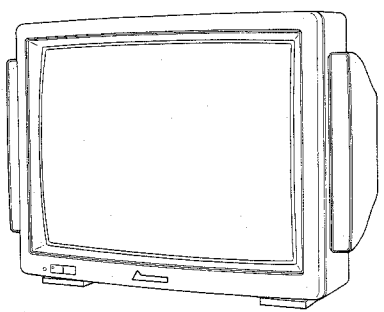
MITSUBISHI

Service Manual



MODEL

CT-37C2EDT

MITSUBISHI ELECTRIC CORPORATION

SPECIFICATION

Reception System	:	CCIR-B,G,I,L
Colour System	:	PAL/SECAM/3.58NTSC/4.43NTSC
Reception Freqeuncy	:	VHF : 44~68, 174~230MHz UHF : 470~862MHz
Mains Input	:	AC230V; 50Hz
Power Consumption	:	170W
Aerial Input	:	75Ω unbalanced
Intermediate Frequency	:	Video : 34.47/38.9MHz Sound : 32.4/32.9/33.16/33.4MHz Colour : 34.47/38.9MHz
Audio Output	:	30W+30W (Music Power)
Speaker	:	ø 100mm 2pcs
Chassis	:	EURO 9
Picture Tube	:	A48JWH10X 37" 110° Deflection
Cabinet Dimensions	:	959(W) x 727(H) x 593(D)mm
Weight (Approx.)	:	86.2kg

SAFETY PRECAUTIONS

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

WARNING

1. An isolation transformer should be used between the television receiver and the AC supply point before any test/service is performed on a live chassis television receiver.
2. Operation of these receivers outside the cabinet or with the cover removed, involves a shock hazard from the receiver power supplies. Work on the receiver should not be attempted by anyone who is not throughly familiar with precautions necessary when working on high voltage equipment.
3. 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.
4. When service is required, observe the original lead dressing. Extra precaution should be given to assure correct lead dressing in the high voltage area. Where a short – circuit has occurred, replace those components that indicate evidence of overheating.

LEAKAGE CURRENT COLD CHECK

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

With the AC plug removed from the 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 jumpered AC plug and touch the other lead to each exposed metal part (antennas, screwheads, 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 4 meg ohm. Any resistance below this value indicates an abnormality which requires corrective action.

CABINET PARTS

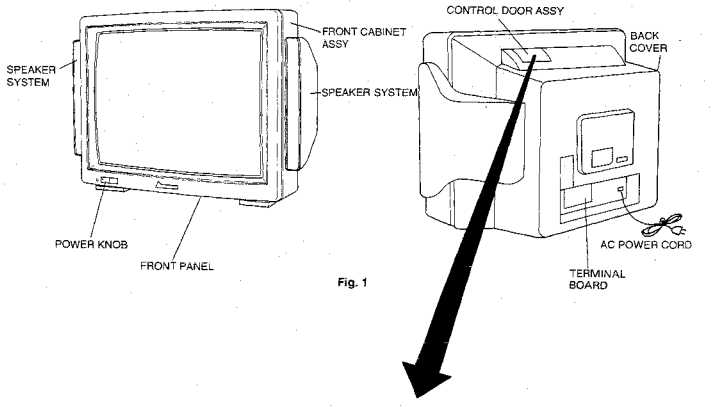


Fig. 1

CONTROL LOCATION

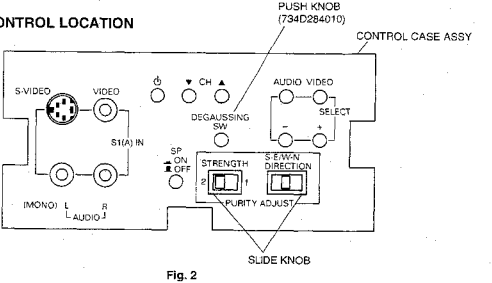
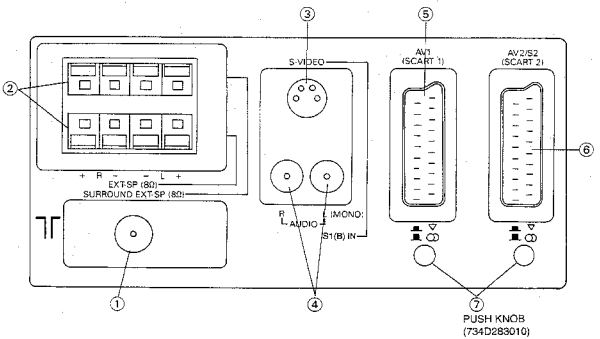


Fig. 2

CONNECTORS



① AERIAL SOCKET
② EXTERNAL LOUDSPEAKER CONNECTOR
③ S-VIDEO INPUT CONNECTOR
④ S-VIDEO AUDIO INPUTS
⑤ AV1 SCART SOCKET
⑥ AV2 SCART SOCKET
⑦ STEREO/MONO SWITCH

SCART SOCKET CONNECTIONS

MODE / PIN	AV1	AV2
1	AUDIO OUT R	
2	AUDIO IN R	
3	AUDIO OUT L	
4	AUDIO EARTH	
5	BLUE EARTH	EARTH
6	AUDIO IN L	
7	BLUE IN	NOT CONNECTED
8	FUNCTION SWITCH	
9	GREEN EARTH	EARTH
10	NOT CONNECTED	
11	GREEN IN	NOT CONNECTED

MODE / PIN	AV1	AV2
12	NOT CONNECTED	
13	RED EARTH	EARTH
14	EARTH	
15	RED IN	S CHROMA IN
16	RGB STATUS (BLANKING)	NOT CONNECTED
17	VIDEO OUT EARTH	
18	VIDEO IN EARTH	
19	VIDEO OUT	
20	VIDEO IN	
21	SOCKET EARTH	

Fig. 3

Using Extension cord jig

Using the Extension cord (Part No. 859C431O30) for servicing the PCB TEXT, the PCB YUV and the PCB DBF.

REPLACING THE PICTURE TUBE

1. Remove the left and right speakers.
2. Remove 24 screws retaining the rear cover. (Fig. 4-1)
3. Remove the main PC boards.
4. Remove the lead clamper and connector anode cap.
5. Remove 4 screws retaining the shield cover. (Fig. 4-2)

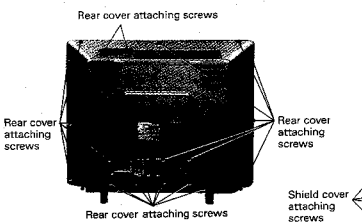


Fig. 4-1.

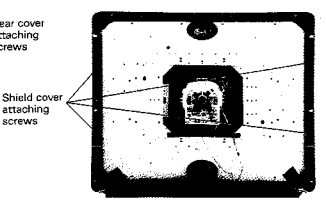
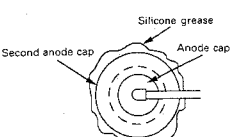


Fig. 4-2.



6. To protect the front surface of the CRT from damage, prepare a soft sheet, and lay the set on that sheet. Then, remove the four CRT lock nuts, using the T driver (JIG No. 859C358020). (Fig. 4-3)
7. Mount the set on the base so that the centre of picture tube is aligned with the centre of the base. Then, lower the cabinet slowly. (Fig. 4-4)
8. Replace the CRT with new one. For installation of the picture tube, reverse the above procedure. (Fig. 4-5)

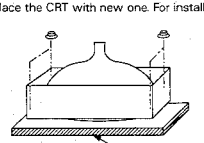


Fig. 4-3.

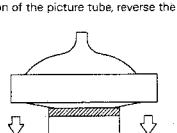


Fig. 4-4.

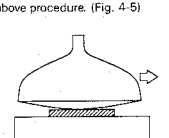


Fig. 4-5.

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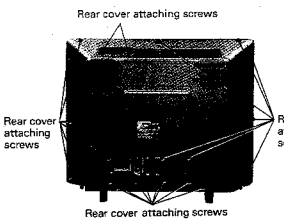


Fig. 4-1.

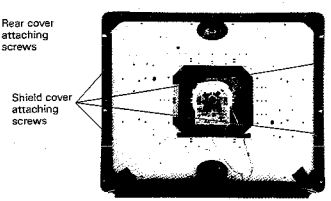
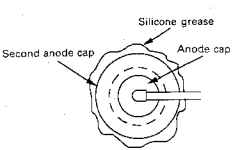


Fig. 4-2.



6. To protect the front surface of the CRT from damage, prepare a soft sheet, and lay the set on that sheet. Then, remove the four CRT lock nuts, using the T driver (JIG No. 859C358020). (Fig. 4-3)
7. Mount the set on the base so that the centre of picture tube is aligned with the centre of the base. Then, lower the cabinet slowly. (Fig. 4-4)
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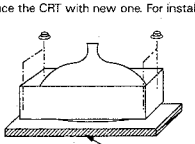


Fig. 4-3.

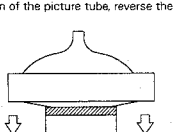


Fig. 4-4.

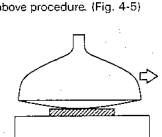


Fig. 4-5.

ITC adjustment

Purity and Convergence

Before adjusting the INTEGRATED TUBE COMPONENT, warm up the Receiver for more than an hour with a monochrome signal applied, to allow normal beam current flow.
Degauss not only the front and rear of the CRT but also the external magnetic shield, CRT holder, etc. (Insufficient degaussing causes magnetization, giving an unfavourable effect on colour purity adjustment.)

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

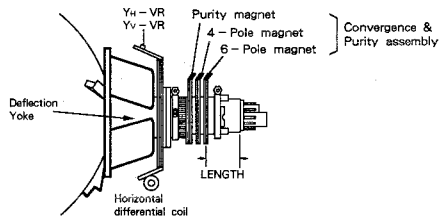
Note 1: The picture tube provided as a service spare part replacement is supplied in the form of assembly with Picture Tube, Deflection Yoke and Purity and Convergence magnetic assembly attached.
As a rule, Purity Convergence adjustment have already been preset at the factory, so that the final adjustment procedure only is required.

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

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

Procedure

(1) Remove the deflection yoke and rubber wedges from the picture tube cone, take care not to strike or scratch the cone surface.
(2) Clean any remaining cement 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 1.81±0.04 inches(46±1.0mm) as shown in Fig. 5-1, and tighten screw by hand.
(5) Demagnetize the front and sides of the receiver with a degaussing coil.



LENGTH
46±1.0 mm 1.81±0.04 inches

Fig. 5-1

Preliminary Adjustment

1. Purity

(1) Tune receiver to a monochrome signal.
(2) Short-circuit the base and emitter of B-OUT transistor to produce yellow raster.
(3) With the deflection yoke positioned fully forward, adjust the purity magnet so that the yellow bar is at the centre of the screen with normal vertical centreing.
(4) Slide the deflection yoke slowly backwards to produce a uniform yellow raster.
(5) Remove the shorting link on B-OUT transistor.
(6) Short-circuit the base and emitter of corresponding two transistors as indicated in Table 1 to produce green, red and blue rasters and to verify their purity, and fasten the DY screw on the deflection yoke temporarily.
(7) Remove the shorting leads from respective transistors.

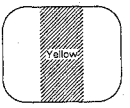


Fig. 5-2

Table 1
Transistors to be Shorted Base to Emitter to Produce Primary Colour.

Transistor / Raster	R – OUT	G – OUT	B – OUT
Red	Open	Short	Short
Green	Short	Open	Short
Blue	Short	Short	Open

2. Static Convergence Adjustment

(1) Tune the receiver to a crosshatch signal.
(2) Set the BRIGHTNESS and CONTRAST controls to centre position.
(3) Adjust the degree of angle between the tabs of the 4-pole magnet and the angular position to converge the "B" and "R" beams of the green at the centre on the screen.
[Refer to Fig. 5-3(b)]
(4) Adjust the degree of angle between the tabs of the 6-pole magnet and the angular position to converge the "B" and "R" beams to the "G" beam at the centre of the screen.
[Refer to Fig. 5-3(c)]
(5) If necessary, repeat the above steps.

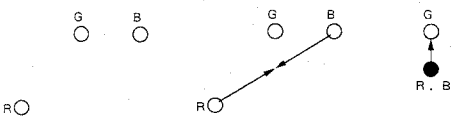


Fig. 5-3(a) Before Adjustment

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 equal distances but opposite directions.
* The 6-pole magnet moves "B" and "R" beams in the same direction and distance.
* The "G" beam is not movable by the 4-pole and 6-pole magnets.

3. Focus Adjustment

(1) Supply a grey scale signal with window.
(2) Observing around the vertical line, adjust FOCUS control for best overall focus.
Refer to Focus of electrical adjustment.

Final Adjustment

1. Purity

(1) Tune receiver to a monochrome signal.
(2) Short-circuit the base and emitter of B-OUT transistor to produce yellow raster.
(3) Loosen the Deflection Yoke screw and move it forward. Make certain that the yellow bar is at the horizontal centre. If necessary, adjust purity magnets to centre it.
(4) Slide the Yoke backwards to produce a uniform yellow raster.
(5) Short-circuit the base and emitter of corresponding two transistors as indicated in Table 1 to produce green, red and blue rasters and to verify their purity, and fasten the DY screw on the deflection yoke temporarily.
(6) If necessary, repeat above steps.
(7) Tighten the Yoke in position.
(8) Remove the shorting leads from respective transistors.
(9) Fix the yoke in position using the DY screws.

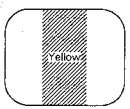


Fig. 5-4

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

Screen corner landing compensation

※ The steps described below are for correcting outward colour beam divergence at screen corners. Take reversal placement of the magnetic pieces for correcting inward divergence.
(1) Degauss the unit with its own degauss system.
※ 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 colour other than the received colour 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 colour disappears.(Part No. of the magnet : 461D033020 **Not stocked parts**)

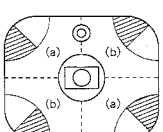


Fig.5-5

When an undesirable colour appears at the area (a) 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 colour appears at the area (b) 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 the raster and disturb the convergence system. Do not place magnetic piece closer than 50mm (2 inches) from the deflection yoke.
If an undesirable colour appears at the area shown ▨, move the magnetic piece counter-clockwise until the colour disappears.
If an undesirable colour appears at the area shown ▭, move the magnetic piece clockwise until the colour disappears.
After correction, degauss the set and then check the screen corners for discolouration. If exists, fine adjust the magnetic pieces for that corner.
Repeat degaussing and checking.

2. Focus Adjustment	(1) Supply a grey scale signal with window. (2) Observing around the vertical line, adjust FOCUS control for best overall focus. Refer to Focus (No.14) of electrical adjustment.
3. Static Convergence Adjustment	(1) Tune the receiver to a crosshatch signal. (2) Set the BRIGHTNESS and CONTRAST controls in centre positions. (3) Adjust the degree of angle between the tabs of the 4-pole magnet and the angular position green at the centre of the screen to converge the "B" and "R" beams on the screen. [Refer to Fig. 5-3(b)] (4) Adjust the degree of angle between the tabs of the 6-pole magnet and the angular position to congerge the "B" and "R" beams to the "G" beam at the centre 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 equal distances but opposite directions. * The 6-pole magnet moves "B" and "R" beams in the same direction and distance. * The "G" beam is not movable by the 4-pole and 6-pole magnets. **Note 2:** Never perform focus adjustment after convergence adjustments. If focus is adjusted after the convergence adjustment, re-check the convergence.

4. Dynamic convergence Y_H adjustment (Deviation of the vertical axis in the horizontal direction.)

Input a crosshatch signal.

Observing top and bottom point on the screen, adjust the VR (Y_H), at the upper part of the deflection yoke, for best convergence.

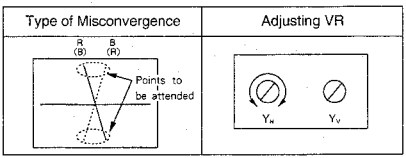


Fig. 5-6(a)

Y_V adjustment (Deviation of the horizontal axis in the vertical direction.)

Adjust the VR(Y_V), in upper part of the deflection yoke, to converge horizontal lines at the top and bottom of the screen.

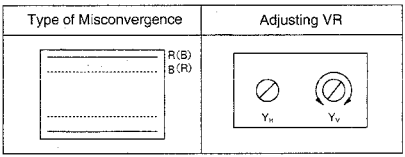


Fig. 5-6(b)

X_V adjustment (Deviation of horizontal axis in the vertical direction.)

Deviation should be corrected by adjusting the horizontal differential coil(core position).

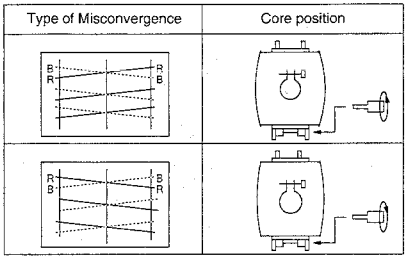
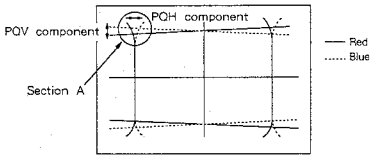
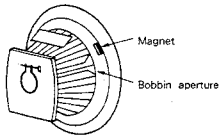


Fig. 5-6(c)

If convergence is poor at corners, place the magnet at the aperture of the deflection yoke bobbin as shown in Fig. 5-7 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. 5-7, stick a magnet to the position shown in Fig. 5-7 below.
(Part No. of the magnet : 461D017O10 **Not stocked parts**)



(Misconversion pattern)



Magnet mounting position
(Rear view of deflection yoke).

Fig. 5-7

5. Wedge position

After the position of the wedges has been determined, 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 gum (Parts No. 859D106O20) between wedges and the picture tube cone. (Fig. 5-9)

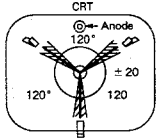


Fig. 5-8

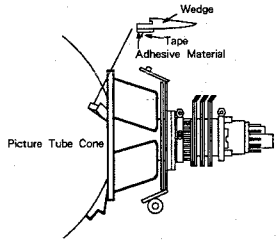


Fig. 5-9

Electrical Adjustment

Perform only the alignments required.
If proper equipment is not available, do not attempt an alignment.

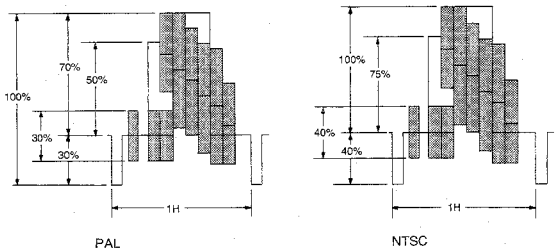
■ Measuring equipment and Jigs

- Oscilloscope (Unless otherwise specified in particular, use 10:1 probes.)
- Signal generator
- Frequency counter
- Direct current voltmeter.
- Electrical tools

■ Test Signal

1) Monoscope signal
   When you have no monoscope signal source for adjustment, connect the unit to a VCR and play an alignment tape (Monoscope).

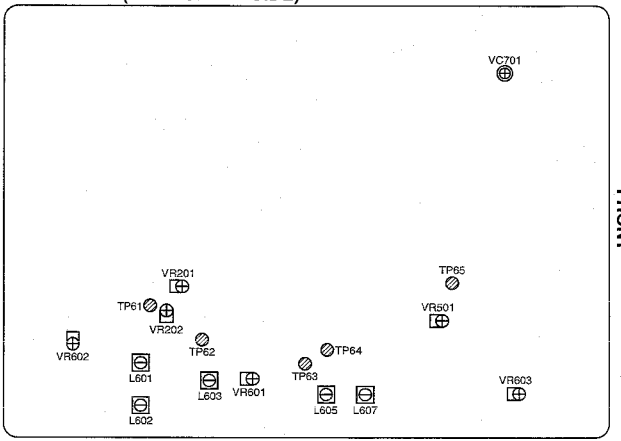
2) Colour bar signal
   In this manual, unless otherwise specified in particular, use colour bar signal in specifications below.



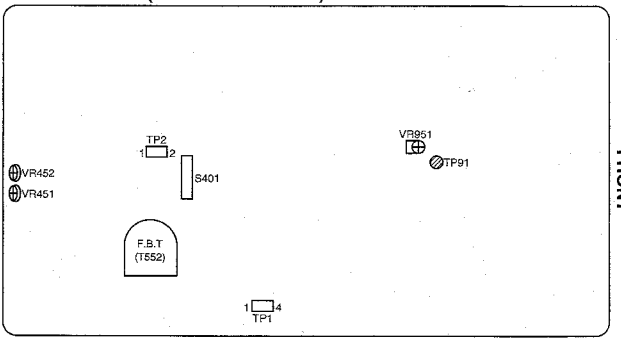
Split-Field Colour Bars (with 100% window)

LOCATION OF TESTPOINTS AND ADJUSTMENTS

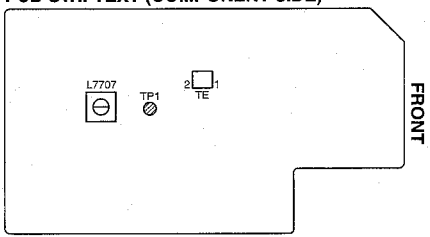
PCB-SIGNAL (COMPONENT SIDE)



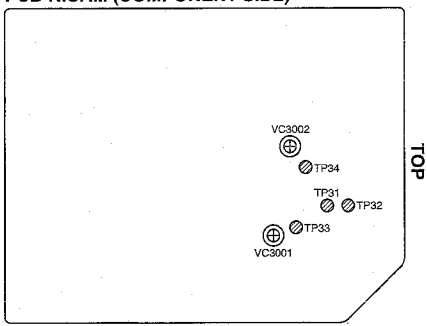
PCB-MBC-DEFL (COMPONENT SIDE)



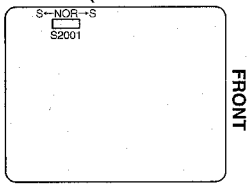
PCB-SWIFTEXT (COMPONENT SIDE)



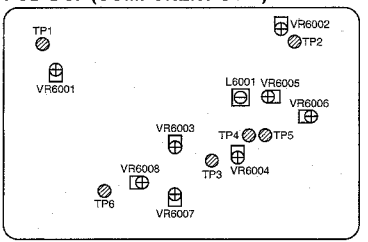
PCB-NICAM (COMPONENT SIDE)



PCB-YUV (COMPONENT SIDE)

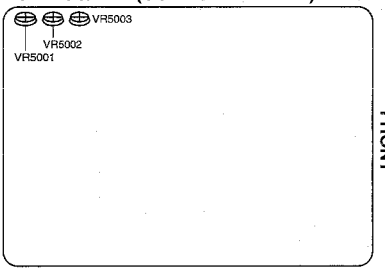


PCB-DCF (COMPONENT SIDE)



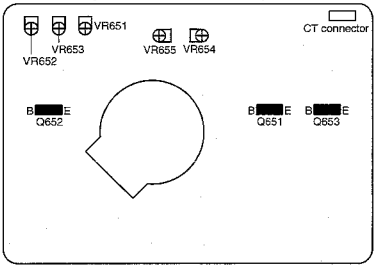
TOP

PCB-PCC/DBF (COMPONENT SIDE) TOP

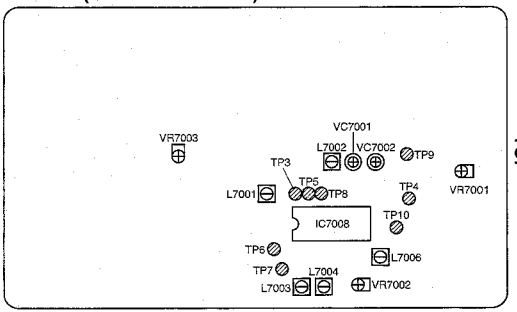


FRONT

PCB-CRT (COMPONENT SIDE) TOP



PCB-PIP (COMPONENT SIDE)

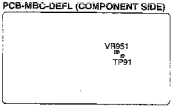


[Power Circuit] 1. B4 Voltage	**Adjustment purpose** Setting supply voltage for each circuits. **Symptom when incorrectly adjusted** Too bright or too dark picture. Too compressed or too expanded.

Measuring instrument	AC Voltmeter
Test point	TP 91
EXT trigger	---
Measurement range	---
Input signal	Video signal (Monoscope)
Input terminal	VIDEO IN terminal

1. Supply a video signal (Monoscope).
2. Observe the voltage at TP91.
3. Adjust VR951 so that the B4 voltage is 130V.

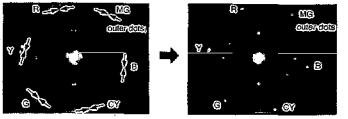
PCB-MBC-DEFL (COMPONENT SIDE)



[Chroma Circuit] 2. PAL Vector	**Adjustment purpose** Setting each colour to the best result when receiving PAL signal. **Symptom when incorrectly adjusted** Incorrect colour when receive PAL signal.

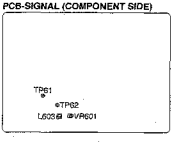
Measuring instrument	Oscilloscope
Test point	CH-1:TP61 CH-2:TP62
EXT trigger	---
Measurement range	DIV 10mV TIM X-Y mode
Input signal	Video signal (G card)
Input terminal	VIDEO IN terminal

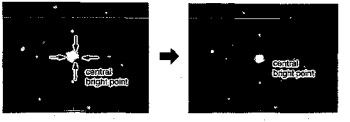
1. Supply a video signal (G card).
2. Observe the waveform at TP61 and TP62. (CH-1 to TP61)
3. Set the oscilloscope to X-Y mode.
4. Adjust L603 so that outer double dots draw together.



5. Adjust VR601 so that the four pair of dots come nearer to the central bright point.

PCB-SIGNAL (COMPONENT SIDE)





3. SECAM Bell Filter

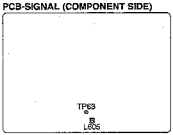
Adjustment purpose Setting carrier freguency for SECAM signal.

Symptom when incorrectly adjusted The colour is erratic.

Measuring instrument	Oscilloscope
Test point	TP63
EXT trigger	---
Measurement range	DIV 5mV TIM 20µs
Input signal	Video signal (SECAM Colour bar)
Input terminal	VIDEO IN terminal

1. Supply a video signal (SECAM Colour bar).
2. Observe the waveform at TP63.
3. Adjust L605 so that the amplitude of the magenta of the adjoining horizontal synchronization shall be nearly egual.

PCB-SIGNAL (COMPONENT SIDE)



4. SECAM Identification

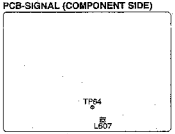
Adjustment purpose Setting phase of chrominance subcarrier for SECAM signal.

Symptom when incorrectly adjusted Coloured monochrome when receive SECAM signal.

Measuring instrument	Oscilloscope
Test point	TP64
EXT trigger	---
Measurement range	DIV 0.1V TIM 10µs
Input signal	Video signal (SECAM Colour bar)
Input terminal	VIDEO IN terminal

* This adjustment must follow item 3 (SECAM Bell Filter).
1. Supply a video signal (SECAM Colour bar).
2. Observe the waveform at TP64.
3. Adjust L607 so that the DC level is maximum.

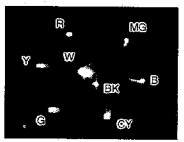
PCB-SIGNAL (COMPONENT SIDE)

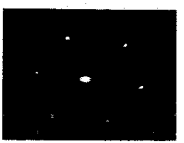


5. SECAM Demodulator	**Adjustment purpose**	Setting each colour to the best result when receiving SECAM signal.
	Symptom when incorrectly adjusted	Incorrect colour when receive SECAM signal.

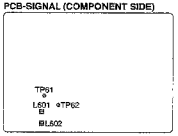
Measuring instrument	Oscilloscope
Test point	CH-1:TP61 CH-2:TP62
EXT trigger	---
Measurement range	DIV 10mV TIM X-Y mode
Input signal	Video signal (SECAM Colour bar)
Input terminal	VIDEO IN terminal

* This adjustment must follow item 4 (SECAM Identification).
1. Supply a video signal (SECAM Colour bar).
2. Observe the waveform at TP61 and TP62.(CH-1 to TP61)
3. Set the osilloscope to X-Y mode.
4. Adjust L601 and L602 so that the middle bright point corresponding to the white of vector and the bright point corresponding to the black shall be merged.





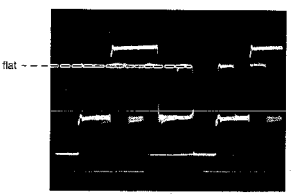
PCB-SIGNAL (COMPONENT SIDE)



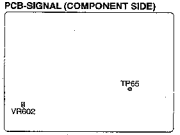
6. Colour Output	**Adjustment purpose**	Setting colour level of video signal.
	Symptom when incorrectly adjusted	Too much or too little colour level.

Measuring instrument	Oscilloscope
Test point	TP65
EXT trigger	---
Measurement range	DIV 10mV TIM 10µs
Input signal	Video signal (SECAM Colour bar)
Input terminal	VIDEO IN terminal

* This adjustment must follow item 2 (PAL Vector), 13 (Cut off, white) and 15(Sub Cont).
1. Supply a video signal (SECAM Colour bar).
2. Press OPTIMUM button on the remote hand unit.
3. Observe the waveform at TP65.
4. Adjust VR602 so that the tops of the waveforms shall be flat.



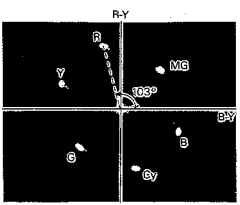
PCB-SIGNAL (COMPONENT SIDE)



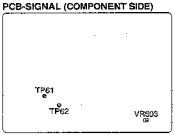
7. Sub Tint	**Adjustment purpose**	Setting each colour to the best result when receive NTSC signal.
	Symptom when incorrectly adjusted	Reddish or greenish picture when receive NTSC signal.

Measuring instrument	Oscilloscope
Test point	CH-1:TP61 CH-2:TP62
EXT trigger	---
Measurement range	DIV 10mV TIM X-Y mode
Input signal	Video signal (NTSC Colour bar)
Input terminal	VIDEO IN terminal

1. Supply a video signal (NTSC Colour bar) to AV1.
2. Press OPTIMUM button on the remote hand unit.
3. Observe the waveform at TP61 and TP62 (CH-1 to TP61).
4. Set the oscilloscope to X-Y mode.
5. Adjust VR603 so that the red dot is 103°.



PCB-SIGNAL (COMPONENT SIDE)

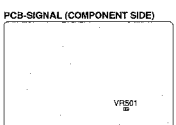


[Deflection Circuit] 8. Horizontal Centre	**Adjustment purpose**	Horizontal position of picture.
	Symptom when incorrectly adjusted	Picture too shifted to the left, or the right.

Measuring instrument	---
Test point	---
EXT trigger	---
Measurement range	---
Input signal	Video signal (Monoscope)
Input terminal	VIDEO IN terminal

1. Supply a video signal (Monoscope).
2. Adjust VR501 so that readings of left and right markers are the same.

PCB-SIGNAL (COMPONENT SIDE)

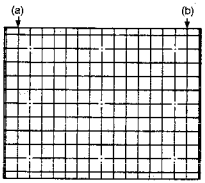


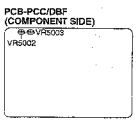
9. PCC	**Adjustment purpose**	Horizontal linearity of picture.
	Symptom when incorrectly adjusted	Horizontal distortion of picture.

Measuring instrument	---
Test point	---
EXT trigger	---
Measurement range	---
Input signal	Video signal (PAL Cross hatch)
Input terminal	VIDEO IN terminal

1. Supply a video signal (PAL Cross hatch).
2. Press OPTIMUM button on the remote hand unit.
3. Observing the second line (a), (b) from both ends on the screen. Adjust VR5003 and VR5002 for optimum EAST-WEST PCC.
4. Supply a video signal (NTSC Cross hatch).
5. Observing the second line (a), (b) from both ends on the screen. Adjust VR5002 for optimum EAST-WEST PCC phase.

Note: When the cross hatch signal change to the condition at PAL, confirm the signal is as good as the cross hatch signal at NTSC.

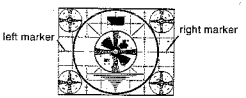


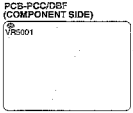


10. Horizontal Width	**Adjustment purpose**	Horizontal width of picture.
	Symptom when incorrectly adjusted	Too compressed or too expanded horizontal width of picture.

Measuring instrument	---
Test point	---
EXT trigger	---
Measurement range	---
Input signal	Video signal (Monoscope)
Input terminal	VIDEO IN terminal

1. Supply a video signal (Monoscope).
2. Press OPTIMUM button on the remote hand unit.
3. Adjust VR5001 so that the sum of left and right markers is 3.8–5.8 (eguivalent to 6–9% overscan).





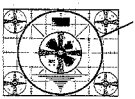
11. Vertical Height, Vertical Linearity

Adjustment purpose Vertical height and linearity of picture.

Symptom when incorrectly adjusted Too compressed or too expanded vertical height of picture. Vertical linearity of picture.

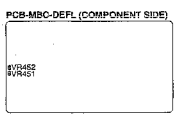
Measuring instrument	---
Test point	---
EXT trigger	---
Measurement range	---
Input signal	VIDEO signal (Monoscope)
Input terminal	VIDEO IN terminal

1. Supply a video signal (Monoscope).
2. Press OPTIMUM button on the remote hand unit.
3. Adjust VR452 for approx. 90% vertical size of raster.
4. Adjust VR451 for symmetry of vertical linearity.
5. Adjust VR452 so that the largerst circle is a complete round.



monoscope

PCB-MBC-DEFL (COMPONENT SIDE)



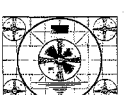
12. Vertical Centre Position

Adjustment purpose Vertical position of picture.

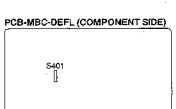
Symptom when incorrectly adjusted *Picture too shifted to the up, or the low.*

Measuring instrument	---
Test point	---
EXT trigger	---
Measurement range	---
Input signal	Video signal (Monoscope)
Input terminal	VIDEO IN terminal

1. Supply a video signal (Monoscope).
2. Set S401 for optimum raster position.


monoscope

PCB-MBC-DEFL (COMPONENT SIDE)



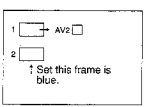
[CRT Circuit]
13. Cut Off, White

Adjustment purpose Rate of electron beam shot from each electron gun of R, G and B.

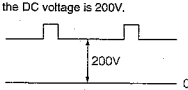
Symptom when incorrectly adjusted Coloured monochrome, too dark or too bright picture.

Measuring instrument	Oscilloscope
Test point	Collector of Q651
EXT trigger	---
Measurement range	DIV 5V TIM 20μs
Input signal	---
Input terminal	---

1. Supply no signal to AV1.
2. Set AV1 mode.
3. Inhibit the blue background.
   ① Press "MENU" button on the remote hand unit three times.
   ② Push the button: 2 of the remote hand unit so that the frame which refer to figure is white.
   (Whenever push the button:2, the frame changes to white and blue alternately.)

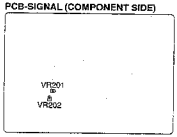


   ③ Press "MENU" button.
4. Tilt S2001 to left or right.
5. Set VR651, VR652 and VR653 to fully counterclockwise position as seen from solder side.
6. Set VR654 and VR655 to the mechanical centre position.
7. Set VR202 to fully counterclockwise position as seen from solder side.
8. Set VR201 to the mechanical centre position.
9. Set SCREEN volume (on F.B.T.) to fully counterclockwise position.
10. Observe the waveform at the collector of Q651.(Use CT connector pin② for ground)
11. Adjust VR651 so that the DC voltage is 200V.

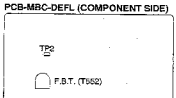


12. Observe the waveform at the collector of Q652.(Use CT connector pin② for ground)
13. Adjust VR652 so that the DC voltage is 200V.
14. Observe the waveform at the collector of Q653.(Use CT connector pin② for ground)
15. Adjust VR653 so that the DC voltage is 200V.
16. Short-circuit TP2 connector pin① and pin②.
17. Adjust SCREEN volume (on F.B.T.) to the point where one red, green or blue line becomes just visible.
18. Adjust two of VR651, VR652 and VR653 so that the horizontal line becomes white, e.g. if the original colour line was blue, adjust VR651 and VR653 to achieve a white line.
19. Return S2001 to the centre position.
20. Adjust VR2002 so that the horizontal line becomes bright.
21. Open the short circuit of TP2 connector pin① and pin②.
22. Supply a video signal (white raster).
23. Adjust VR654 and VR655 so that the entire screen is in pure white.
    If necessary, repeat step 1 to 23 above.

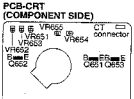
PCB-SIGNAL (COMPONENT SIDE)



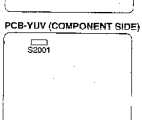
PCB-MRC-DEFL (COMPONENT SIDE)



PCB-CRT (COMPONENT SIDE)



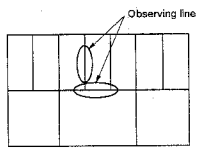
PCB-YUV (COMPONENT SIDE)

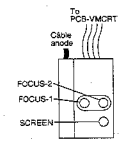


14. Focus	**Adjustment purpose** Sharpness of picture. **Symptom when incorrectly adjusted** Poor sharpness of picture.

Measuring instrument	---
Test point	---
EXT trigger	---
Measurement range	---
Input signal	Video signal (Grey Scale with Window)
Input terminal	VIDEO IN terminal

1. Supply a video signal (grey scale with window).
2. Observing around the vertical line.
3. Adjust FOCUS-2 volume (on F.B.T.) for best focus.
4. Observing around the horizontal line.
5. Adjust FOCUS-1 volume (on F.B.T) for best focus.
6. Repeat step 2 to 5 three times or more.

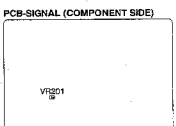


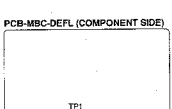


[Video Circuit] 15. Sub Cont	**Adjustment purpose** The best value of beam current. **Symptom when incorrectly adjusted** Too bright or too dark picture.

Measuring instrument	DC milliammeter
Test point	+lead:TP1 connector pin① −lead:TP1 connector pin④
EXT trigger	---
Measurement range	---
Input signal	Video signal (Colour bar)
Input terminal	VIDEO IN terminal

* This adjustment must follow item 13 (Cut Off, White).
1. Supply a video signal (Colour bar).
2. Set COLOUR control to minimum.
3. Observe the waveform at TP1 connector pin① and pin④. (Plus lead to TP connector pin①)
4. Adjust VR201 so that the beam current is 1500±20μA.





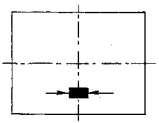
[Micro Computer Circuit]
16. Display Position

Adjustment purpose Charactor position on screen.

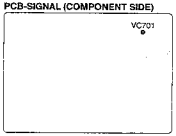
Symptom when incorrectly adjusted Charactors too shifted to the left, or the right.

Measuring instrument	---
Test point	---
EXT trigger	---
Measurement range	---
Input signal	Video signal (Centre cross)
Input terminal	VIDEO IN terminal

* This adjustment must follow item 8 (Horizontal Centre).
1. Supply a video signal (Centre cross).
2. Press OPTIMUM button on the remote hand unit.
3 Adjust VC701 so that the centre of the level bar is on the vertical line of the centre cross signal.



PCB-SIGNAL (COMPONENT SIDE)



[Teletext Circuit]
17. Teletext Free Run Frequency

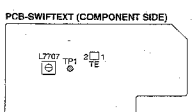
Adjustment purpose The best detect condition of text signal from video signal.

Symptom when incorrectly adjusted Distorted text display.

Measuring instrument	Frequency Counter
Test point	TP1
EXT trigger	---
Measurement range	---
Input signal	---
Input terminal	---

* Preheat the set for five minutes or more.
1. Disconnect a antenna cable from RF IN terminal to display a snow noise on the screen.
2. Disconnect TE connector from PCB-SWIFTEXT.
3. Observe the frequency at TP1.
4. Adjust L7707 so that the frequency is 13.4±0.1MHz.

PCB-SWIFTEXT (COMPONENT SIDE)



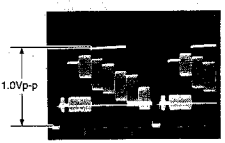
[DCF Circuit]
18. CCD Insert Gain

Adjustment purpose Setting input and output signal level of CCD circuit.

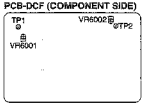
Symptom when incorrectly adjusted Too much or too little colour level.

Measuring instrument	Oscilloscope
Test point	TP1
EXT trigger	---
Measurement range	DIV 20mV TIM 10μs
Input signal	Video signal (Colour bar)
Input terminal	VIDEO IN terminal

1. Supply a video signal (Colour bar).
2. Observe the waveform at TP1.
3. Adjust VR6001 so that the amplitude of the video signal is 1.0Vp-p.
4. Observe the waveform at TP2.
5. Adjust VR6002 so that the amplitude of the video signal is 1.0Vp-p.



PCB-DCF (COMPONENT SIDE)



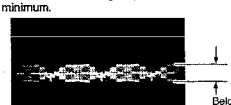
19. Vertical Correlation

Adjustment purpose Reduced vertical dot disturbance.

Symptom when incorrectly adjusted Vertical dot disturbance is noticeable.

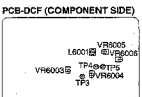
Measuring instrument	Oscilloscope
Test point	CH-1:TP3 CH-2:TP4
EXT trigger	---
Measurement range	DIV 10mV TIM 20μs
Input signal	Video signal (Colour bar)
Input terminal	VIDEO IN terminal

1. Supply a video signal (Colour bar).
2. Turn VR6003 fully counterclockwise as seen from component side.
3. Observe the waveform at TP3 and TP4 (CH-1 to TP3).
4. Set the oscilloscope's CH-2 to INVERT mode.
5. Set the oscilloscope to ADD mode.
6. Alternate adjustments in the following sequence:VR6003, VR6004 so that the chroma level is minimum.



7. Observe the waveform at TP3 and TP5 (CH-1 to TP3).
8. Set the oscilloscope's CH-2 to INVERT mode.
9. Set the oscilloscope to ADD mode.
10. Alternate adjustments in the following sequence: VR6005, VR6006 and L6001 so that the chroma level is minimum.

PCB-DCF (COMPONENT SIDE)



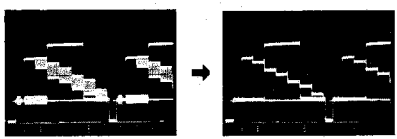
20. Y/C Separation

Adjustment purpose Separating video signal to Y signal and C-signal.

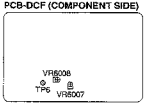
Symptom when incorrectly adjusted Dot disturbance is noticeable.

Measuring instrument	Oscilloscope
Test point	TP6
EXT trigger	---
Measurement range	DIV 20mV TIM 10μs
Input signal	Video signal (Colour bar)
Input terminal	VIDEO IN terminal

1. Supply a video signal (colour bar).
2. Observe the waveform at TP6.
3. Alternate adjustments in the following sequence : VR6007, VR6008 so that the chroma level is minimum.



PCB-DCF (COMPONENT SIDE)



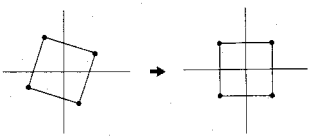
[NICAM Circuit] 21. Carrier VCXO

Adjustment purpose Setting phase of NICAM signal.

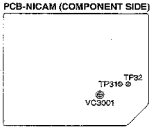
Symptom when incorrectly adjusted Deteriorating detection sensitivity of NICAM signal.

Measuring instrument	Oscilloscope
Test point	CH-1:TP31 CH-2:TP32
EXT trigger	---
Measurement range	DIV 10mV TIM X-Y mode
Input signal	RF signal (NICAM stereo or dual sound)
Input terminal	RF IN terminal

1. Supply an RF signal (NICAM stereo or dual sound).
2. Observe the waveform at TP31 and TP32 (CH-1 to TP31).
3. Set the oscilloscope to X-Y mode.
4. Adjust VC3001 so that a square made by lining up four luminous point run parallel with a scale line of oscilloscope.



PCB-NICAM (COMPONENT SIDE)



22. Clock VCXO

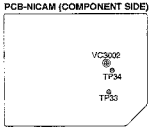
Adjustment purpose Setting input clock pulse to NICAM circuit.

Symptom when incorrectly adjusted Disappear the sound.

Measuring instrument	DC Voltmeter
Test point	+lead : TP33 −lead : TP34
EXT trigger	---
Measurement range	---
Input signal	RF signal (NICAM stereo or dual sound)
Input terminal	RF IN terminal

1. Supply an RF signal (NICAM stereo or dual sound).
2. Observe the voltage at TP33 and TP34 (Plus lead to TP33).
3. Adjust VC3002 so that voltage difference is 0±30mV.

PCB-NICAM (COMPONENT SIDE)



[PIP Circuit]
23. 5MHz OSC

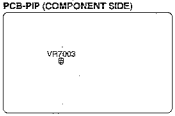
Adjustment purpose Setting input clock pulse to PIP circuit.

Symptom when incorrectly adjusted Too compressed or too expanded in sub picture.

Measuring instrument	---
Test point	---
EXT trigger	---
Measurement range	---
Input signal	Video signal (PAL G card)
Input terminal	VIDEO IN terminal

1. Supply a video signal (PAL G card).
2. Set the receiver to PIP mode.
3. Display G card signal on the main and sub picture, respectively.
4. Adjust VR7003 so that display widths of the sub picture are symmetrical with respect to the screen centre.

PCB-PIP (COMPONENT SIDE)

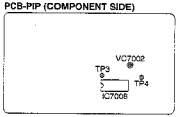


24. PAL Free Run Frequency	**Adjustment purpose**	Setting PAL free run frequency of sub picture to 4.43 MHz (chrominance subcarrier).
	Symptom when incorrectly adjusted	Coloured monochrome in sub picture when receive PAL signal.

Measuring instrument	---
Test point	---
EXT trigger	---
Measurement range	---
Input signal	RF signal (PAL G card)
Input terminal	RF IN terminal

1. Supply an RF signal (PAL G card).
2. Supply a video signal (PAL colour bar) to AV1.
3. Set the receiver to PIP mode.
4. Display PAL G card signal on the main picture.
5. Display PAL colour bar signal through AV1 on the sub picture.
6. Connect TP3 and Vcc (IC7008 pin⑨) through a resistor (220Ω).
7. Connect TP4 to ground.
8. Adjust VC7002 for almost colour synchronization.
9. Remove a resistor (220Ω) and ground used in step 6 and 7.

PCB-PIP (COMPONENT SIDE)

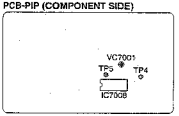


25. NTSC Free Run Frequency	**Adjustment purpose**	Setting NTSC free run frequency of sub picture to 3.58MHz (chrominance subcarrier).
	Symptom when incorrectly adjusted	Coloured monochrome in sub picture when receive NTSC signal.

Measuring instrument	---
Test point	---
EXT trigger	---
Measurement range	---
Input signal	RF signal (PAL G card)
Input terminal	RF IN terminal

1. Supply an RF signal (PAL G card).
2. Supply a video signal (NTSC colour bar) to AV1.
3. Set the receiver to PIP mode.
4. Display PAL G card signal on the main picture.
5. Display NTSC colour bar signal through AV1 on the sub picture.
6. Connect TP5 and Vcc (IC7008 pin⑨) through a resistor (220Ω).
7. Connect TP4 to ground.
8. Adjust VC7001 for almost colour synchronization.
9. Remove a resistor (220Ω) and ground used in step 6 and 7.

PCB-PIP (COMPONENT SIDE)



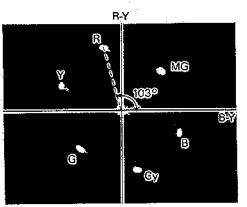
26. NTSC Sub Tint

Adjustment purpose Setting each colour to the best result for sub picture which receive NTSC signal.

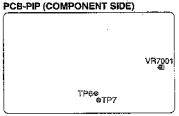
Symptom when incorrectly adjusted Reddish or greenish picture in sub picture when receive NTSC signal.

Measuring instrument	Oscilloscope
Test point	CH-1 : TP7 CH-2 : TP6
EXT trigger	---
Measurement range	DIV 20mV TIM X-Y mode
Input signal	RF signal (PAL G card)
Input terminal	RF IN terminal

* This adjustment must follow item 25 (NTSC Free Run Frequency).
1. Supply an RF signal (PAL G card).
2. Supply a video signal (NTSC colour bar) to AV1.
3. Set the receiver to PIP mode.
4. Display PAL G card signal on the main picture.
5. Display NTSC colour bar signal through AV1 on the sub picture.
6. Observe the waveform at TP7 and TP6 (CH-1 to TP7).
7. Set the oscilloscope to X-Y mode.
8. Adjust VR7001 so that the red dot is 103°.



PCB-PIP (COMPONENT SIDE)



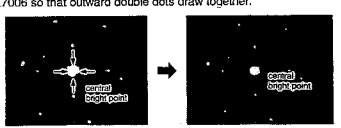
27. PAL Vector

Adjustment purpose Setting each colour to the best result for sub picture which receive PAL signal.

Symptom when incorrectly adjusted Incorrect colour in sub picture when receive PAL signal.

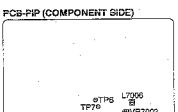
Measuring instrument	Oscilloscope
Test point	CH-1 : TP7 CH-2 : TP6
EXT trigger	---
Measurement range	VID 20mV TIM X-Y mode
Input signal	RF signal (PAL G card)
Input terminal	RF IN terminal

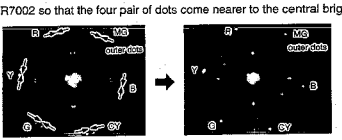
* This adjustment must follow item 24 (PAL Free Run Frequency).
1. Supply an RF signal (PAL G card).
2. Supply a video signal (PAL colour bar) to AV1.
3. Set the receiver to PIP mode.
4. Display PAL colour bar signal through AV1 on the main picture.
5. Display PAL G card signal on the sub picture.
6. Observe the waveform at TP7 and TP6 (CH-1 to TP7).
7. Set the oscilloscope to X-Y mode.
8. Adjust L7006 so that outward double dots draw together.



9. Adjust VR7002 so that the four pair of dots come nearer to the central bright point.

PCB-PIP (COMPONENT SIDE)

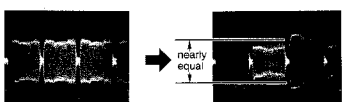




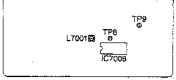
28. SECAM Bell Filter	**Adjustment purpose**	Setting carrier frequency in sub picture when receive SECAM signal.
	Symptom when incorrectly adjusted	The colour is erratic in sub picture when receive SECAM signal.

Measuring instrument	Oscilloscope (Probe 1 : 1)
Test point	TP9
EXT trigger	---
Measurement range	DIV 20mV TIM 20µs
Input signal	RF signal (SECAM colour bar)
Input terminal	RF IN terminal

1. Supply an RF signal (SECAM colour bar).
2. Supply a video signal (PAL colour bar) to AV1.
3. Set the receiver to PIP mode.
4. Dispaly SECAM colour bar signal on the main picture.
5. Display PAL colour bar signal through AV1 on the sub picture.
6. Connect TP8 and Vcc (IC 7008 pin ⑨) through a resistor (220Ω).
7. Observe the waveform at TP9.
8. Adjust L7001 so that the amplitude of the magenta of the adjoining horizontal synchronization shall be nearly equal.
9. Remove a resistor (220Ω).



PCB-PIP (COMPONENT SIDE)

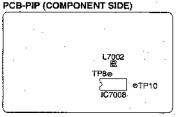


29. SECAM Identification	**Adjustment purpose**	Setting phase of chrominance subcarrier in sub picture when receive SECAM signal.
	Symptom when incorrectly adjusted	Coloured monochrome in sub picture when receive SECAM signal.

Measuring instrument	Oscilloscope
Test point	TP10
EXT trigger	---
Measurement range	DIV 0.2V TIM 0.5ms
Input signal	RF signal (SECAM colour bar)
Input terminal	RF IN terminal

* This adjustment must follow item28 (PIP SECAM Bell Filter).
1. Supply an RF signal (SECAM colour bar).
2. Supply a video signal (PAL colour bar) to AV1.
3. Set the receiver to PIP mode.
4. Display PAL colour bar signal through AV1 on the main picture.
5. Display SECAM colour bar signal on the sub picture.
6. Connect TP10 and Vcc (IC7008 pin⑨) through a resistor (10MΩ).
7. Connect TP8 and Vcc (IC7008 pin⑨) through a resistor (220Ω).
8. Observe the waveform at TP10.
9. Adjust L7002 so that the DC level is maximum.
10. Remove two resistors.

PCB-PIP (COMPONENT SIDE)

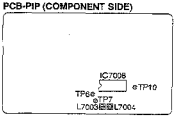


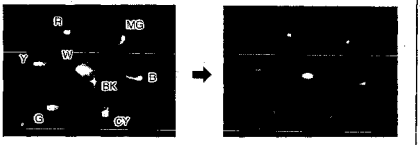
30. SECAM Demodulator	**Adjustment purpose**	Setting each colour to the best result when receive SECAM signal.
	Symptom when incorrectly adjusted	Incorrect colour in sub picture when receive SECAM signal.

Measuring instrument	Oscilloscope
Test point	CH-1 : TP7 CH-2 : TP6
EXT trigger	---
Measurement range	DIV 20mV TIM X-Y mode
Input signal	RF signal (SECAM colour bar)
Input terminal	RF IN terminal

* This adjustment must item29 (PIP SECAM Identification).
1. Supply an RF signal (SECAM colour bar).
2. Supply a video signal (PAL colour bar) to AV1.
3. Set the receiver to PIP mode.
4. Display PAL colour bar signal through AV1 on the main picture.
5. Dispaly SECAM colour bar signal on the sub picture.
6. Connect TP10 and Vcc (IC 7008 pin⑲) through a resistor (10MΩ).
7. Observe the waveform at TP7 and TP6 (CH-1 to TP7).
8. Set the oscilloscope to X-Y mode.
9. Adjust L7003 and L7004 so that the middle bright point corresponding to the black shall be merged.
10. Remove a resistor (10MΩ).

PCB-PIP (COMPONENT SIDE)





PARTS LIST

MODEL : CT – 37C2EDT

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.

⚠ : 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

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
		TUBES	
⚠V 271	255B005001	CRT ASSY	M89KCW11X
		INTEGRATED CIRCUITS	
IC101	272P486010	IC	μPC78M09H
IC201	272P487010	IC	TA8659AN
IC202	272P420010	IC	TEA5114A
IC203	272P420010	IC	TEA5114A
IC204	272P420010	IC	TEA5114A
IC205	263P551030	IC	MC14551BCP
IC207	263P053020	IC	TC4053BP
IC2A1	272P138010	IC	LA7952
IC2A2	266P279010	IC	M51321P
IC2A3	266P064010	IC	M51320P
IC2P2	263P053020	IC	TC4053BP
IC2P3	263P053020	IC	TC4053BP
IC2001	272P055010	IC	AN5860
IC2002	272P181010	IC	CX20125
IC301	263P053020	IC	TC4053BP
IC302	272P145010	IC	STK4132MK2
IC3A1	272P139010	IC	LA7953
IC3A2	272P039010	IC	LC7523
IC3A3	272P396010	IC	BX7601A
IC3A4	272P396010	IC	BX7601A
IC3A5	263P053020	IC	TC4053BP
IC3001	266P982010	IC	AN608P
IC3002	266P982010	IC	AN608P
IC3003	272P283010	IC	TA8662N
IC3004	263P636010	IC	TC6011N
IC3005	263P822020	IC	HM6264ALSP10/12
IC3006	272P284010	IC	TD6710AN
IC3007	267P036020	IC	AFL87F14000A11
IC3008	267P036020	IC	AFL87F14000A11
IC3009	266P546010	IC	RC4558P
IC3014	272P200020	IC	M5201L
IC3015	272P200020	IC	M5201L
IC451	272P239040	IC	LA7838
IC5001	272P406010	IC	TEA2031A
IC601	272P170010	IC	TDA4565 CTI
IC6001	272P292010	IC	CXL1009P
IC6002	267P032020	IC	BX6387
IC6003	272P292010	IC	CXL1009P
IC6004	267P035020	IC	BPF2(B080-2)
IC6005	267P027020	IC	BPF(B074-2)
IC6006	267P035020	IC	BPF2(B080-2)
IC6007	267P032020	IC	BX6387
IC6008	266P982010	IC	AN608P
IC6009	267P032010	IC	BX6386
IC6010	272P262010	IC	CX22013
IC6011	267P028020	IC	SUB(B075-2)
IC6012	263P053020	IC	TC4053BP
IC6013	266P923020	IC	NJM78L09A
IC701	263P155020	IC	μPD75116CW-168
IC702	263P156010	IC	M50554-185SP

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
IC705	263P872030	IC	MN1280-M
IC706	263P869010	IC	μPD6326C
IC707	263P052050	IC	HEF4052BP
IC709	266P727040	IC	μPC339C/LM339N
IC711	266P727040	IC	μPC339C/LM339N
IC712	263P053020	IC	TC4053BP
IC7001	263P795010	IC	M50541FP
IC7002	263P509010	IC	MM74HCU04N/TC74H
IC7003	272P246010	IC	SN7451 24N
IC7004	266P934070	IC	μPC7805H
IC7005	272P249010	IC	M52684AP
IC7006	272P249010	IC	M52684AP
IC7007	266P636010	IC	LA7950
IC7008	272P171010	IC	TDA4556 MSD
IC7009	272P251010	IC	M52686P
IC7010	263P794040	IC	M5M4C500AL-5
IC7011	272P444010	IC	M52628ZP
IC7401	263P346010	IC	M50253P
IC7701	272P861010	IC	SAA5191
IC7702	274P179010	IC	SAA9042P
IC7703	274P180010	IC	TC514256AP-80
IC7704	274P178010	IC	PC883C528
IC7705	263P434020	IC	X24C04P
IC901	272P514010	IC	TEA2261
IC950	272P412010	IC	TEA5170
IC951	267P076030	IC	SI-3050C
IC952	266P922010	IC	μPC78M05H
IC953	272P240010	IC	M5237L
IC954	266P910020	IC	μPC574J-K
IC955	272P240010	IC	M5237L
ICSA1	272P570010	IC	M51848P
	930C475001	IC ASSY	IC703(263P683010)
	930C475002	IC ASSY	IC704(263P683010)
		TRANSISTORS	
Q 101	260P543050	TRANSISTOR	JC501-Q
Q 201	260P654030	TRANSISTOR	2SC2058S-Q
Q 202	260P543050	TRANSISTOR	JC501-Q
Q 203	260P543050	TRANSISTOR	JC501-Q
Q 204	260P543050	TRANSISTOR	JC501-Q
Q 207	260P543050	TRANSISTOR	JC501-Q
Q 208	260P544030	TRANSISTOR	JA101-Q
Q 209	260P543050	TRANSISTOR	JC501-Q
Q 210	260P544030	TRANSISTOR	JA101-Q
Q 211	260P543050	TRANSISTOR	JC501-Q
Q 213	260P543050	TRANSISTOR	JC501-Q
Q 214	260P544030	TRANSISTOR	JA101-Q
Q 215	260P544030	TRANSISTOR	JA101-Q
Q 216	260P543050	TRANSISTOR	JC501-Q
Q 217	260P544030	TRANSISTOR	JA101-Q
Q 218	260P544030	TRANSISTOR	JA101-Q
Q 219	260P544030	TRANSISTOR	JA101-Q
Q 220	260P544030	TRANSISTOR	JA101-Q
Q 221	260P544030	TRANSISTOR	JA101-Q
Q 222	260P654030	TRANSISTOR	2SC2058S-Q

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
Q 223	260P544030	TRANSISTOR	JA101-Q
Q 224	260P544030	TRANSISTOR	JA101-Q
Q 2A1	260P543050	TRANSISTOR	JC501-Q
Q 2A2	260P543050	TRANSISTOR	JC501-Q
Q 2A3	260P554030	TRANSISTOR	2SC2058S-Q
Q 2A4	260P543050	TRANSISTOR	JC501-Q
Q 2A5	260P543050	TRANSISTOR	JC501-Q
Q 2A6	260P543050	TRANSISTOR	JC501-Q
Q 2A7	260P543050	TRANSISTOR	JC501-Q
Q 2A8	260P543050	TRANSISTOR	JC501-Q
Q 2A9	260P543050	TRANSISTOR	JC501-Q
Q 2B0	260P544030	TRANSISTOR	JA101-Q
Q 2B2	260P543050	TRANSISTOR	JC501-Q
Q 2B3	260P654030	TRANSISTOR	2SC2058S-Q
Q 2B4	260P543050	TRANSISTOR	JC501-Q
Q 2B5	260P543050	TRANSISTOR	JC501-Q
Q 2B6	260P543050	TRANSISTOR	JC501-Q
Q 2B7	260P544030	TRANSISTOR	JA101-Q
Q 2B8	260P544030	TRANSISTOR	JA101-Q
Q 2B9	260P543050	TRANSISTOR	JC501-Q
Q 2C0	260P543050	TRANSISTOR	JC501-Q
Q 2001	260P544030	TRANSISTOR	JA101-Q
Q 2002	260P543050	TRANSISTOR	JC501-Q
Q 2003	260P543050	TRANSISTOR	JC501-Q
Q 2004	260P543050	TRANSISTOR	JC501-Q
Q 2005	260P543050	TRANSISTOR	JC501-Q
Q 2006	260P543050	TRANSISTOR	JC501-Q
Q 2007	260P543050	TRANSISTOR	JC501-Q
Q 2008	260P543050	TRANSISTOR	JC501-Q
Q 2009	260P543050	TRANSISTOR	JC501-Q
Q 2010	260P543050	TRANSISTOR	JC501-Q
Q 301	260P543050	TRANSISTOR	JC501-Q
Q 302	260P543050	TRANSISTOR	JC501-Q
Q 303	260P544030	TRANSISTOR	JA101-Q
Q 304	260P543050	TRANSISTOR	JC501-Q
Q 305	260P543050	TRANSISTOR	JC501-Q
Q 3A1	260P543050	TRANSISTOR	JC501-Q
Q 3A2	260P387030	TRANSISTOR	2SC2236-Y
Q 3A3	260P544030	TRANSISTOR	JA101-Q
Q 3A4	260P543050	TRANSISTOR	JC501-Q
Q 3A5	260P543050	TRANSISTOR	JC501-Q
Q 3001	260P543050	TRANSISTOR	JC501-Q
Q 3002	260P416030	TRANSISTOR	2SC2274-F
Q 3003	260P543050	TRANSISTOR	JC501-Q
Q 3004	260P543050	TRANSISTOR	JC501-Q
Q 3006	260P543050	TRANSISTOR	JC501-Q
Q 3007	260P543050	TRANSISTOR	JC501-Q
Q 3008	260P543050	TRANSISTOR	JC501-Q
Q 3201	260P543050	TRANSISTOR	JC501-Q
Q 3202	260P543050	TRANSISTOR	JC501-Q
Q 451	260P543050	TRANSISTOR	JC501-Q
Q 501	260P543050	TRANSISTOR	JC501-Q
Q 502	260P543050	TRANSISTOR	JC501-Q
Q 503	260P544030	TRANSISTOR	JA101-Q
Q 504	260P543050	TRANSISTOR	JC501-Q

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
Q 505	260P543050	TRANSISTOR	JC501-Q
Q 506	260P544030	TRANSISTOR	JA101-Q
Q 507	260P543050	TRANSISTOR	JC501-Q
Q 508	260P543050	TRANSISTOR	JC501-Q
Q 551	260P422010	TRANSISTOR	2SC2482
Q 552	260P608010	TRANSISTOR	2SD1879
Q 5006	260P543050	TRANSISTOR	JC501-Q
Q 5501	260P543050	TRANSISTOR	JC501-Q
Q 5502	260P543050	TRANSISTOR	JC501-Q
Q 5503	260P641010	TRANSISTOR	2SC4634/2SC4450
Q 5504	260P543030	TRANSISTOR	JC501-R
Q 601	260P543050	TRANSISTOR	JC501-Q
Q 602	260P543050	TRANSISTOR	JC501-Q
Q 603	260P543050	TRANSISTOR	JC501-Q
Q 604	260P543050	TRANSISTOR	JC501-Q
Q 605	260P543050	TRANSISTOR	JC501-Q
Q 606	260P543050	TRANSISTOR	JC501-Q
Q 607	260P543050	TRANSISTOR	JC501-Q
Q 608	260P543050	TRANSISTOR	JC501-Q
Q 651	260P425040	TRANSISTOR	2SC2688-M, N
Q 652	260P425040	TRANSISTOR	2SC2688-M, N
Q 653	260P425040	TRANSISTOR	2SC2688-M, N
Q 654	260P544030	TRANSISTOR	JA101-Q
Q 655	260P654030	TRANSISTOR	2SC2058S-Q
Q 656	260P654030	TRANSISTOR	2SC2058S-Q
Q 657	260P654030	TRANSISTOR	2SC2058S-Q
Q 658	260P422010	TRANSISTOR	2SC2482
Q 659	260P422010	TRANSISTOR	2SC2482
Q 660	260P422010	TRANSISTOR	2SC2482
Q 6A1	260P543050	TRANSISTOR	JC501-Q
Q 6A3	260P544030	TRANSISTOR	JA101-Q
Q 6001	260P543050	TRANSISTOR	JC501-Q
Q 6002	260P543050	TRANSISTOR	JC501-Q
Q 6003	260P544030	TRANSISTOR	JA101-Q
Q 6004	260P654030	TRANSISTOR	2SC2058S-Q
Q 6005	260P544030	TRANSISTOR	JA101-Q
Q 6006	260P544030	TRANSISTOR	JA101-Q
Q 6007	260P543050	TRANSISTOR	JC501-Q
Q 6008	260P543050	TRANSISTOR	JC501-Q
Q 6009	260P543050	TRANSISTOR	JC501-Q
Q 6010	260P543050	TRANSISTOR	JC501-Q
Q 6011	260P544030	TRANSISTOR	JA101-Q
Q 705	260P543050	TRANSISTOR	JC501-Q
Q 706	260P543050	TRANSISTOR	JC501-Q
Q 713	260P543050	TRANSISTOR	JC501-Q
Q 714	260P544030	TRANSISTOR	JA101-Q
Q 715	260P544030	TRANSISTOR	JA101-Q
Q 716	260P544030	TRANSISTOR	JA101-Q
Q 718	260P543050	TRANSISTOR	JC501-Q
Q 719	260P543050	TRANSISTOR	JC501-Q
Q 7P1	260P543050	TRANSISTOR	JC501-Q
Q 7P2	260P544030	TRANSISTOR	JA101-Q
Q 7Y1	260P543050	TRANSISTOR	JC501-Q
Q 7Y2	260P543050	TRANSISTOR	JC501-Q
Q 7001	260P543050	TRANSISTOR	JC501-Q

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
Q 7002	260P543050	TRANSISTOR	JC501-Q
Q 7003	260P543050	TRANSISTOR	JC501-Q
Q 7004	260P543050	TRANSISTOR	JC501-Q
Q 7005	260P543050	TRANSISTOR	JC501-Q
Q 7006	260P543050	TRANSISTOR	JC501-Q
Q 7007	260P543050	TRANSISTOR	JC501-Q
Q 7008	260P543050	TRANSISTOR	JC501-Q
Q 7009	260P544030	TRANSISTOR	JA101-Q
Q 7010	260P544030	TRANSISTOR	JA101-Q
Q 7011	260P544030	TRANSISTOR	JA101-Q
Q 7012	260P544030	TRANSISTOR	JA101-Q
Q 7013	260P544030	TRANSISTOR	JA101-Q
Q 7014	260P544030	TRANSISTOR	JA101-Q
Q 7015	260P544030	TRANSISTOR	JA101-Q
Q 7017	260P544030	TRANSISTOR	JA101-Q
Q 7018	260P544030	TRANSISTOR	JA101-Q
Q 7019	260P582010	TRANSISTOR	2SK656
Q 7020	260P543050	TRANSISTOR	JC501-Q
Q 7021	260P543050	TRANSISTOR	JC501-Q
Q 7022	260P544030	TRANSISTOR	JA101-Q
Q 7701	260P544030	TRANSISTOR	JA101-Q
Q 7702	260P543050	TRANSISTOR	JC501-Q
Q 7703	260P543050	TRANSISTOR	JC501-Q
Q 7704	260P543050	TRANSISTOR	JC501-Q
Q 7705	260P543050	TRANSISTOR	JC501-Q
Q 7706	260P654030	TRANSISTOR	2SC2058S-Q
Q 7707	260P654030	TRANSISTOR	2SC2058S-Q
Q 7708	260P654030	TRANSISTOR	2SC2058S-Q
Q 7709	260P543050	TRANSISTOR	JC501-Q
Q 7710	260P543050	TRANSISTOR	JC501-Q
Q 7711	260P543050	TRANSISTOR	JC501-Q
Q 7712	260P543050	TRANSISTOR	JC501-Q
Q 7713	260P544030	TRANSISTOR	JA101-Q
Q 8001	260P573020	TRANSISTOR	2SB940A-P
Q 8002	260P574020	TRANSISTOR	2SD1264A-P
Q 8003	260P543050	TRANSISTOR	JC501-Q
Q 8004	260P544030	TRANSISTOR	JA101-Q
Q 8005	260P543050	TRANSISTOR	JC501-Q
Q 8006	260P543050	TRANSISTOR	JC501-Q
Q 8007	260P543050	TRANSISTOR	JC501-Q
Q 8008	260P543050	TRANSISTOR	JC501-Q
Q 8009	260P543050	TRANSISTOR	JC501-Q
Q 8010	260P543050	TRANSISTOR	JC501-Q
Q 8012	260P635010	TRANSISTOR	2SC3055F/2SC3065G
Q 901	260P683010	TRANSISTOR	2SD1887
Q 902	260P543050	TRANSISTOR	JC501-Q
Q 950	260P255040	TRANSISTOR	2SA950-Y
Q 951	260P543050	TRANSISTOR	JC501-Q
Q 952	260P668020	TRANSISTOR	
Q 953	260P668010	TRANSISTOR	2SB1135-R, S
Q 954	260P543050	TRANSISTOR	JC501-Q

DIODES

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
D 101	264P370010	DIODE	1N4148
D 102	264P370010	DIODE	1N4148
D 103	264P370010	DIODE	1N4148
D 104	264P370010	DIODE	1N4148
D 203	264P370010	DIODE	1N4148
D 204	264P370010	DIODE	1N4148
D 205	264P370010	DIODE	1N4148
D 206	264P370010	DIODE	1N4148
D 207	264P370010	DIODE	1N4148
D 2A1	264P488020	DIODE	RD13ED1
D 2A2	264P488020	DIODE	RD13ED1
D 2A3	264P483080	DIODE	RD5.1FB2
D 2A6	264P488020	DIODE	RD13ED1
D 2A7	264P488020	DIODE	RD13ED1
D 2A8	264P483080	DIODE	RD5.1FB2
D 2A9	264P483080	DIODE	RD5.1FB2
D 2B0	264P483080	DIODE	RD5.1FB2
D 2B1	264P483080	DIODE	RD5.1FB2
D 2B2	264P501020	DIODE	HZ2BLL
D 2B3	264P370010	DIODE	1N4148
D 2B4	264P370010	DIODE	1N4148
D 2B5	264P488020	DIODE	RD13ED1
D 2B6	264P488020	DIODE	RD13ED1
D 2P1	264P488020	DIODE	RD13ED1
D 2P2	264P488020	DIODE	RD13ED1
D 2001	264P370010	DIODE	1N4148
D 2002	264P370010	DIODE	1N4148
D 2003	264P370010	DIODE	1N4148
D 2004	264P370010	DIODE	1N4148
D 2005	264P370010	DIODE	1N4148
D 2006	264P370010	DIODE	1N4148
D 301	264P370010	DIODE	1N4148
D 302	264P370010	DIODE	1N4148
D 303	264P374020	DIODE	1N4003ID
D 304	264P370010	DIODE	1N4148
D 3A1	264P463080	DIODE	EQA02-09C/RD9.1EB3
D 3A2	264P465080	DIODE	EQA02-13A/RD13EB3
D 3A3	264P370010	DIODE	1N4148
D 3A5	264P483080	DIODE	RD5.1FB2
D 3B1	264P488060	DIODE	RD15FB1
D 3001	264P464050	DIODE	EQA02-10C
D 3201	264P370010	DIODE	1N4148
D 3202	264P370010	DIODE	1N4148
D 3203	264P370010	DIODE	1N4148
D 3204	264P370010	DIODE	1N4148
D 3205	264P370010	DIODE	1N4148
D 401	264P485070	DIODE	RD7.5FB3
D 451	264P374020	DIODE	1N4003ID
D 453	264P374020	DIODE	1N4003ID
D 454	264P374020	DIODE	1N4003ID
D 502	264P463080	DIODE	EQA02-09C/RD9.1EB3
D 551	264P375010	DIODE	BY228
D 552	264P378010	DIODE	BYW96E
D 553	264P371010	DIODE	BYD33G
D 554	264P295030	DIODE	ES 1F
D 555	264P371010	DIODE	BYD33G

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
D 556	264P371010	DIODE	BYD33G
D 557	264P471070	DIODE	EQA02-35C/RD39EB2
D 558	264P370010	DIODE	1N4148
D 559	264P370010	DIODE	1N4148
D 5001	264P370010	DIODE	1N4148
D 5002	264P370010	DIODE	1N4148
D 5005	264P370010	DIODE	1N4148
D 5006	264P370010	DIODE	1N4148
D 5501	264P370010	DIODE	1N4148
D 5502	264P528010	DIODE	RP 1H
D 602	264P370010	DIODE	1N4148
D 603	264P370010	DIODE	1N4148
D 604	264P370010	DIODE	1N4148
D 605	264P370010	DIODE	1N4148
D 651	264P370010	DIODE	1N4148
D 652	264P370010	DIODE	1N4148
D 653	264P370010	DIODE	1N4148
D 654	264P371010	DIODE	BYD33G
D 655	264P371010	DIODE	BYD33G
D 657	264P370010	DIODE	1N4148
D 658	264P370010	DIODE	1N4148
D 6A1	264P483080	DIODE	RD5.1FB2
D 6A2	264P483080	DIODE	RD5.1FB2
D 705	264P486020	DIODE	RD8.2FB3
D 706	264P370010	DIODE	1N4148
D 707	264P370010	DIODE	1N4148
D 708	264P370010	DIODE	1N4148
D 709	264P370010	DIODE	1N4148
D 711	264P376010	DIODE	1N4148
D 7P2	264P370010	DIODE	1N4148
D 7X1	264P393010	LIGHT EMITTING DIODE	SLC-26VR5F
D 7X2	264P393030	LIGHT EMITTING DIODE	SLC-26DU5F
D 7Y3	264P483080	DIODE	RD5.1FB2
D 7Y4	264P483080	DIODE	RD5.1FB2
D 7001	264P370010	DIODE	1N4148
D 7002	264P370010	DIODE	1N4148
D 7003	264P370010	DIODE	1N4148
D 7004	264P370010	DIODE	1N4148
D 7005	264P370010	DIODE	1N4148
D 7006	264P370010	DIODE	1N4148
D 7007	264P370010	DIODE	1N4148
D 8001	264P370010	DIODE	1N4148
D 8002	264P370010	DIODE	1N4148
D 8003	264P374020	DIODE	IN4003ID
D 8004	264P374020	DIODE	IN4003ID
D 901	264P376010	DIODE	BYW56
D 902	264P376010	DIODE	BYW56
D 903	264P376010	DIODE	BYW56
D 904	264P376010	DIODE	BYW56
D 905	264P371010	DIODE	BYD33G
D 906	264P372010	DIODE	BYV96E
D 907	264P481060	DIODE	RD3.0FB2
D 909	264P481060	DIODE	RD3.0FB2
D 910	264P370010	DIODE	1N4148
D 911	264P484020	DIODE	RD5.6FB1

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
D 912	264P456020	DIODE	RD2.0EB1
D 914	264P458030	DIODE	RD3.6EB2
D 915	264P484020	DIODE	RD5.6FB1
D 950	264P358070	DIODE	RU 4AM
D 951	264P377010	DIODE	BYW95B
D 952	264P566010	DIODE	FMP-G12S
D 953	264P377010	DIODE	BYW95B
D 956	264P377010	DIODE	BYW95B
D 957	264P377010	DIODE	BYW95B
D 958	264P370010	DIODE	1N4148
D 959	264P370010	DIODE	1N4148
D 960	264P370010	DIODE	1N4148
D 961	264P370010	DIODE	1N4148
D 9A1	264P374020	DIODE	IN4003ID
D 9A2	264P370010	DIODE	1N4148
		OTHER SEMICONDUCTORS	
RP901	265P047050	POSITIVE THERMISTOR	PTH BG 180M290
		FILTERS	
CF3001	299P144010	CERAMIC RESONATOR	CSA1B.93MX040
CF501	299P051030	CERAMIC RESONATOR	CSB503F15
CF7001	299P051050	CERAMIC RESONATOR	CSB500F9
CF7002	299P051050	CERAMIC RESONATOR	CSB500F9
CF7003	296P090020	CERAMIC RESONATOR	
LC3001	409P453020	BAND PASS FILTER	20800DAF
LF6001	409P478010	LOW PASS FILTER	
LF6002	409P478010	LOW PASS FILTER	
LF6003	409P458020	BAND PASS FILTER	
LF7001	409P217010	LOW PASS FILTER	
		DELAY LINES	
DF6001	409P432010	DELAY EQUALIZER	
DF6002	409P458020	DELAY EQUALIZER	
DF6003	409P498010	DELAY EQUALIZER	
DL601	337P027020	DELAY LINE	DL-711
DL6001	337P130010	DELAY LINE	
DL7001	337P027020	DELAY LINE	DL-711
		COILS	
	409B058020	CANCEL COIL	
⚠	409B070030	DEGAUSSING COIL	
⚠	330P157020	DEFLECTION YOKE COIL	
L 101	321C031040	RF COIL	10 μ H-K
L 102	321C031040	RF COIL	10 μ H-K
L 201	325C111030	PEAKING COIL	10 μ H-K
L 2A1	325C111030	PEAKING COIL	10 μ H-K
L 2001	325C101060	PEAKING COIL	18 μ H-K
L 3A1	325C121030	PEAKING COIL	10 μ H-K
L 3A2	325C121030	PEAKING COIL	10 μ H-K
L 3A3	325C121030	PEAKING COIL	10 μ H-K
L 3A4	325C121030	PEAKING COIL	10 μ H-K
L 3A5	325C121030	PEAKING COIL	10 μ H-K
L 3A6	325C121030	PEAKING COIL	10 μ H-K

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
L 3A7	325C121030	PEAKING COIL	10 μH-K
L 3A8	325C121030	PEAKING COIL	10 μH-K
L 3A9	325C110070	PEAKING COIL	3.3 μH-K
L 3B0	325C110070	PEAKING COIL	3.3 μH-K
L 3B1	411P001070	FERRITE LEAD	BF60T
L 3B2	411P001070	FERRITE LEAD	BF60T
L 3B3	321C031040	RF COIL	10 μH-K
L 3Y1	325C111030	PEAKING COIL	10 μH-K
L 3Y2	325C111030	PEAKING COIL	10 μH-K
L 3Y3	325C111030	PEAKING COIL	10 μH-K
L 3001	325C108060	PEAKING COIL	820 μH-J
L 3002	325C108060	PEAKING COIL	820 μH-J
L 551	321C030010	RF COIL	1.0 μH-K
L 552	411D009020	FERRITE CORE FILTER	
L 553	409P407010	BRIDGE COIL	
L 554	409P408010	PCC COIL	
L 555	333P018020	H-LIN. COIL	
L 556	409P006080	FILTER COIL	6800 μH-J
L 557	409P566010	FILTER COIL	
L 558	321C031040	RF COIL	10 μH-K
L 5001	325C121030	PEAKING COIL	10 μH-K
L 601	349P187010	DEMODULATOR COIL	
L 602	349P187010	DEMODULATOR COIL	
L 603	349P188010	DL OUT COIL	
L 604	325C106050	PEAKING COIL	15 μH-J
L 605	349P172010	BELL FILTER	
L 606	325C106070	PEAKING COIL	22 μH-J
L 607	349P174010	IDENT COIL	MSD-SECAM
L 608	325C107090	PEAKING COIL	220 μH-J
L 609	325C107030	PEAKING COIL	68 μH-J
L 610	325C107010	PEAKING COIL	47 μH-J
L 611	325C122050	PEAKING COIL	100 μH-K
L 612	325C122050	PEAKING COIL	100 μH-K
L 613	321C031040	RF COIL	10 μH-K
L 654	321C031020	RF COIL	6.8 μH-K
L 6001	349P144020	DL MATCH COIL	14 μH
L 6002	325C102050	PEAKING COIL	100 μH-K
L 6003	325C162050	PEAKING COIL	100 μH-K
L 6004	411P011010	BEAD FERRITE	ZBF503S-P
L 6005	325C162050	PEAKING COIL	100 μH-K
L 6006	409P402030	EMI FILTER	DSS306-55FZ103N100
L 6007	409P402030	EMI FILTER	DSS306-55FZ103N100
L 6008	325C162050	PEAKING COIL	100 μH-K
L 6009	325C162050	PEAKING COIL	100 μH-K
L 6010	325C166020	PEAKING COIL	8.2 μH-J
L 6011	325C166010	PEAKING COIL	6.8 μH-J
L 6012	321C031040	RF COIL	10 μH-K
L 6014	325C121050	PEAKING COIL	15 μH-K
L 701	325C106050	PEAKING COIL	15 μH-J
L 7Y1	325C111030	PEAKING COIL	10 μH-K
L 7Y2	325C111030	PEAKING COIL	10 μH-K
L 7001	349P172010	BELL FILTER	
L 7002	349P174010	IDENT COIL	MSD-SECAM
L 7003	349P173010	DEMODULATOR COIL	
L 7004	349P173010	DEMODULATOR COIL	

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
L 7005	325C106040	PEAKING COIL	12 μH-J
L 7006	349P185010	DL OUT COIL	
L 7007	321C031040	RF COIL	10 μH-K
L 7008	321C030070	RF COIL	3.3 μH-K
L 7009	325C120010	PEAKING COIL	1.0 μH-M
L 7010	325C120010	PEAKING COIL	1.0 μH-M
L 7011	325C120010	PEAKING COIL	1.0 μH-M
L 7014	325C120010	PEAKING COIL	1.0 μH-M
L 7015	325C120010	PEAKING COIL	1.0 μH-M
L 7016	325C120010	PEAKING COIL	1.0 μH-M
L 7017	411P013020	FERRITE LEAD	
L 7018	411P013020	FERRITE LEAD	
L 7401	325C106030	PEAKING COIL	10 μH-J
L 7402	321C031040	RF COIL	10 μH-K
L 7701	321C031040	RF COIL	10 μH-K
L 7702	325C121050	PEAKING COIL	15 μH-K
L 7703	321C030010	RF COIL	1.0 μH-K
L 7706	321C030010	RF COIL	1.0 μH-K
L 7707	409P752010	SWITCH COIL	13.5MHz
L 8001	411D009020	FERRITE CORE FILTER	
L 8002	325C106050	PEAKING COIL	15 μH-J
L 8003	325C106090	PEAKING COIL	33 μH-J
L 901	411P001070	FERRITE LEAD	BF60T
L 903	411P001070	FERRITE LEAD	BF60T
L 904	321C030050	RF COIL	2.2 μH-K
L 905	325C121010	PEAKING COIL	6.8 μH-K
L 951	325D059060	PEAKING COIL	390 μH-K
L 952	321C041050	RF COIL	J1SC-3212-0.4
L 956	321C131080	RF COIL	47MHz+-7.5%
L 958	411D009020	FERRITE CORE FILTER	
△L 991	351P011020	LINE FILTER	
△L 992	351P092010	LINE FILTER	253Y2R0-01
△L 996	351P092010	LINE FILTER	253Y2R0-01
LC201	320P051010	TRAP COIL	4.43MHz
LC202	320P051020	TRAP COIL	4.28MHz
LC2A1	320P051030	TRAP COIL	3.58MHz
LC2A2	320P051020	TRAP COIL	4.28MHz
LC2A3	320P051010	TRAP COIL	4.43MHz
LC7Y1	320P051010	TRAP COIL	4.43MHz
LC7003	409P402030	EMI FILTER	DSS306-55FZ103N100
LC7004	409P402030	EMI FILTER	DSS306-55FZ103N100
LC7005	409P402030	EMI FILTER	DSS306-55FZ103N100
LC7006	409P402030	EMI FILTER	DSS306-55FZ103N100
LC7007	409P402030	EMI FILTER	DSS306-55FZ103N100
LC7008	409P402030	EMI FILTER	DSS306-55FZ103N100
LC7009	409P402010	EMI FILTER	DSS306-55B101M100
LC7010	409P402010	EMI FILTER	DSS306-55B101M100
LC7011	409P402040	EMI FILTER	DSS306-54B470M100
		TRANSFORMERS	
LC7001	349P159050	CHROMA-BP	
LC7002	349P159010	CHROMA-BP	
T 551	336P009030	H. DRIVE	
△T 552	334P183040	FLYBACK	
T 5501	409P567010	FOCUS	

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
△T 901	350P481030	POWER	
△T 902	336P023010	DRIVE	POWER
		VARIABLE RESISTORS	
VR201	127C081000	VR-SEMIFIXED	1/5W B30KΩ-M
VR202	127C080060	VR-SEMIFIXED	1/5W B3KΩ-M
VR451	127C180070	VR-SEMIFIXED	1/5W B5KΩ-M
VR452	127C191000	VR-SEMIFIXED	1/5W B30KΩ-M
VR501	127C080040	VR-SEMIFIXED	1/5W B1KΩ-M
VR5001	127C180040	VR-SEMIFIXED	1/5W B1KΩ-M
VR5002	127C181060	VR-SEMIFIXED	1/5W B1MΩ-M
VR5003	127C180070	VR-SEMIFIXED	1/5W B5KΩ-M
VR601	127C080050	VR-SEMIFIXED	1/5W B2KΩ-M
VR602	127C080070	VR-SEMIFIXED	1/5W B5KΩ-M
VR603	127C080080	VR-SEMIFIXED	1/5W B10KΩ-M
VR651	127C020040	VR-SEMIFIXED	1/5W B1KΩ-N
VR652	127C020040	VR-SEMIFIXED	1/5W B1KΩ-N
VR653	127C020040	VR-SEMIFIXED	1/5W B1KΩ-N
VR654	127C020050	VR-SEMIFIXED	1/5W B2KΩ-N
VR655	127C020050	VR-SEMIFIXED	1/5W B2KΩ-N
VR6001	127C090040	VR-SEMIFIXED	1/5W B1KΩ-M
VR6002	127C090040	VR-SEMIFIXED	1/5W B1KΩ-M
VR6003	127C090040	VR-SEMIFIXED	1/5W B1KΩ-M
VR6004	127C090040	VR-SEMIFIXED	1/5W B1KΩ-M
VR6005	127C090030	VR-SEMIFIXED	1/5W B500Ω-M
VR6006	127C090040	VR-SEMIFIXED	1/5W B1KΩ-M
VR6007	127C090040	VR-SEMIFIXED	1/5W B1KΩ-M
VR6008	127C090050	VR-SEMIFIXED	1/5W B2KΩ-M
VR7001	127C080080	VR-SEMIFIXED	1/5W B10KΩ-M
VR7002	127C080010	VR-SEMIFIXED	1/5W B200Ω-M
VR7003	127C080070	VR-SEMIFIXED	1/5W B5KΩ-M
VR7701	127C180080	VR-SEMIFIXED	1/10W B10KΩ-M
VR951	127C080080	VR-SEMIFIXED	1/5W B10KΩ-M
		RESISTORS	
R 322	109P052010	FUSE	1/4W 100Ω-J
R 323	109P052010	FUSE	1/4W 100Ω-J
R 3C7	103P586010	NETWORK	1/8W 1MΩ-J
R 3C8	103P586010	NETWORK	1/8W 1MΩ-J
△R 451	103P378040	FUSE	1/4W 2.2Ω-J
R 551	109D067070	CEMENT WIRE	10W 2.7Ω-K
△R 553	103P442020	FUSE METAL	1W 560Ω-K/J
△R 554	109P052040	FUSE	1/4W 1.2Ω-J
△R 555	103P398010	FUSE	1/2W 1.2Ω-J
△R 556	103P397090	FUSE	1/2W 0.82Ω-J
△R 559	103P392050	FUSE	1/2W 1.0KΩ-J
R 566	102P172080	CEMENT METAL	5W 1.8KΩ-K/J
△R 568	103P397090	FUSE	1/2W 0.82Ω-J
△R 570	103P392020	FUSE	1/2W 560Ω-J
△R 5519	103P392050	FUSE	1/2W 1.0KΩ-J
△R 671	103P438030	FUSE METAL	2W 1.8Ω-K/J
△R 675	103P372050	FUSE	1/4W 1KΩ-J
△R 676	103P372050	FUSE	1/4W 1KΩ-J
△R 677	103P372050	FUSE	1/4W 1KΩ-J
R 701	103P623040	NETWORK	1/8W 5.6KΩ-J

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
R 716	103P583030	NETWORK	1/8W 4.7KΩ-J
△R 8014	103P370010	FUSE	1/4W 10Ω-J
△R 8015	103P370050	FUSE	1/4W 22Ω-J
△R 8016	103P370010	FUSE	1/4W 10Ω-J
R 901	102P083010	CEMENT WIRE	10W 2.2Ω-K
R 906	109D075060	CEMENT WIRE	10W 1KΩ-J
△R 960	103P397090	FUSE	1/2W 0.82Ω-J
R 992	102P082080	CEMENT WIRE	10W 2.7Ω-K
		CAPACITORS AND TRIMMERS	
C 557	189P071080	C-M-PLASTIC-PP	200V 0.47μF-J
C 558	189P071010	C-M-PLASTIC-PP	200V 0.56μF-J
C 559	189P081030	C-M-PLASTIC-PP	200V 0.82μF-J
C 560	189P071020	C-M-PLASTIC-PP	200V 0.51μF-J
C 567	189P081020	C-M-PLASTIC-PP	200V 0.22μF-J
C 710	189P092010	ELECTROLYTIC-C	FU5.5V 0.047μF-Z
C 904	185D062070	ELECTROLYTIC-C	450DV 330μF-M
△C 913	189P091010	CERAMIC CAPACITOR	AC400V E4700pF-M
CR971	149P008010	CR-MULTIPLE	470pF&3.6μF-K
VC3001	202P109030	TRIMMER CAPACITOR	5.5pF-30pF
VC3002	202P109030	TRIMMER CAPACITOR	5.5pF-30pF
VC701	202P109050	TRIMMER CAPACITOR	9.8pF-60pF
VC7001	202P109030	TRIMMER CAPACITOR	5.5pF-30pF
VC7002	202P109030	TRIMMER CAPACITOR	5.5pF-30pF
		SWITCHES	
S 2001	129P007090	VR-CH-PRESETTER	SW-BAND
S 3A1	432P052030	PUSH SWITCH	2-2 LOCK-TYPE
S 3A2	432P052030	PUSH SWITCH	2-2 LOCK-TYPE
S 401	129P007090	VR-CH-PRESETTER	SW-BAND
S 7Y1	432P101010	KEY BOARD SWITCH	1-1 H=4.3
S 7Y2	432P101010	KEY BOARD SWITCH	1-1 H=4.3
S 7Y3	432P101010	KEY BOARD SWITCH	1-1 H=4.3
S 7Y4	432P101010	KEY BOARD SWITCH	1-1 H=4.3
S 7Y5	432P101010	KEY BOARD SWITCH	1-1 H=4.3
S 7Y7	432P101010	KEY BOARD SWITCH	1-1 H=4.3
S 7Y8	432P101010	KEY BOARD SWITCH	1-1 H=4.3
S 7Z0	431C068030	SLIDE SWITCH	2-3 NON-SHORT
S 7Z1	431C067010	SLIDE SWITCH	2-2 NON SHORT
S 7Z2	432P101010	KEY BOARD SWITCH	1-1 H=4.3
S 7Z5	432C038020	PUSH SWITCH	
△S 991	432P076030	PUSH SWITCH	2-1 AC250V 5A L18
		MISCELLANEOUS	
	338P025020	CPM ASSY	
	641D758010	WEDGE	3P DEF-YOKE SETTING
△F 991	283D091040	FUSE	T2A
IP101	295P097010	TUNER HF PACK	
J 2A1	451C058010	CONNECTOR	21P
J 2A2	451C058010	CONNECTOR	21P
J 2A3	449C102010	SOCKET DIN MINI	4P
J 3A1	451C114010	PIN JACK(2P)	RED+WHITE
J 3A2	440C191010	PUSH TERMINAL 8P	
J 3Y1	451C119010	HEADPHONE JACK	
△J 601	449C085010	CRT SOCKET	

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
J 7Y2	451C114010	PIN JACK(2P)	RED+WHITE
J 7Y3	451C106050	PIN JACK	
J 7Y1	449C093010	SOCKET DIN MINI	4P (S+SW)
K 301	287P060010	POWER RELAY	DH12D2-DS(M)
△K 9A1	287P029050	POWER RELAY	
X 3001	285P092010	CRYSTAL RESONATOR	5.85MHz
X 3002	285P093010	CRYSTAL RESONATOR	5.824MHz
X 601	285P132010	CRYSTAL RESONATOR	4.4336MHz
X 602	285P131010	CRYSTAL RESONATOR	3.5795MHz
X 6001	285P079010	CRYSTAL RESONATOR	21.325MHz
X 701	285P063040	CRYSTAL RESONATOR	4.19430MHz
X 702	285P073020	CRYSTAL RESONATOR	7.15909MHz
X 7001	285P073020	CRYSTAL RESONATOR	7.15909MHz
X 7002	285P068030	CRYSTAL RESONATOR	8.8MHz
X 7701	285P062030	CRYSTAL RESONATOR	13.875MHz
X 7702	285P139010	CRYSTAL RESONATOR	12MHz
△Z 5001	299P087060	SURGE PROTECTOR	PRF 2000
Z 701	939P226010	PREAMP UNIT	SBX1483
△Z 950	299P132010	SURGE PROTECTOR	PRF 5000
△Z 951	299P087060	SURGE PROTECTOR	PRF 3150
△Z 952	299P132010	SURGE PROTECTOR	PRF 5000
△Z 953	299P132010	SURGE PROTECTOR	PRF 5000
		PRINTED CIRCUIT BOARD ASSY'S	
△	930D015001	A/V SW PCB ASSY	
△	920D276090	ADG PCB ASSY	
△	920D278090	AV PCB ASSY	
△	920D311040	CONTROL PCB ASSY	
△	930C377001	DCF PCB ASSY	
△	920D277090	DEFL REG PCB ASSY	
△	930C498002	NICAM PCB ASSY	
△	930C381001	PCC/DBF PCB ASSY	
△	930C378001	PIP PCB ASSY	
△	920D310090	POWER SUB PCB ASSY	
△	930C608005	SIGNAL PCB ASSY	
△	930C607002	SW PCB ASSY	
△	930C441001	TERMINAL PCB ASSY	
△	930C382001	VMCRT PCB ASSY	
△	920D280050	Y/C-SW PCB ASSY	
△	920D279050	YUV PCB ASSY	
		MECHANICAL PARTS	
	669D107010	SCREW	M3X12
	669D130020	SCREW	4X16
	669D220010	SCREW	3X6 46LA005
	669D220020	SCREW	3X8 46LA005
	669D220030	SCREW	3X10 46LA005
	669D221080	SCREW	4X16 46LA005
	669D212010	SCREW	3X12
	669D212040	SCREW	3X10
	669D222060	SCREW	3X16-12
		COSMETIC PARTS	
△	246C022030	AC POWER CORD	
	702C949010	CONTROL CASE ASSY	

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION
△	700C147040	BACK COVER	
	701D086070	FRONT CABINET ASSY	
	224D243010	CRT CAP	
	641D173010	CLIP	AC POWER CORDE
	702D225080	CONTROL DOOR ASSY	
	704C738010	POWER KNOB	
	734D283010	PUSH KNOB	
	734D284010	PUSH KNOB	
	734D353010	SLIDE KNOB	
	701B258030	FRONT PANEL	
	926P013080	SPEAKER SYSTEM	
	761A078080	TERMINAL BOARD	
	761D628010	SPEAKER HOLDER	
		PACKING PARTS AND ACCESSORY	
	803A325010	PACKING CUSHION	
	802B395010	PACKING CASE	
	802B395060	PACKING CASE	
	831D110090	PACKING BAG	
	831D174090	PACKING BAG	
	244D229010	CABLE	VFF L=1500 2P
△	872C083000	INSTRUCTION BOOK	
△	939P486010	REMOTE HAND UNIT	

〔MEMO〕

LEAD DRESSING

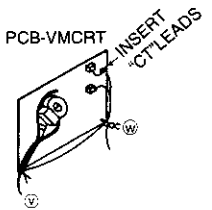
The lead wires to be clamped are listed in the table below.

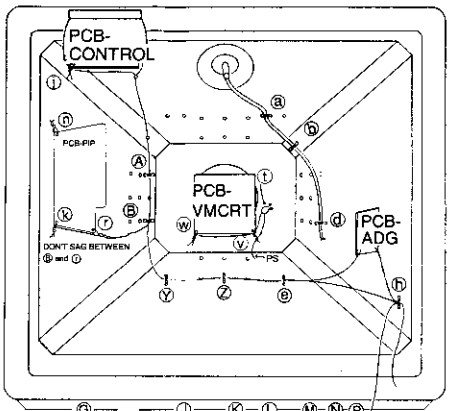
Note: The inner wires are clamped so that they do not come close to the heat generating or high-tension parts. After servicing route all wires in their original position.

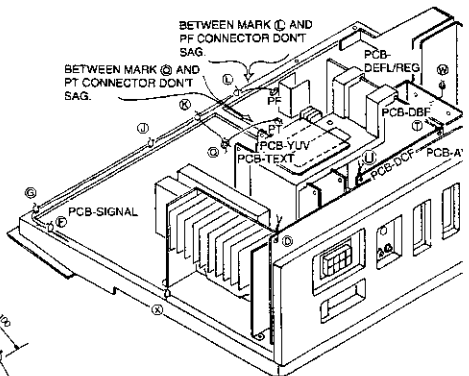
The anode lead wires are routed so no tensile strength is applied to the anode cap. If the mounting angle of the anode cap and the route of the anode lead wires are changed, return them to the initial angle and route.

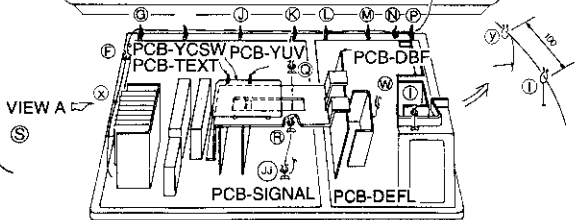
CONNECTOR LEAD FOR CLAMP

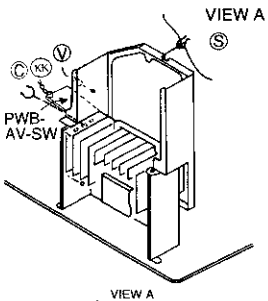
CLAMP	LEAD TO BE CLAMPED
A	DC,KY,PE,PJ,NS,DB,SC
B	EARTH LEAD FROM SA,SC,DC,KY,PE, PJ,NS,DB,YP,FP,FK,SM,FH
C	SN,SD,LD2,AU2,ST,KY,PJ,SC
D	AP
F	KY,PJ,EP,PF
G	KY,PJ,EP,PF
J	KY,PJ,EP,LD,RA,PF
K	PT,PJ,EP,LD,RA,AP,PF
L	EP,LD,RA,PT,EA,AP,PF
M	EP,LD,RA,PC,PT,EA
N	EP,LD,RA,PC,PT,PL,EA
P	EP,LD,RA,PC,PT,PL,EA
Q	PT,PJ,AP,DA,CA,SM,TD
R	PJ,DA,CA,CT,AP,PA,LP,CM,FH,FK,SM,TD
S	DB,DC,FP,FK,SM,YP,FH
T	DC,DB,CT,PA,CB,CC,CA,AE,AD,AC,AF, LP,DA,AY,AL,AP,FK,FP,FH,SM,YP
U	YP,DC,LP,DA,AP,AK,FP,FK,SM,DB,FH(2 LAYERS CLAMP)
V	KY,PJ,SC,SN,SD,LD2,AU2,ST
W	PY,CX,DV,DF1,TD,LEADS FROM DY
Y	PE,SC,KY,PJ
Z	PE
a	ANODE LEAD
b	ANODE LEAD
d	ANODE LEAD
e	PE,PY,CX,LEADS FROM DY
g	DF1
h	PT,PG,PL,PY,EP,RA,LD, EA,PC,FROM DG-COIL
j	PJ,NS
k	FP,FK,SM,LEADS FROM DG-COIL
l	DF2,F1,F2,G2,DF1,SB
n	FP
r	FP,FK,SM,YP,FH,NS
t	PS,SA,LEADS FROM DY
v	SA,CA,F1,F2,DF2,SB,MY,PS(2 LAYER CLAMP)
w	SA,PS,CC,CB,CT,PA,CA(2 LAYER CLAMP)
x	SC,EP
y	F1,F2,DF2,G2,PS
AA	SB
BB	SB
CC	DV,DF1
JJ	DA,CC,CA,CB,CT,AP,PA,LP,FP,CM,FH,FK,SM,TD
KK	AV, AW

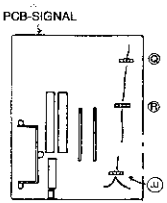






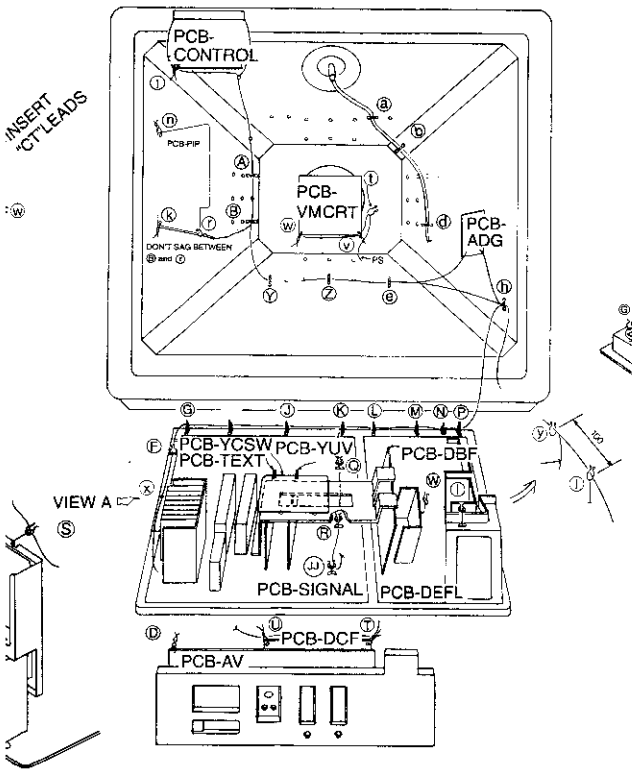


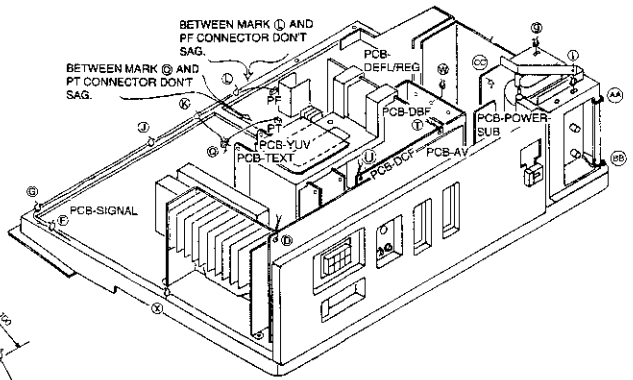


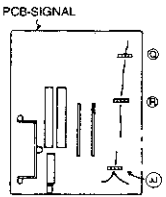


gh-tension parts. After servicing route all

ng angle of the anode cap and the route of

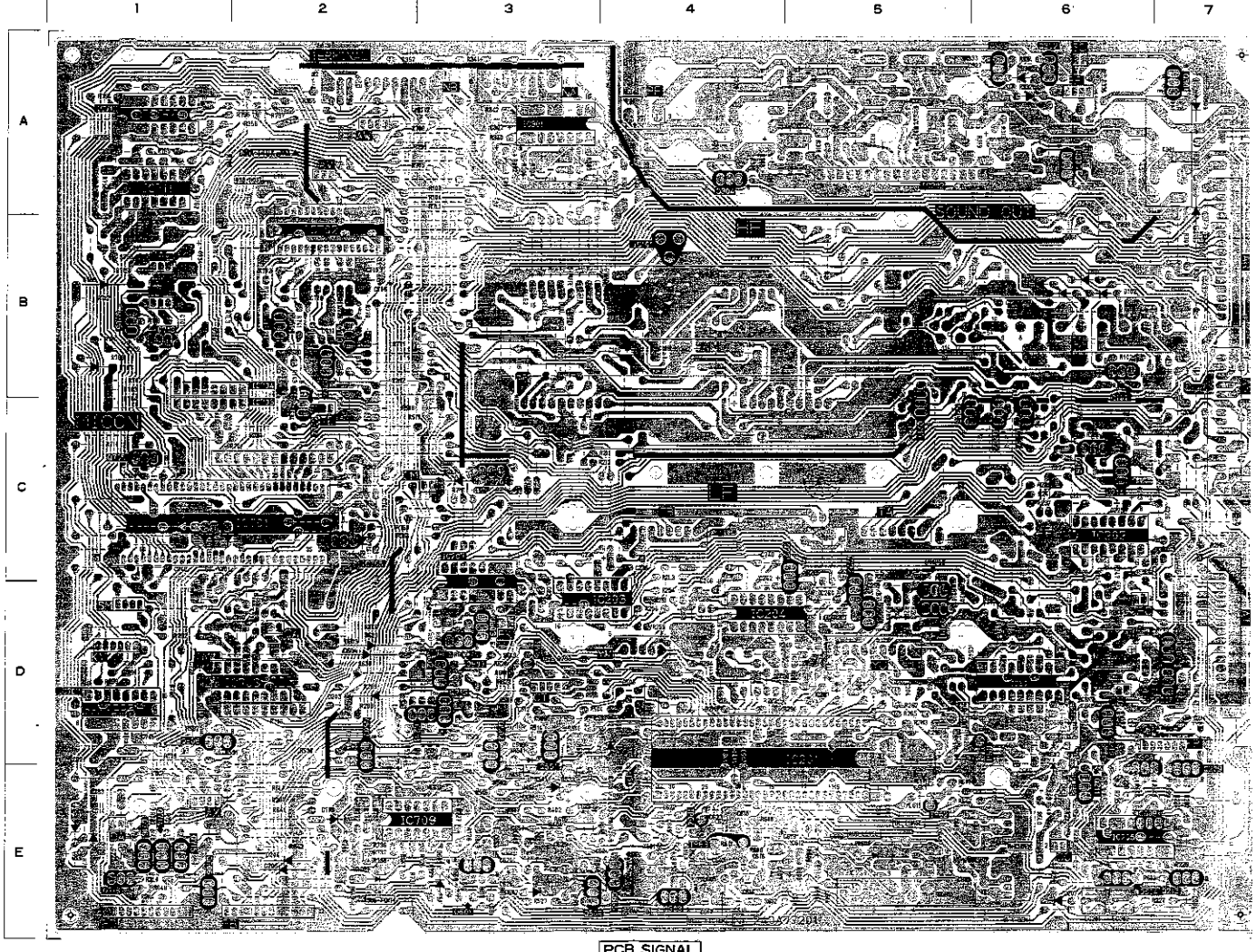




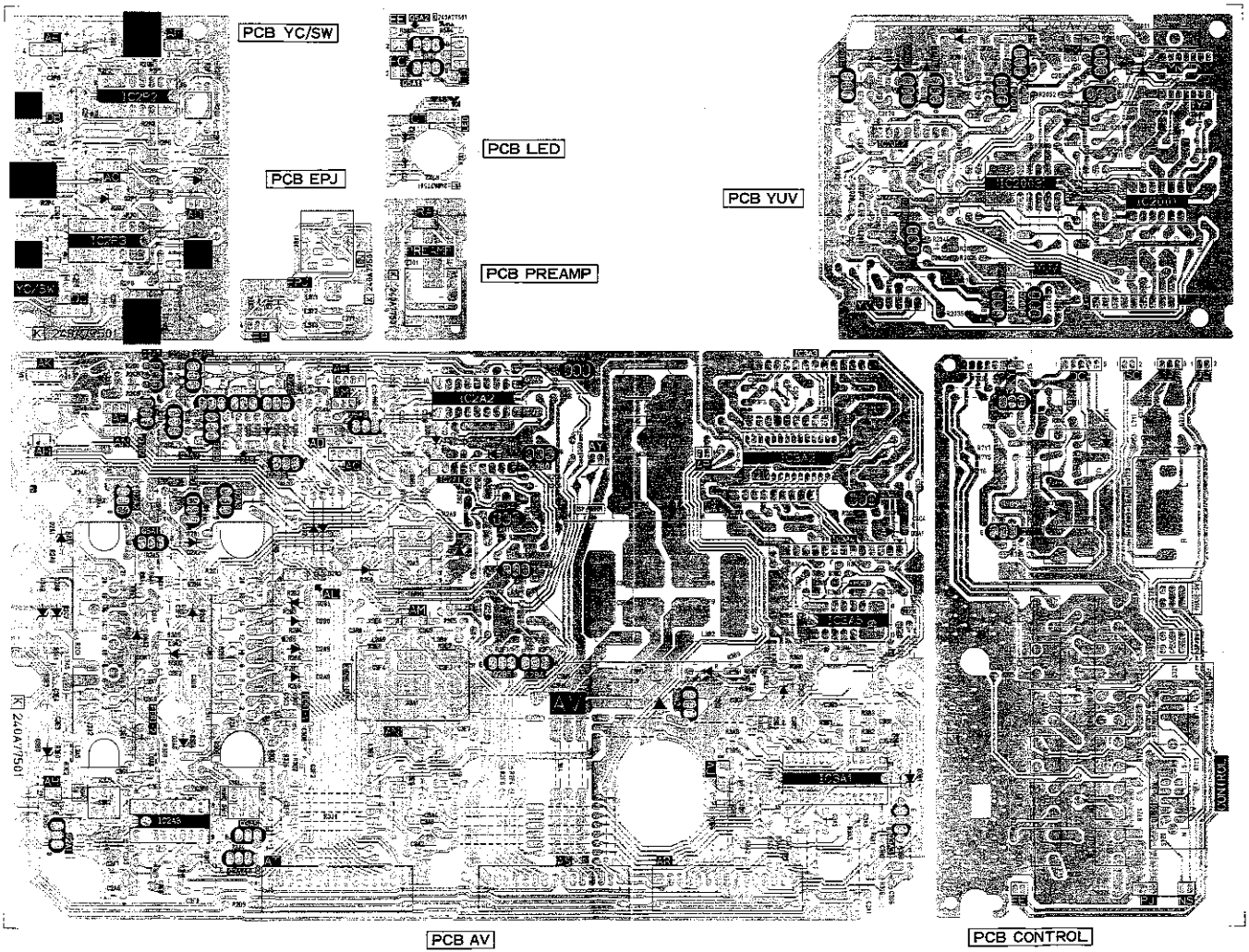


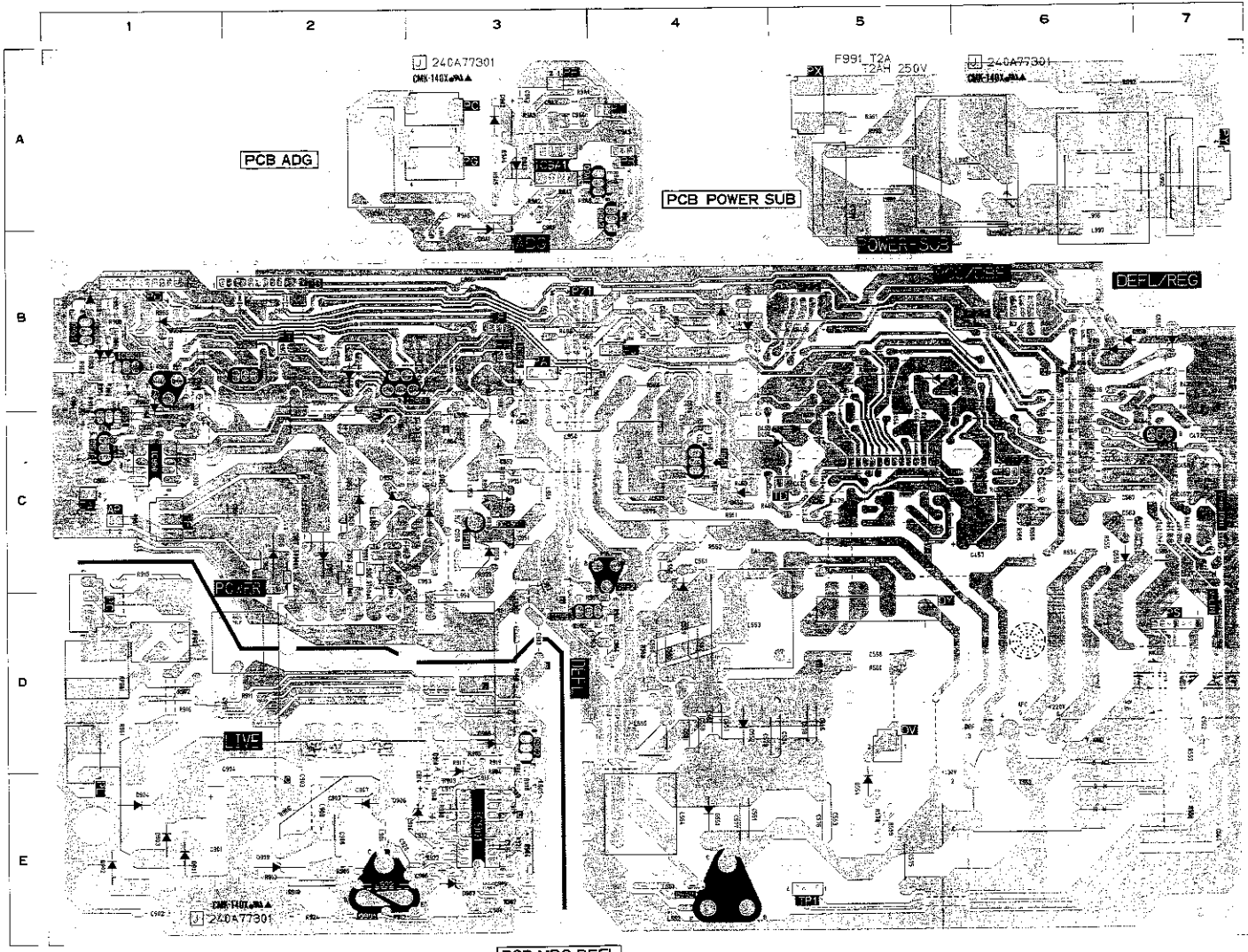
CLAMP FOR CONNECTOR LEAD

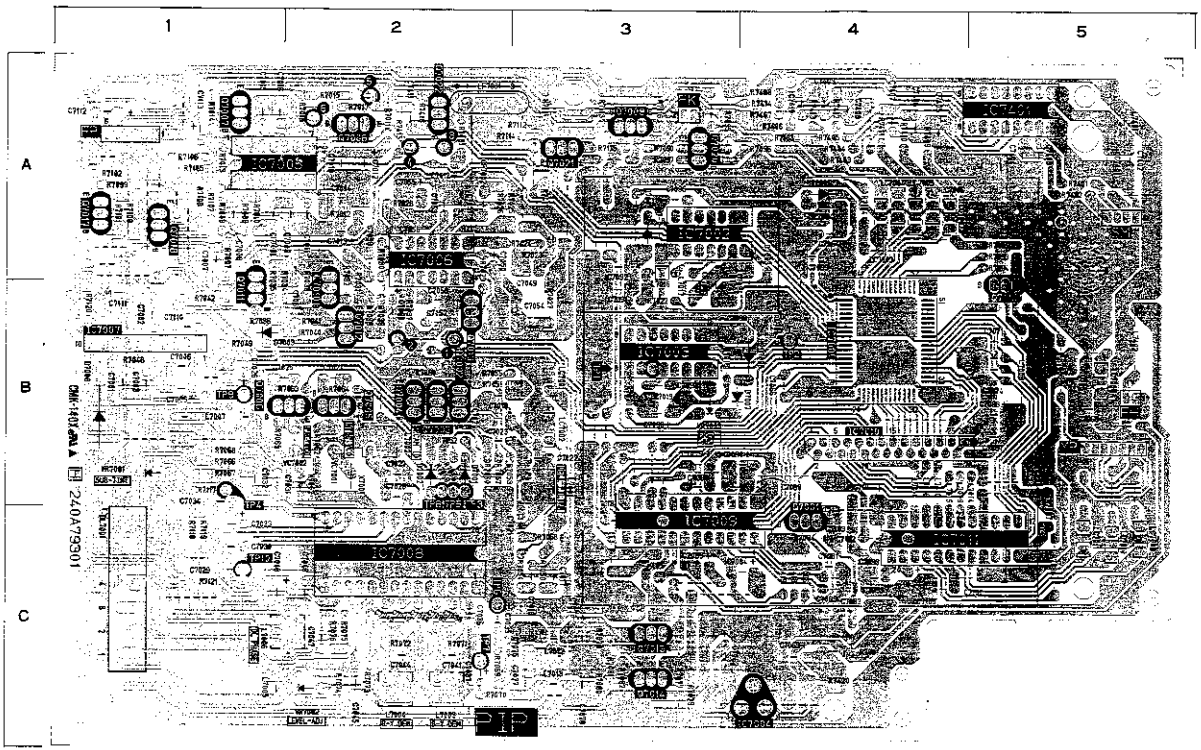
CONNECTOR	CLAMP
ANODE LEAD	a-b-d
AC	T
AD	T
AE	T
AF	T
AK	U
AL	T
AP	L-K-Q-R-JJ-T-U-D
AU2	V-C
AT	T
AY	T
CA	v-w-Q-R-JJ-T
CB	w-JJ-T
CC	w-JJ-T
CM	R-JJ
CT	w-R-JJ-T
CX	e-W
DA	U-Q-R-JJ-T
DB	A-B-S-U-T
DC	A-B-S-U-T
DF1	W-oc-g-l
DF2	y-v-l
DV	W-oc
EA	L-M-N-P-h
EP	x-F-G-J-K-L-M-N-P-h
F1	y-v-l
F2	y-v-l
FH	r-B-S-U(2 LAYERS CLAMP)-T-JJ-R
FK	k-r-B-S-U-T-JJ-R
FP	n-k-r-B-S-U-T-JJ
G2	l-y
KY	A-B-Y-V-C-F-G-J
LD	J-K-L-M-N-P-h
LD2	V-C
LP	U-T-JJ-R
MY	v
NS	j-A-B-r
PA	w-T-JJ-R
PC	M-N-P
PE	A-B-Y-Z-e
PF	F-G-J-K-L
PG	h
PJ	j-A-B-Y-V-C-F-G-J-K-Q-R
PL	N-P-h
PS	w-v(2 LAYERS CLAMP)-t-y
PT	Q-K-L-M-N-P-h
PY	e-h-W
RA	J-K-L-M-N-P-h
SA	t-v-w(2 LAYERS CLAMP)
SB	v-l-AA-BB
SC	A-B-Y-V-C-X
SD	V-C
SM	k-r-B-S-U-T-JJ-R-Q
SN	V-C
ST	V-C
TD	Q-R-JJ-W
YP	r-B-S-U-T
AV	KK
AW	KK



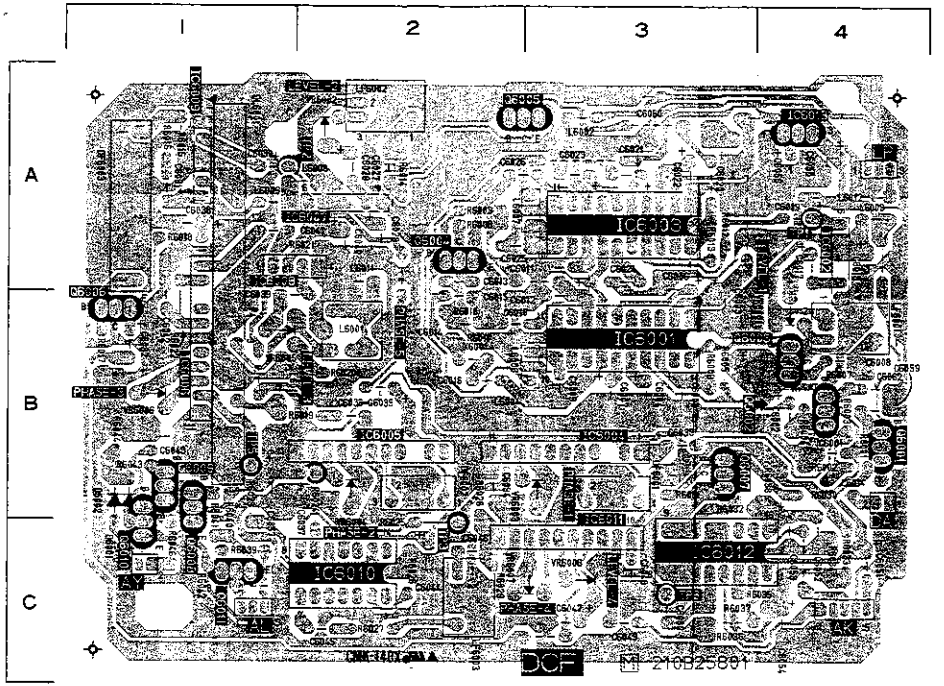
PCB SIGNAL


1
2
3
4
5
6
7
A
B
C
D
E
PCB YC/SW
PCB LED
PCB EPJ
PCB PREAMP
PCB YUV
PCB AV
PCB CONTROL

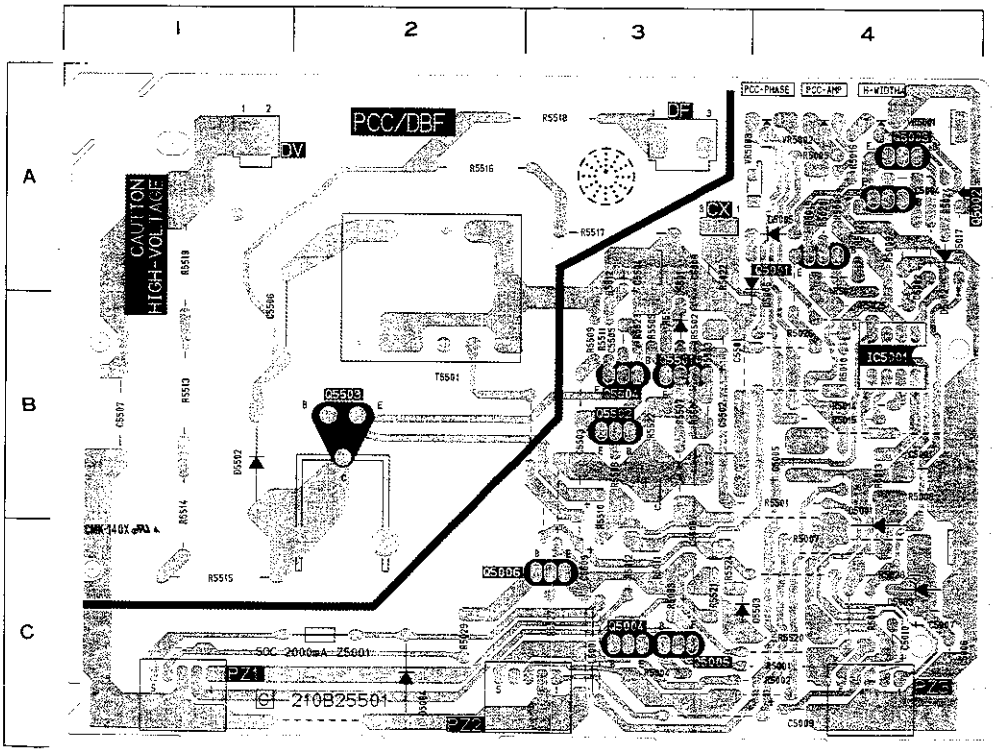

1
2
3
4
5
6
7
A
B
C
D
E
PCB ADG
PCB POWER SUB
PCB MBC DEFL
240A77301
F991_T2A
T2AH 250V
DEFL/REG
POWER
LIVE
ADG


1
2
3
4
5
A
B
C
IC7405
IC7406
IC7407
IC7408
IC7409
IC7410
IC7411
IC7412
PIP

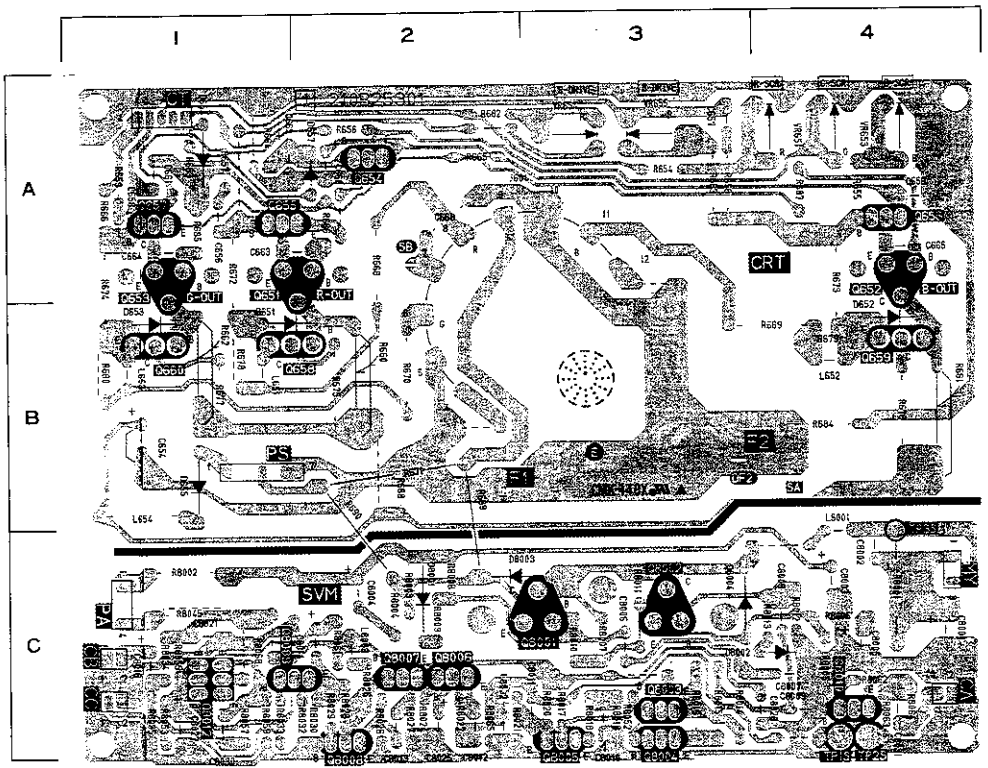
PCB PIP



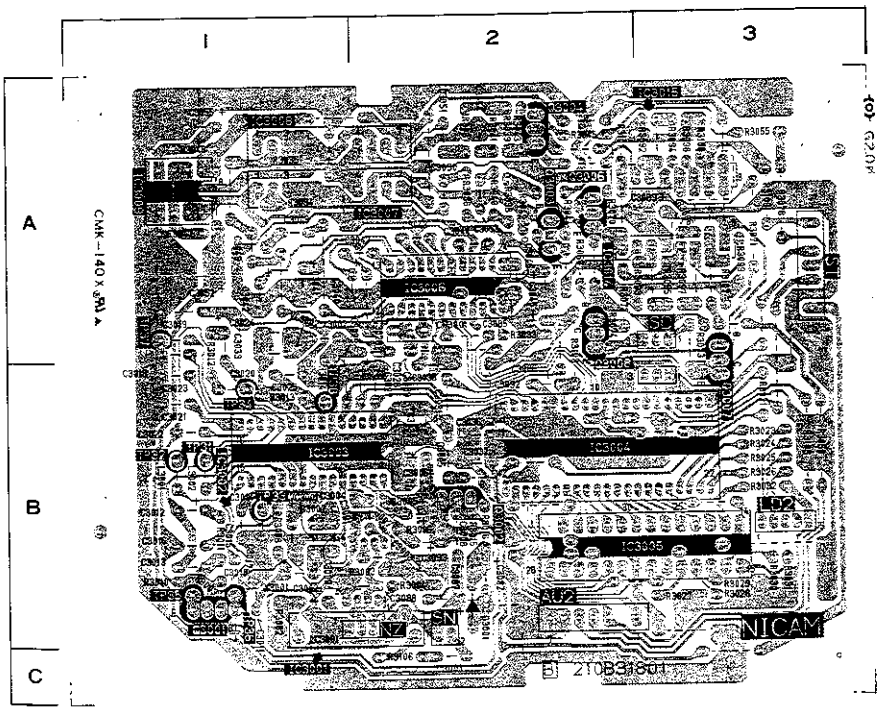
PCB DCF


1
2
3
4
A
B
C
PCC/DBF
DF
DV
DX
CAUTION
HIGH-VOLTAGE
PCC-PHASE
PCC-AMP
H-WIDTH
Q5503
Q5502
Q5501
Q5506
Q5507
Q5508
IC5504
T5501
SOC 2000mA 25001
PZ1
PZ2
PZ3
2108B2550-1

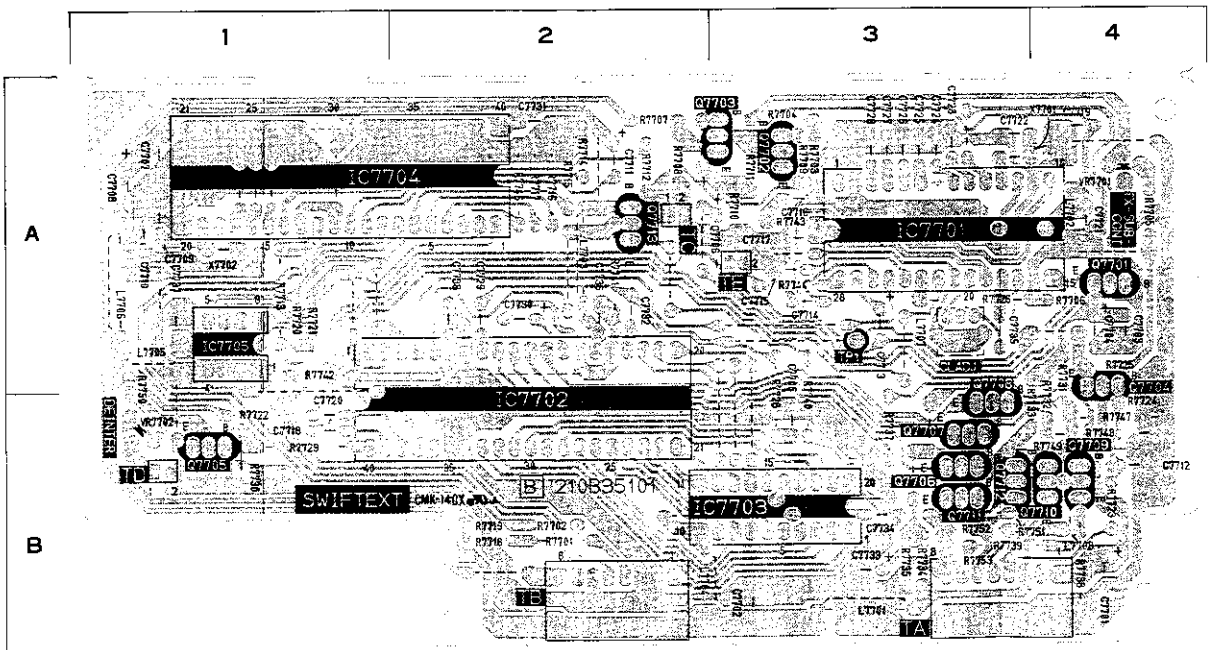
PCB PCC/DBF



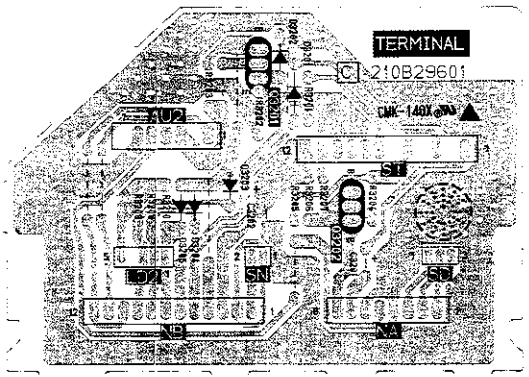
PCB VMCRT



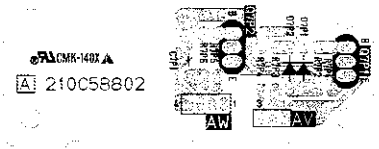
PCB-NICAM



PCB SWIFT TEXT

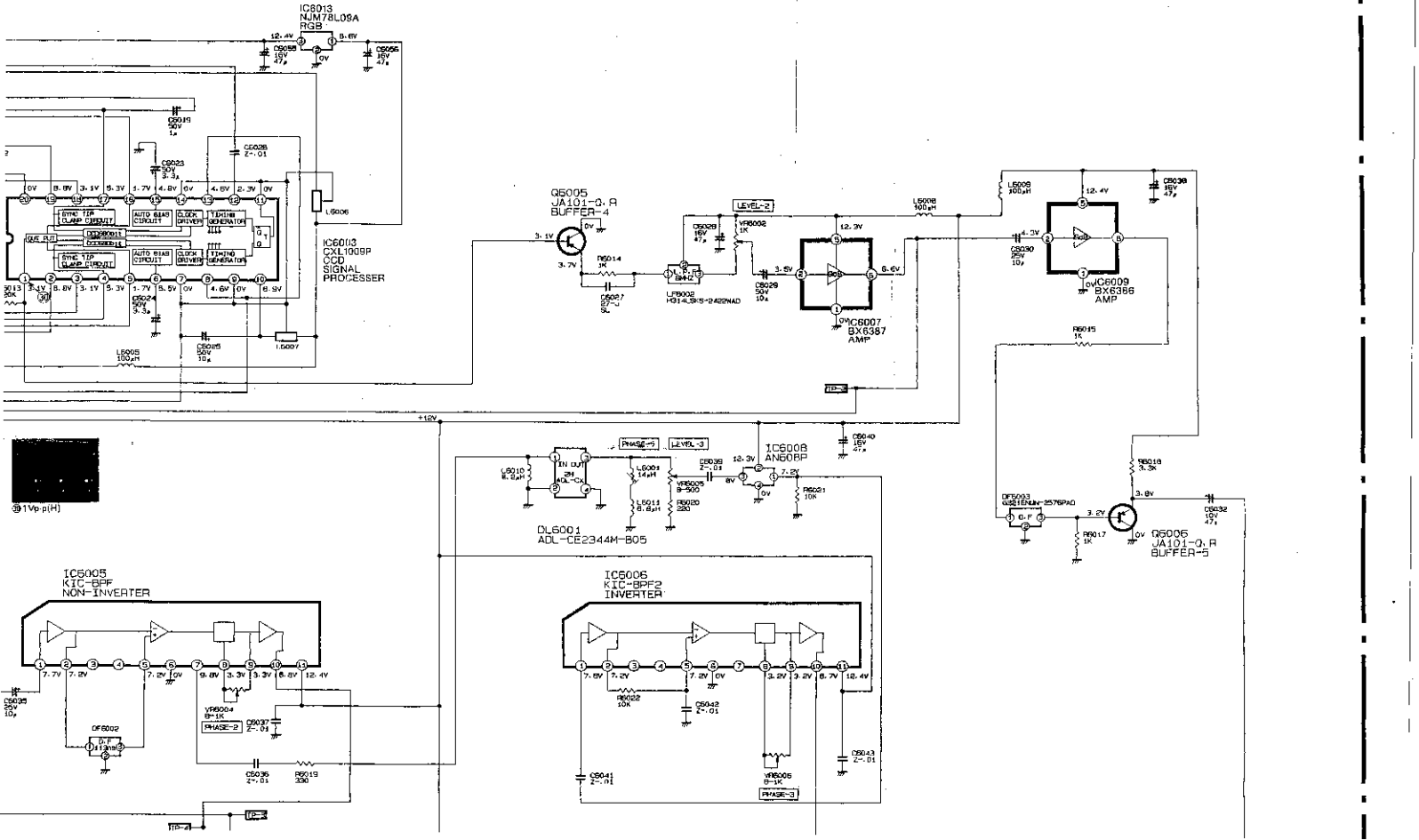


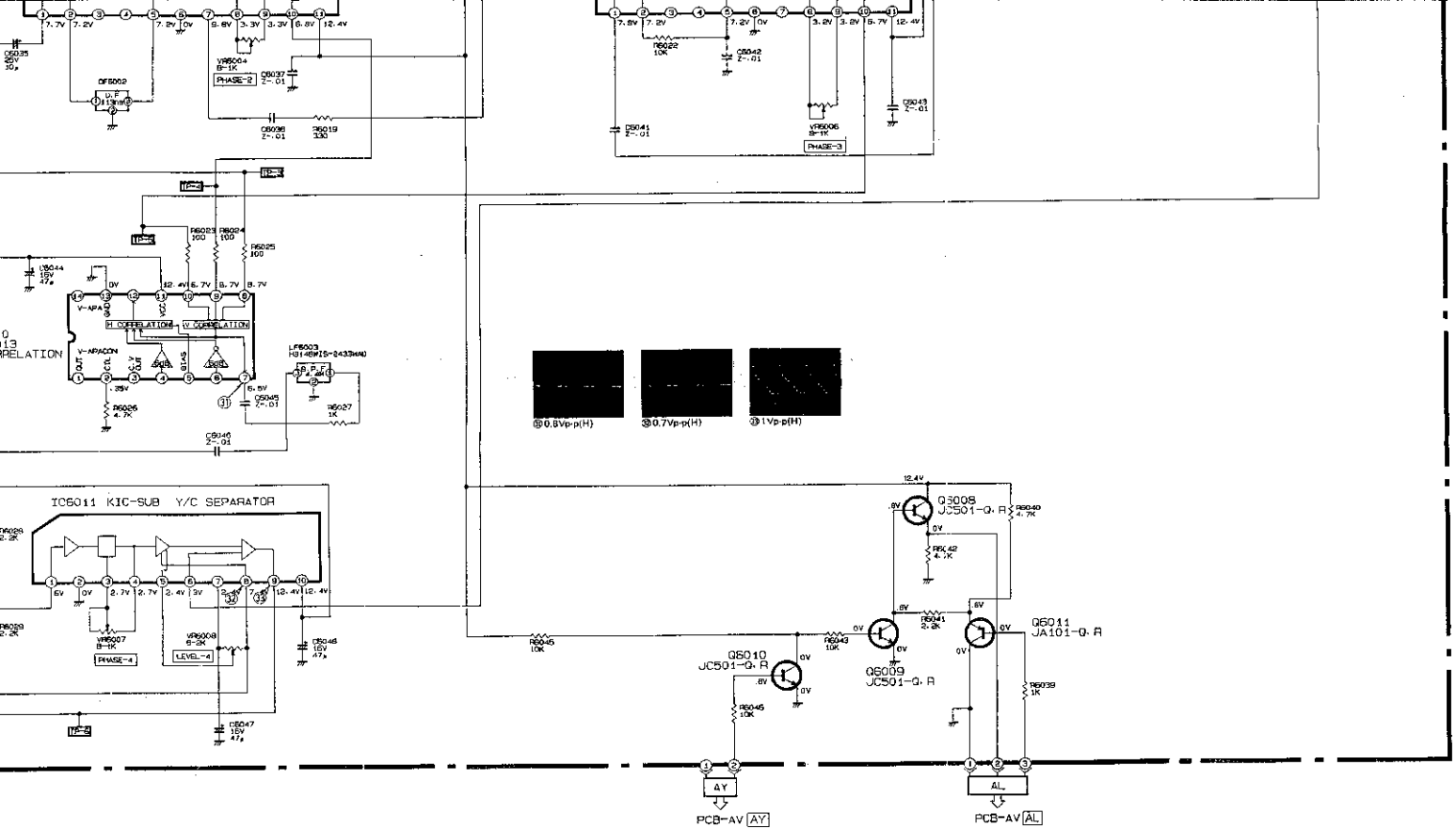
PCB TERMINAL

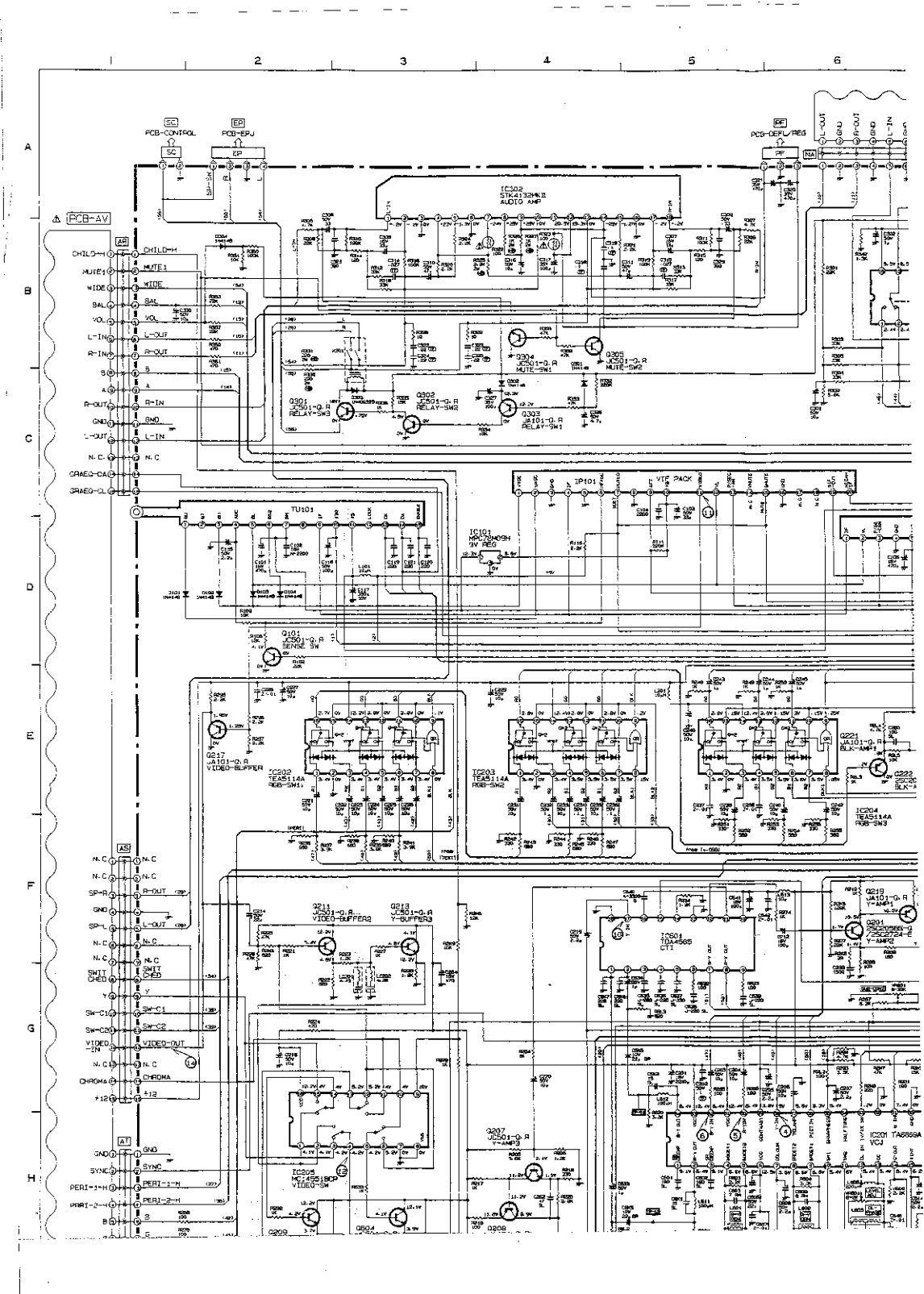


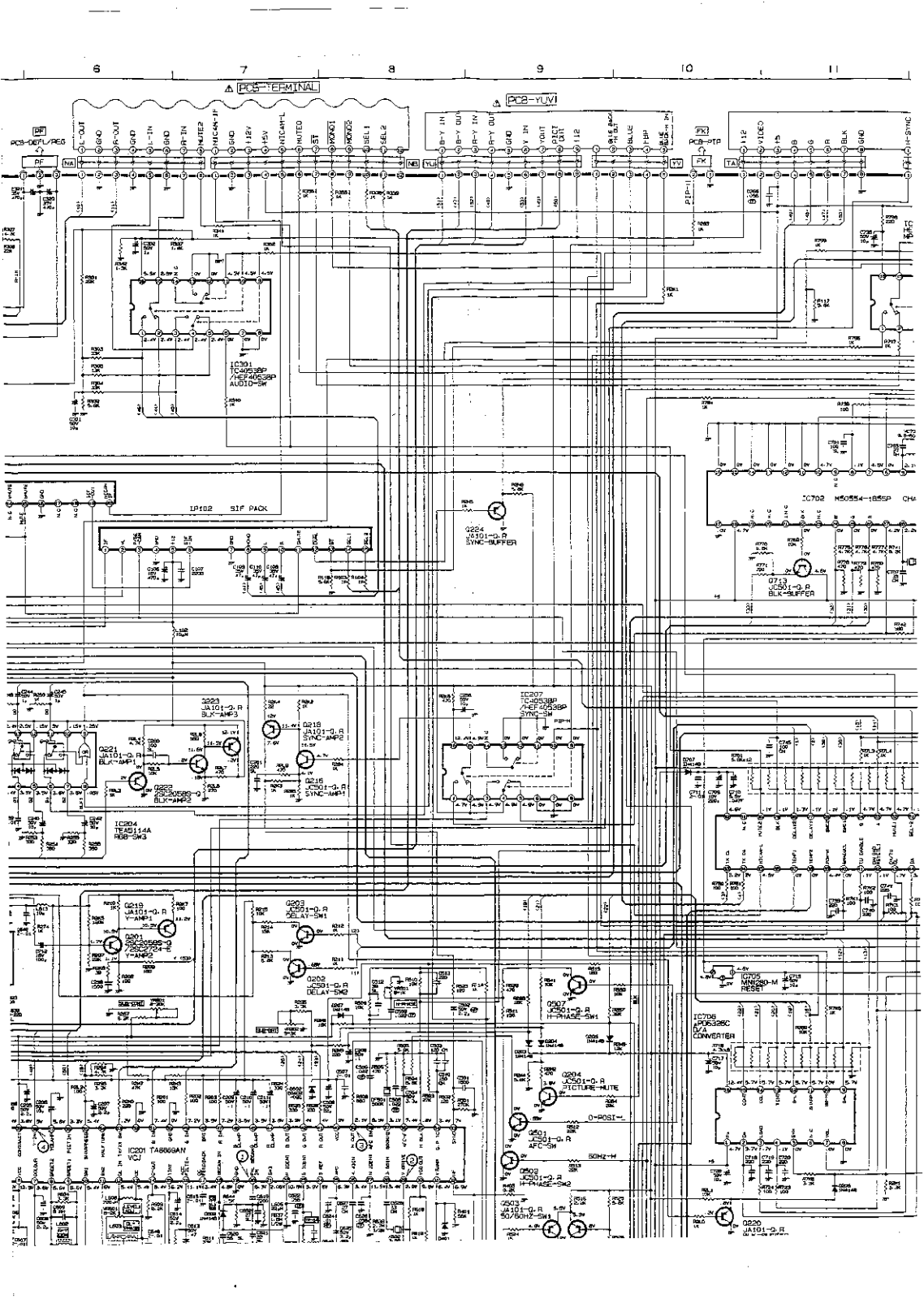
PCB AV-SW

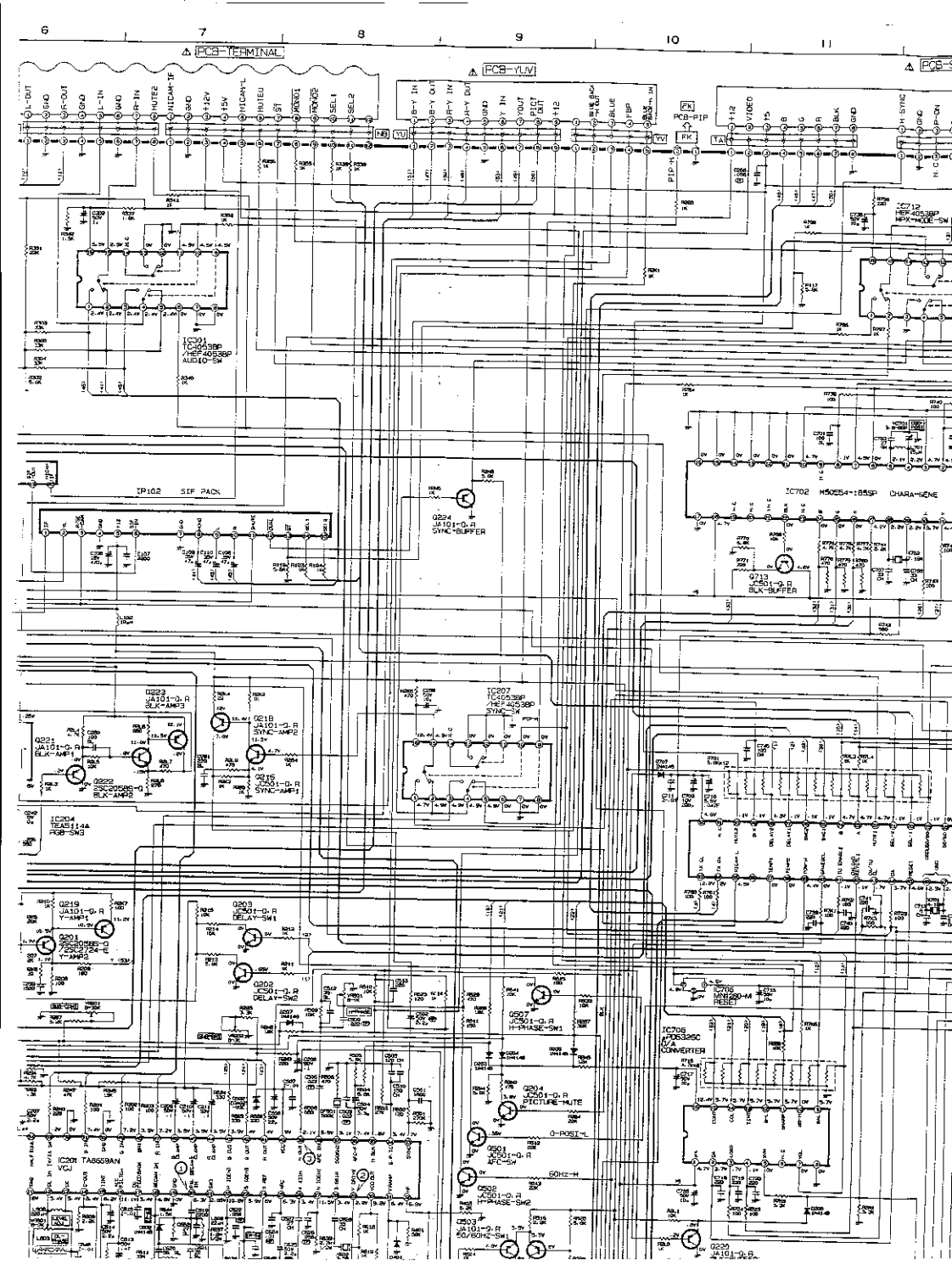
⚠ PCB-DCF


IC8013
NJM78L09A
RGB
IC6013
CXL1009P
CCD
SIGNAL
PROCESSER
Q5005
JA101-O,R
BUFFER-4
LEVEL-2
IC6007
BX6387
AMP
IC6009
BX6388
AMP
Q5006
JA101-O,R
BUFFER-5
IC6008
AN608P
DL6001
ADL-CE2344M-B05
PHASE-1
LEVEL-3
IC6005
KIC-BPF
NON-INVERTER
IC6006
KIC-BPF2
INVERTER
PHASE-2
PHASE-3
+12V


IC6011 KIC-SUB Y/C SEPARATOR
V-APA/CON
H CORRELATION
V CORRELATION
PHASE-2
PHASE-3
PHASE-4
LEVEL-4
Q3008 JC501-Q.R
Q6010 JC501-Q.R
Q6009 JC501-Q.R
Q6011 JA101-Q.R
AY
AL
PCB-AV AY
PCB-AV AL

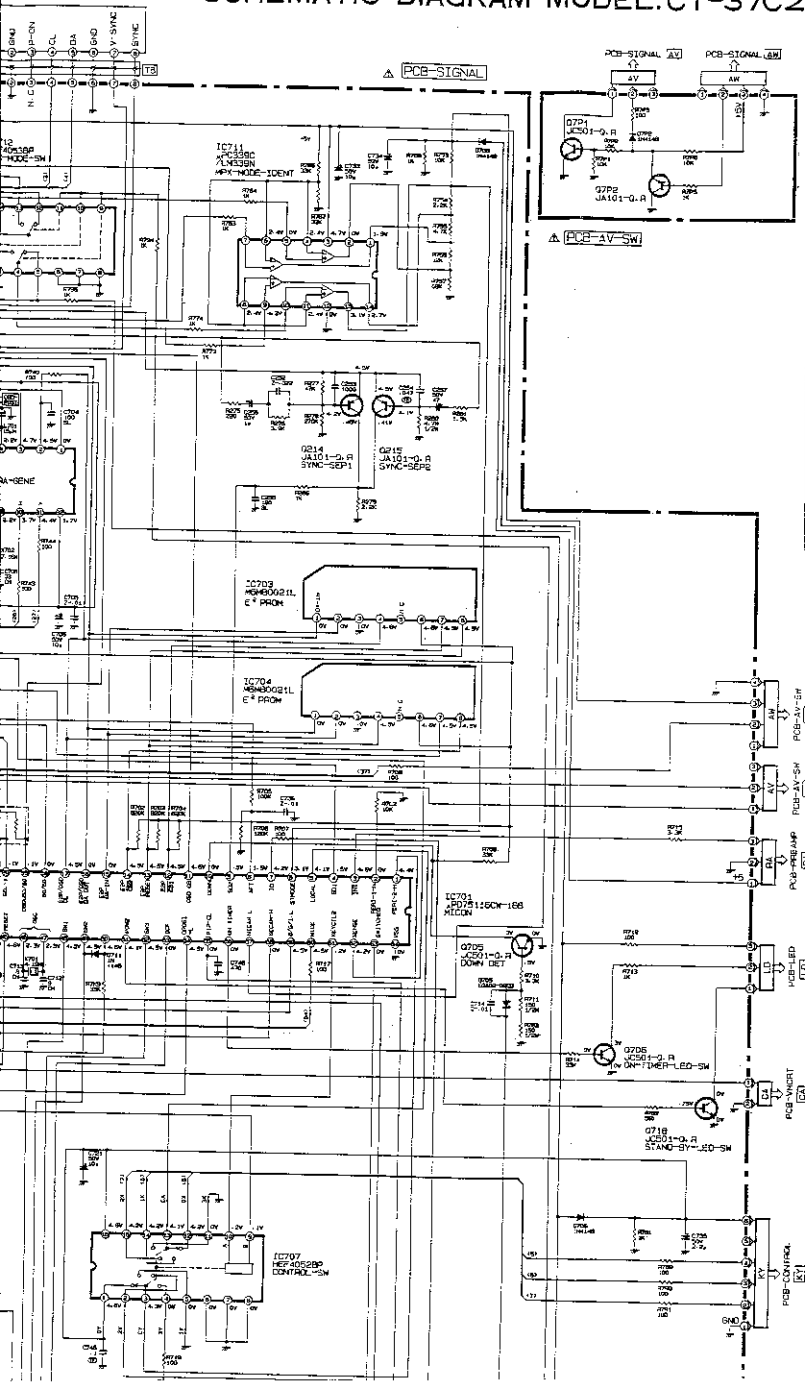

PCB-AV
PCB-CONTROL
PCB-EPJ
PCB-DEFL/REG
TU101
IC101
IC302
STK4132MK2
AUDIO AMP
IC201
TA8659A
VCJ
IC501
TDA4565
CTI
IC202
TEA5114A
RGB-SW1
IC203
TEA5114A
RGB-SW2
IC204
TEA5114A
RGB-SW3
IC205
MC14551BCP
VIDEO-SW
VTR PACK
CHILD-H
MUTE1
WIDE
BAL
VOL
L-IN
R-IN
S
A
R-OUT
GND
L-OUT
N.C
CRAEG-DA
CRAEG-CL
SP-R
SP-L
SWIT CHED
SW-C1
SW-C2
VIDEO-OUT
CHROMA
+12
SYNC
PERI-1-H
PERI-2-H
B
G


PCB-DEFL/REG
PCB-TERMINAL
PCB-YUV
PCB-STB
IC301
TC40S38P
TC40S38P
AUDIO-SW
IP102 SIF PACK
Q224
JA101-Q,R
SYNC-BUFFER
IC702 M50554-165SP
Q710
JC501-Q,R
BLK-BUFFER
Q223
JA101-Q,R
BLK-AMP3
Q218
JA101-Q,R
SYNC-AMP2
Q221
JA101-Q,R
BLK-AMP1
Q222
2SC2058S-Q
BLK-AMP2
Q215
JC501-Q,R
SYNC-AMP1
IC207
TC40S38P
TC40S38P
SYNC-SW
IC204
TEA5114A
RGB-SW3
Q219
JA101-Q,R
Y-AMP3
Q201
2SC2058S-Q
2SC3734-Q
Y-AMP2
Q203
JC501-Q,R
DELAY-SW1
Q202
JC501-Q,R
DELAY-SW2
Q705
MN1280-M
RESET
IC706
LP0532BC
A/D
CONVERTER
Q507
JC501-Q,R
H-PHASE-SW1
Q204
JC501-Q,R
PICTURE-MUTE
Q501
JC501-Q,R
AFC-SW
Q502
JC501-Q,R
PHASE-SW
Q503
JA101-Q,R
50/60HZ-SW
IC201 TA8669AN
Q220
JA101-Q,R


PCB-TERMINAL
PCB-YUV
PCB-PIP
IP102 SIF PACK
IC201 TA8659BAN VCJ
IC204 TEA5114A RGB-SW3
IC207 TC9539P HEF4053BP SYNC-SW
IC301 TC9539P HEF4053BP AUDIO-SW
IC702 M50254-185SP CHARA-SCENE
IC705 MN6280-M RESET
IC706 PD5325C A/A CONVERTER
IC712 HEF4053BP MPX-MODE-SW
Q224 JA101-Q,R SYNC-BUFFER
Q713 JC501-Q,R BLK-BUFFER
Q223 JA101-Q,R BLK-AMP3
Q218 JA101-Q,R SYNC-AMP2
Q215 JA101-Q,R SYNC-AMP1
Q224 JA101-Q,R BLK-AMP1
Q222 2SC2058S-O BLK-AMP2
Q219 JA101-Q,R Y-AMP31
Q201 2SC2058S-O 2SA933AS-A Y-AMP32
Q203 JC501-Q,R DELAY-SW1
Q202 JC501-Q,R DELAY-SW2
Q907 JC501-Q,R H-PHASE-SW1
Q204 JC501-Q,R PICTURE-MUTE
Q501 JC501-Q,R AFC-SW
Q503 JA101-Q,R 50/60HZ-SW1
Q502 JC501-Q,R T-PHASE-SW2
Q229 JA101-Q,R
0-POSI-L
60HZ-H

PCB-SWIFTEXT

SCHEMATIC DIAGRAM MODEL:CT-37C2EDT



SERVICING PRECAUTION

SYMBOLS INDICATE COMPONENTS HAVING SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY AND PERFORMANCE. THERFORE REPLACEMENT OF ANY SAFETY PARTS SHOULD BE IDENTICAL IN VALUE AND CHARACTERISTICS. FOR ACCURACY OF THE REPLACEMENT REFER TO THE PARTS LIST OF SERVICE MANUAL.

DON'T DEGRADE THE SAFETY OF THE RECEIVERS THROUGH IMPROPER SERVICING.

NOTE 1:

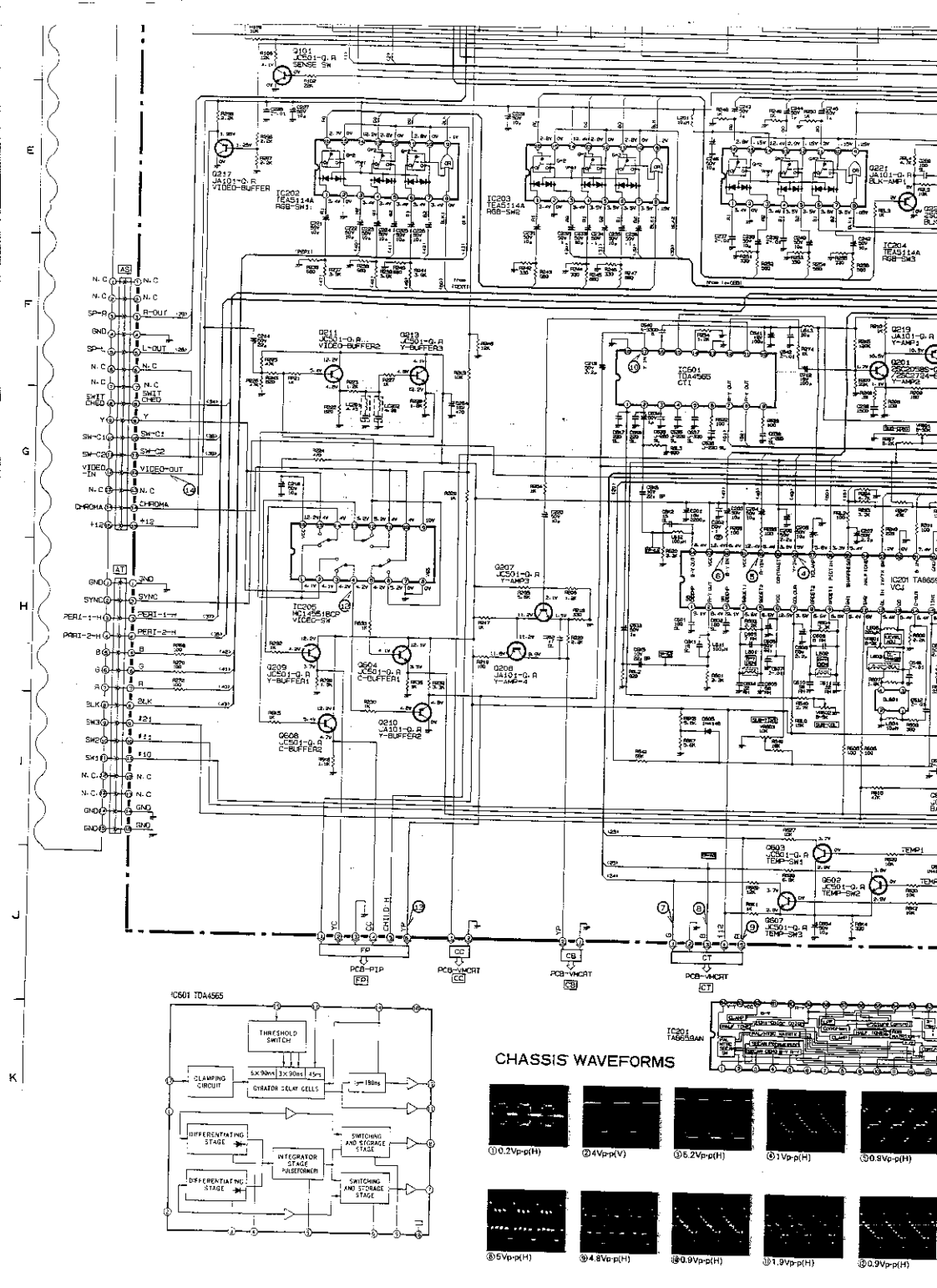
1. The unit of resistance is "ohm" with no symbol.
   Accordingly, K = 1000 ohms
   M = 1000K ohms.
2. The wattage of resistors, if not specifically designated, is less than 1/4 watt.
3. Resistors, if not specifically designated, are carbon resistors.
4. The marks of resistors are as follows:
   - (CE) : Cemented resistor
   - (MB) : Metal oxide film resistor (type B)
   - (MPC) : Metal plate cement resistor.
   - (ML) : Metal linear resistor.
   - (S) : Fixed composition resistor
   - (W) : Wire wound resistor
   - (M) : Metal film resistor
5. The tolerance of resistor value, if not specifically designated, is: ±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 electrolyac capacitors.
8. The marks of capacitors are as follows:
   - (ALN) : Aluminos electrolytic capacitor
   - (MF) : Polyester capacitor
   - (PP) : Polypropylene film capacitor
   - (TAN) : Tantalum capacitor
   - (TF) : Twin film capacitor.
   - (MF.PP) : Polyester polypropylene film capacitor.
   - (MPP) : Metallize plastic film capacitor.
   - (NP) : Non polarized electrolytic capacitor.
   - (PS) : Styrol capacitor.
   - (SC) : Semi conductor 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% Z = +80% −20%
    C = ±0.25PF D = ±0.5PF F = ±1PF N = ±30%

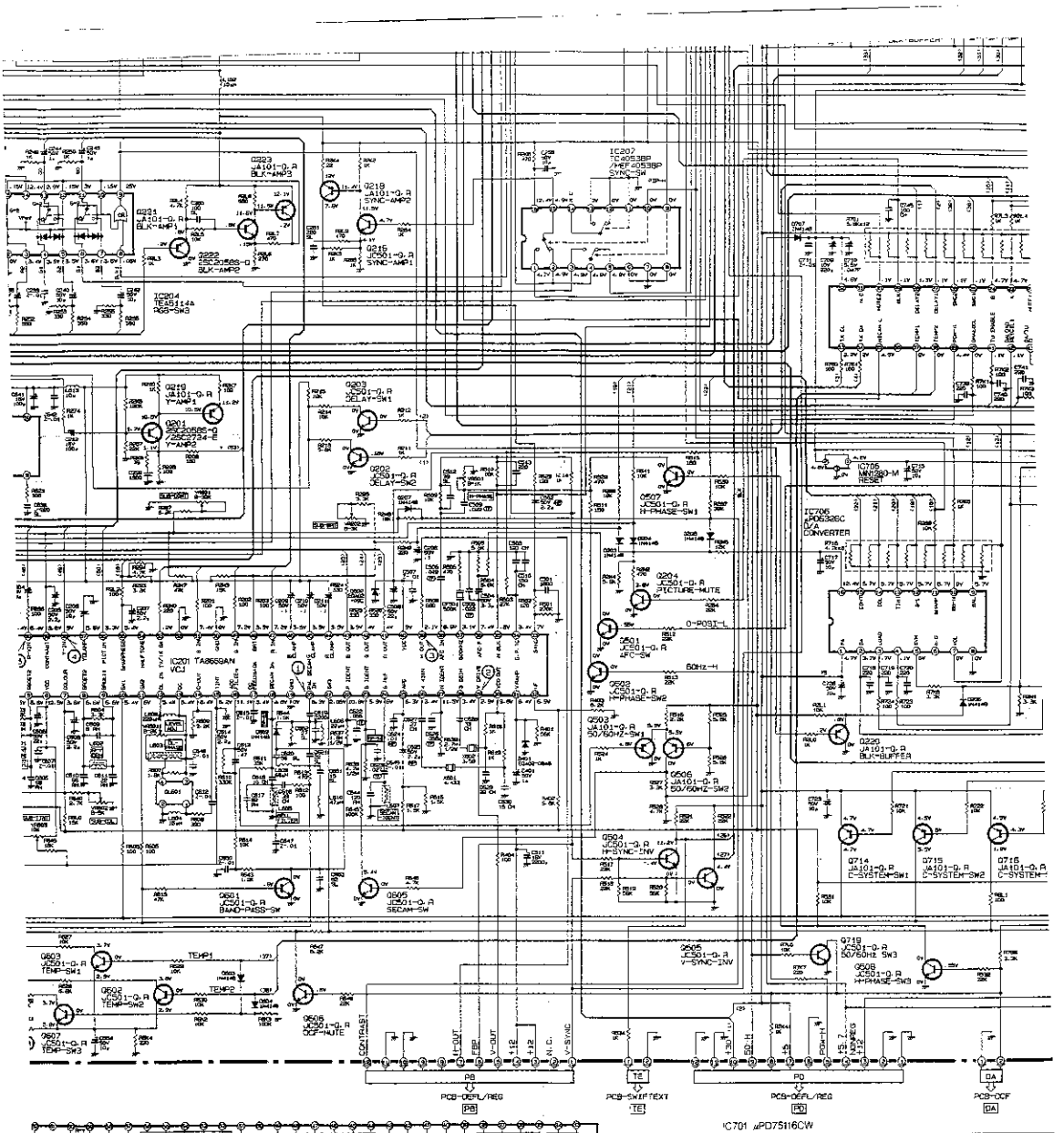
SPECIFIC SYMBOL

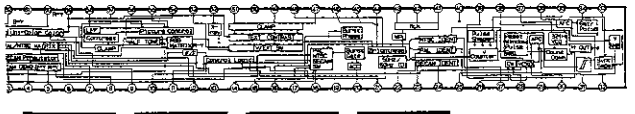
Zener Diode	Varistor
Varicap	Crystal Unit
Positor	Air Gap
Thermistor	Part (resistor) attached on the copper-foil side of PCB
Fusible Resistor	Ceramic filter

NOTE 2:

1. DC voltages were measured from points indicated to the circuit ground with a high-Z voltmeter.
2. Waveforms were taken with offset PAL colour bar signal.


Q101 JC501-G,R SENSE SW
Q217 JA101-G,R VIDEO-BUFFER
IC202 TEA5114A RGB-SW1
IC203 TEA5114A RGB-SW2
Q221 JA101-G,R BLK-AMP1
IC204 TEA5114A RGB-SW3
Q211 JA101-G,R VIDEO-BUFFER2
Q213 JC501-G,R Y-BUFFER3
IC601 TDA4565 CT1
Q219 JA101-G,R Y-AMP1
Q201 2SC2758S / 2SC2784 Y-AMP2
Q207 JC501-G,R Y-AMP3
IC205 HC14551BCP VIDEO-SW
Q209 JC501-G,R Y-BUFFER1
Q604 JC501-G,R C-BUFFER1
Q208 JA101-G,R Y-AMP4
IC201 TA8659 VCJ
Q608 JC501-G,R C-BUFFER2
Q210 JA101-G,R Y-BUFFER2
Q603 JC501-G,R TEMP-SW1
Q602 JC501-G,R TEMP-SW2
Q607 JC501-G,R TEMP-SW3
IC601 TDA4565
THRESHOLD SWITCH
CLAMPING CIRCUIT
5X 90ns 3X 90ns 45ns
GYRATOR DELAY CELLS
180ns
DIFFERENTIATING STAGE
INTEGRATOR STAGE PULSEFORMER
SWITCHING AND STORAGE STAGE
DIFFERENTIATING STAGE
SWITCHING AND STORAGE STAGE
IC201 TA8659AN
CHASSIS WAVEFORMS
①0.2Vp-p(H)
②4Vp-p(V)
③5.2Vp-p(H)
④1Vp-p(H)
⑤0.9Vp-p(H)
⑥5Vp-p(H)
⑦4.8Vp-p(H)
⑧0.9Vp-p(H)
⑨1.9Vp-p(H)
⑩0.9Vp-p(H)





④1Vp-p(H)

⑤0.9Vp-p(H)

⑥0.7Vp-p(H)

⑦5Vp-p(H)

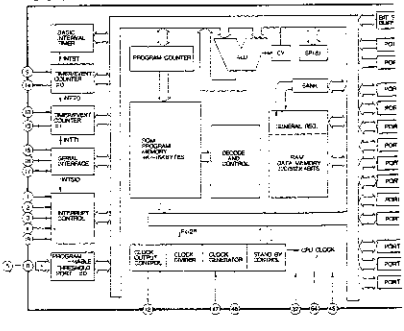
⑪1.9Vp-p(H)

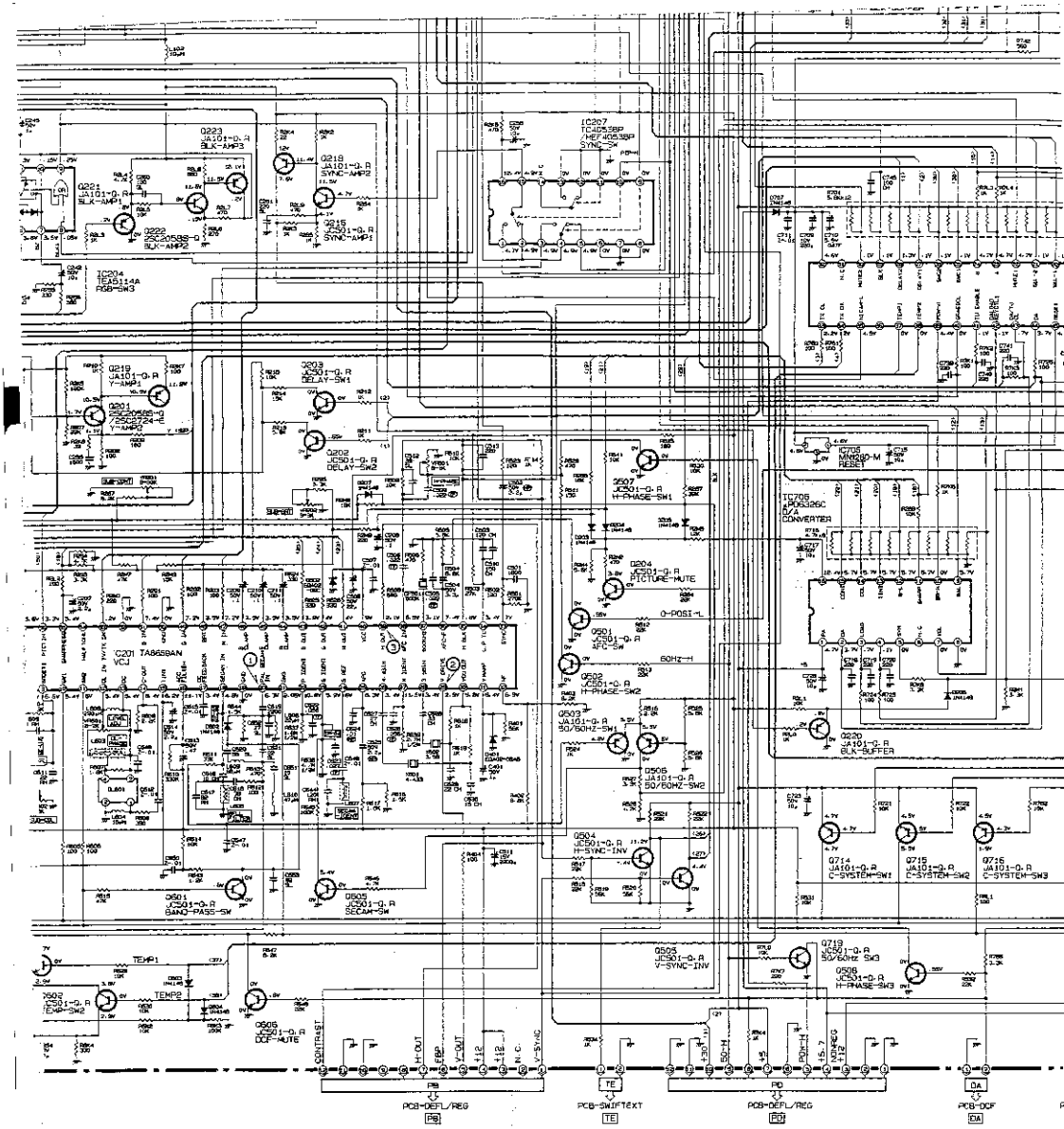
⑫0.9Vp-p(H)

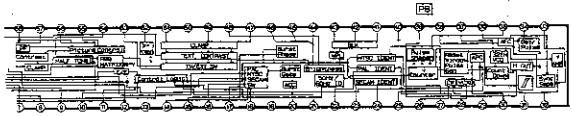
⑬0.9Vp-p(H)

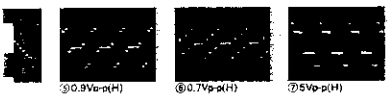
⑮0.9Vp-p(H)

IC701 μPD75116CW

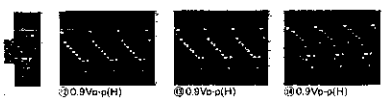






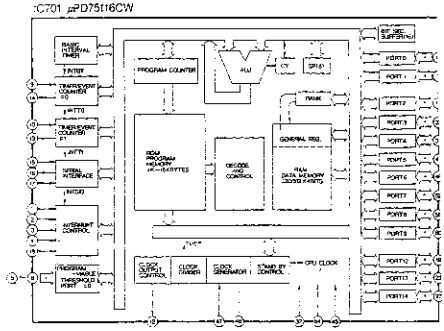


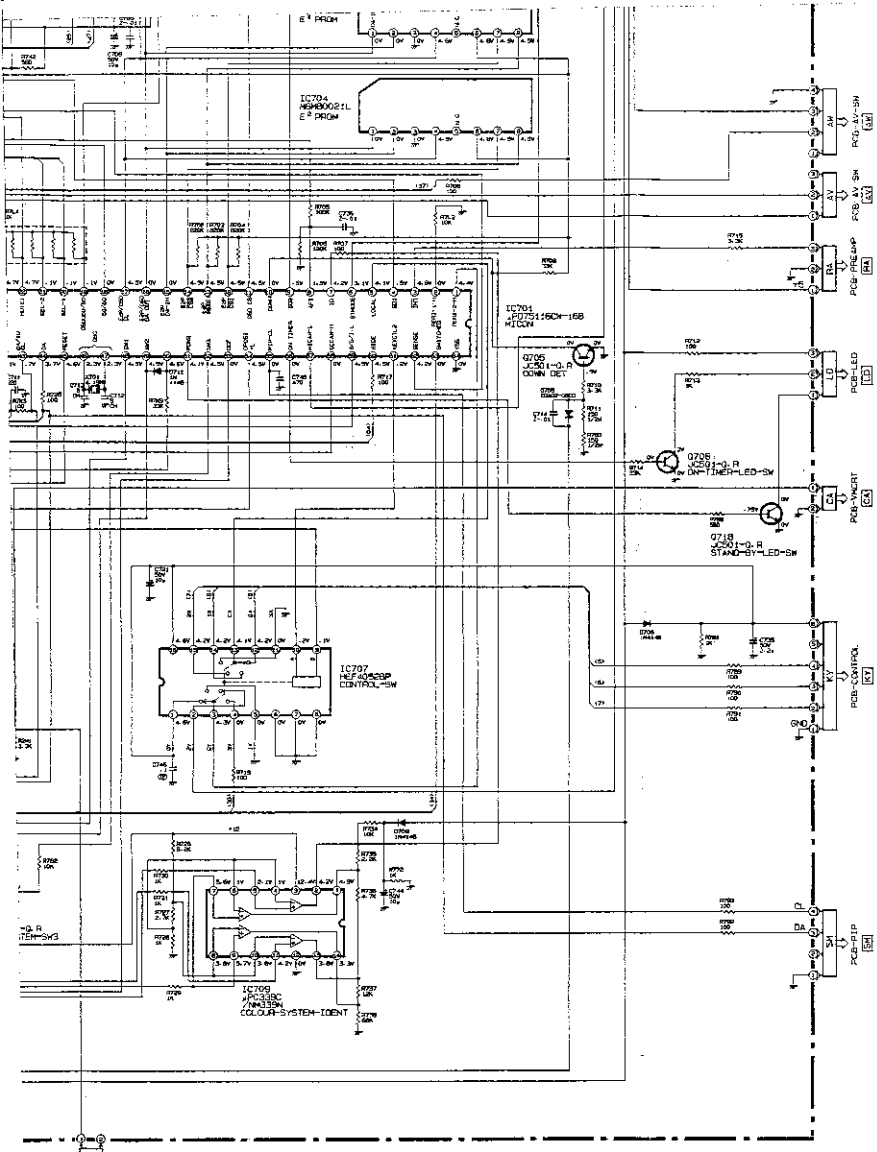
⑤0.9Vp-p(H) ⑥0.7Vp-p(H) ⑦5Vp-p(H)

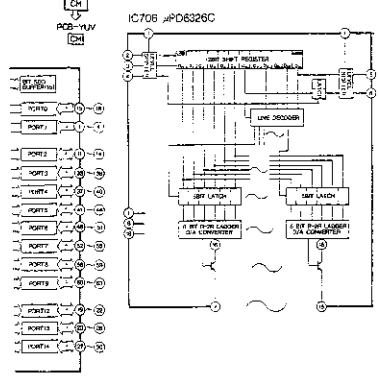


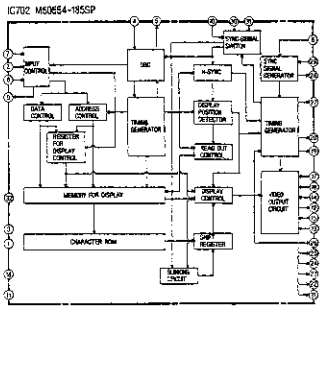
③0.9Vp-p(H) ④0.9Vp-p(H) ⑧0.9Vp-p(H)

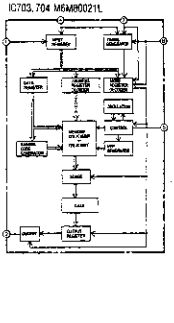
IC701 μPD75116CW











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 design
   than 1/4 watt.
3. Resistors, if not specifically designated, are carbon r
4. The marks of resistors are as follows:
   - (CE) : Cemented resistor
   - (MB) : Metal oxide film resistor (type B)
   - (MPC) : Metal plate cement resistor.
   - (ML) : Metal linear resistor.
   - (S) : Fixed composition resistor
   - (W) : Wire wound resistor
   - (M) : Metal film resistor
5. The tolerance of resistor value, if not specifically desi
   ±5%, K = ±10% M = ±20%
6. The unit of capacitance, if not specifically designated
   a) μF, for numbers less than 1
   b) PF, for numbers more than 1
7. Capacitors, if not specifically designated are Ceramic
   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.
   - (MFPP) : Polyester polypropylene film capacitor.
   - (MPP) : Metallize plastic film capacitor.
   - (NP) : Non polarized electrolytic capacitor.
   - (PS) : Styrol capacitor.
   - (SC) : Semi conductor capacitor.
   - : Electrolytic capacitor
9. The DC working voltage of capacitor, if not specifically
   ed is: 50V
10. The tolerance of capacitor value, if not specifically des
    ±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 = $^{+80\%}_{-20\%}$

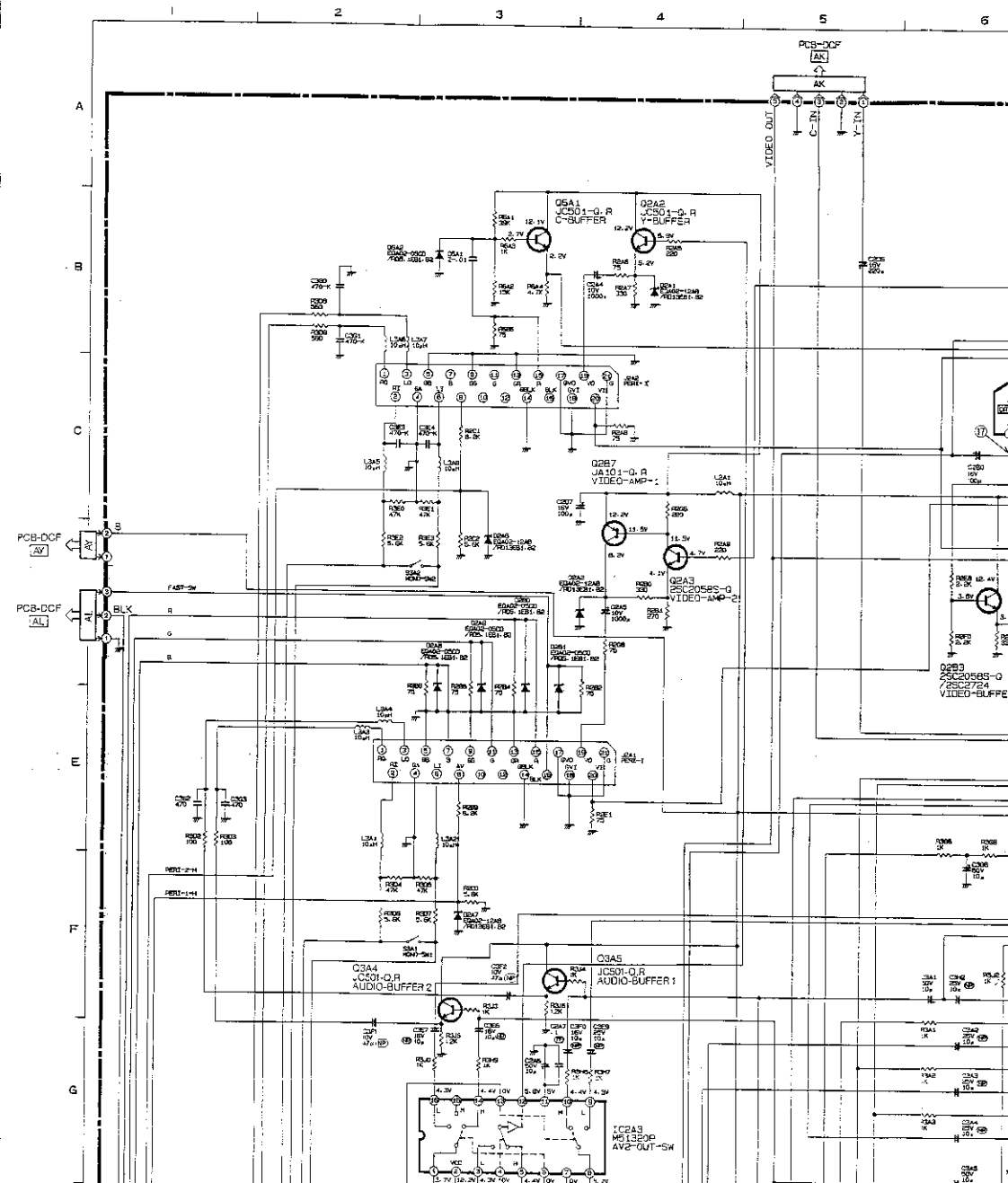
SPECIFIC SYMBOL

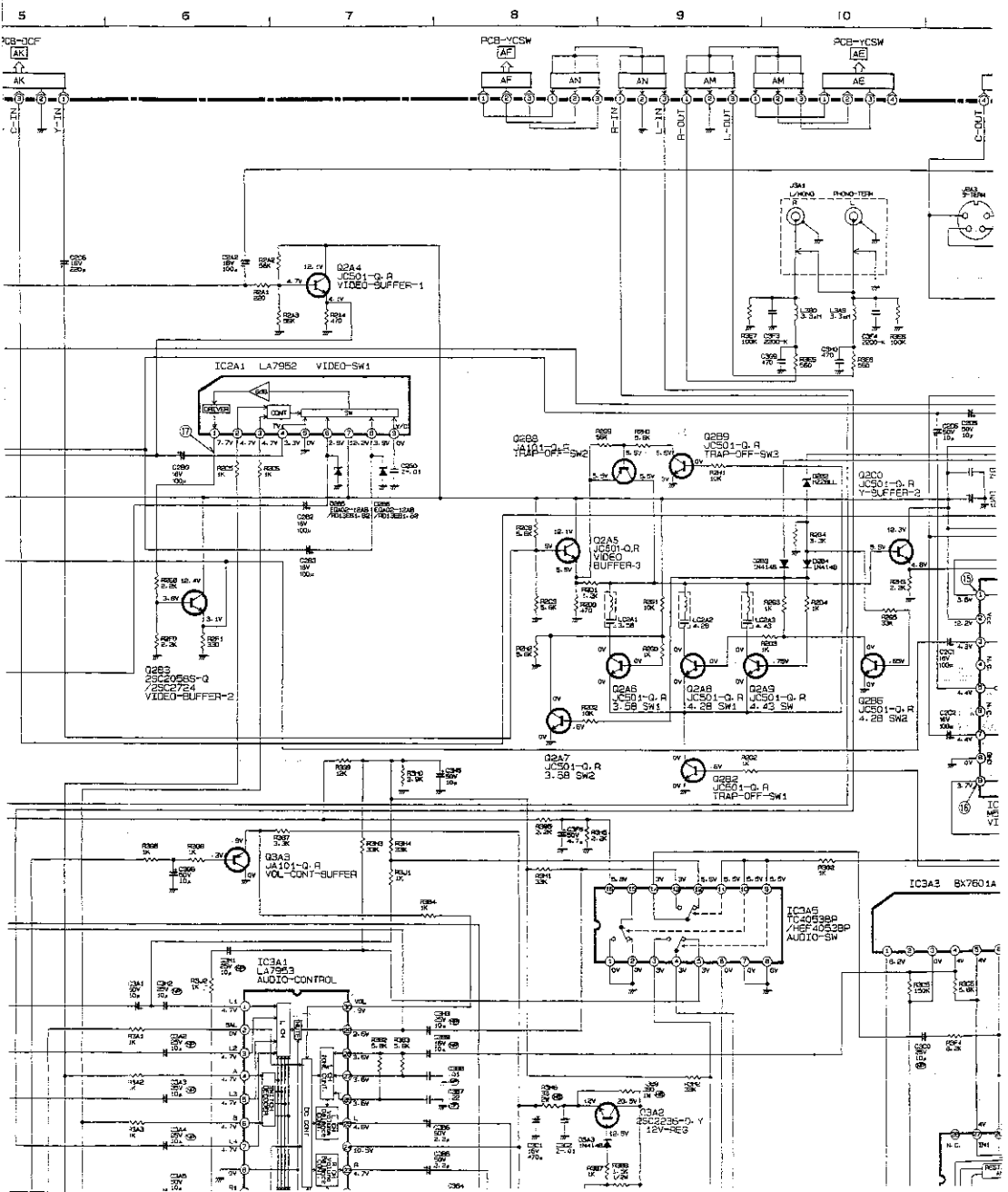
Zener Diode	Varistor
Varicap	Crystal unit
Posistor	Air Gap
Thermistor	Part (resistor) att on the copper-fo of PCB
Fusible Resistor	Ceramic filter

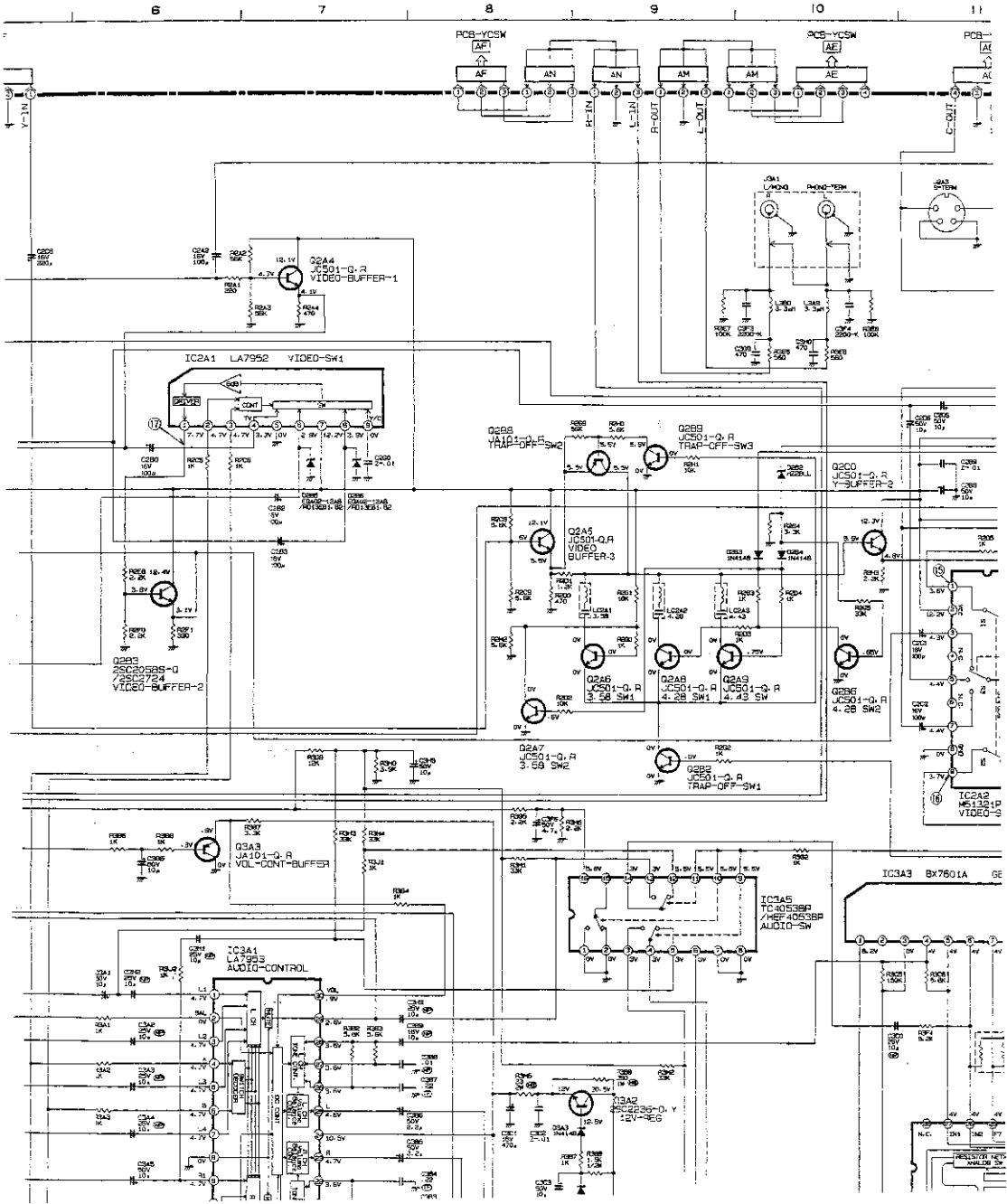
NOTE 2:

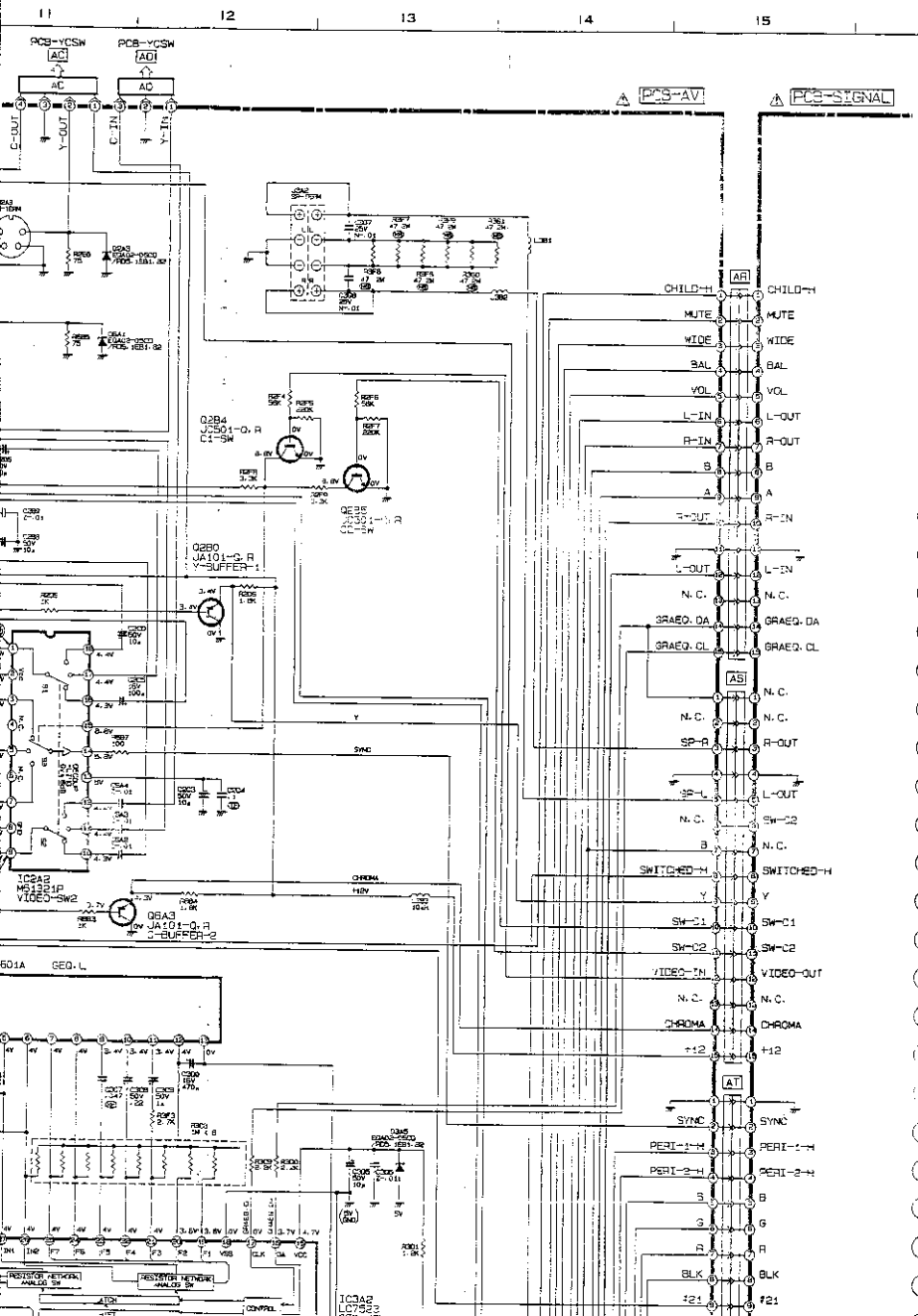
1. DC voltages were measured from points indicated to t
   ground with a high-Z voltmeter.
2. Waveforms were taken with offset PAL colour bar signal
3. This is a basic schematic diagram. Some sets may be
   modification according to engineering improvement.

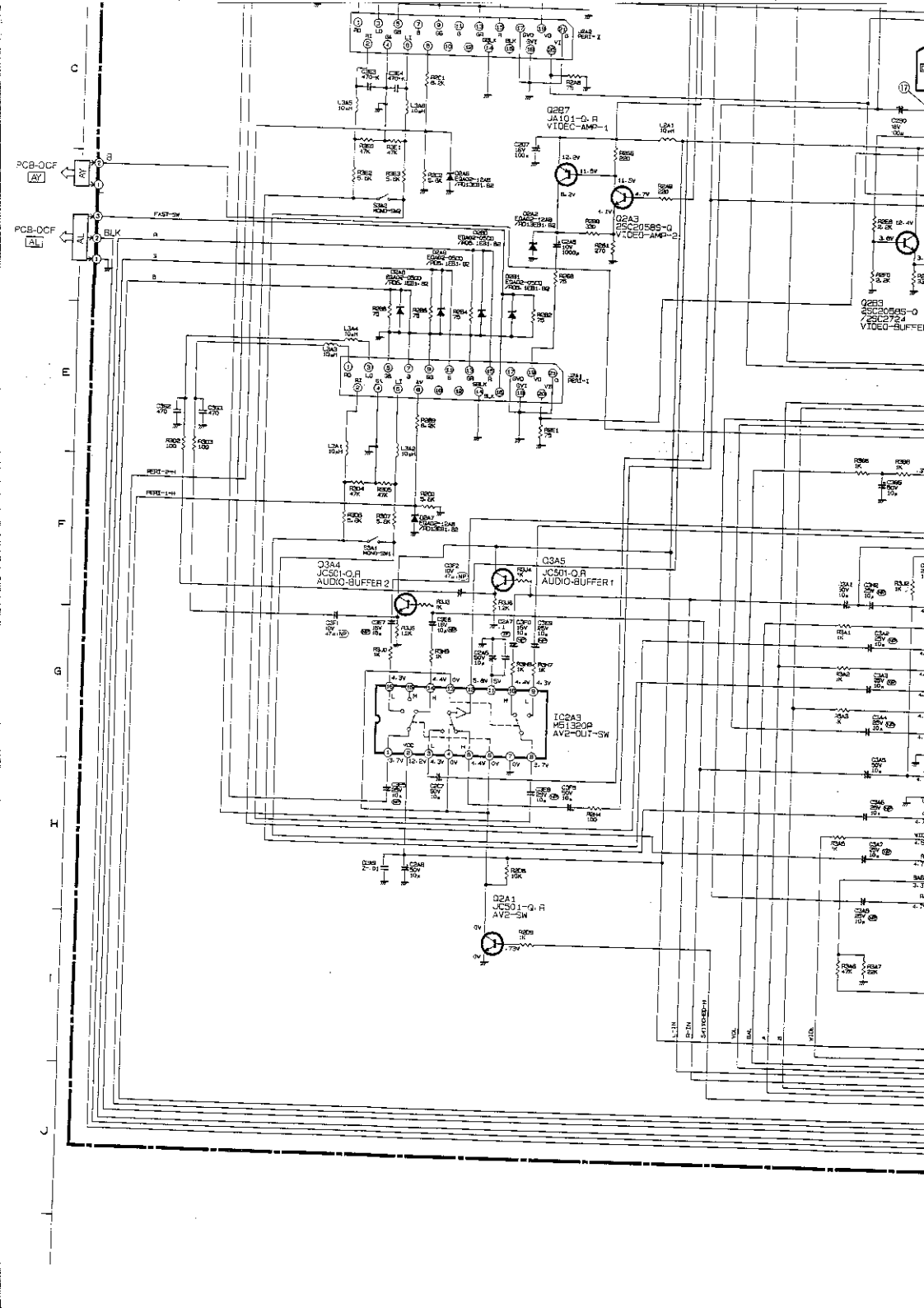
Printed J

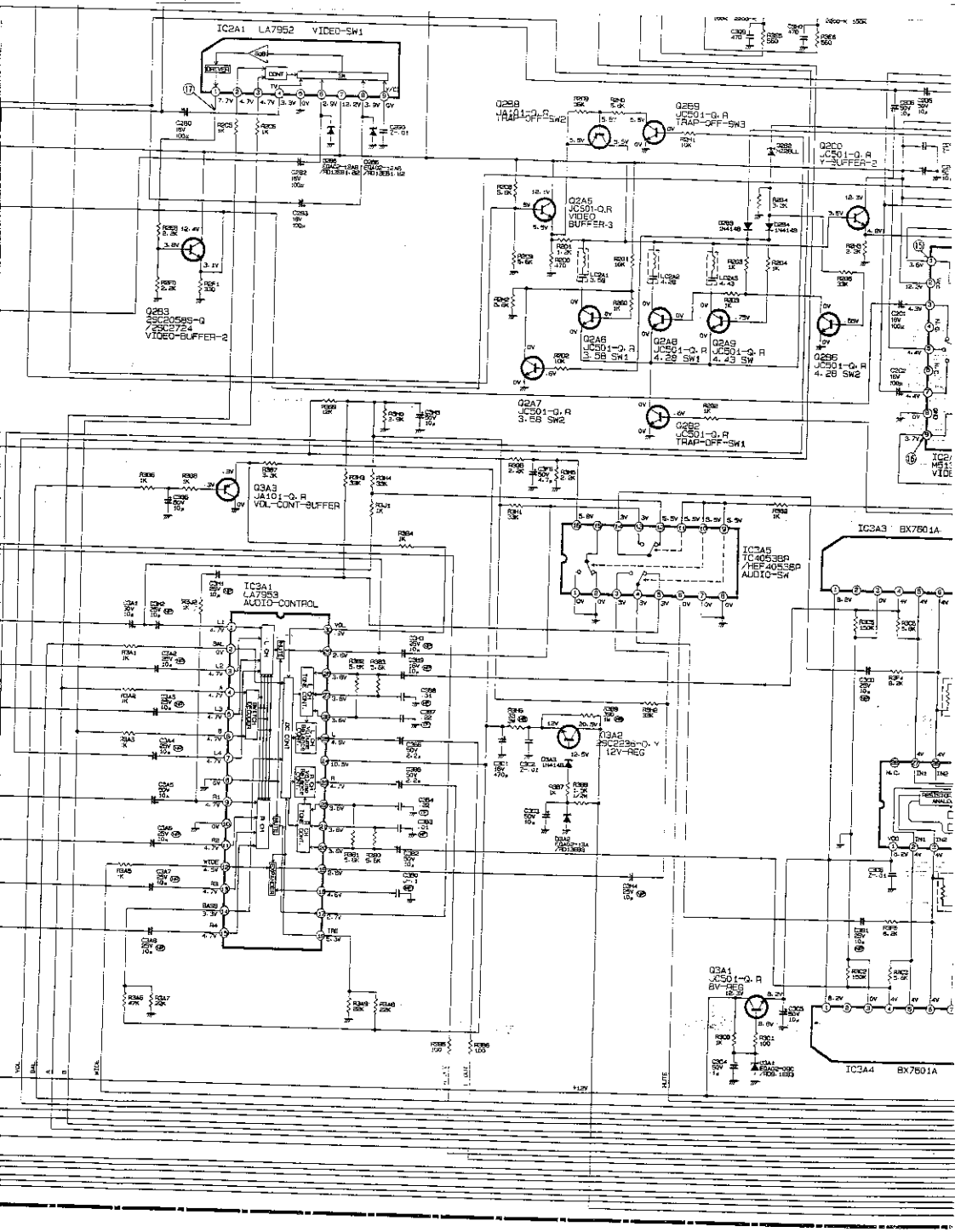

PCB-DCF
AK
VIDEO OUT
C-IN
Y-IN
Q6A1
JC501-Q,R
C-BUFFER
Q2A2
JC501-Q,R
Y-BUFFER
Q2B7
JA101-Q,R
VIDEO-AMP-1
Q2A3
2SC2058S-Q
VIDEO-AMP-2
Q2B3
2SC2058S-Q
/2SC2724
VIDEO-BUFFE
PCB-DCF
AV
PCB-DCF
AL
BLK
FAST-SW
R
G
B
PERT-2-H
PERT-1-H
Q3A4
JC501-Q,R
AUDIO-BUFFER 2
Q3A5
JC501-Q,R
AUDIO-BUFFER 1
IC2A3
MS1320P
AV2-OUT-SW

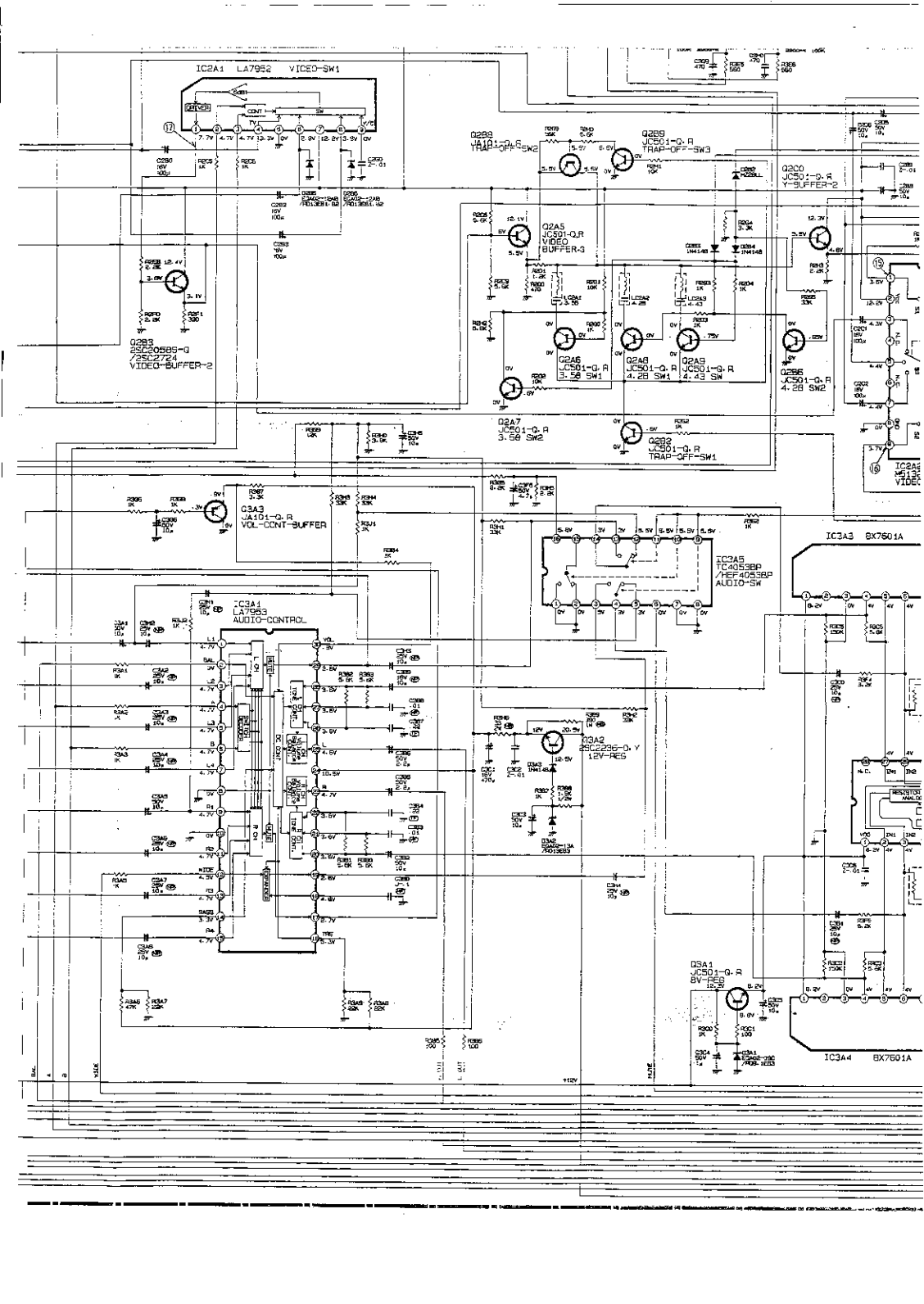

5
6
7
8
9
10
PCB-OCF
PCB-YCSW
PCB-YCSW
C-IN
Y-IN
R-IN
L-IN
R-OUT
L-OUT
C-OUT
IC2A1 LA7952 VIDEO-SW1
Q2A4 2SC501-Q,R VIDEO-BUFFER-1
Q2B8 JA101-Q,R TRAP-OFF-SW2
Q2B9 2SC501-Q,R TRAP-OFF-SW3
Q2C0 2SC501-Q,R Y-BUFFER-2
Q2A5 2SC501-Q,R VIDEO BUFFER-3
Q2A6 2SC501-Q,R 3.58 SW1
Q2A8 2SC501-Q,R 4.43 SW
Q2A9 2SC501-Q,R 4.43 SW1
Q2B5 2SC501-Q,R 4.28 SW2
Q2A7 2SC501-Q,R 3.58 SW2
Q2B2 2SC501-Q,R TRAP-OFF-SW1
Q2B3 2SC2056S-Q /2SC2724 VIDEO-BUFFER-2
Q3A3 JA101-Q,R VOL-CONT-BUFFER
IC3A1 LA7953 AUDIO-CONTROL
IC3A5 TC40538P /HEP40538P AUDIO-SW
IC3A3 BX7601A
Q3A2 2SC2235-O,Y 12V-REG

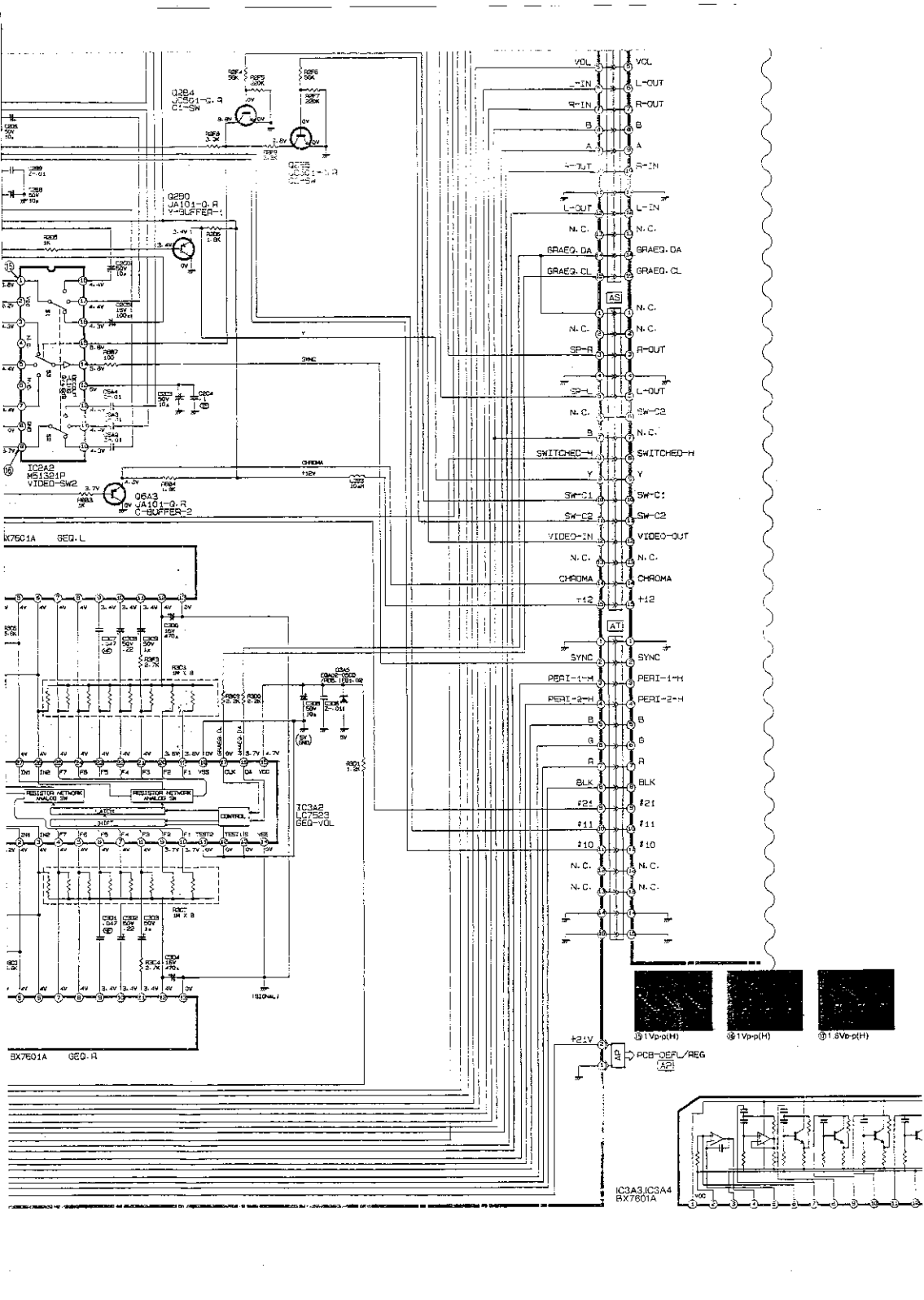

6
7
8
9
10
11
PCB-YCSW
AF
AN
AM
AE
Y-IN
R-IN
L-IN
R-OUT
L-OUT
C-OUT
Q2A4
JC501-Q.R
VIDEO-BUFFER-1
IC2A1 LA7952 VIDEO-SW1
Q2A5
JC501-Q.R
VIDEO
BUFFER-3
Q2B8
YA101-Q.R
TRAP-OFF-SW2
Q2B9
JC501-Q.R
TRAP-OFF-SW3
Q2C0
JC501-Q.R
Y-BUFFER-2
Q2B3
2SC2058S-Q
/2SC2724
VIDEO-BUFFER-2
Q2A6
JC501-Q.R
3.58 SW1
Q2A8
JC501-Q.R
4.28 SW1
Q2A9
JC501-Q.R
4.43 SW
Q2B6
JC501-Q.R
4.28 SW2
Q2A7
JC501-Q.R
3.58 SW2
Q2B2
JC501-Q.R
TRAP-OFF-SW1
IC2A2
MB3519
VIDEO-S
Q3A3
JA101-Q.R
VOL-CONT-BUFFER
IC3A1
LA7933
AUDIO-CONTROL
IC3A5
TC40S388
/HEF4053BP
AUDIO-SW
IC3A3 BX7601A
Q3A2
2SC2235-O.Y
12V-REG

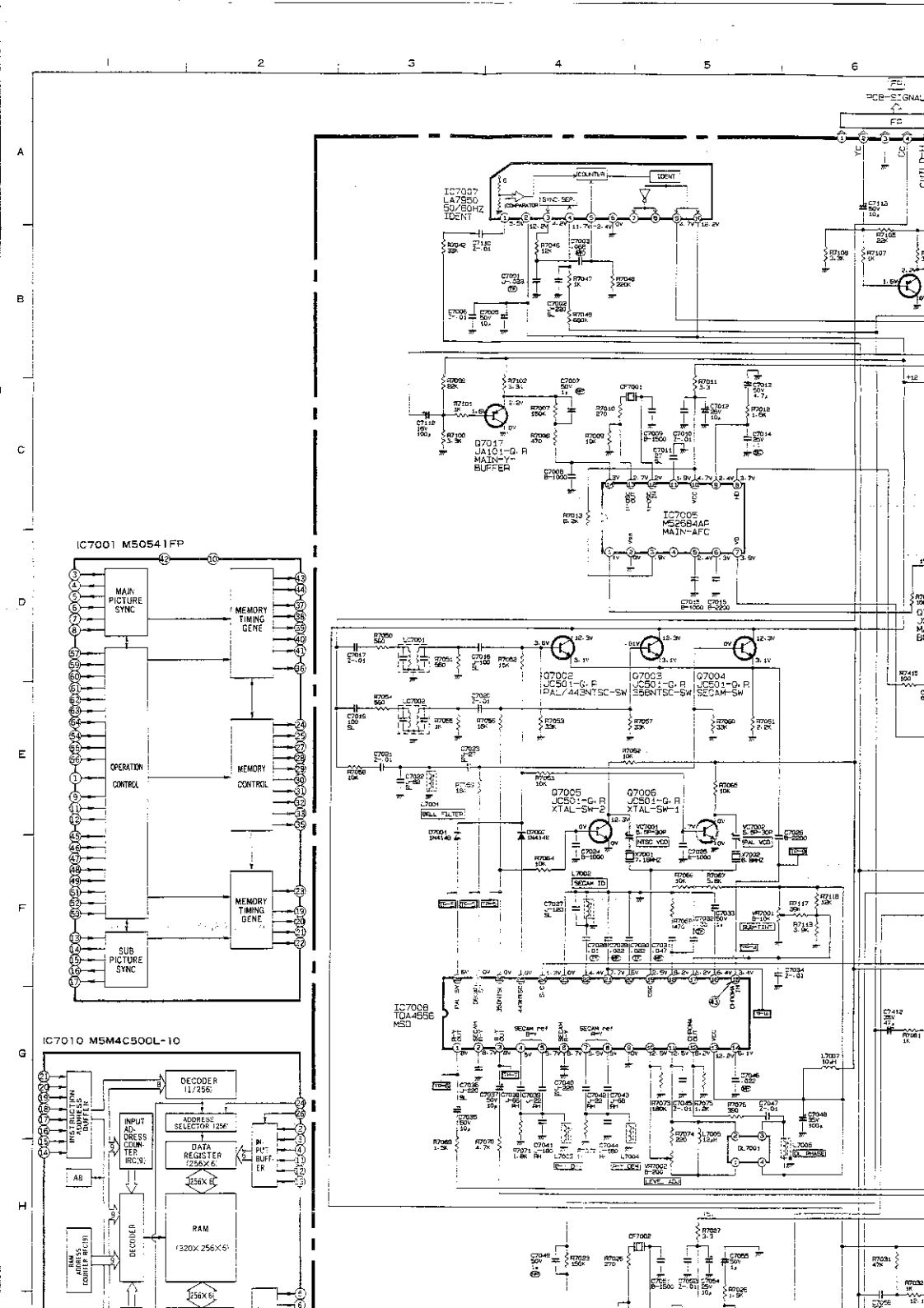

11
12
13
14
15
16
PCB-YCSW
AC
AD
C-OUT
Y-OUT
C-IN
Y-IN
PCB-AV
PCB-SIGNAL
AR
AS
AT
CHILD-H
MUTE
WIDE
BAL
VOL
L-IN
L-OUT
R-IN
R-OUT
B
A
G-OUT
G-IN
N. C.
GRAEQ. DA
GRAEQ. CL
SP-R
SP-L
SW-C2
SWITCHED-H
Y
SW-C1
VIDEO-IN
VIDEO-OUT
CHROMA
+12
SYNC
PERI-1-H
PERI-2-H
G
R
BLK
+21
Q2B4
2SD601-O, R
C1-SW
Q2B5
2SD601-O, R
C2-SW
Q2B0
UA101-O, R
Y-BUFFER-1
Q6A3
UA101-O, R
C-BUFFER-2
IC3A3
M51131P
VIDEO-SW2
601A
GEQ. L
IC3A2
LC7535
CONTROL

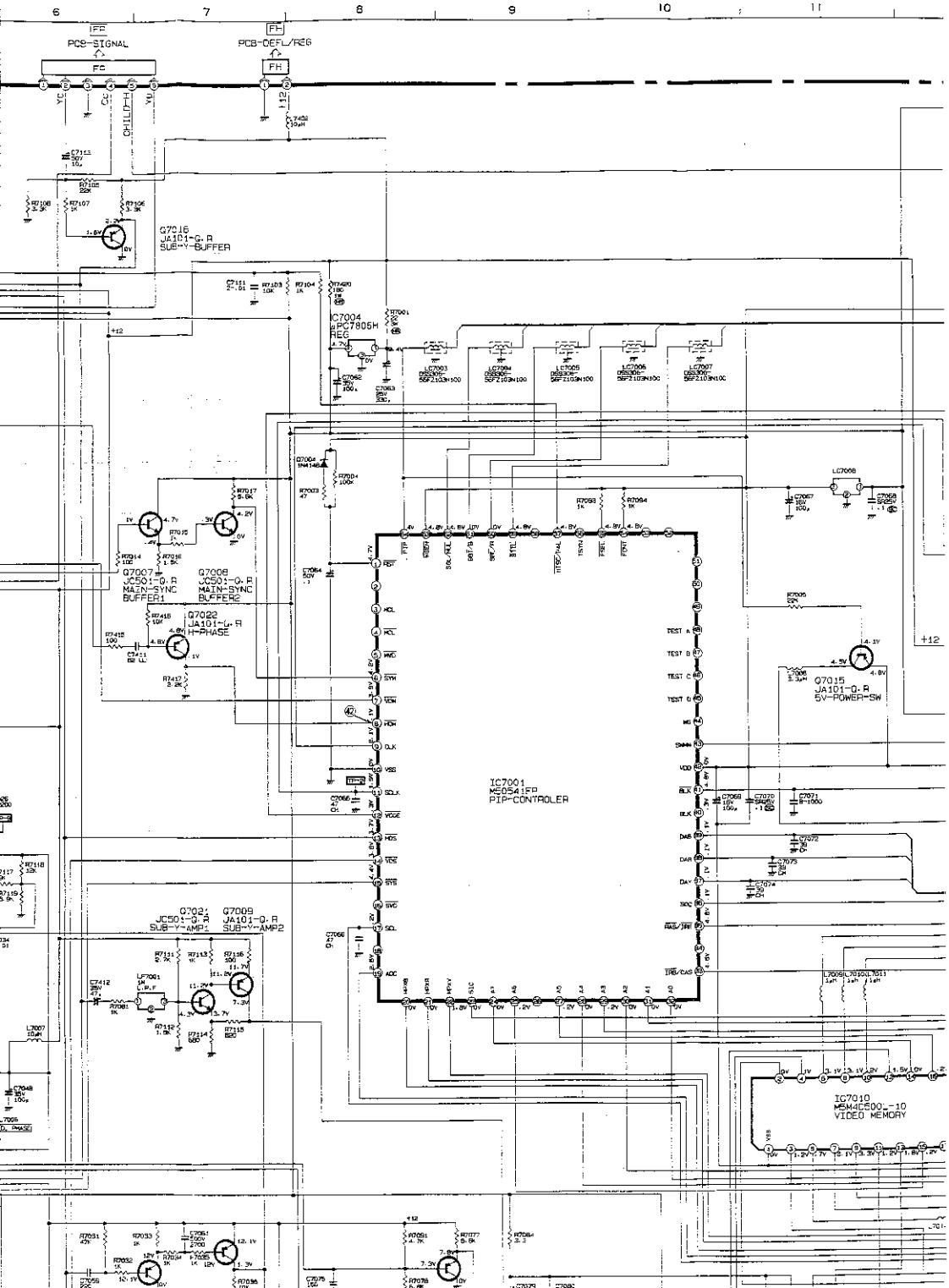

PCB-DCF
AV
PCB-DCF
AL
BLK
FAST-SW
Q2B7
JA101-Q-A
VIDEO-AMP-1
Q2A3
2SC2058S-Q
VIDEO-AMP-2
Q2B3
2SC2058S-Q
2SC2724
VIDEO-BUFFER
Q3A4
JC501-Q-A
AUDIO-BUFFER 2
Q3A5
JC501-Q-A
AUDIO-BUFFER 1
IC2A3
MS1320P
AV2-OUT-SW
Q2A1
JC501-Q-A
AV2-SW
PERI-2H
PERI-1H

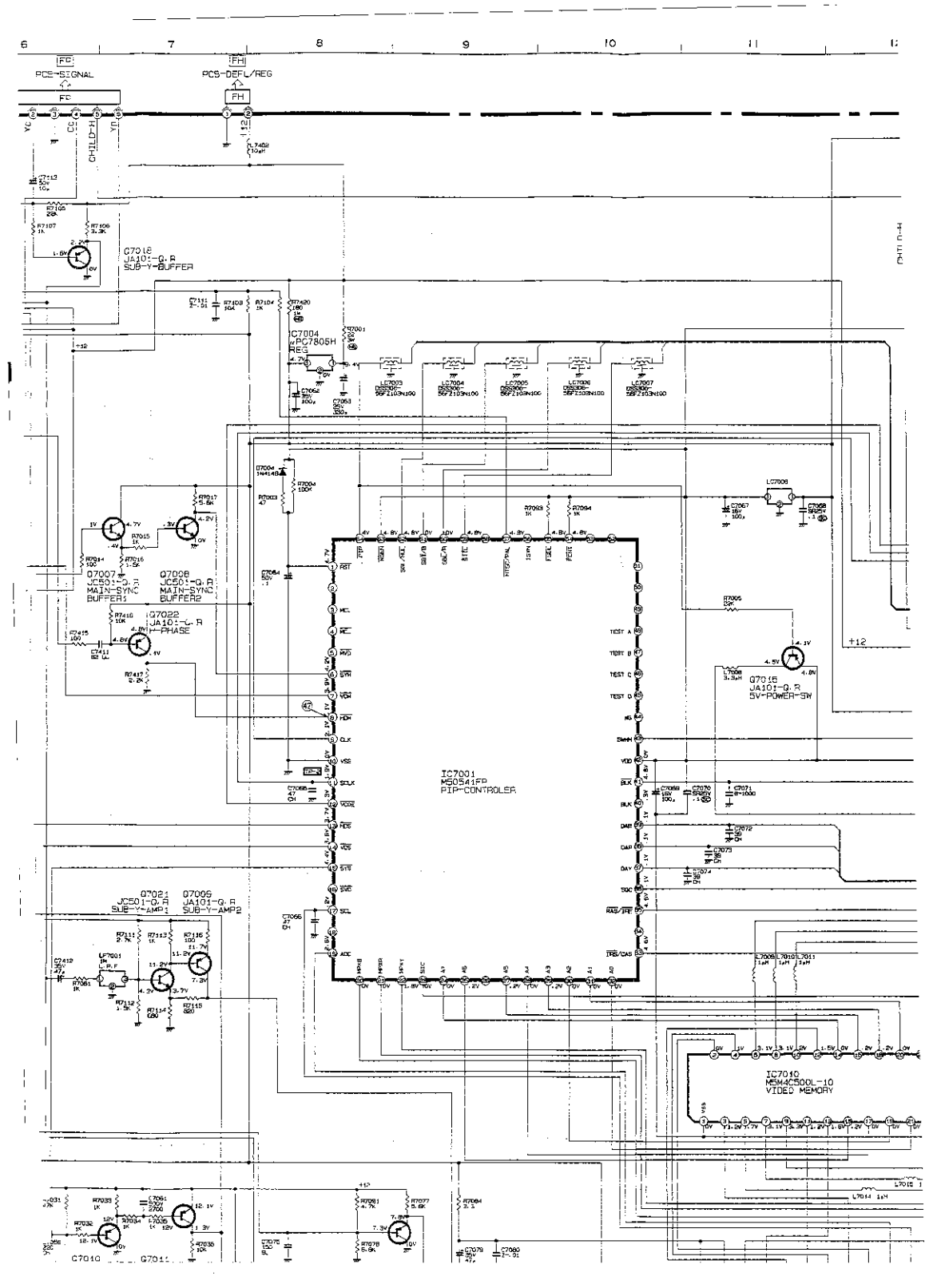

IC2A1 LA7952 VIDEO-SW1
Q2B8 JA101-Q,R TRAP-OFF-SW2
Q2B9 JC501-Q,R TRAP-OFF-SW3
Q2C0 JC501-Q,R V-BUFFER-2
Q2A5 JC501-Q,R VIDEO BUFFER-3
Q2B3 2SC2058S-Q /2SC2724 VIDEO-BUFFER-2
Q2A6 JC501-Q,R 3.58 SW1
Q2A8 JC501-Q,R 4.28 SW1
Q2A9 JC501-Q,R 4.43 SW
Q2B6 JC501-Q,R 4.28 SW2
Q2A7 JC501-Q,R 3.58 SW2
Q2B2 JC501-Q,R TRAP-OFF-SW1
Q3A3 JA101-Q,R VOL-CONT-BUFFER
IC2A5 TC4053BP /HEF4053BP AUDIO-SW
IC3A3 BX7601A
IC3A1 LA7953 AUDIO-CONTROL
Q3A2 2SC2236-O,Y 12V-REG
Q3A1 JC501-Q,R BY-REG
IC3A4 BX7601A


IC2A1 LA7952 VIDEO-SW1
Q2B8 JA101-Q,R TRAP-OFF-SW2
Q2B9 JC501-Q,R TRAP-OFF-SW3
Q2C0 JC501-Q,R Y-BUFFER-2
Q2A5 JC501-Q,R VIDEO BUFFER-3
Q2A6 JC501-Q,R 3.58 SW1
Q2A8 JC501-Q,R 4.28 SW1
Q2A9 JC501-Q,R 4.43 SW
Q2B6 JC501-Q,R 4.28 SW2
Q2A7 JC501-Q,R 3.58 SW2
Q2B3 JC501-Q,R TRAP-OFF-SW1
Q2B3 2SC2058S-Q /2SC2724 VIDEO-BUFFER-2
Q3A3 JA101-Q,R VOL-CONT-BUFFER
IC3A1 LA7953 AUDIO-CONTROL
IC3A5 TC4053BP /HEF4053BP AUDIO-SW
IC3A3 BX7601A
IC3A4 BX7601A
Q3A2 2SC2236-O,Y 12V-REG
Q3A1 JC501-Q,R 8V-REG

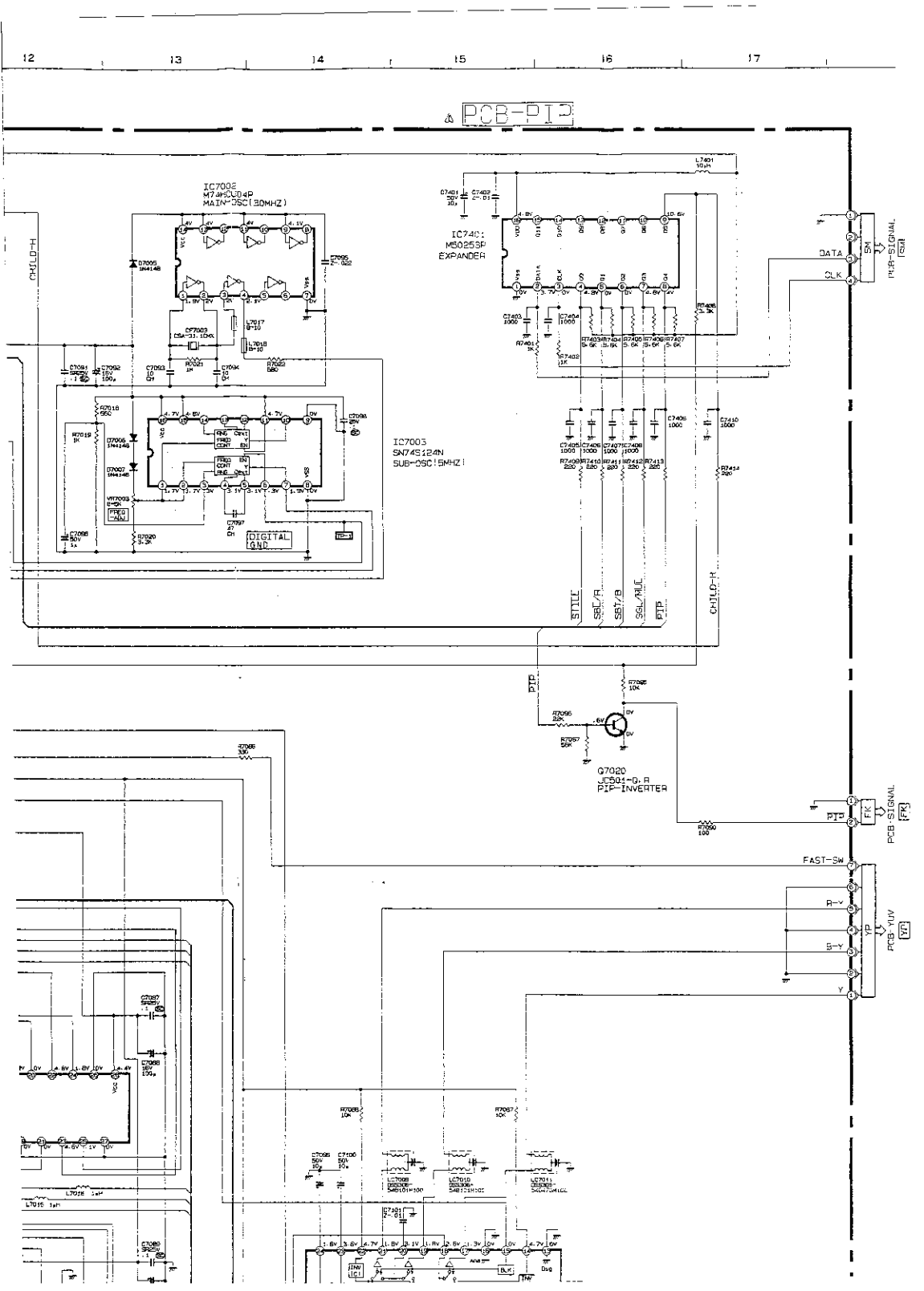

VOL
-IN
R-IN
B
A
L-OUT
N. C.
GRAEQ. DA
GRAEQ. CL
SP-R
SP-L
SWITCHED-H
Y
SW-C1
SW-C2
VIDEO-IN
CHROMA
+12
SYNC
PERI-1-H
PERI-2-H
G
BLK
#21
#11
#10
+21V
AS
AT
AP
Q2B4
Q2B0
JA101-Q-R
V-BUFFER-1
IC2A2
MS1321P
VIDEO-SW2
Q6A3
JA101-Q-R
C-BUFFER-2
BX7601A GEQ.L
BX7601A GEQ.R
IC3A2
LC7523
GEQ-VOL
PCB-DEFL/REG
IC3A3,IC3A4
BX7601A

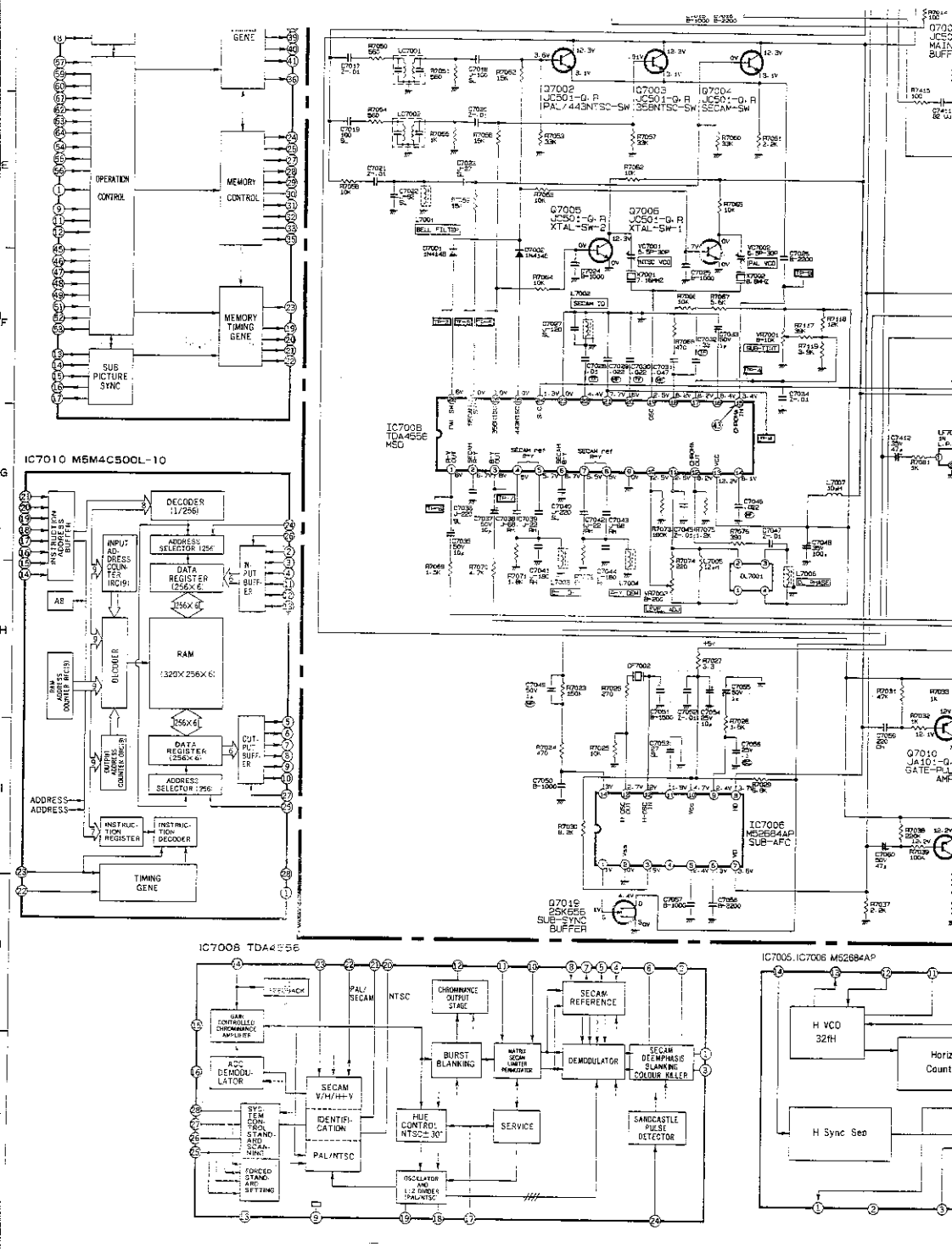

IC7007
LA7950
50/60HZ
IDENT
Q7017
JA101-G, R
MAIN-Y-
BUFFER
IC7006
M52684AP
MAIN-AFC
Q7002
JC501-G, R
PAL/443NTSC-SW
Q7003
JC501-G, R
358NTSC-SW
Q7004
JC501-G, R
SECAM-SW
Q7005
JC501-G, R
XTAL-SW-2
Q7006
JC501-G, R
XTAL-SW-1
IC7008
TDA4556
MSD
IC7001 M50541FP
MAIN PICTURE SYNC
MEMORY TIMING GENE
OPERATION CONTROL
MEMORY CONTROL
MEMORY TIMING GENE
SUB PICTURE SYNC
IC7010 M5M4C500L-10
DECODER 11/256
INPUT ADDRESS COUNTER 19
ADDRESS SELECTOR 1256
DATA REGISTER 1256X6
IN-PUT BUFFER
RAM 1320X 256X6
DECODER
INSTRUCTION ADDRESS COUNTER BUFFER
RAM ADDRESS COUNTER 8BIT
PCB-SIGNAL
FC

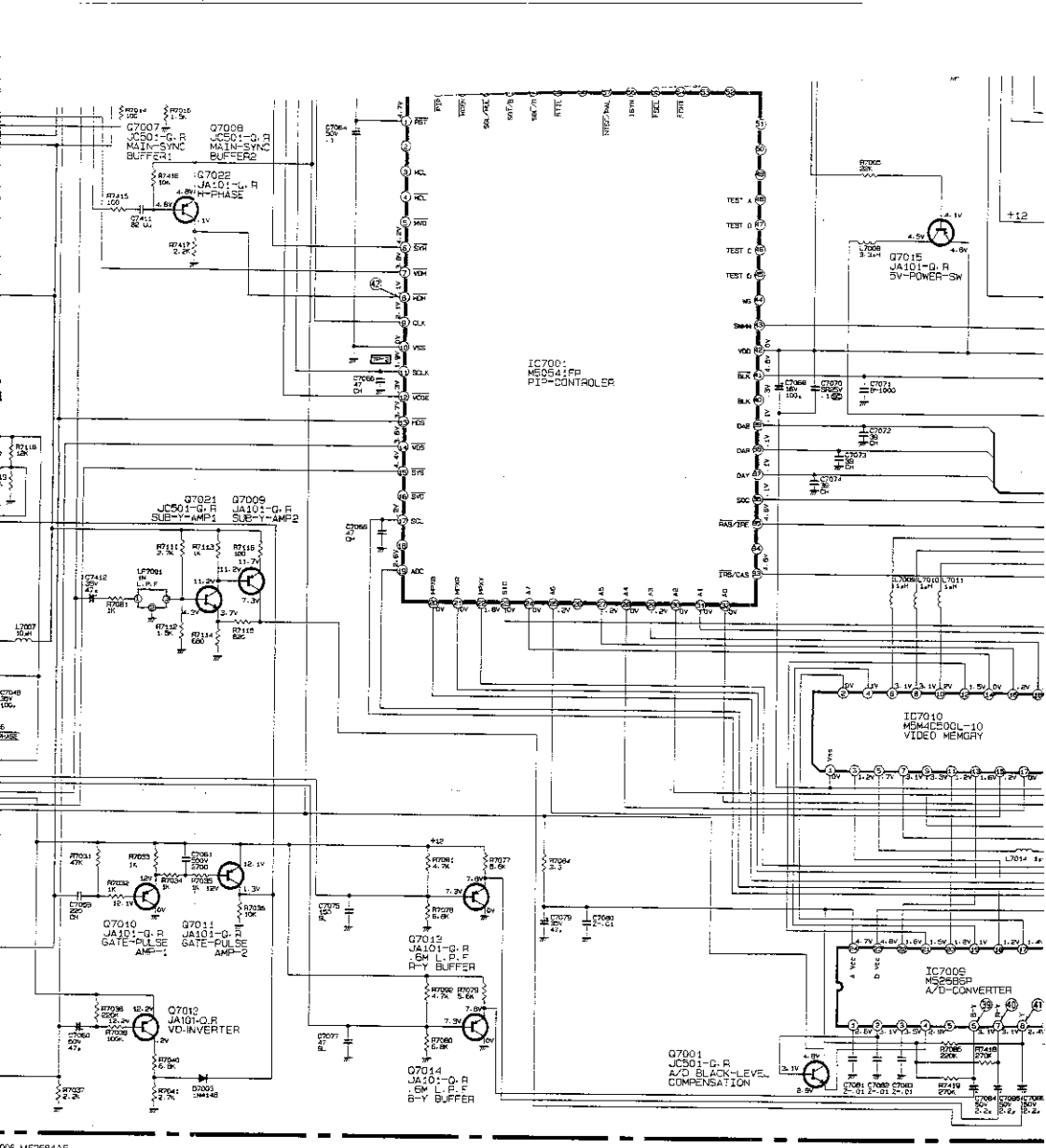

6
7
8
9
10
11
FP
PCB-SIGNAL
FH
PCB-DEFL/REG
FC
FH
Y/C
C
CHILD-H
Y/L
+12
Q7016
JA101-Q-A
SUB-Y-BUFFER
IC7004
μPC7805H
REG
Q7007
JC501-Q-A
MAIN-SYNC
BUFFER1
Q7008
JC501-Q-A
MAIN-SYNC
BUFFER2
Q7022
JA101-Q-A
H-PHASE
IC7001
M65041FP
PIP-CONTROLER
Q7015
JA101-Q-A
5V-POWER-SW
Q7021
JC501-Q-A
SUB-Y-AMP1
Q7009
JA101-Q-A
SUB-Y-AMP2
IC7010
M5M4C500L-10
VIDEO MEMORY

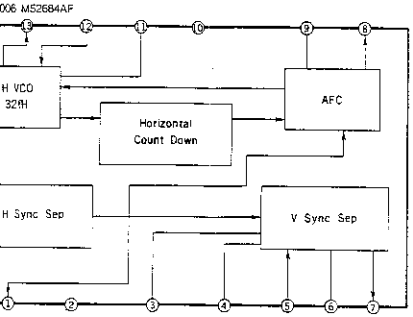

PCS-SIGNAL
PCS-DEFL/REG
IC7001
M50541FP
PIP-CONTROLLER
IC7010
M5M4C500L-10
VIDEO MEMORY
IC7004
μPC7805H
REG
Q7007
JC501-Q,R
MAIN-SYNC
BUFFER1
Q7008
JC501-Q,R
MAIN-SYNC
BUFFER2
Q7022
JA101-Q,R
H-PHASE
Q7016
JA101-Q,R
SUB-Y-BUFFER
Q7018
JA101-Q,R
5V-POWER-SW
Q7021
JC501-Q,R
SUB-Y-AMP1
Q7006
JA101-Q,R
SUB-Y-AMP2
+12
+5

& PCB-PIP


IC7002
M74HC04P
MAIN-OSC(30MHZ)
IC7003
SN74S124N
SUB-OSC(15MHZ)
IC7401
M50253P
EXPANDER
G7020
JC501-0.A
PIP-INVERTER
CHILD-H
DATA
CLK
PCB-SIGNAL (SM)
PCB-SIGNAL (FK)
PCB-YUV (YP)
FAST-SW
PIP
DIGITAL GND
FREQ ADJ
R-Y
B-Y
Y

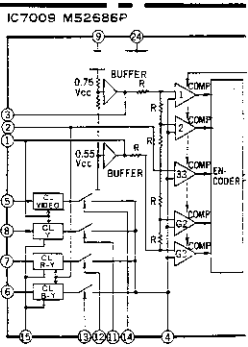

OPERATION CONTROL
MEMORY CONTROL
MEMORY TIMING GENE.
SUB PICTURE SYNC
IC7010 M5M4C500L-10
DECODER (1/256)
INPUT ADDRESS COUNTER (9)
ADDRESS SELECTOR (256)
DATA REGISTER (256X6)
256X6
RAM (320X256X6)
INPUT BUFFER
OUTPUT BUFFER
DATA REGISTER (256X6)
ADDRESS SELECTOR (256)
INSTRUCTION REGISTER
INSTRUCTION DECODER
TIMING GENE
ADDRESS
IC7008 TDA4556
PAL/SECAM
NTSC
CHROMINANCE OUTPUT STAGE
SECAM REFERENCE
BURST BLANKING
MATRIX SECAM LIMITER DEMODULATOR
DEMODULATOR
SECAM DEEMPHASIS BLANKING COLOUR KILLER
SECAM V/H/H+V
IDENTIFICATION
HUE CONTROL NTSC±30°
SERVICE
SANDCASTLE PULSE DETECTOR
PAL/NTSC
OSCILLATOR AND 1:2 DIVIDER PAL/NTSC
IC7005.IC7006 M52684AP
H VCO 32fH
H Sync Sep
IC7008 TDA4556
IC7006 M52684AP SUB-AFC
Q7019 2SK555 SUB-SYNC BUFFER
Q7010 JA101-Q GATE-PU AMP
IC7003 JC501-Q-R SECAM-SW
IC7004 JC501-Q-R SECAM-SW
Q7005 JC501-Q-R XTAL-SW-2
Q7006 JC501-Q-R XTAL-SW-1
IC7002 JC501-Q-R PAL/443NTSC-SW
IC7003 JC501-Q-R 358NTSC-SW
IC7008 TDA4556 MSD

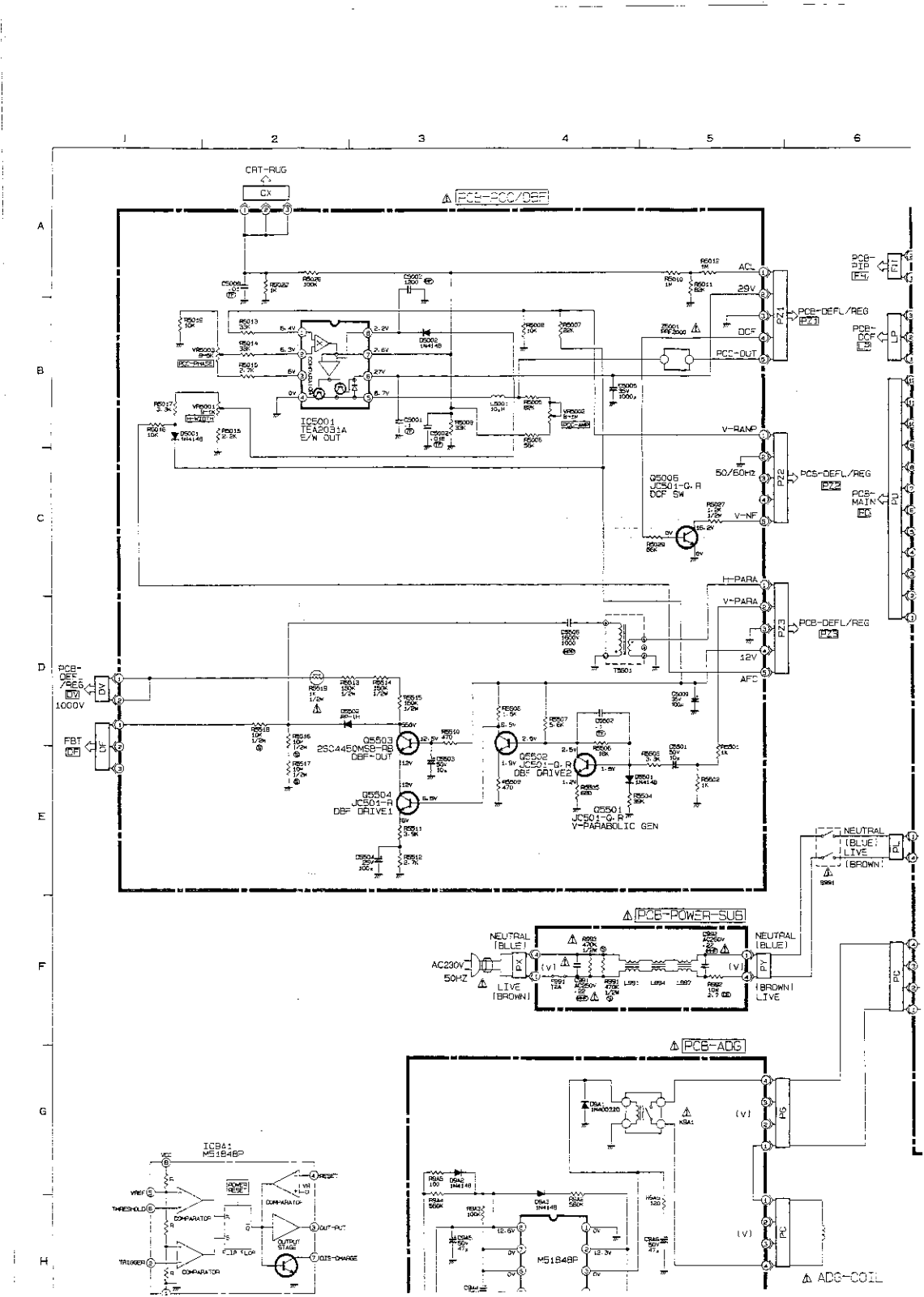


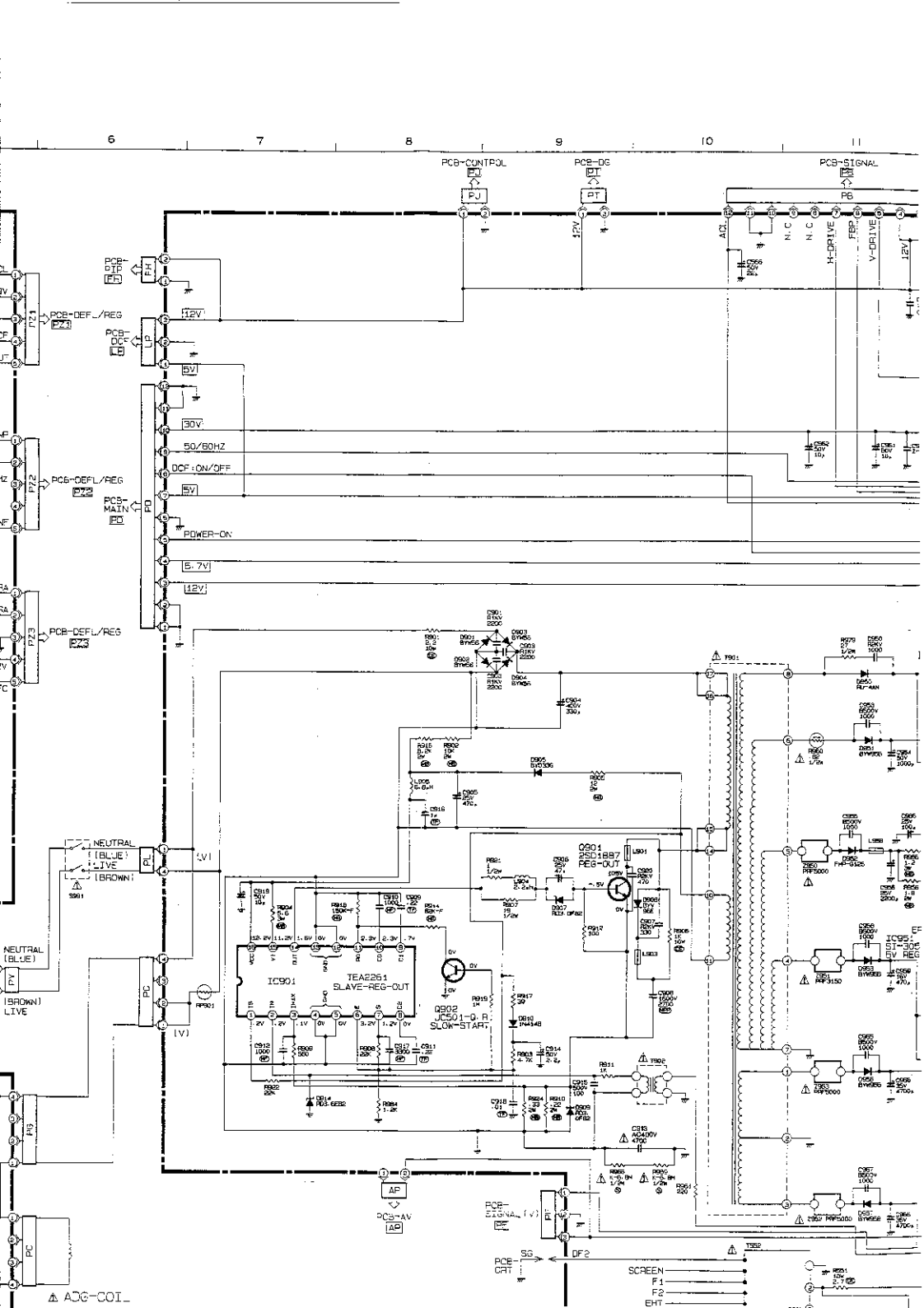


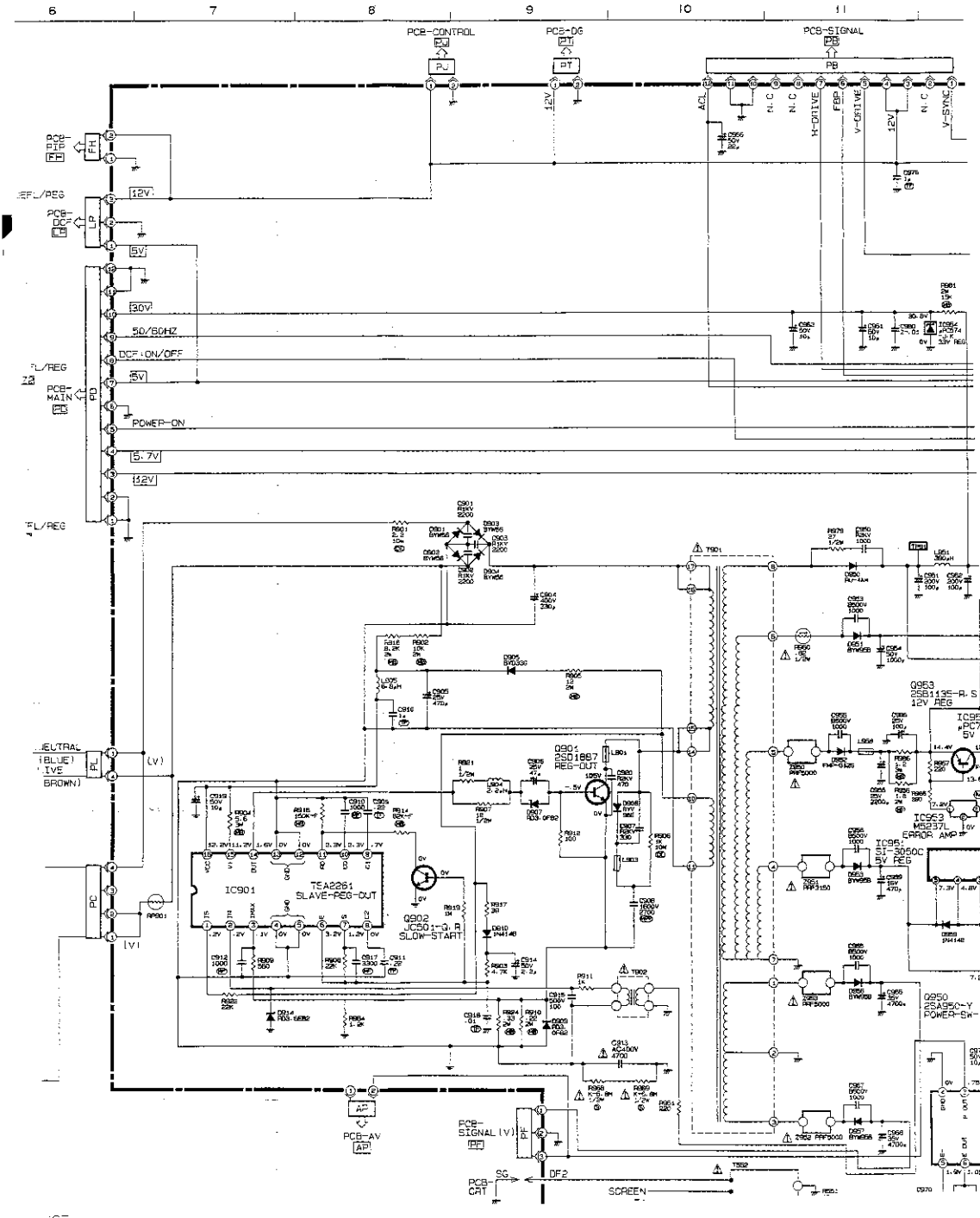
③0.2Vp-p(H)

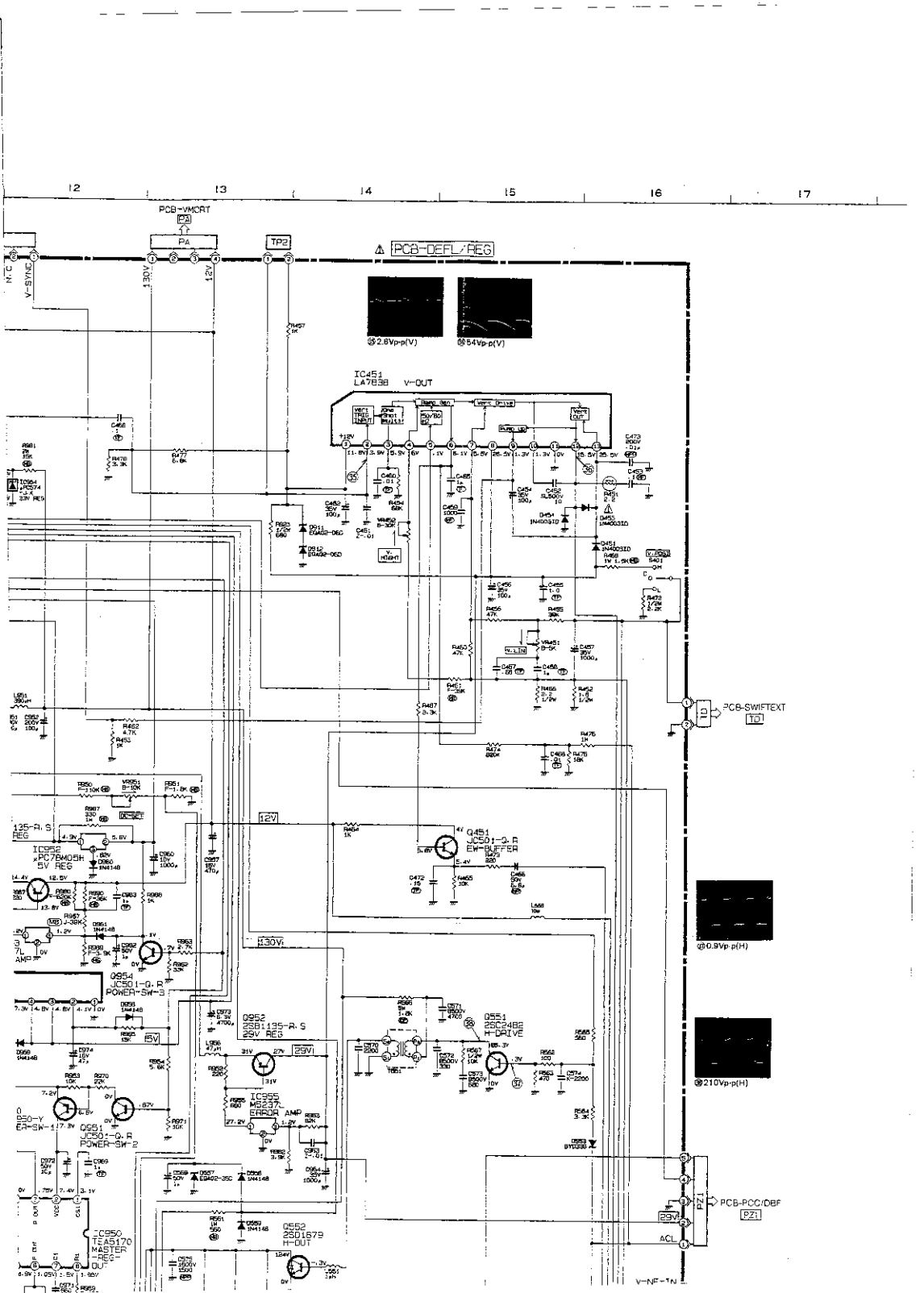
②5.2Vp-p(H)

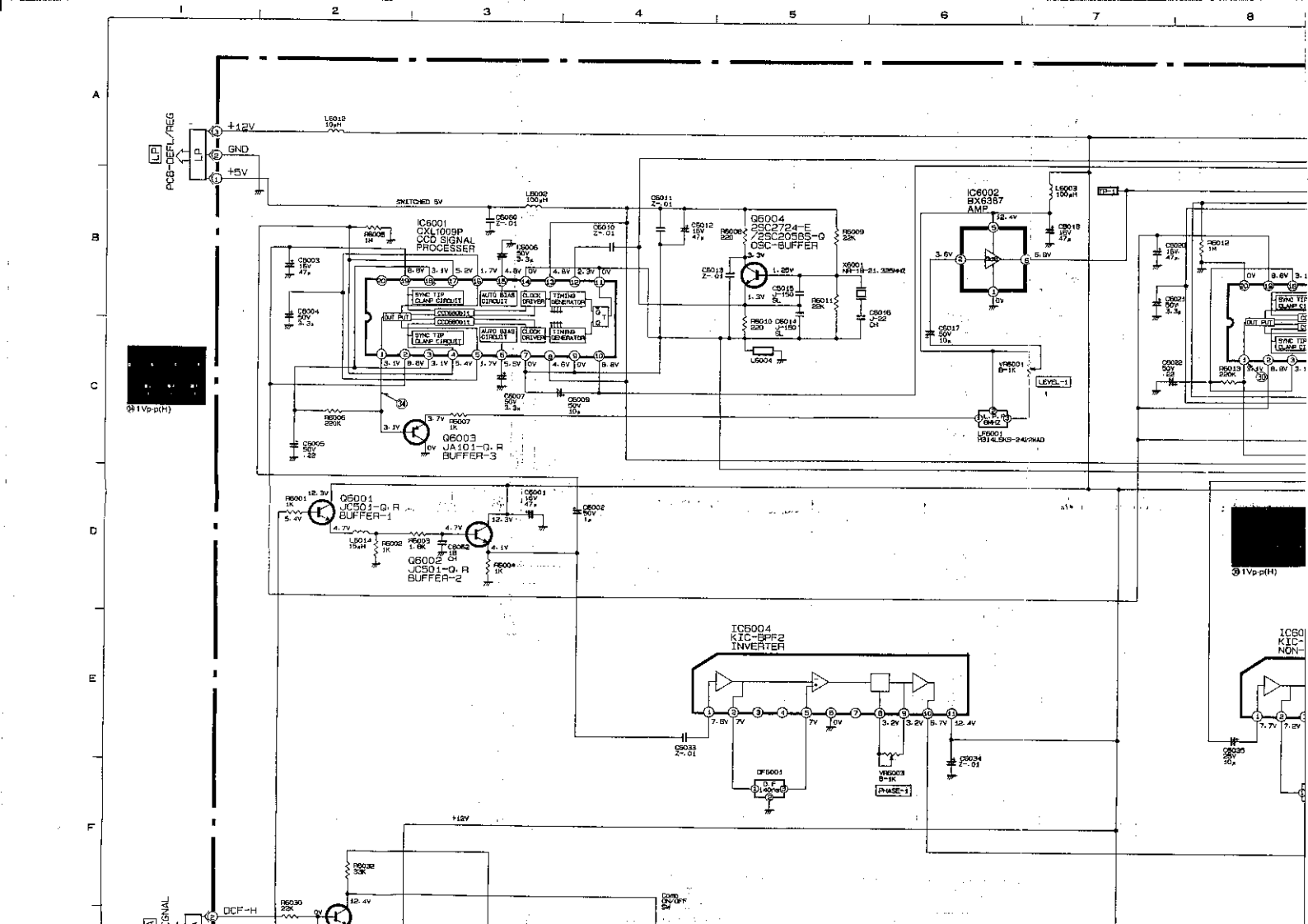


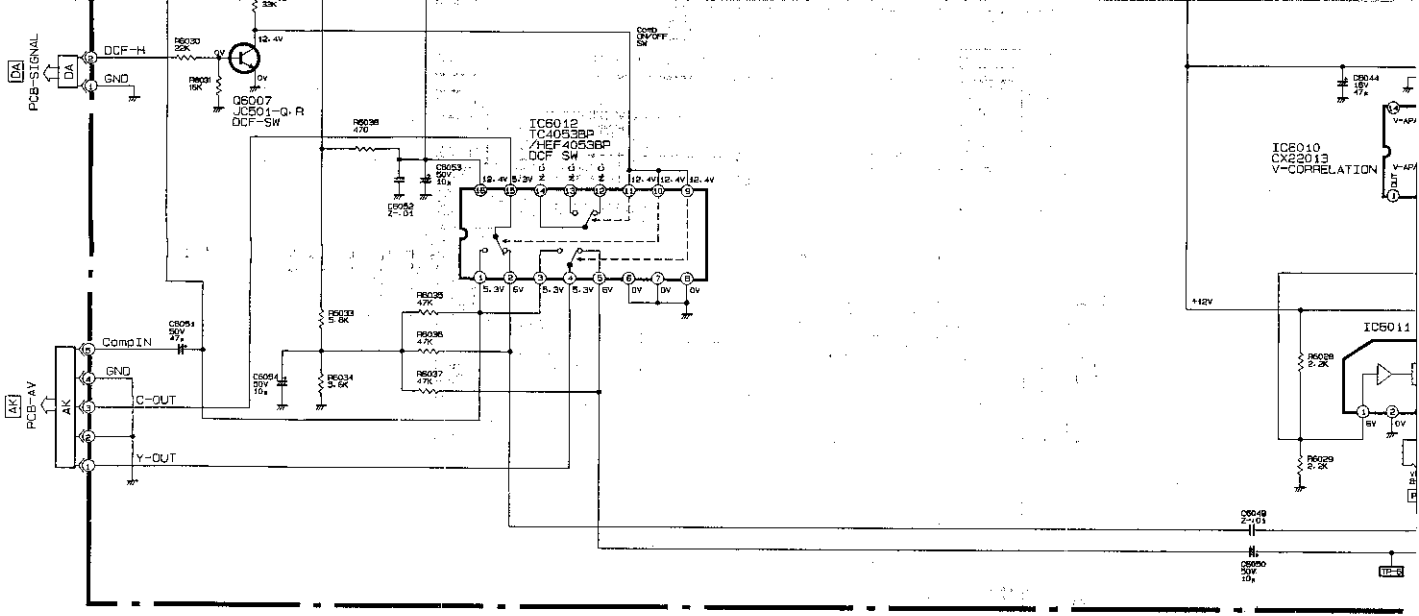

CRT-RUG
CX
PCB-DEF/REG
IC5001
TEA2031A
E/W OUT
Q5006
JC501-G.R
DCF SW
Q5503
2SC4450MSB-R6
DBF-OUT
Q5504
JC501-R
DBF DRIVE1
Q5502
JC501-G.R
DBF DRIVE2
Q5501
JC501-G.R
V-PARABOLIC GEN
T5501
AC
29V
DCF
PCC-OUT
V-RAMP
50/60Hz
V-NF
H-PARA
V-PARA
12V
AFC
PCB-DEF/REG
PCB-PIP
PCB-DCF
PCB-MAIN
PCB-POWER-SUS
AC230V
50HZ
NEUTRAL
(BLUE)
LIVE
(BROWN)
PCB-ADG
M51848P
ADG-COIL

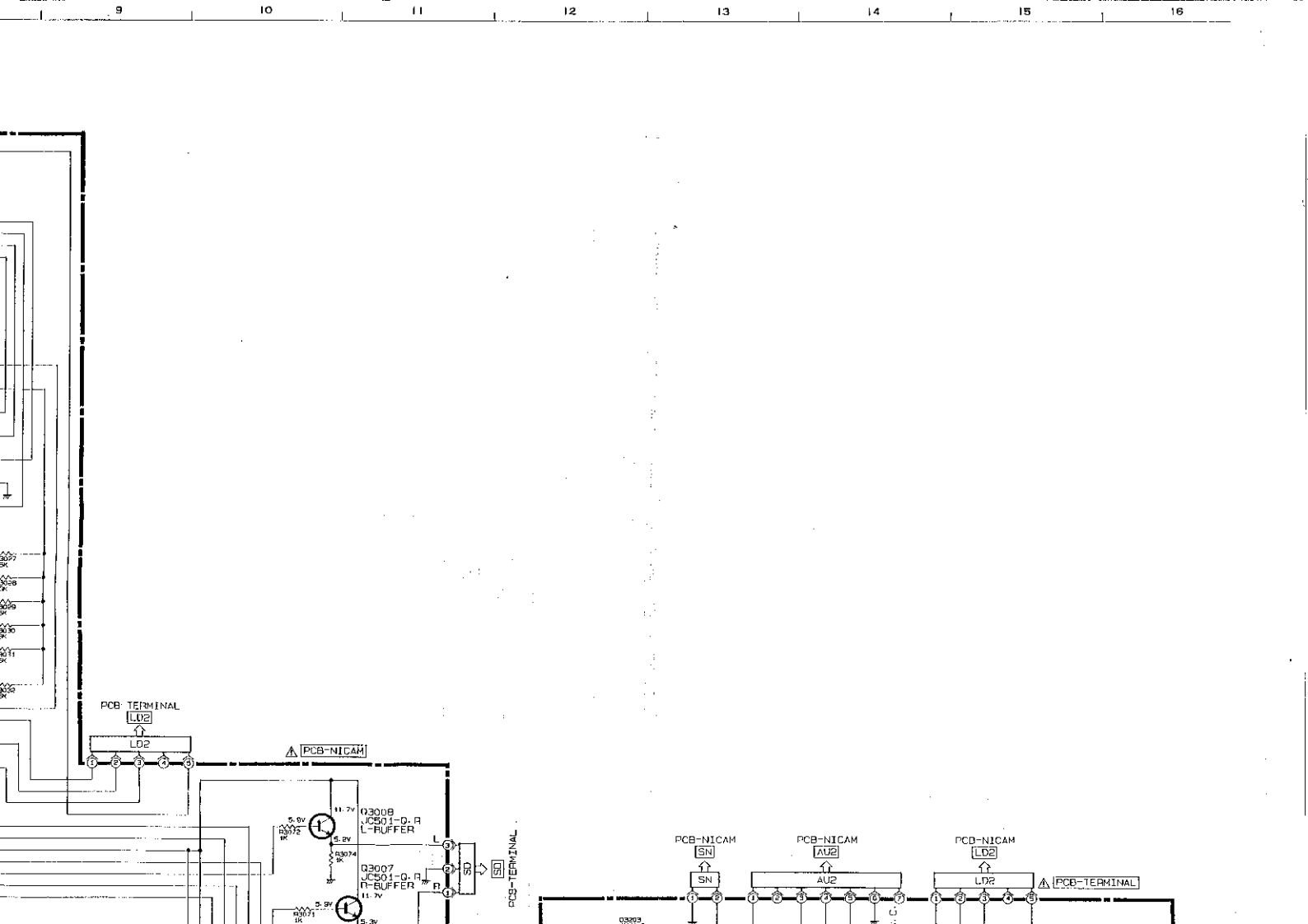

6
7
8
9
10
11
PCB-CONTROL
PJ
PCB-DC
PT
PCB-SIGNAL
P6
PCB-DTD
PH
PCB-DEF-/REG
PZ1
PCB-DC
PL
12V
5V
30V
50/60HZ
DCF-ON/OFF
PCB-DEFL/REG
PZ2
PCB-MAIN
PD
POWER-ON
5.7V
PCB-DEFL/REG
PZ3
NEUTRAL
(BLUE)
LIVE
(BROWN)
PL
PF
PC
IC901
TEA2261
SLAVE-REG-OUT
Q902
JC501-G.R.
SLOW-START
Q901
2SD1887
REG-OUT
AP
PCB-AV
PCB-SIGNAL (V)
PCB-CRT
SCREEN
F1
F2
EHT
ADC-COIL

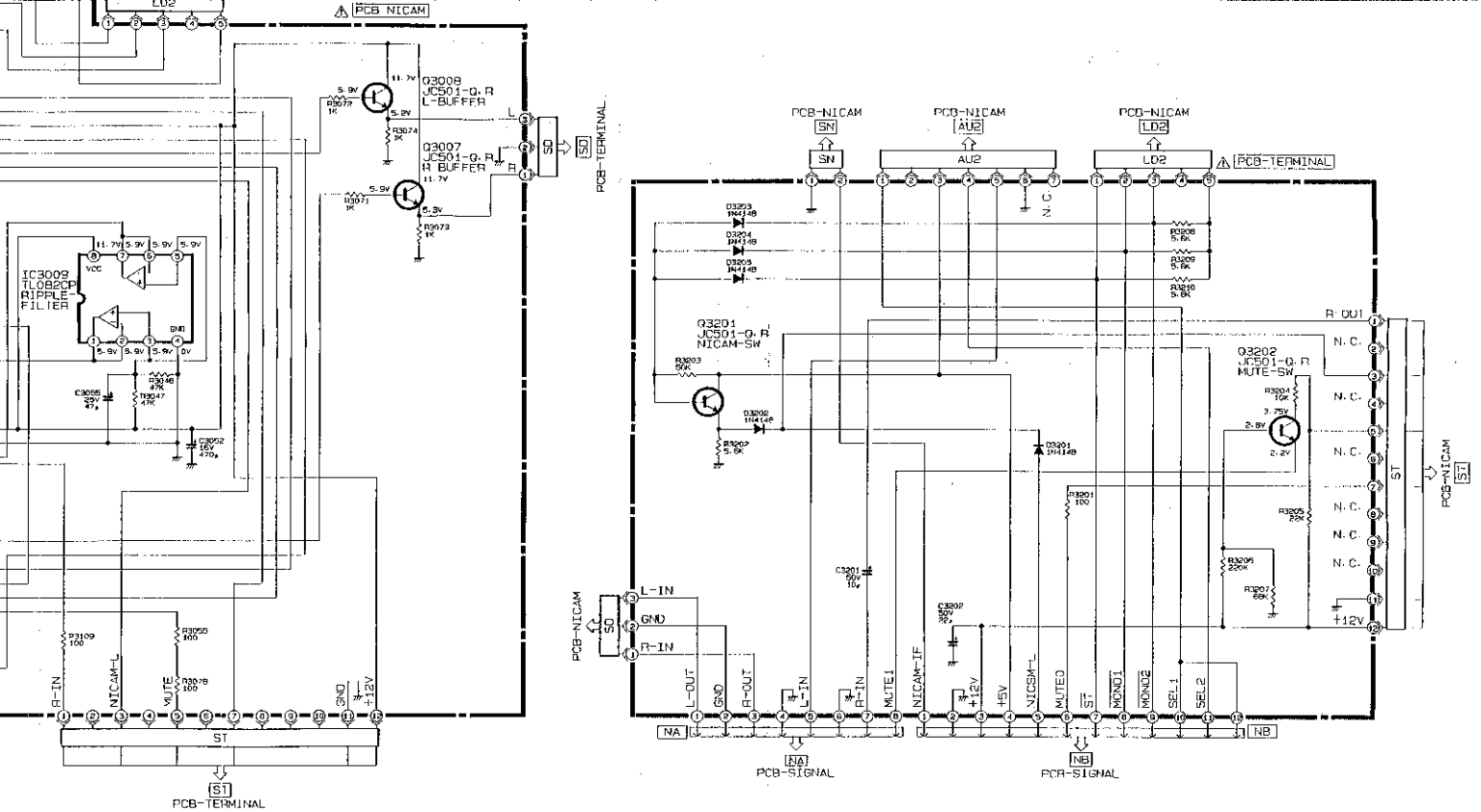

6
7
8
9
10
11
PCB-CONTROL
PCB-DG
PCB-SIGNAL
PU
PT
PB
12V
ACL
N.C
H-DRIVE
FBP
V-DRIVE
V-SYNC
PCB-DEF
PCB-DC
PCB-MAIN
12V
5V
30V
50/60HZ
DCF:ON/OFF
POWER-ON
5.7V
3.2V
NEUTRAL
(BLUE)
LIVE
BROWN
IC901
TEA2261
SLAVE-PEG-OUT
Q901
2SD1887
REG-OUT
Q902
JC501-Q,R
SLOW-START
Q953
2SB1135-R,S
12V REG
IC953
M5237L
ERROR AMP
IC951
SI-3050C
5V REG
Q950
2SA950-Y
POWER-SW
PCB-AV
PCB-SIGNAL(V)
PCB-CRT
SG
DF2
SCREEN

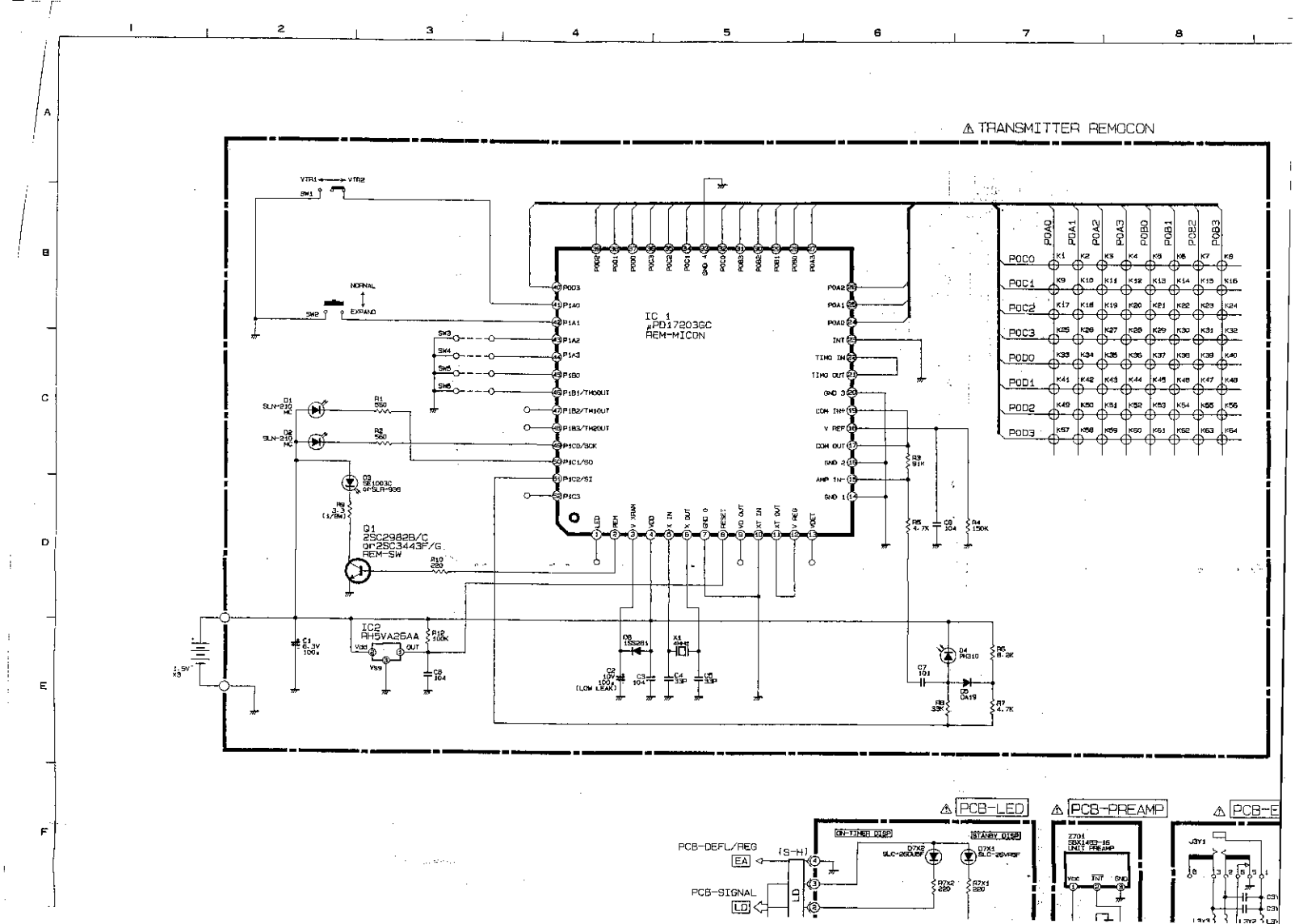

12
13
14
15
16
17
PCB-VMCRT
P3
PA
TP2
PCB-DEFL/REG
N.C
V-SYNC
130V
12V
2.8Vp-p(V)
54Vp-p(V)
IC451
LA7838
V-OUT
PCB-SWIFTEXT
T0
12V
Q451
2SC1815-Q,R
FLY-BUFFER
IC952
μPC78M05H
5V REG
Q954
2SC1815-Q,R
POWER-SW-3
Q952
2SB1135-R,S
29V REG
Q951
2SC2482
H-DRIVE
IC955
MB3737
ERROR AMP
Q953
2SC1815-Q,R
POWER-SW-2
IC950
TEA5170
MASTER
REG
Q952
2SD1679
H-OUT
0.9Vp-p(H)
210Vp-p(H)
PCB-PCC/DBF
P21
29V
ACL
V-NF-TN

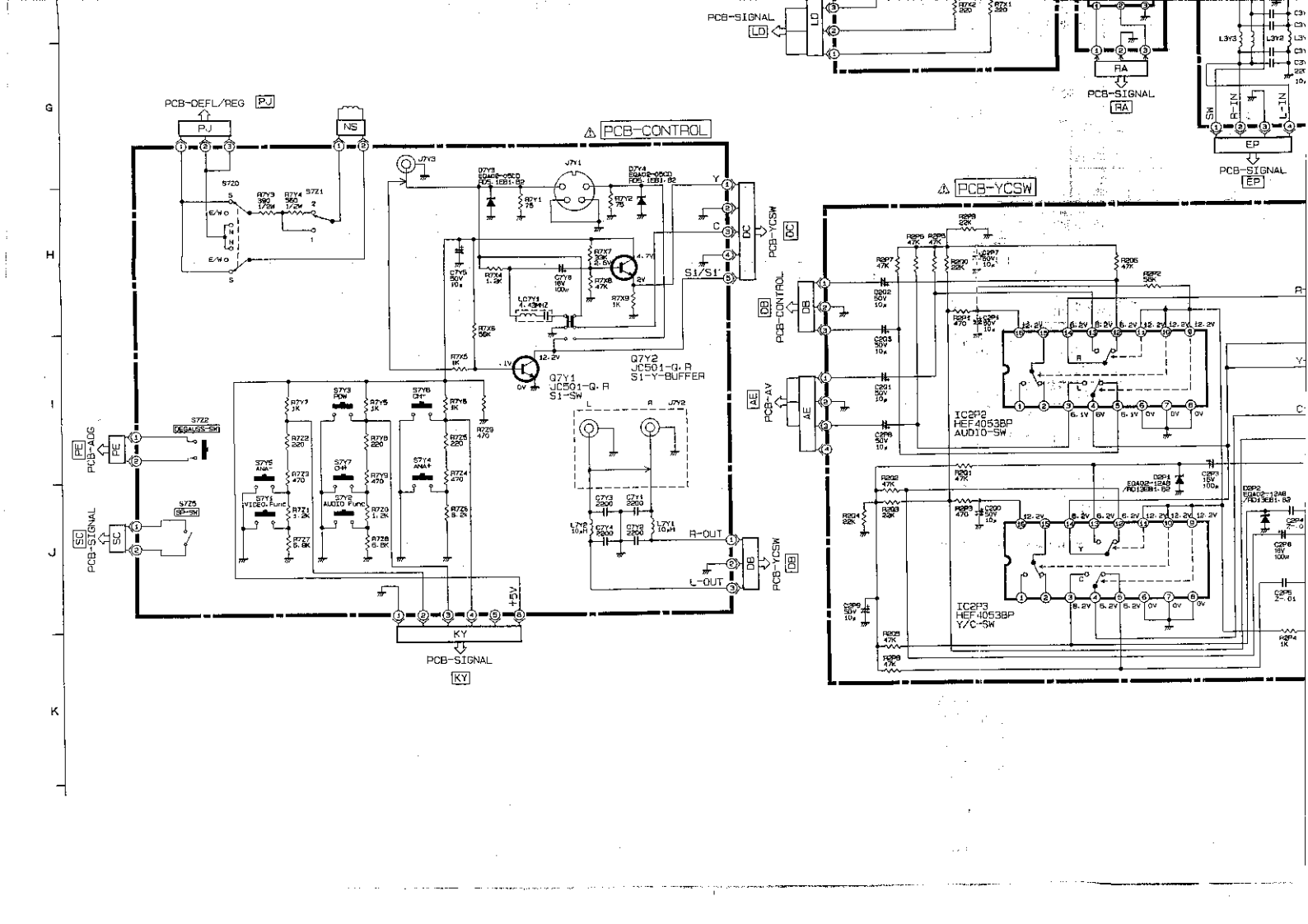

PCB-DEFL/REG
LP
+12V
GND
+5V
SWITCHED 5V
IC6001
CXL1009P
CCD SIGNAL
PROCESSER
IC6002
BX6387
AMP
Q6004
2SC2724-E
/2SC2585-Q
OSC-BUFFER
Q6003
JA101-Q,R
BUFFER-3
Q6001
JC501-Q,R
BUFFER-1
Q6002
JC501-Q,R
BUFFER-2
IC6004
KIC-BPF2
INVERTER
LEVEL-1
PHASE-1
DCF-H
DCF
ON/OFF
SW
1Vp-p(H)

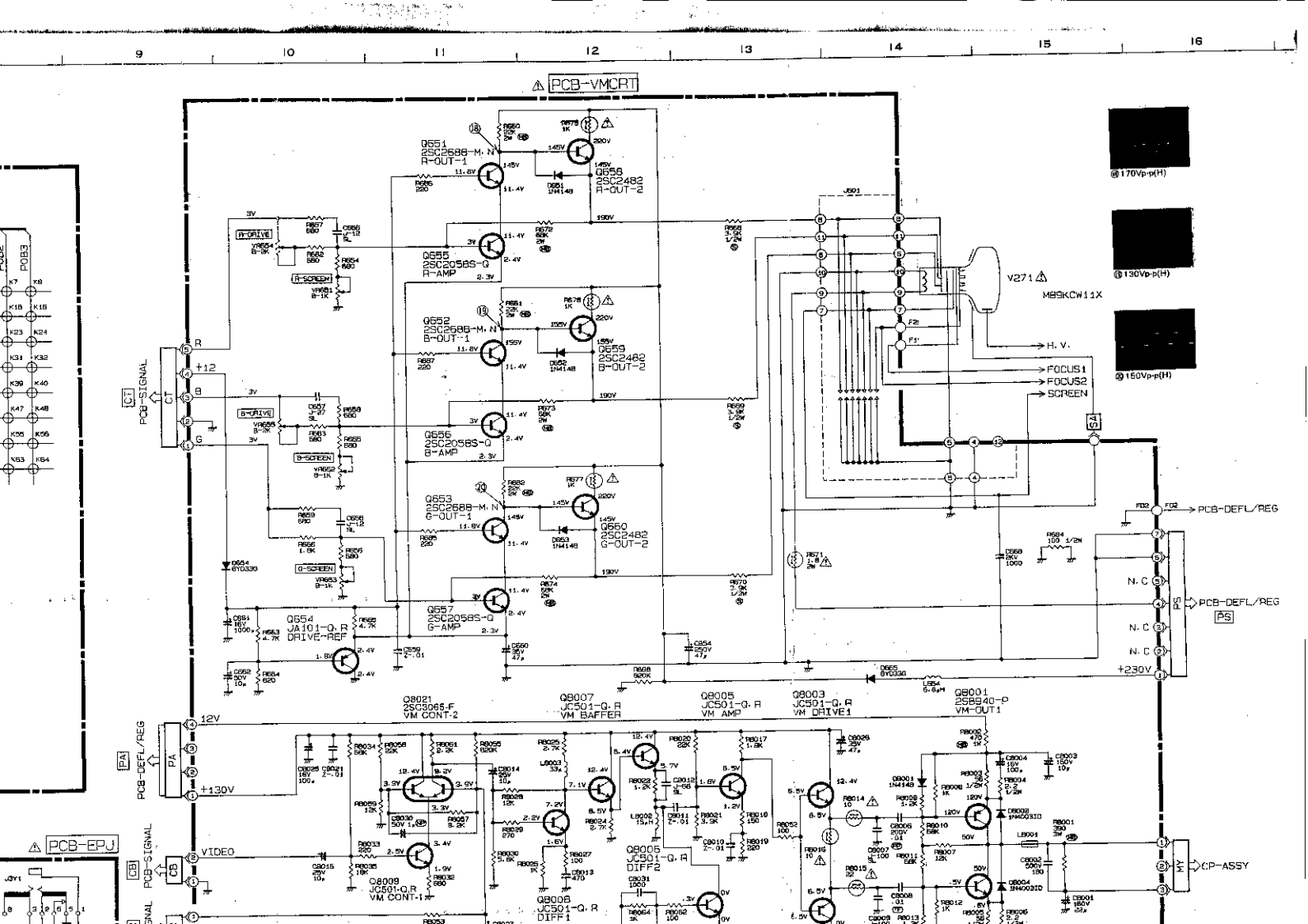

PCB-SIGNAL
DA
DCF-H
GND
Q6007
2SC501-Q,R
DCF-SW
IC6012
TC4053BP
/HEF4053BP
DCF SW
IC6010
CX22013
V-CORRELATION
IC6011
PCB-AV
AK
CompIN
GND
C-OUT
Y-OUT
+12V
TP-G

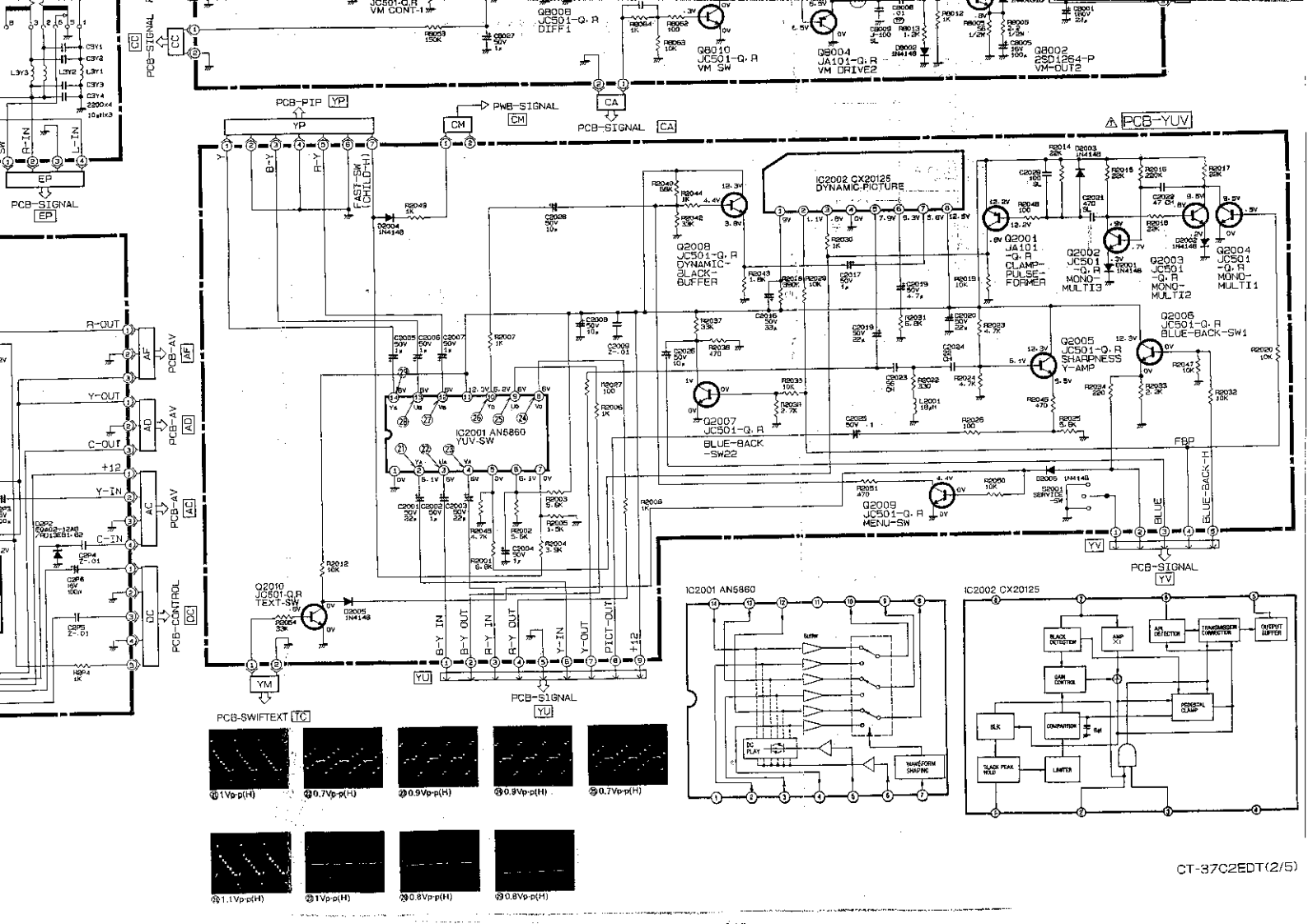

9
10
11
12
13
14
15
16
PCB TERMINAL
LD2
PCB-NICAM
Q3008
JC501-0.A
L-BUFFER
Q3007
JC501-0.A
R-BUFFER
SD
PCB-TERMINAL
PCB-NICAM
SN
PCB-NICAM
AU2
PCB-NICAM
LD2
PCB-TERMINAL

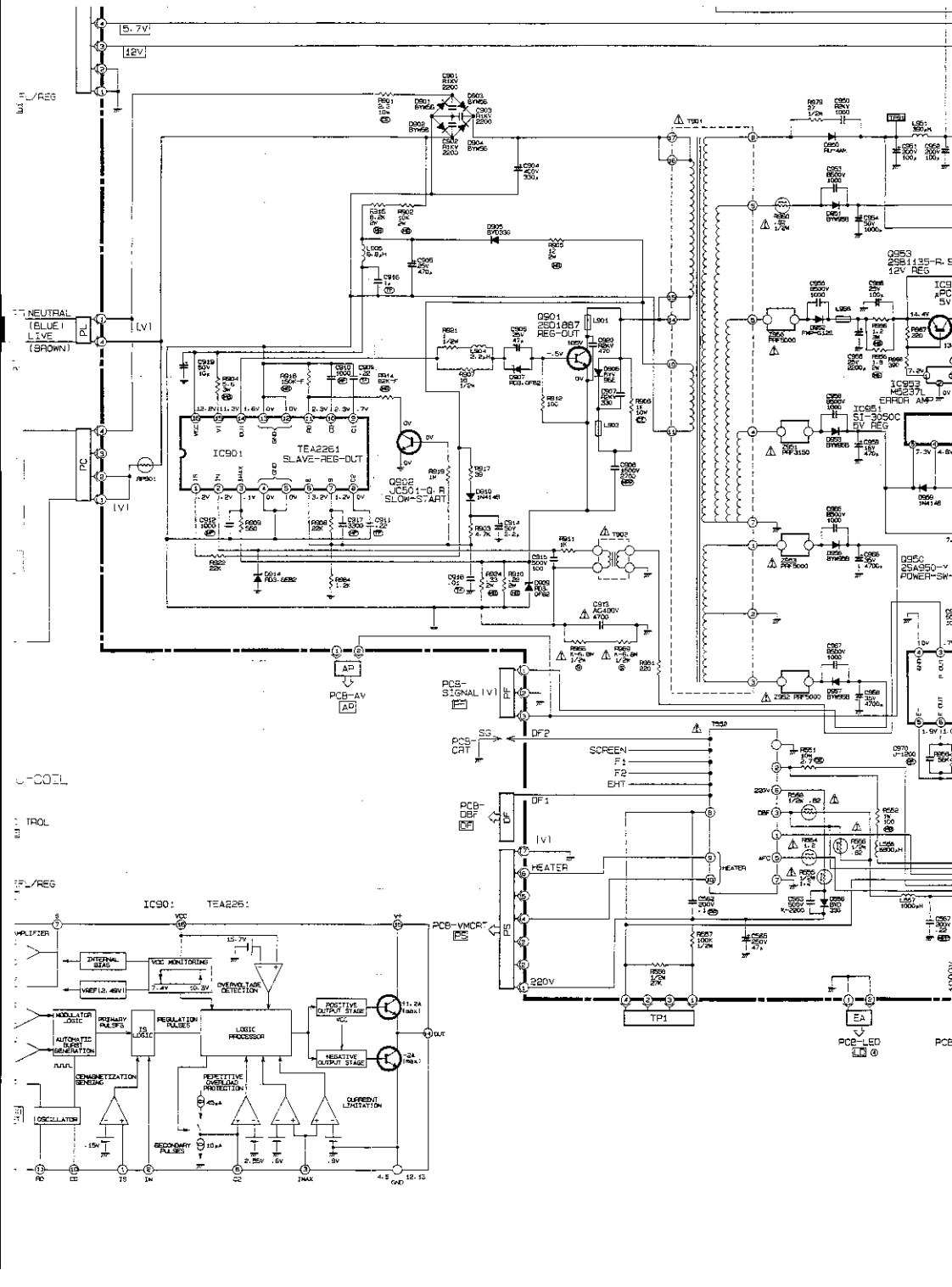

PCB-NICAM
SN
AU2
LD2
PCB-TERMINAL
Q3008
JC501-Q.R
L-BUFFER
Q3007
JC501-Q.R
R-BUFFER
IC3009
TL082CP
RIPPLE-
FILTER
Q3201
JC501-Q.R
NICAM-SW
Q3202
JC501-Q.R
MUTE-SW
N.C.
L-IN
GND
R-IN
L-OUT
R-OUT
MUTE1
NICAM-IF
+12V
+5V
MUTED
ST
MONO1
MONO2
SEL1
SEL2
NA
NB
PCB-SIGNAL
PCB-NICAM
PCB-TERMINAL

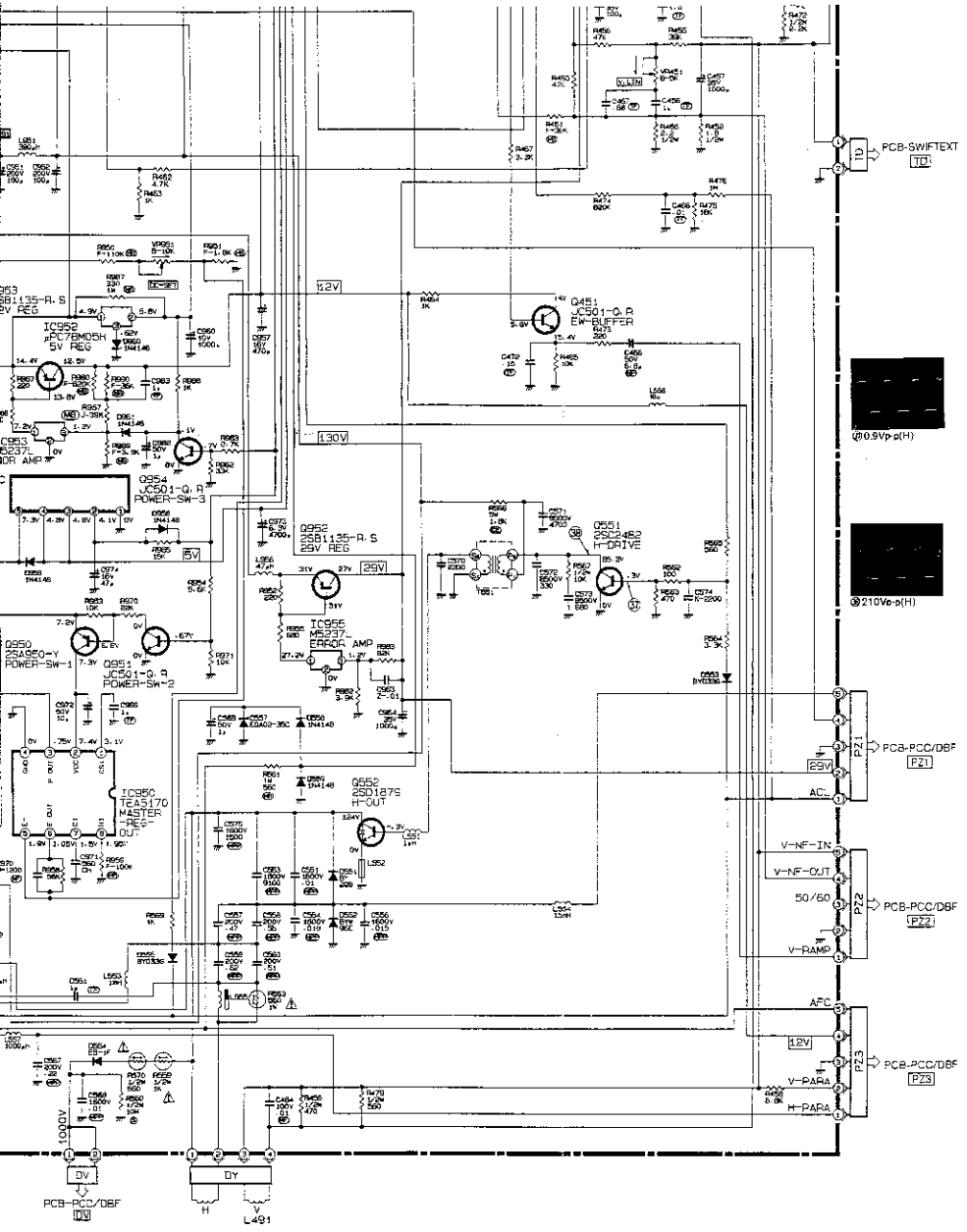

⚠ TRANSMITTER REMOCON
IC 1
μPD17203GC
REM-MICON
IC2
RH5VA26AA
Q1
2SC2982B/C
OR2SC3443F/G
REM-SW
PCB-LED
PCB-PREAMP
PCB-DEFL/REG
PCB-SIGNAL
EA
LD
(S-H)

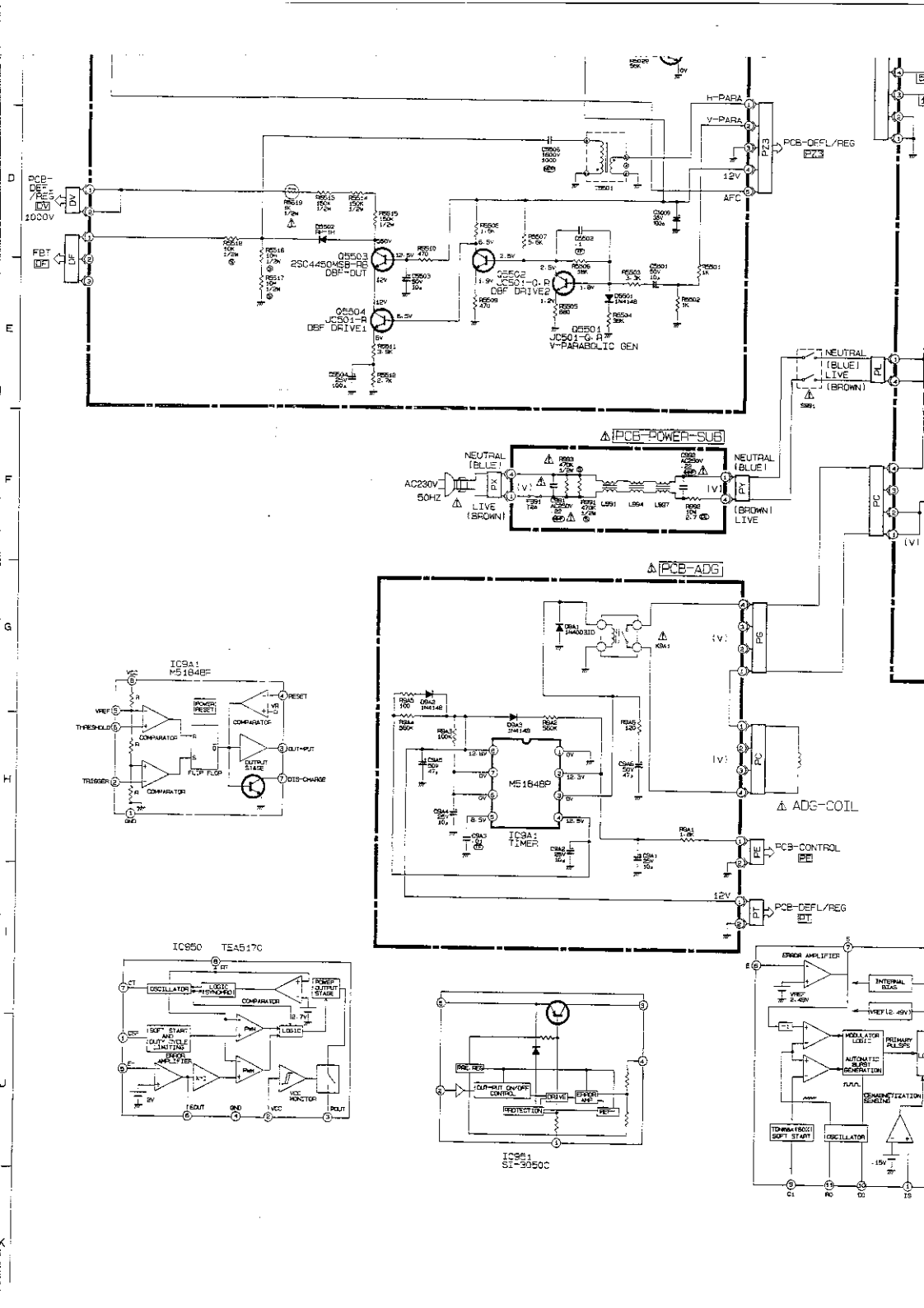

PCB-DEFL/REG
PJ
NS
PCB-CONTROL
PCB-YCSW
PCB-SIGNAL
PCB-AV
PCB-AUDIO
PCB-JOG
PCB-CONTROL
IC2P2
HEF4053BP
AUDIO-SW
IC2P3
HEF4053BP
Y/C-SW
Q7Y1
JC501-Q.R
S1-SW
Q7Y2
JC501-Q.R
S1-Y-BUFFER
R-OUT
L-OUT
S1/S1'
KY
LD
RA
EP
SC
PE
DB
DC
AE

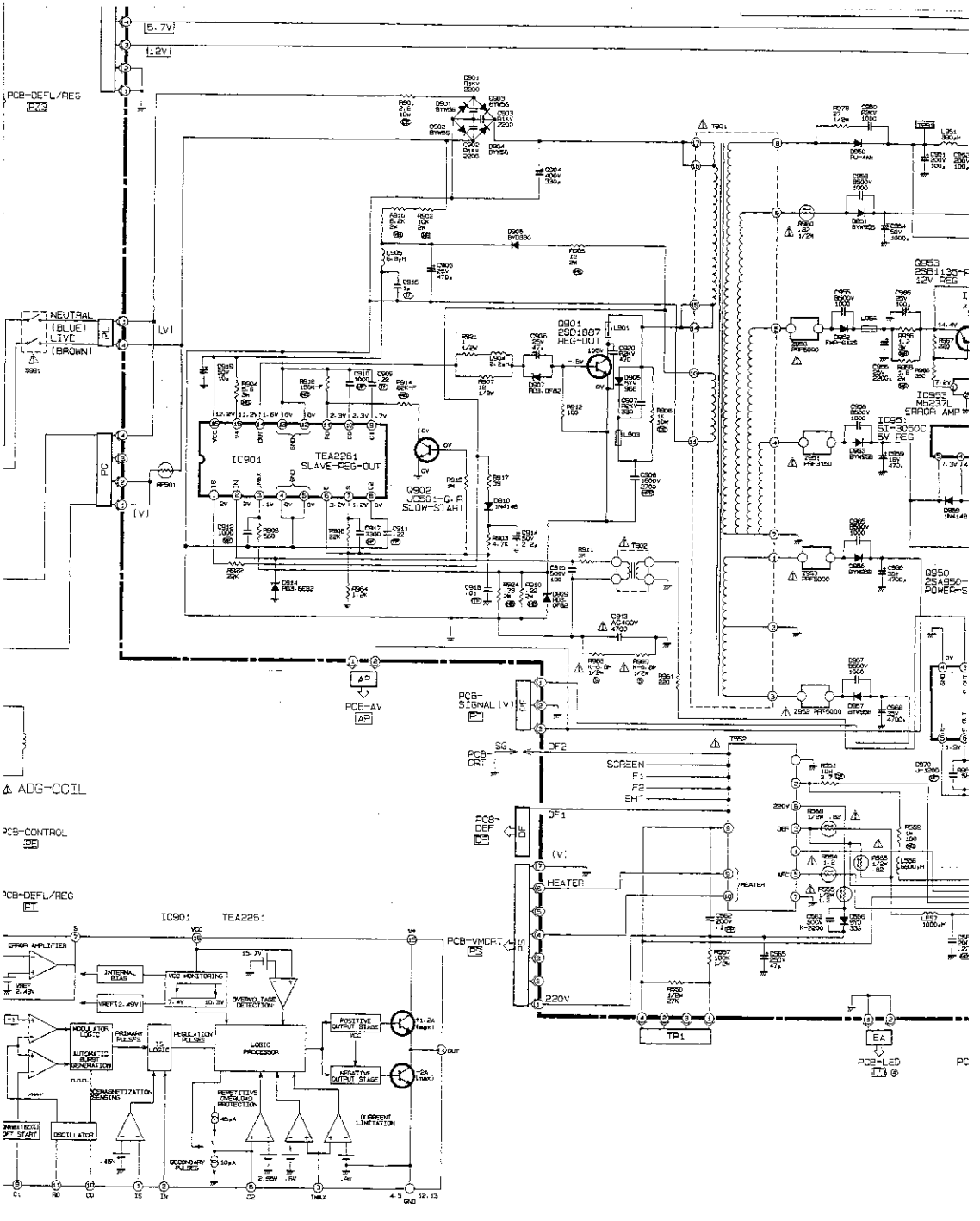

PCB-VMCRT
Q651 2SC2688-M.N R-OUT-1
Q655 2SC2482 R-OUT-2
Q655 2SC2058S-Q R-AMP
Q652 2SC2688-M.N B-OUT-1
Q659 2SC2482 B-OUT-2
Q656 2SC2058S-Q B-AMP
Q653 2SC2688-M.N G-OUT-1
Q660 2SC2482 G-OUT-2
Q657 2SC2058S-Q G-AMP
Q654 JA101-Q.R DRIVE-REF
Q8021 2SC3065-F VM CONT-2
Q8007 JC501-Q.R VM BAFFER
Q8005 JC501-Q.R VM AMP
Q8003 JC501-Q.R VM DRIVE1
Q8001 2SB940-P VM-OUT1
Q8009 JC501-Q.R VM CONT-1
Q8006 JC501-Q.R DIFF1
Q8005 JC501-Q.R DIFF2
V271 M89KCW11X
H. V.
FOCUS1
FOCUS2
SCREEN
PCB-DEFL/REG
PCB-SIGNAL
PCB-EPJ
CP-ASSY
R-DRIVE
B-DRIVE
G-DRIVE
R-SCREEN
B-SCREEN
G-SCREEN
+12V
+130V
+230V
VIDEO
N. C
@170Vp-p(H)
@130Vp-p(H)
@150Vp-p(H)

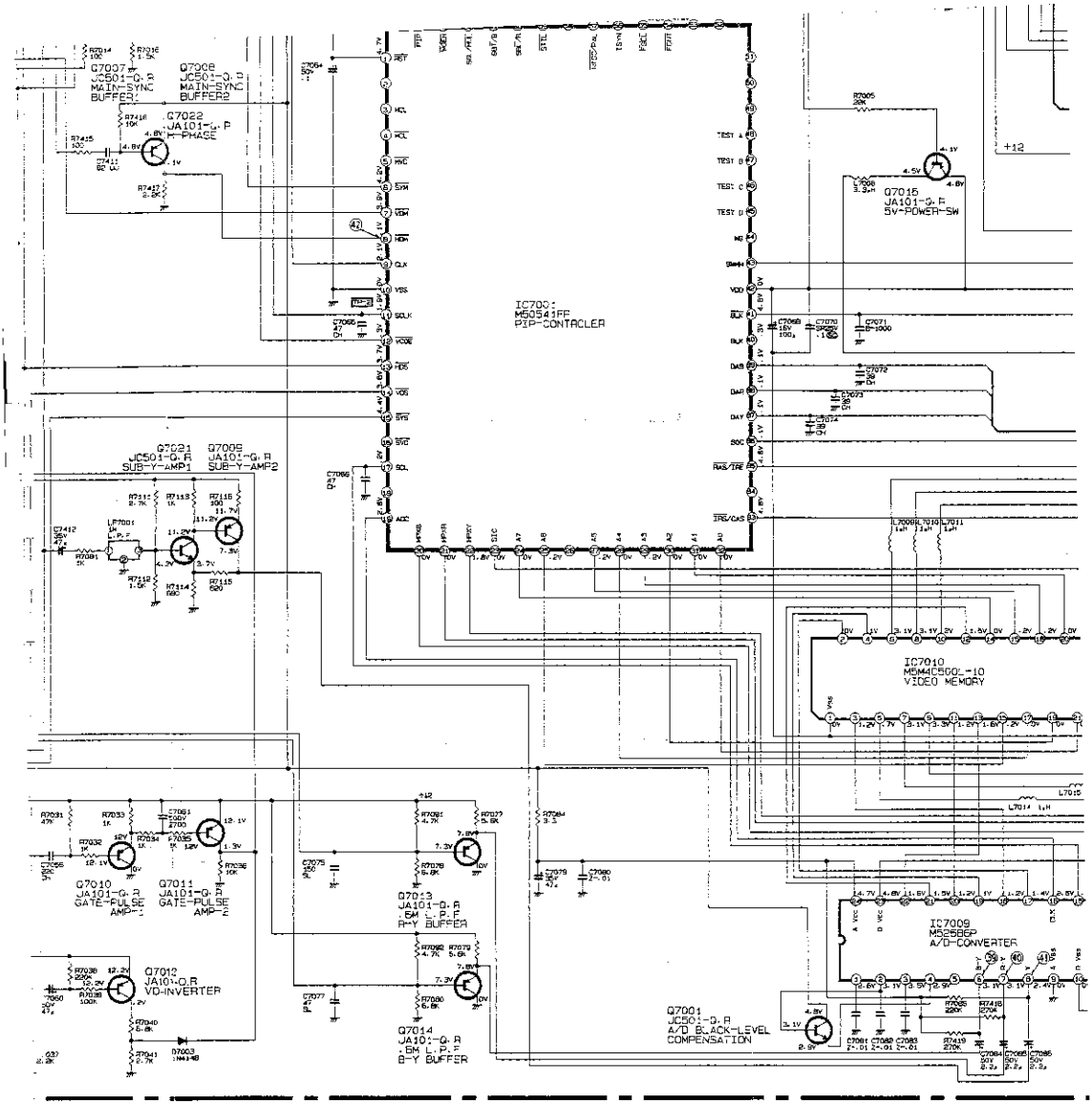

PCB-SIGNAL
CC
VM CONT-1
Q8008
JC501-Q.R
DIFF1
Q8010
JC501-Q.R
VM SW
Q8004
JA101-Q.R
VM DRIVE2
Q8002
2SD1264-P
VM-OUT2
PCB-PIP
YP
PWB-SIGNAL
CM
PCB-SIGNAL
CA
PCB-YUV
B-Y
R-Y
FAST-SW (CHILD H)
IC2002 CX20125
DYNAMIC-PICTURE
Q2008
JC501-Q.R
DYNAMIC-BLACK-BUFFER
Q2001
JA101
-Q.R
CLAMP-PULSE-FORMER
Q2002
JC501
-Q.R
MONO-MULTI3
Q2003
JC501
-Q.R
MONO-MULTI2
Q2004
JC501
-Q.R
MONO-MULTI1
Q2005
JC501-Q.R
BLUE-BACK-SW1
Q2005
JC501-Q.R
SHARPNESS
Y-AMP
IC2001 AN5860
YUV-SW
Q2007
JC501-Q.R
BLUE-BACK
-SW22
Q2009
JC501-Q.R
MENU-SW
FBP
BLUE-BACK-H
BLUE
YV
PCB-SIGNAL
YV
R-OUT
Y-OUT
C-OUT
+12
Y-IN
C-IN
PCB-AV
AF
AD
AC
PCB-CONTROL
DC
EP
PCB-SIGNAL
EP
L-IN
Q2010
JC501-Q.R
TEXT-SW
B-Y IN
B-Y OUT
R-Y IN
R-Y OUT
Y-IN
Y-OUT
PICT-OUT
+12
YM
YU
PCB-SIGNAL
YU
PCB-SWIFTEXT
TC
IC2001 AN5860
IC2002 CX20125
CT-37C2EDT(2/5)

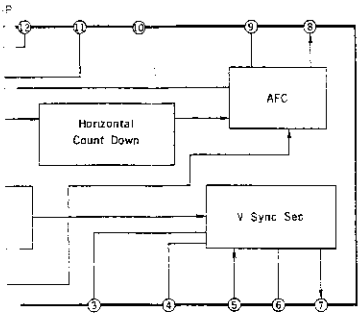

5.7V
12V
NEUTRAL
(BLUE)
LIVE
(BROWN)
PL
PG
IV
IC901
TEA2261
SLAVE-REG-OUT
Q901
2SD1887
REG-OUT
Q902
UC501-0.B
SLOW-START
IC903
KA2237L
ERROR AMP
IC951
ST-9050C
5V REG
Q953
2SB1135-R,S
12V REG
Q952
2SA950-Y
POWER-SW
PCB-AV
PCB-SIGNAL(V)
PCB-CRT
PCB-DBF
PCB-VMCRT
SS
DF2
DF1
SCREEN
F1
F2
EHT
HEATER
220V
TP1
PCB-LED
IC90: TEA226:
INTERNAL BIAS
VCC MONITORING
OVERVOLTAGE DETECTION
MODULATOR LOGIC
PRIMARY PULSES
AUTOMATIC BURST GENERATION
IS LOGIC
REGULATION PULSES
LOGIC PROCESSOR
POSITIVE OUTPUT STAGE
NEGATIVE OUTPUT STAGE
DEMAGNETIZATION SENSING
REPETITIVE OVERLOAD PROTECTION
CURRENT LIMITATION
SECONDARY PULSES
OSCILLATOR


PCB-SWIFTEXT
TD
@0.9Vp-p(H)
@210Vp-p(H)
PCB-PCC/DBF
PZ1
PZ2
PZ3
29V
AC
V-NF-IN
V-NF-OUT
50/60
V-RAMP
AFC
4.2V
V-PARA
H-PARA
12V
130V
5V
IC952
pPC78M05H
5V REG
Q951
2SA950-Y
POWER-SW-1
Q952
2SB135-A,S
29V REG
IC956
M5237-
ERROR AMP
Q953
2SC2482
H-DRIVE
IC950
TEA5170
MASTER
-REG-
OUT
Q952
2SD1875
H-OUT
DY
H
V
L491

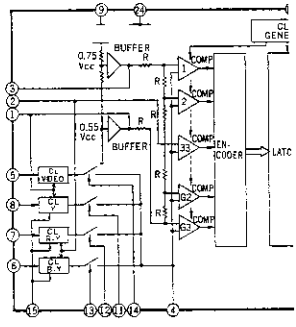

H-PARA
V-PARA
PCB-DEFL/REG
PZ3
12V
AFC
PCB-DEFL/REG
DV
1000V
FBT
DF
Q5503
2SC4450MSB-E
DBF-OUT
Q5504
JC501-R
DBF DRIVE1
Q5502
JC501-C-R
DBF DRIVE2
Q5501
JC501-G-R
V-PARABOLIC GEN
NEUTRAL
(BLUE)
LIVE
(BROWN)
PL
PCB-POWER-SUB
AC230V
50HZ
PY
PIC
PCB-ADG
PG
PIC
ADG-COIL
PE
PCB-CONTROL
PT
PCB-DEFL/REG
IC9A1
M51848F
RESET
COMPARATOR
OUTPUT
DIS-CHARGE
FLIP FLOP
IC9A1
TIMER
IC950
TEA5170
OSCILLATOR
LOGIC
SYNCHRO
POWER OUTPUT STAGE
SOFT START AND DUTY CYCLE LIMITING
ERROR AMPLIFIER
VCC MONITOR
IC951
SI-3050C
OUT-OUT ON/OFF CONTROL
PRE-REG
PROTECTION
ERROR AMP
INTERNAL BIAS
MODULATOR LOGIC
AUTOMATIC BURST GENERATION
DEMAGNETIZATION SENSING
TON/MAX/FOLD SOFT START
OSCILLATOR

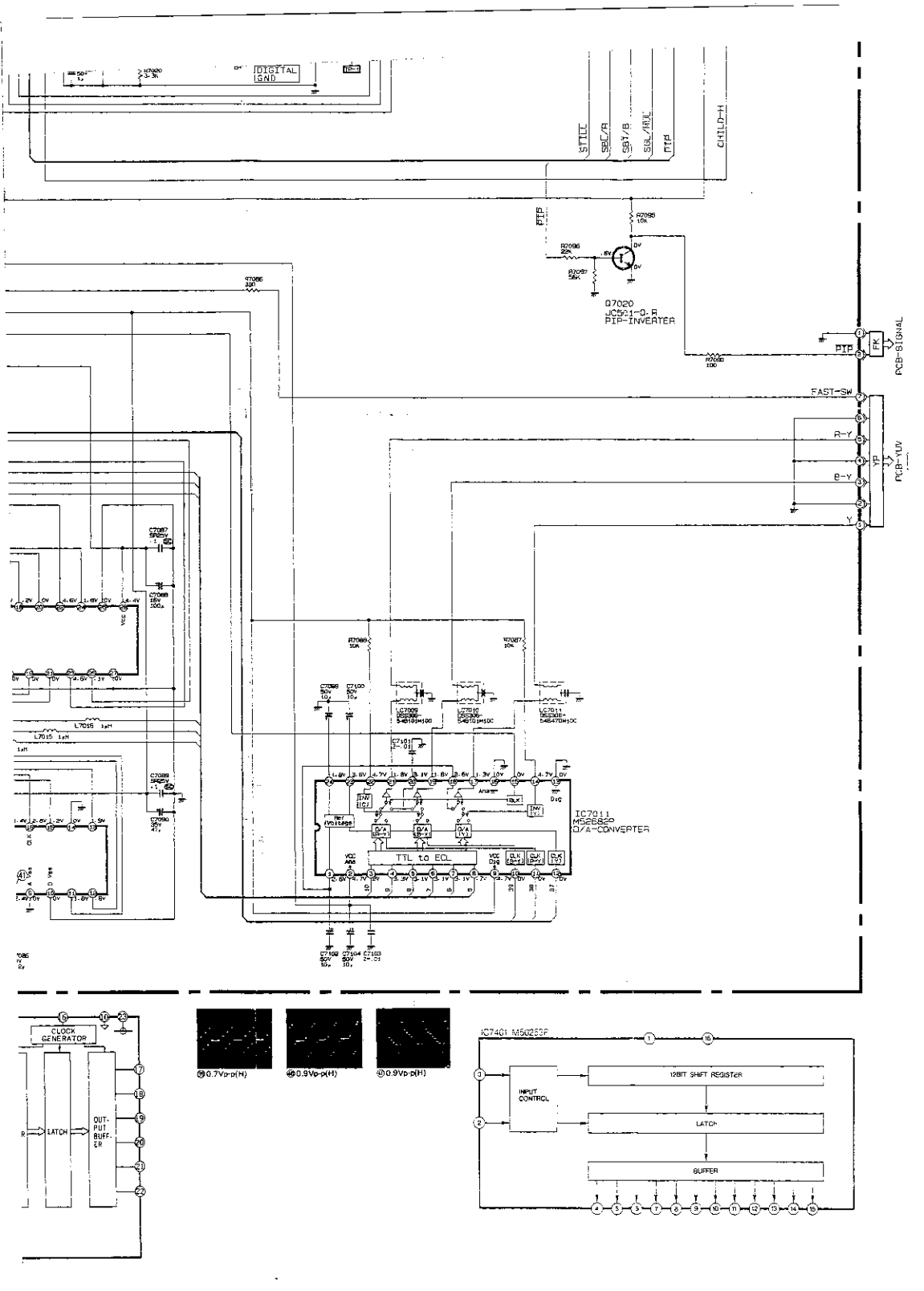

5.7V
12V
PCB-DEFL/REG
NEUTRAL
(BLUE)
LIVE
(BROWN)
IC901
TEA2261
SLAVE-REG-OUT
Q902
SLOW-START
Q901
REG-OUT
PCB-AV
PCB-SIGNAL (V)
PCB-CRT
SCREEN
F1
F2
EHT
PCB-DEF
HEATER
PCB-VMOT
TP1
PCB-LED
ADG-COIL
PCB-CONTROL
IC901: TEA2261
ERROR AMPLIFIER
INTERNAL BIAS
VCC MONITORING
OVERVOLTAGE DETECTION
MODULATOR LOGIC
AUTOMATIC BURST GENERATION
PRIMARY PULSES
DEMAGNETIZATION SENSING
OSCILLATOR
LOGIC PROCESSOR
POSITIVE OUTPUT STAGE
NEGATIVE OUTPUT STAGE
REPETITIVE OVERLOAD PROTECTION
CURRENT LIMITATION
SECONDARY PULSES

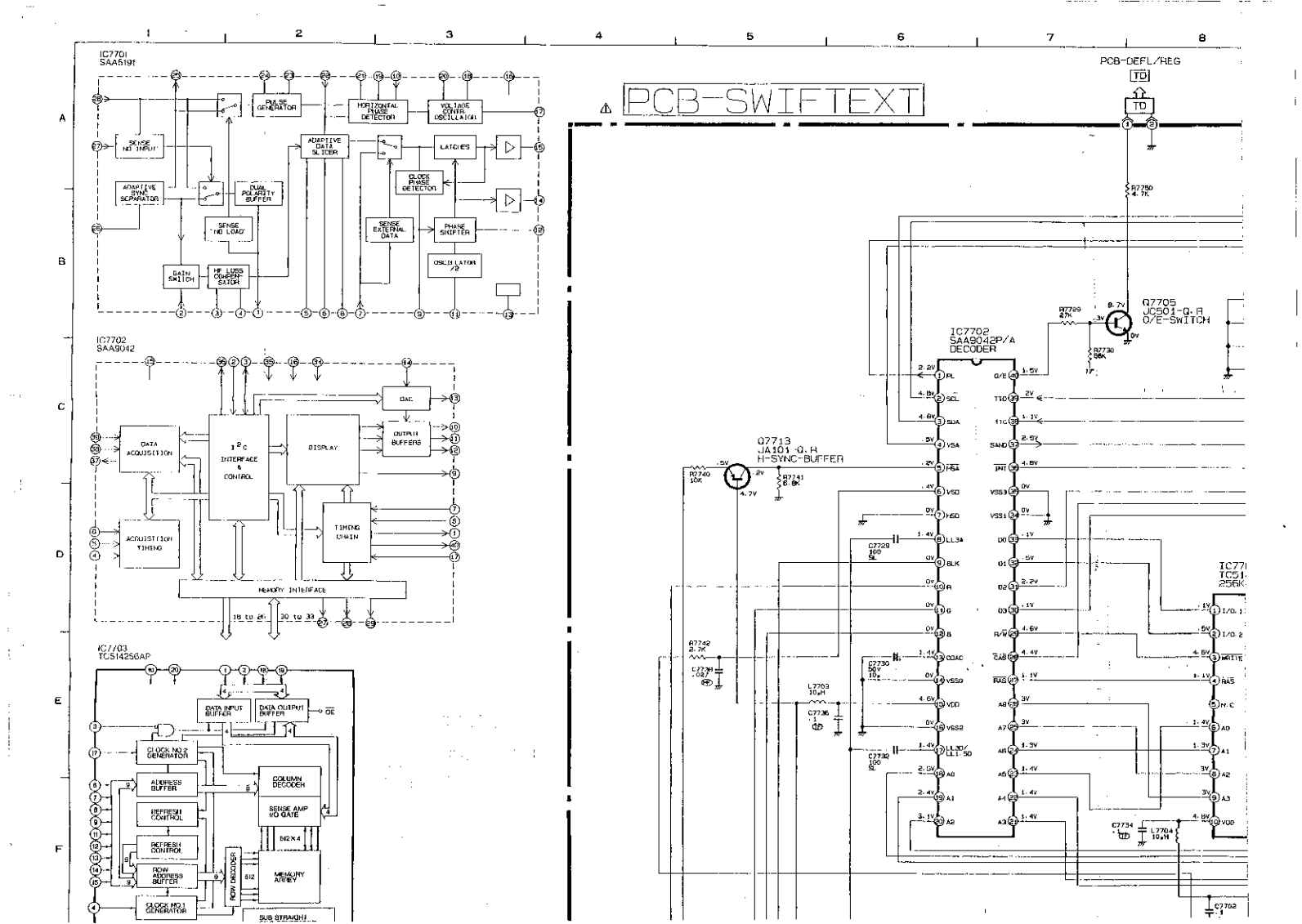


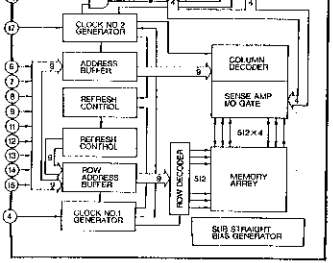


IC7009 M52686P

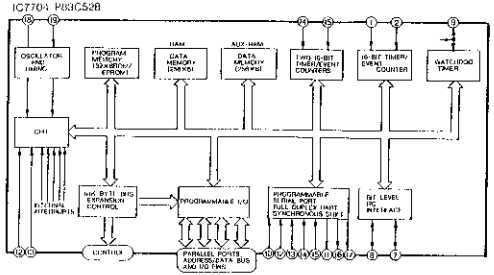



DIGITAL GND
STILL
SBC/A
SBY/B
SGL/RVL
PIP
CHILD-H
PIP
R7095 10k
R7096 22k
R7097 56k
Q7020 -UC511-0-A PIP-INVERTER
R7098 100
PCB-SIGNAL
PIP
FAST-SW
R-Y
B-Y
Y
PCB-YUV
YP
R7086 10k
R7087 10k
IC7011 M52822 D/A-CONVERTER
TTL to ECL
Ref Voltage
IC7401 M50259P
INPUT CONTROL
12BIT SHIFT REGISTER
LATCH
BUFFER
CLOCK GENERATOR
LATCH
OUTPUT BUFFER
0.7Vp-p(H)
0.9Vp-p(H)
0.9Vp-p(H)

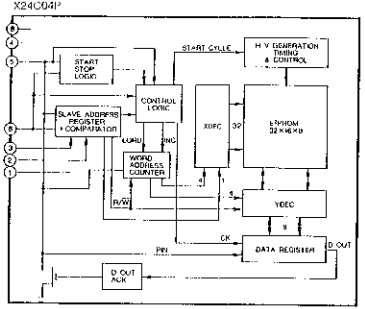

PCB-SWIFTEXT
PCB-DEFL/REG
IC7701
SAA5191
PULSE GENERATOR
HORIZONTAL PHASE DETECTOR
VOLTAGE CONTR. OSCILLATOR
SENSE NO INPUT
ADAPTIVE DATA SLICER
LATCHES
ADAPTIVE SYNC SEPARATOR
DUAL POLARITY BUFFER
CLOCK PHASE DETECTOR
SENSE NO LOAD
SENSE EXTERNAL DATA
PHASE SHIFTER
GAIN SWITCH
HF LOSS COMPEN-SATOR
OSCILLATOR /2
IC7702
SAA9042
DAC
DATA ACQUISITION
I²C INTERFACE & CONTROL
DISPLAY
OUTPUT BUFFERS
ACQUISITION TIMING
TIMING CHAIN
MEMORY INTERFACE
IC7703
TC514256AP
DATA INPUT BUFFER
DATA OUTPUT BUFFER
CLOCK NO.2 GENERATOR
ADDRESS BUFFER
COLUMN DECODER
REFRESH CONTROL
SENSE AMP I/O GATE
ROW ADDRESS BUFFER
ROW DECODER
MEMORY ARRAY
CLOCK NO.1 GENERATOR
IC7702
SAA9042P/A
DECODER
Q7705
JC501-Q,R
O/E-SWITCH
Q7713
JA101-Q,R
H-SYNC-BUFFER
R7750
4.7K
R7739
47K
R7730
68K
R7740
10K
R7741
6.8K
R7742
2.7K
C7729
100
5%
C7730
50V
10
C7732
100
5%
C7736
1
C7734
L7703
10µH
L7704
10µH
C7702
TD

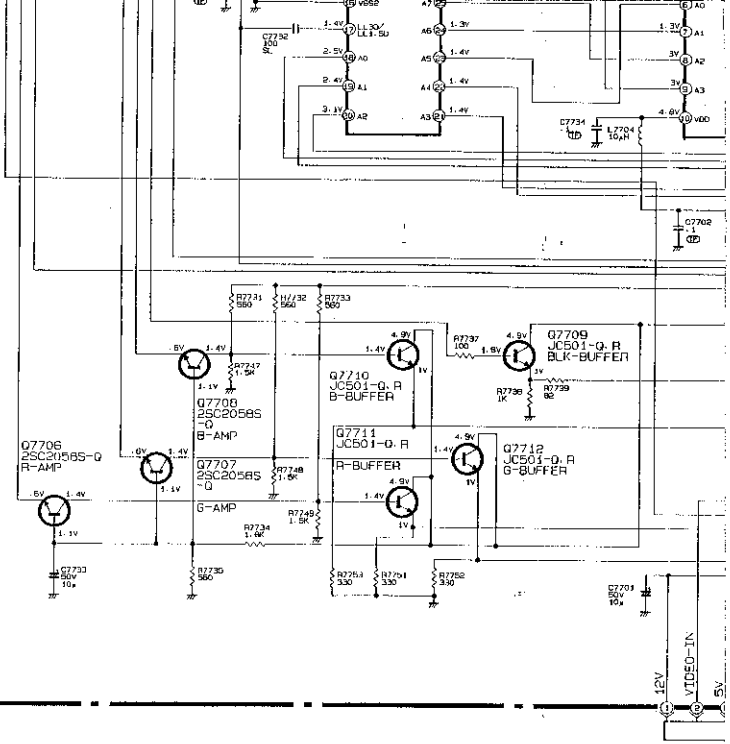


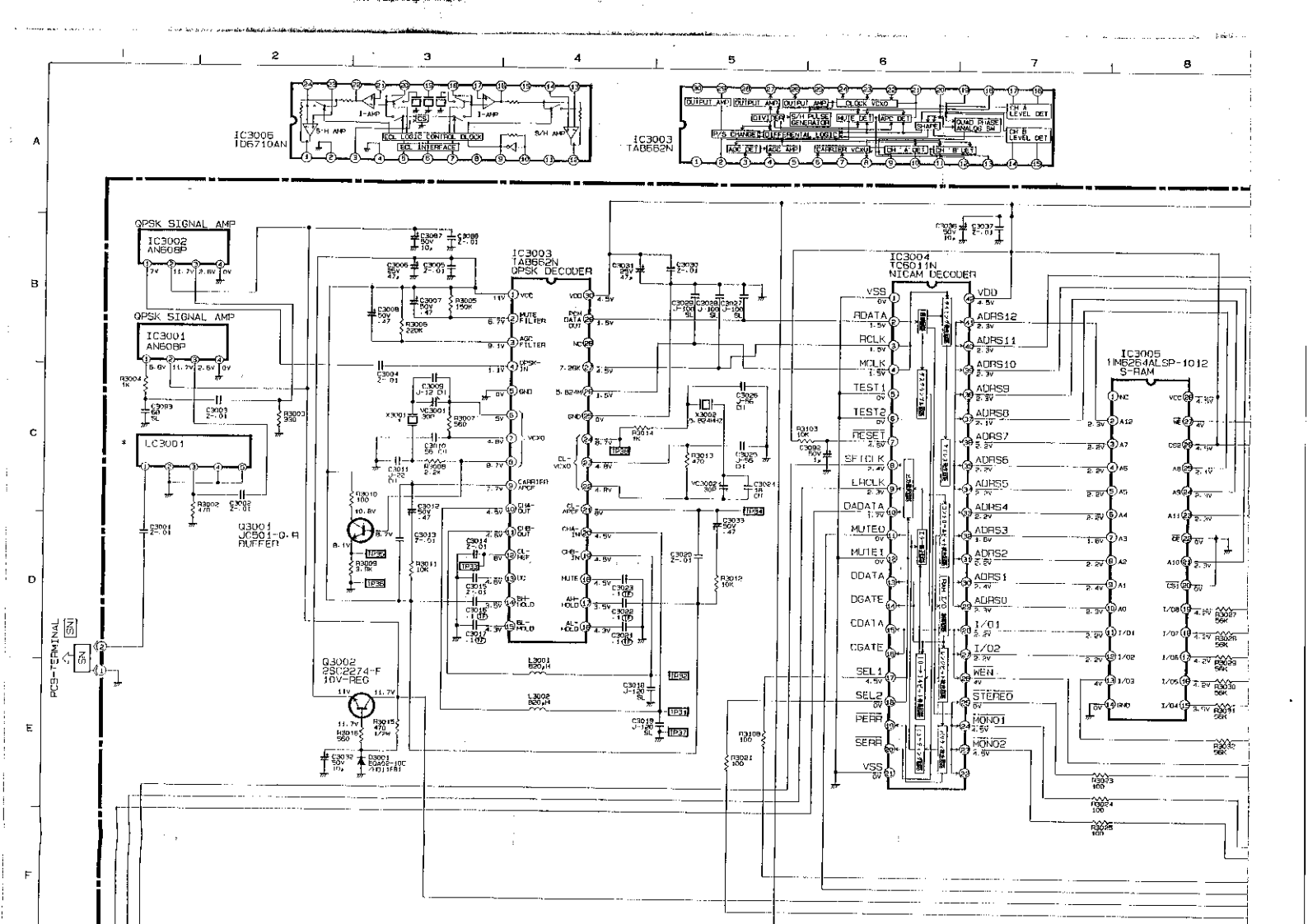
IC7704 P83C528



IC7705
X24C04P



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IC3003
TA8662N
QPSK SIGNAL AMP
IC3002
AN608P
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IC3001
AN608P
LC3001
Q3001
2SC501-O-A
BUFFER
IC3003
TA8662N
QPSK DECODER
IC3004
TC8011N
NICAM DECODER
IC3005
1M6264ALSP-10I2
S-RAM
Q3002
2SC2274-F
10V-REG
PCB TERMINAL
SW
VSS
ADATA
RCLK
MCLK
TEST1
TEST2
RESET
SFTCLK
LRCLK
DADATA
MUTEO
MUTE1
ODATA
DGATE
CDATA
CGATE
SEL1
SEL2
PERR
SERR
VDD
ADRS12
ADRS11
ADRS10
ADRS9
ADRS8
ADRS7
ADRS6
ADRS5
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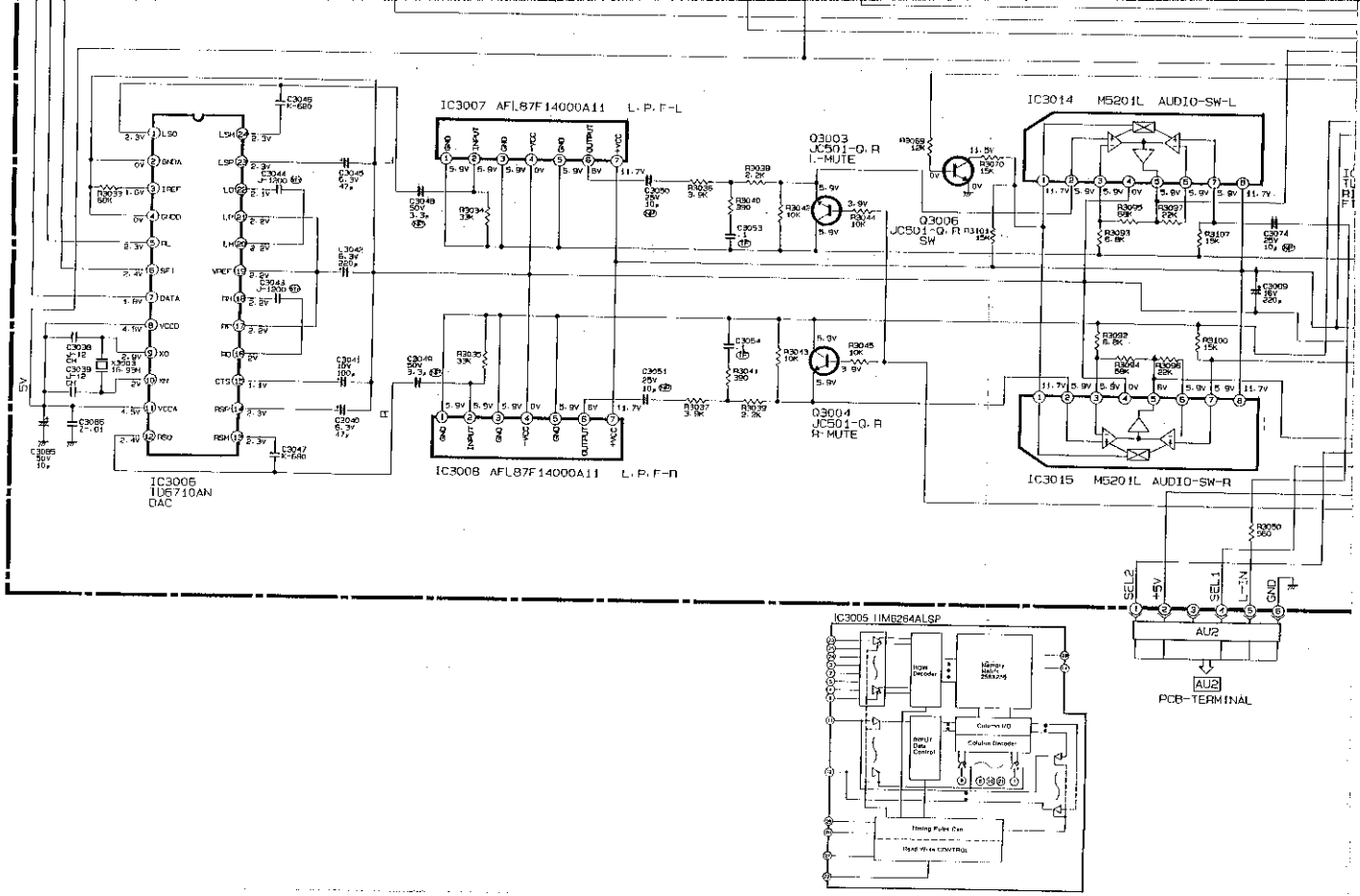
I/O2
WEN
STEREO
MONO1
MONO2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JC501-Q.R
L-MUTE
Q3004
JC501-Q.R
R-MUTE
Q3006
JC501-Q.R
SW
IC3014 M5201L AUDIO-SW-L
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IC3005 IIM0264ALSP
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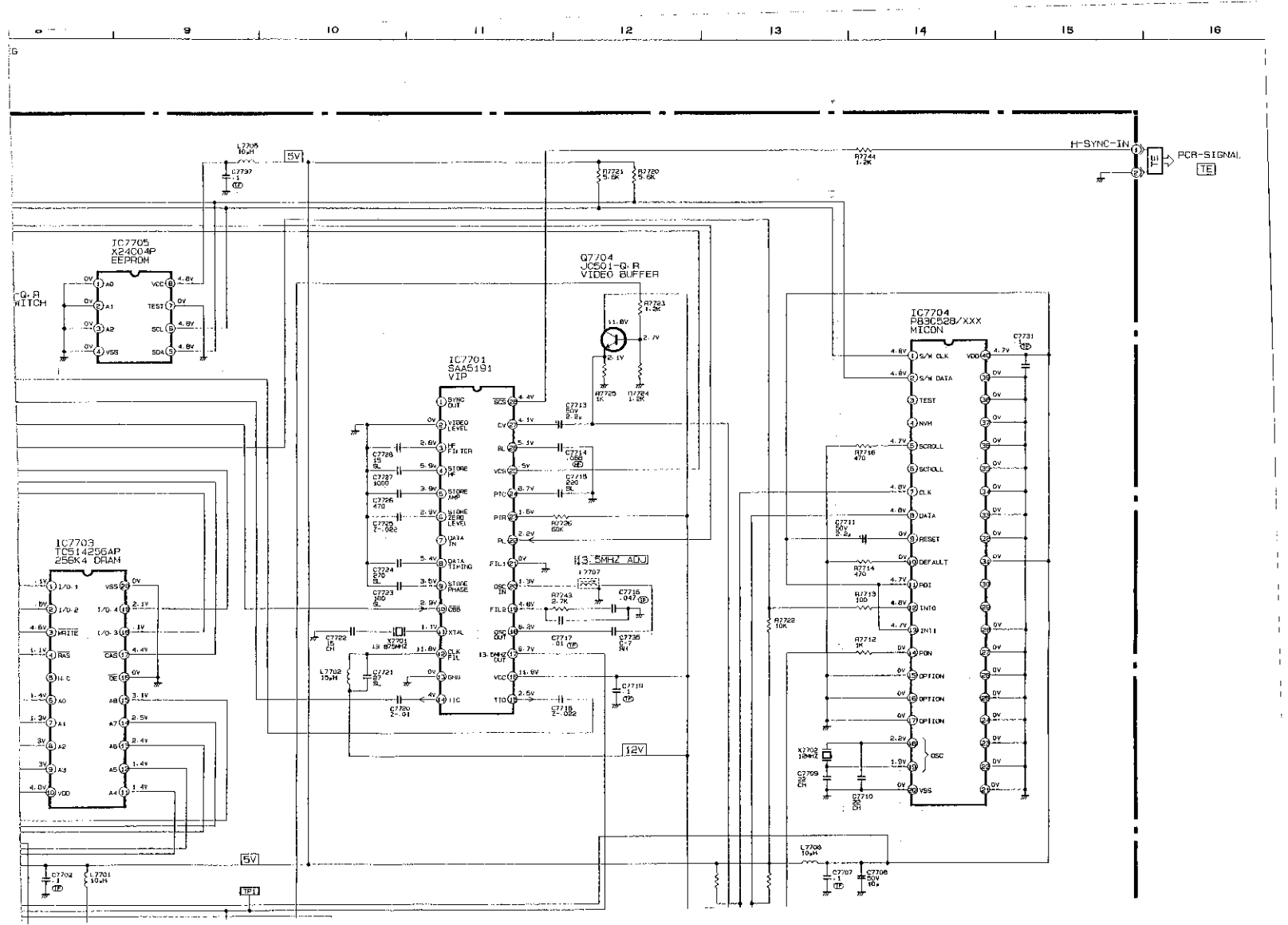
+5V
SEL1
L-TN
GND
AU2
PCB-TERMINAL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IC7703
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256K4 DRAM
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VIP
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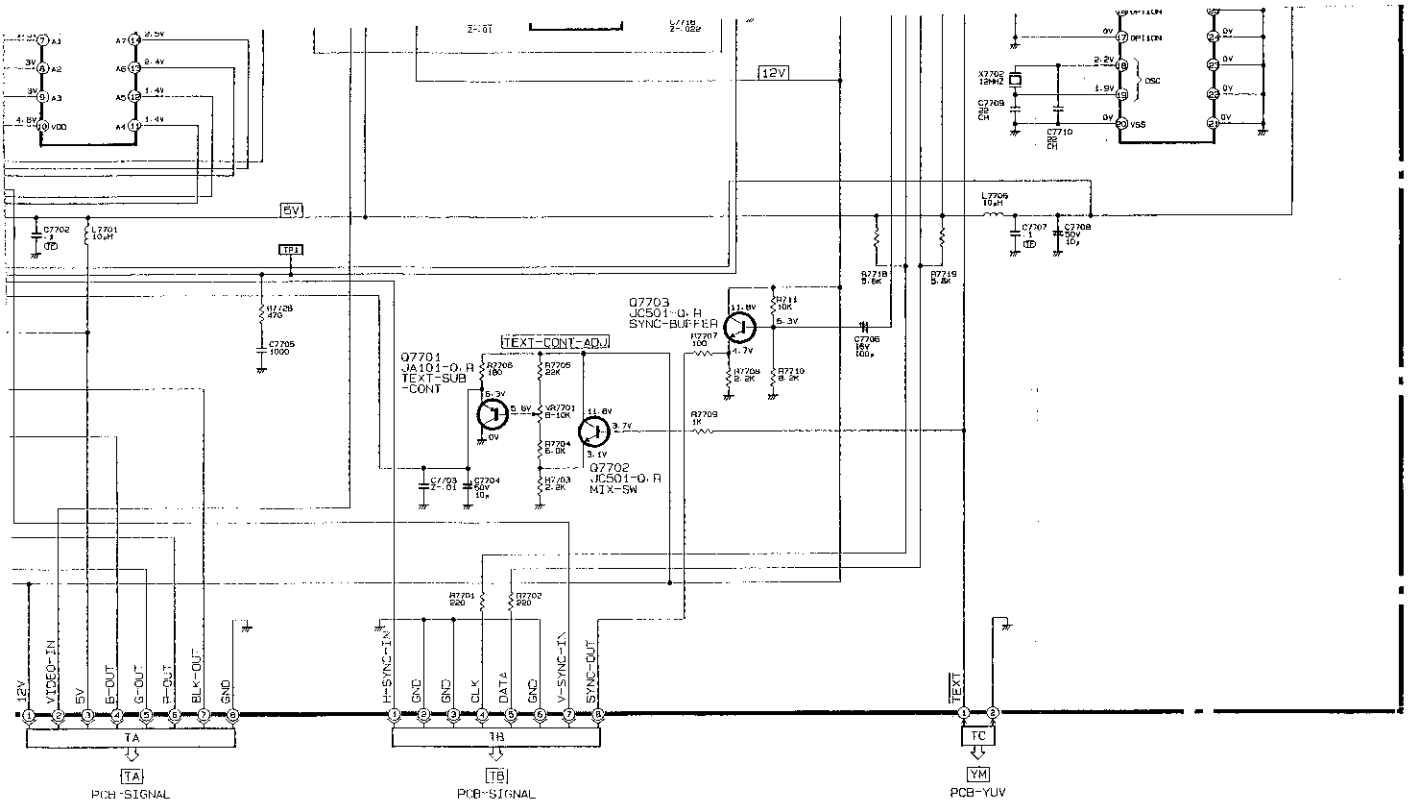
IC7704
P83C528/XXX
MICON
H-SYNC-IN
PCR-SIGNAL
5V
12V
13.5MHZ ADJ



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