resistor) attached on the copper-foil side of PCB
Fusible Resistor	Ceramic filter

NOTE 2:

1. DC voltages were measured from points indicated to the circuit ground with a digital voltmeter.
   Line voltage at 120V AC on signal applied.
2. Waveforms were taken with NTSC color bar signal.
3. This is a basic schematic diagram. Some sets may be subject to modification according to engineering improvement.

SHADED COMPONENTS HAVE SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY. BEFORE REPLACING ANY OF THESE COMPONENTS READ CAREFULLY THE PRODUCT SAFETY NOTICE IN THE SERVICE MANUAL. DON'T DEGRADE THE SAFETY OF THE RECEIVER THROUGH IMPROPER SERVICING.

SERVICE MAN WARNING
X-RADIATION PRECAUTION
THIS PRODUCT INCLUDES CRITICAL ELECTRICAL AND MECHANICAL PARTS ESSENTIAL FOR X-RADIATION PROTECTION.
TO AVOID POSSIBLE EXPOSURE TO X-RADIATION TAKE X-RADIATION PROTECTIVE MEASURES FOR PERSONNEL DURING SERVICING.
SEE SERVICE INSTRUCTIONS FOR SPECIFIED REPLACEMENT PARTS AND SERVICE ADJUSTMENTS.

Printed in U.S.A

CK-3526R
CK-3527R(1/3)

CHASSIS WAVEFORMS

①1.0Vp-p(H) ②0.1Vp-p(H) ③0.5Vp-p(H) ④5.8Vp-p(V)

⑤2.6Vp-p(H) ⑥0.8Vp-p(H) ⑦2.2Vp-p(H) ⑧8Vp-p(H) ⑨1Vp-p(H)

①3.6Vp-p(H) ②3.2Vp-p(H) ③3.6Vp-p(H)

IC301 LA4282

IC600 AN91A14K

IC360 μPC1871CU

IC200 LA7670

If not specified TRANSISTORS are 2SC2603-E,F/2SC1740S-R,S NPN TYPE
2SA1115-E,F/2SA933S-R,S PNP TYPE
If not specified DIODES are 1S2076A/1S2471

If not specified TRANSISTORS are 2SC2603-E,F/2SC1740S-R,S NPN TYPE

PCB-PIP

PIN #	SIGNAL-DET-OUTPUT	
	YES	NO
⑰	H	L
⑱	L	H

IC7000 HA11569FS
PIP-SIGNAL-DISPOSITION

IC7100
HD49412FS
PIP-CONTROLOR

IC7101
M5M4C264L-12
/HM534179P-12
PIP-MEMORY

IC7200
μPC7805H
5V REG

Q7017 S-SIGNAL -DET-SW
Q7016 2SC2603-F MACROVISION -SW
Q7009 S-C-BUFFER-2
Q7010 M&S-SIGNAL -DET-SW
Q7008 S-Y-BUFFER-2
Q7013 S-Y-BUFFER-3
Q7015 S-Y-BUFFER-4
Q7014 S-Y-AMP
Q7007 S-(R-Y)-BUFFER
Q7005 S-(B-Y)-BUFFER
Q7005 PIP-C-BUFFER
Q7004 PIP-Y-BUFFER
Q7003 S-C-BUFFER-1
Q7002 S-Y-BUFFER-1
Q7001 M-C-BUFFER-1
Q7000 M-Y-BUFFER
Q7011 S-Y/C-SW
Q7012 M-C-BUFFER-2

LC7101 PIP-WRITE -CLOCK-ADJ
LC7100 PIP-READ -CLOCK-ADJ

PCB-SIGNAL FP
PCB-SIGNAL VP

FP: PIP ON/OFF, STILL, POSITION, SUB Y/C SW, SC-2-IN, 12V, GND, PIP-SC-DET

5V-ANALOG
5V-DIGITAL
12V
5V (SUB)
5V (MAIN)
5V HV

PIP-Y-LEVEL-ADJ
PIP-LEVEL-ADJ
PIP-TINT

LF7104. LF7107. LF7109 : DSS306-54B101M100
LF7103. LF7105. LF7108 : DSS306-54102M100
LF7100. LF7101. LF7102. LF7106 : DSS306-54FZ103N100

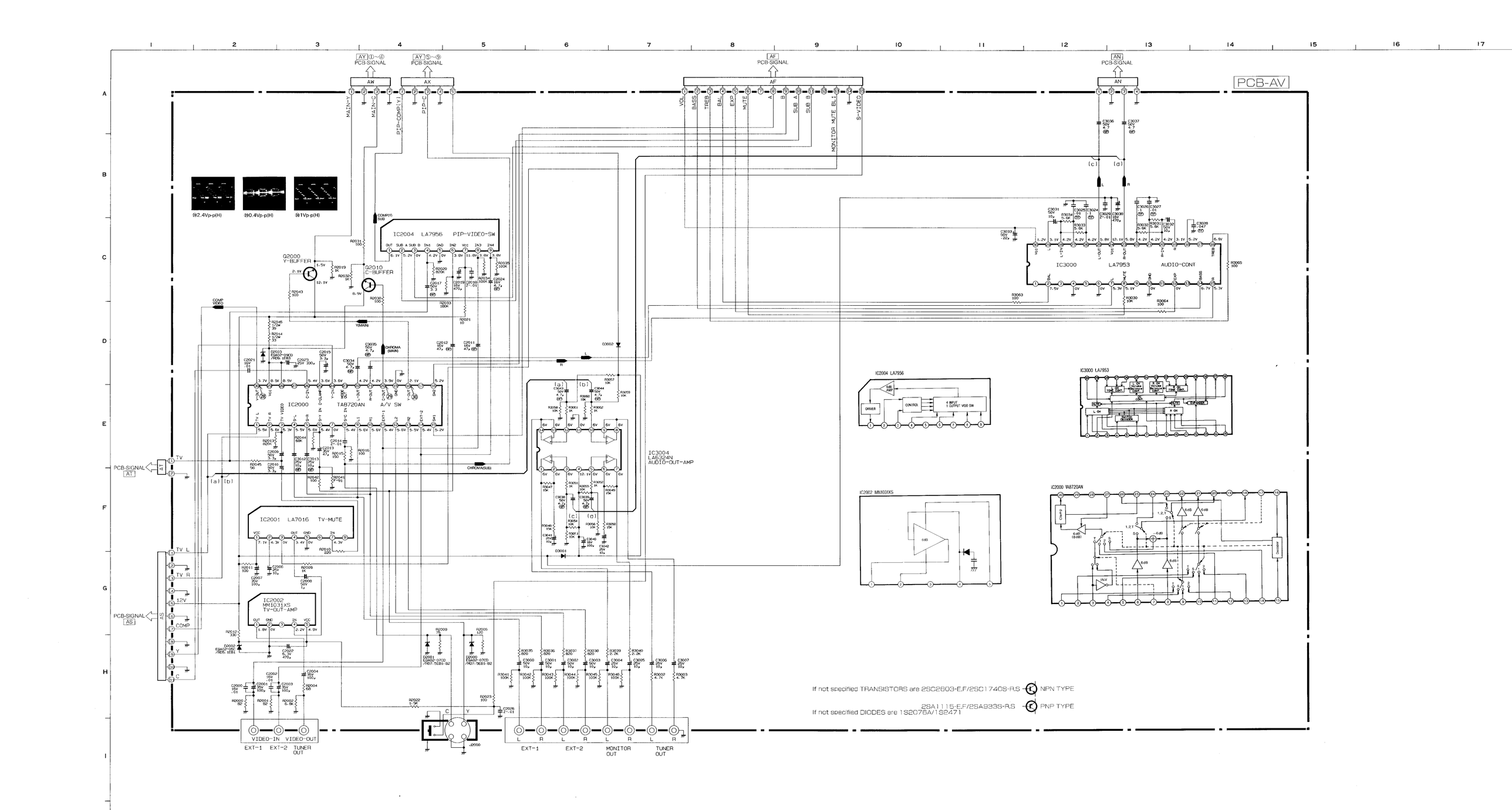
2⃝1.0Vp-p(H)
2⃝0.2Vp-p(H)
2⃝0.6Vp-p(H)
2⃝0.9Vp-p(H)
2⃝0.7Vp-p(H)
(PIP) 2⃝0.9Vp-p(H)
(PIP) 2⃝0.4Vp-p(H)

IC7000 HD49412FS

IC7000 HA11569FS

CK-3526R
CK-3527R(2/3)

PCB-AV


AY ①~④ PCB-SIGNAL
AY ⑤~⑨ PCB-SIGNAL
AF PCB-SIGNAL
AN PCB-SIGNAL
AW
AX
AF
AN
MAIN-Y
MAIN-C
PIP-COMP(Y)
PIP-C
VOL
BASS
TREB
BAL
EXT
MUTE
A
B
SUB
SUB
MONITOR MUTE BLK
S-VIDEO
IC2004 LA7956 PIP-VIDEO-SW
IC2000 TA8720AN A/V SW
IC2001 LA7016 TV-MUTE
IC2002 MM1031XS TV-OUT-AMP
IC3004 LA6324N AUDIO-OUT-AMP
IC3000 LA7953 AUDIO-CONT
Q2000 Y-BUFFER
Q2010 C-BUFFER
COMP VIDEO
CHROMA (MAIN)
CHROMA(SUB)
PCB-SIGNAL AT
PCB-SIGNAL AS
TV
TV L
TV R
12V
COMP
Y
C
VIDEO-IN VIDEO-OUT
EXT-1 EXT-2 TUNER OUT
EXT-1
EXT-2
MONITOR OUT
TUNER OUT
IC2004 LA7956
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