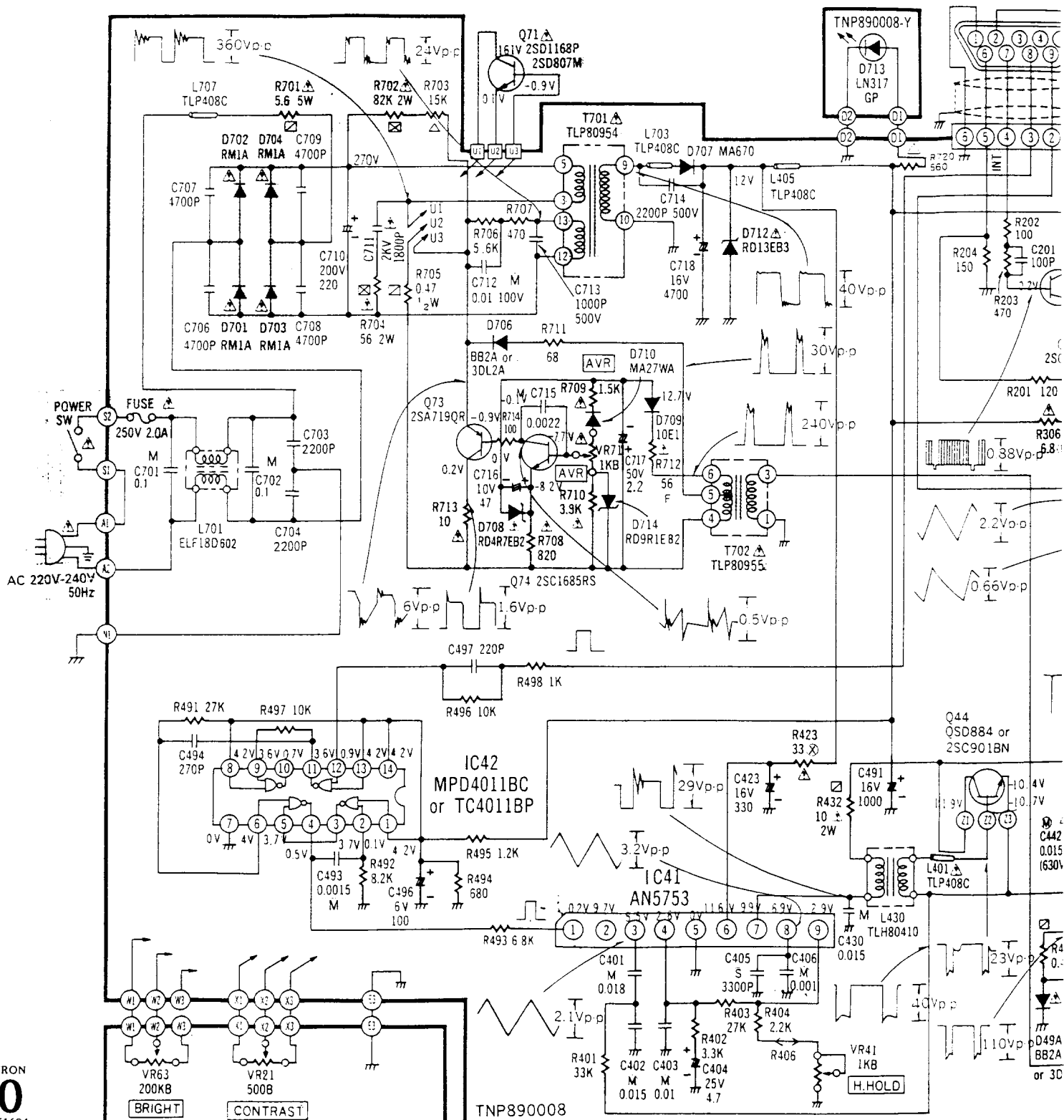


Panason



IMPORTANT SAFETY NOTICE

The component identified by shading or the international symbol for this schematic diagram incorporates special features important for protection from X-Radiation, fire and electrical shock hazards. When servicing it is essential that only manufacturer's specified parts be used for those critical components.

NOTE

1. RESISTOR

All resistors are carbon 1/4W resistor, unless otherwise noted the following marks:
Unit of resistance is OHM (1), K=1,000, M=1,000,000.
— Solid resistor — Fusible
— Non Flame — Wirewound
— Metal Oxide

2. CAPACITOR

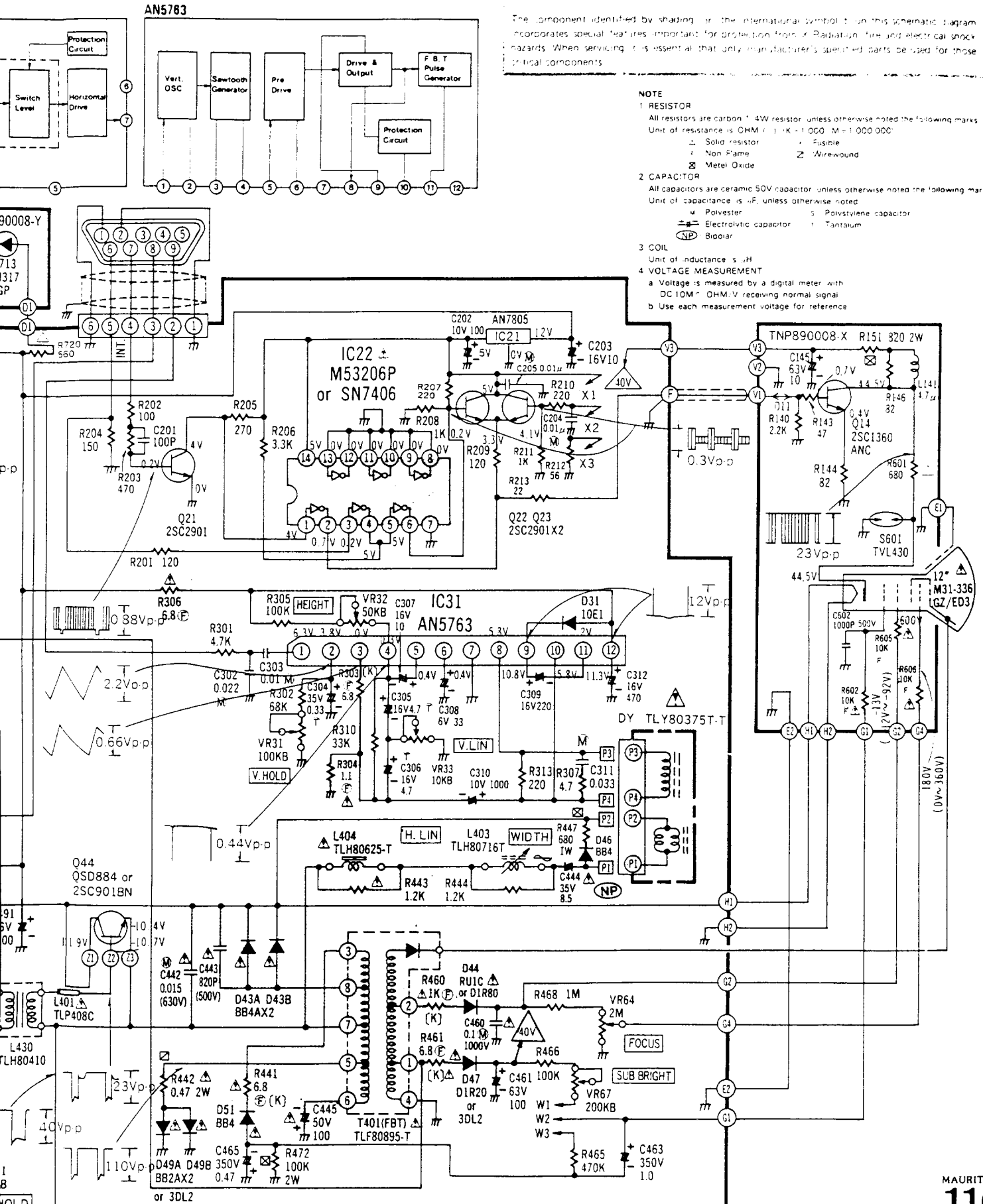
All capacitors are ceramic 50V capacitor, unless otherwise noted the following marks:
Unit of capacitance is pF, unless otherwise noted.
— Polyester — Polystyrene capacitor
— Electrolytic capacitor — Tantalum
— NP — Biolar

3. COIL

Unit of inductance is μ H

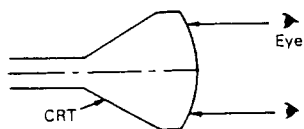
4. VOLTAGE MEASUREMENT

- Voltage is measured by a digital meter with DC 10M Ω OHM-V receiving normal signal
- Use each measurement voltage for reference



PRECAUTIONS

- Follow all the standard conditions presented in this document
- Measure the screen amplitude, distortion, etc. horizontally on the CRT face
- Use a TV Color Analyzer [1] (Minolta) to measure the luminance and the color levels. Calibrate with the Gamma standards. Calibrate the zero levels before use.
- Use a digital voltmeter rated for at least 10M OHM to measure the DC voltage
- The ambient illumination must be no greater than 10 lux.
- When checking the adjustments, demagnetize with a degaussing coil.
- Use a Helmholtz device to adjust this unit with no horizontal magnetic field and a vertical magnetic field of 0.5 Gauss. Inspect the unit under the same conditions.
- Unless otherwise specified, adjustment and check should be made under the standard condition.
- To be sure image width, height and distortion proceed as below:



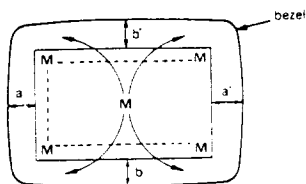
- * Measure level with respect to tube axis:
- Coarse adjustment of V. HOLD, H. HOLD, Centering, Correcting Magnet, V. LIN, and FOCUS must be done before fine adjustment.
 - Adjust coils by means of a hexagonal tuning tool (non-metallic). Adjust variable resistors by screw driver and deflection correcting magnets by square tuning tool (non-metallic).

STANDARD CONDITION OF ADJUSTMENT PROCEDURE

- Timing: Standard timing (See page 5)
- Input signal: Character 'H'
- Video level: Video.....High level (logic '1')
IntensifiedLow level (logic '0')
- Input source: AC 220V 50Hz
- Ambient temperature: Room temperature

7. Centering Adjustment

- Input signal of 'H' character of full screen size.
- Adjust the centering magnet so that image comes to the center of the bezel.



a = a
b = b

- Warm up time: More than 30 minutes
- Brightness control: Set luminance to 12ft-L (41.1cd/m²) at full flat field
- Contrast control: Set to maximum video gain
- Magnetic field: Vertical 0.5Gauss
Horizontal 0Gauss

ADJUSTMENT PROCEDURE

1. Voltage Adjustment

- Connect a digital voltmeter between the TP71 and ground.
- Adjust VR71 (AVR) to set the voltage to 12.0V

2. Vertical Frequency Adjustment

- Turn off the V. SYNC signal.
- Connect a frequency counter to blue lead wire of deflection yoke and to ground.
- Adjust VR31 (V. HOLD) to set the frequency to 40Hz.

3. Horizontal Frequency Adjustment

- Input signal of 'H' character of full screen size.
- Turn VR63 (BRIGHT) clockwise to its extreme end.
- Adjust VR67 (SUB BRIGHT) and make Background raster faintly on the screen.
- Adjust VR41 (H. HOLD) and center 'H' character horizontally on the Background raster.
- Move VR67 (SUB BRIGHT) back to the home position.

4. Width of the image adjustment

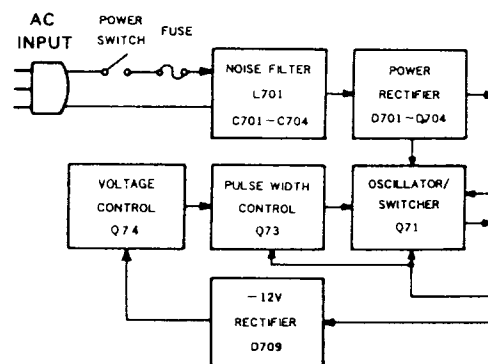
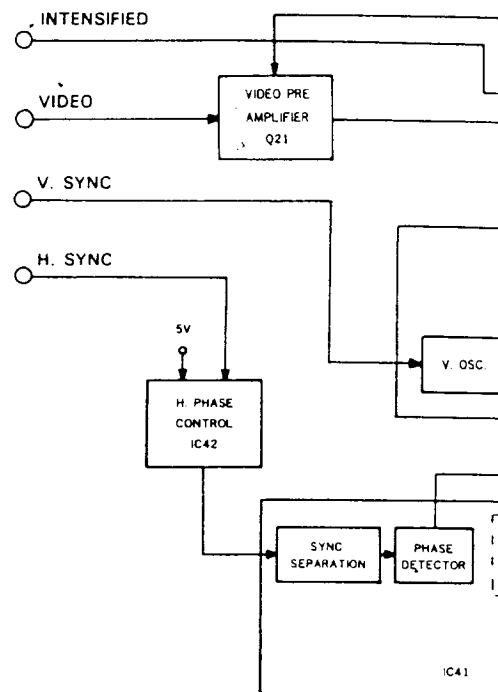
- Input signal of 'H' character of full screen size.
- Adjust L403 (WIDTH) to make the display screen 8.46" (215mm) wide.

5. Height of the image Adjustment

- Input signal of 'H' character of full screen size.
- Adjust VR32 (HEIGHT) to make the display screen 5.91" (150mm) high.

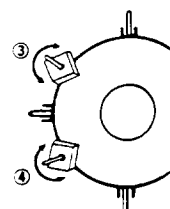
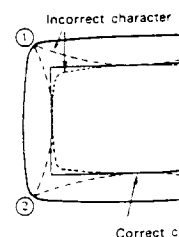
6. Vertical Linearity Adjustment

- Input signal of 'H' character of full screen size.
- Best the vertical linearity of the screen by adjusting VR33 (V. LIN).

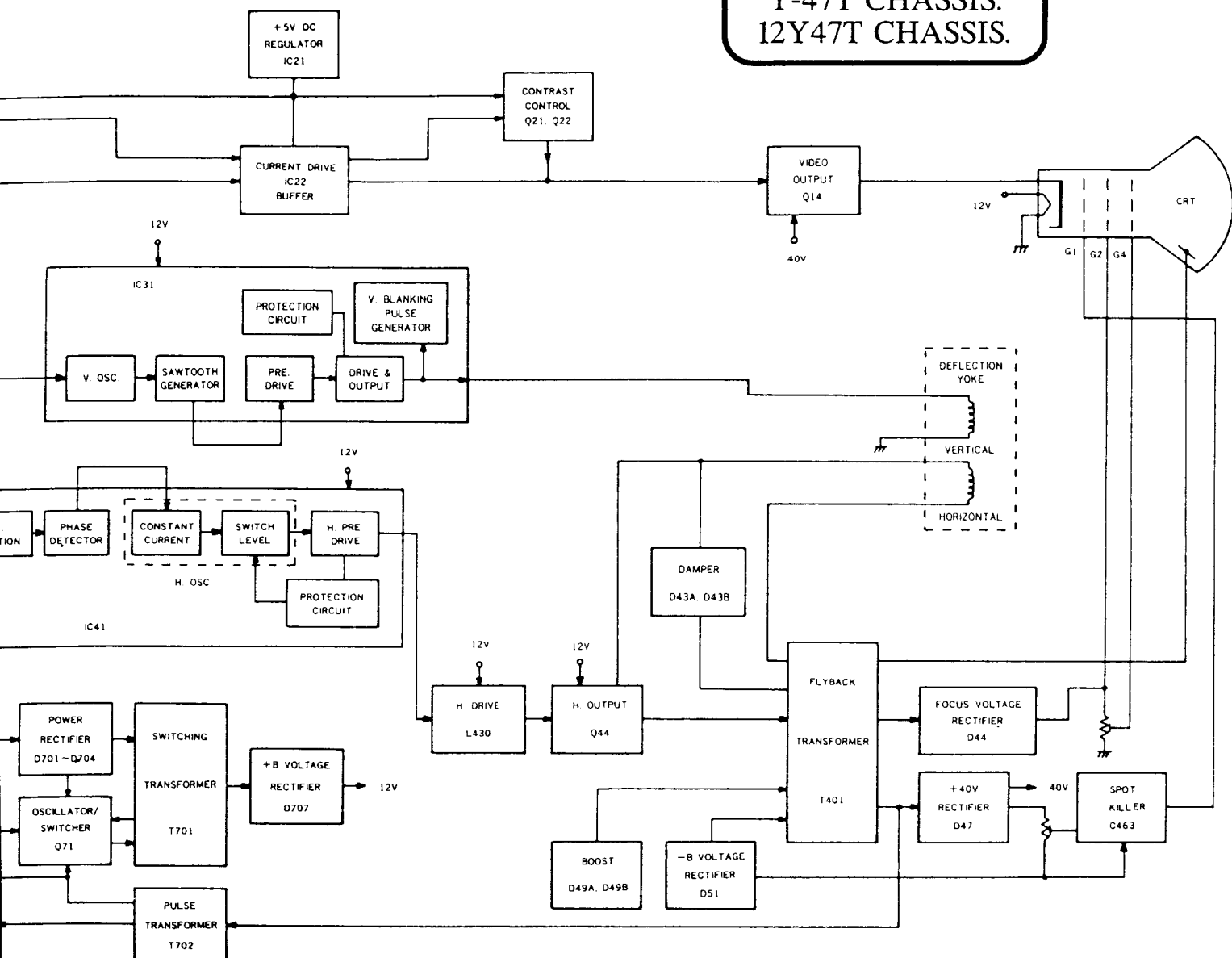


8. Correction Magnets for Geor

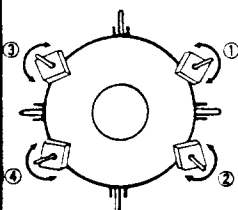
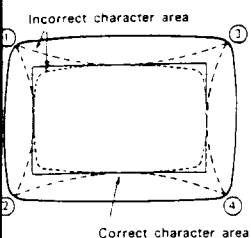
- Adjust each Distortion Cor the active character area a shape as shown in below



TR-125M9A.
TR-125M9B.
Y-47T CHASSIS.
12Y47T CHASSIS.



on Magnets for Geometric Distortion
each 'Distortion Correcting Magnet' until
active character area adjusted to the proper
as shown in below.



9. Brightness Adjustment

- (1) Input flat field signal.
- (2) Turn VR22 (BRIGHT) clockwise to its extreme end.
- (3) Turn VR21 (CONTRAST) counterclockwise to its extreme end.
- (4) Adjust VR67 (SUB BRIGHT) and make Background raster faintly on the screen.

10. Focus Adjustment

- (1) Input full flat field signal.
- (2) Set luminance to 12 ft-L (41 1cd/m²) with VR63 (BRIGHT).
- (1) Input signal of 'H' character of full screen size.
- (6) Adjust VR64 (FOCUS) until the focus in the center of an image and periphery by it is the best.

Main Board (TNP890008)

IC41					
1	0.2V	4	2.6V	7	9.9V
2	9.7V	5	0 V	8	6.9V
3	5.5V	6	11.6V	9	2.9V

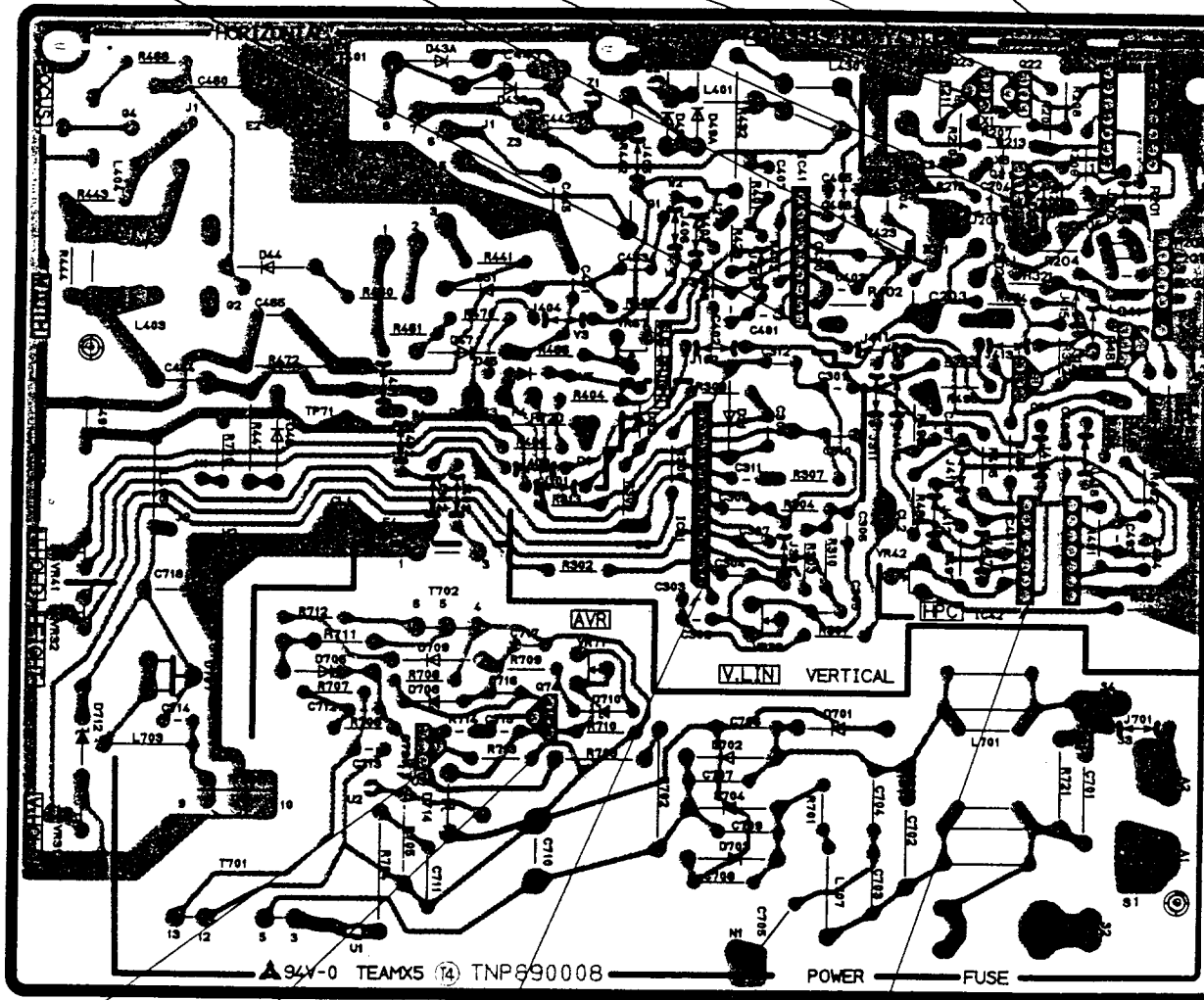
IC21	
I	0V
C	12V
O	50V

Q21	
C	4.0V
B	0.2V
E	0 V

Q23	
E	3.3V
B	4.1V
C	5.0V

Q22	
E	3.3V
B	0.2V
C	5.0V

IC22					
1	4.0V	5	5.0V	9	0V
2	0.7V	6	0.2V	10	0V
3	0.2V	7	0 V	11	0V
4	5.0V	8	0 V	12	0V



Q73	
B	0V
C	0.2V
E	-0.9V

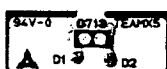
Q74	
E	-8.2V
C	-0.1V
B	-7.7V

IC31					
1	6.3V	5	0.4V	9	10.8V
2	3.8V	6	0.4V	10	5.8V
3	0 V	7	0 V	11	2.0V
4	0.3V	8	5.8V	12	11.3V

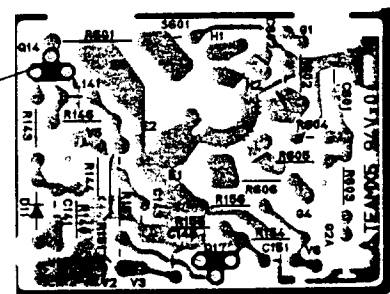
IC42					
1	4.2V	5	3.7V	9	3.6V
2	0.1V	6	4.0V	10	0.7V
3	3.7V	7	0 V	11	3.6V
4	0.5V	8	4.2V	12	0.9V

CRT socket Board (TNP890008-X)

LED Board (TNP890008-Y)



Q14	
E	0.4V
C	44.5V
B	0.7V



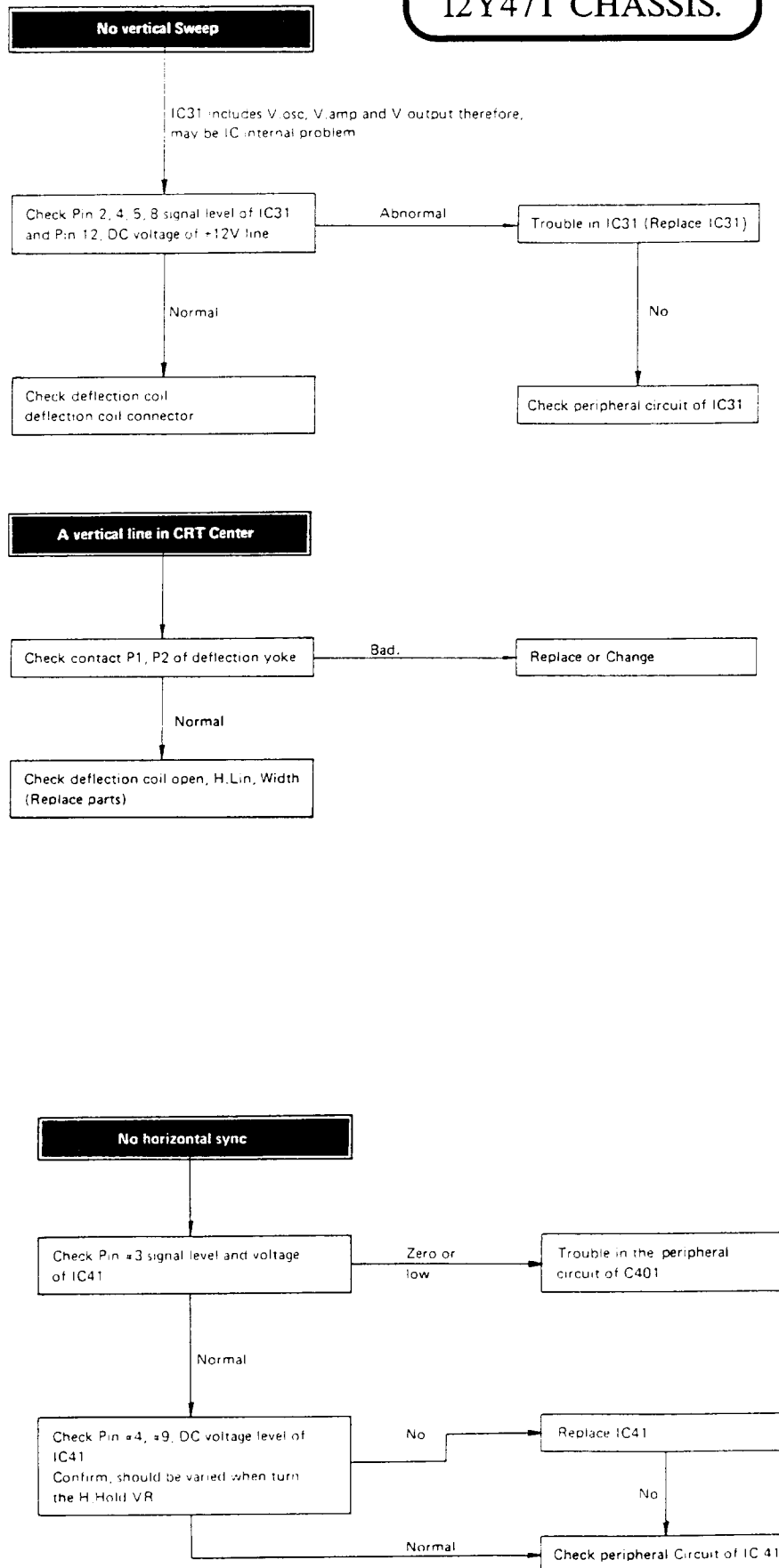
22				
9	0V	13	0 V	
10	0V	14	5.0V	
11	0V			
12	0V			



13	4.2V
14	4.2V

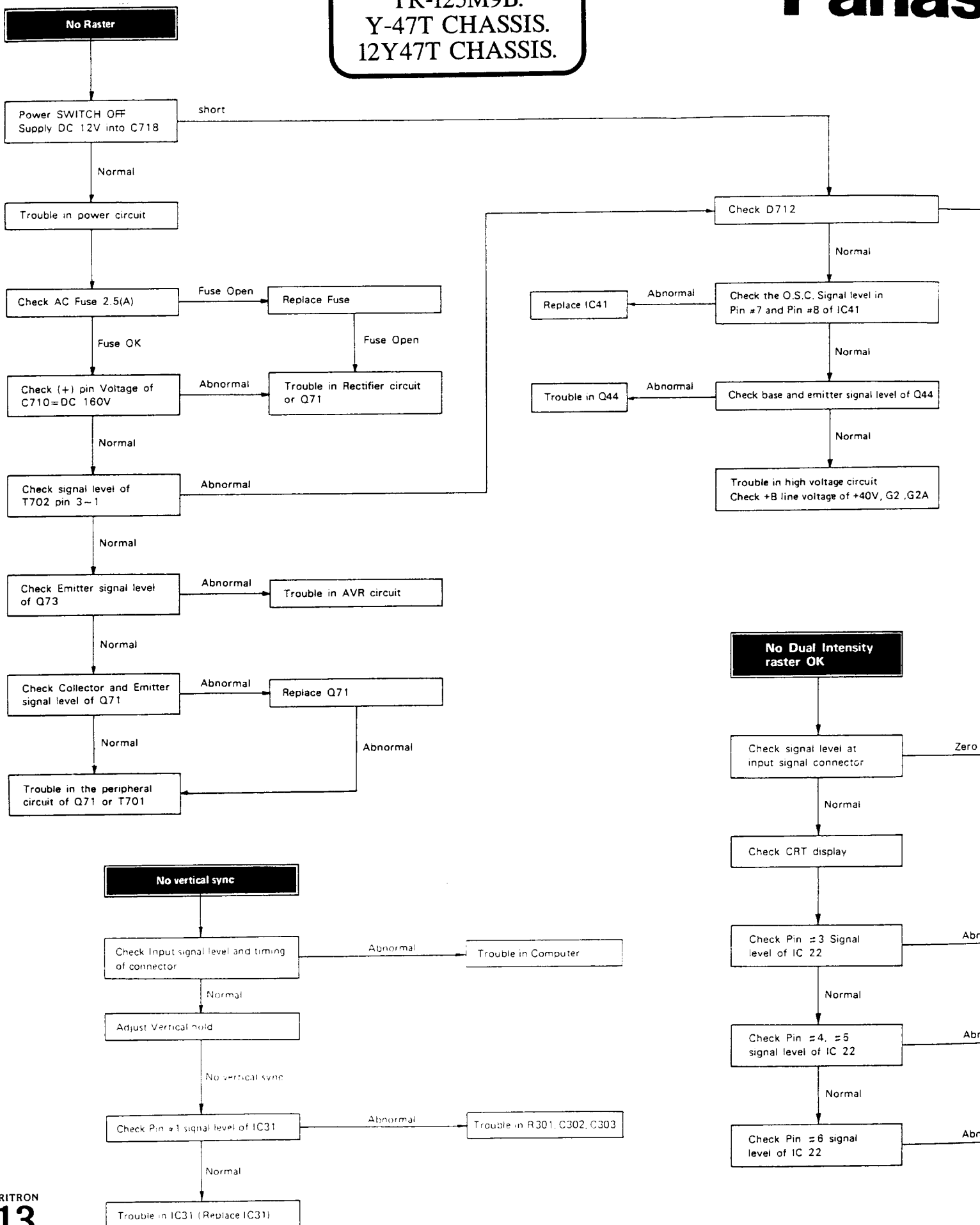


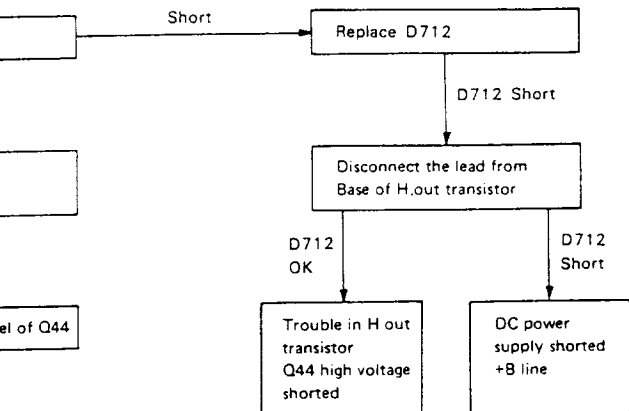
TR-125M9A.
TR-125M9B.
Y-47T CHASSIS.
12Y47T CHASSIS.



TR-125M9A.
TR-125M9B.
Y-47T CHASSIS.
12Y47T CHASSIS.

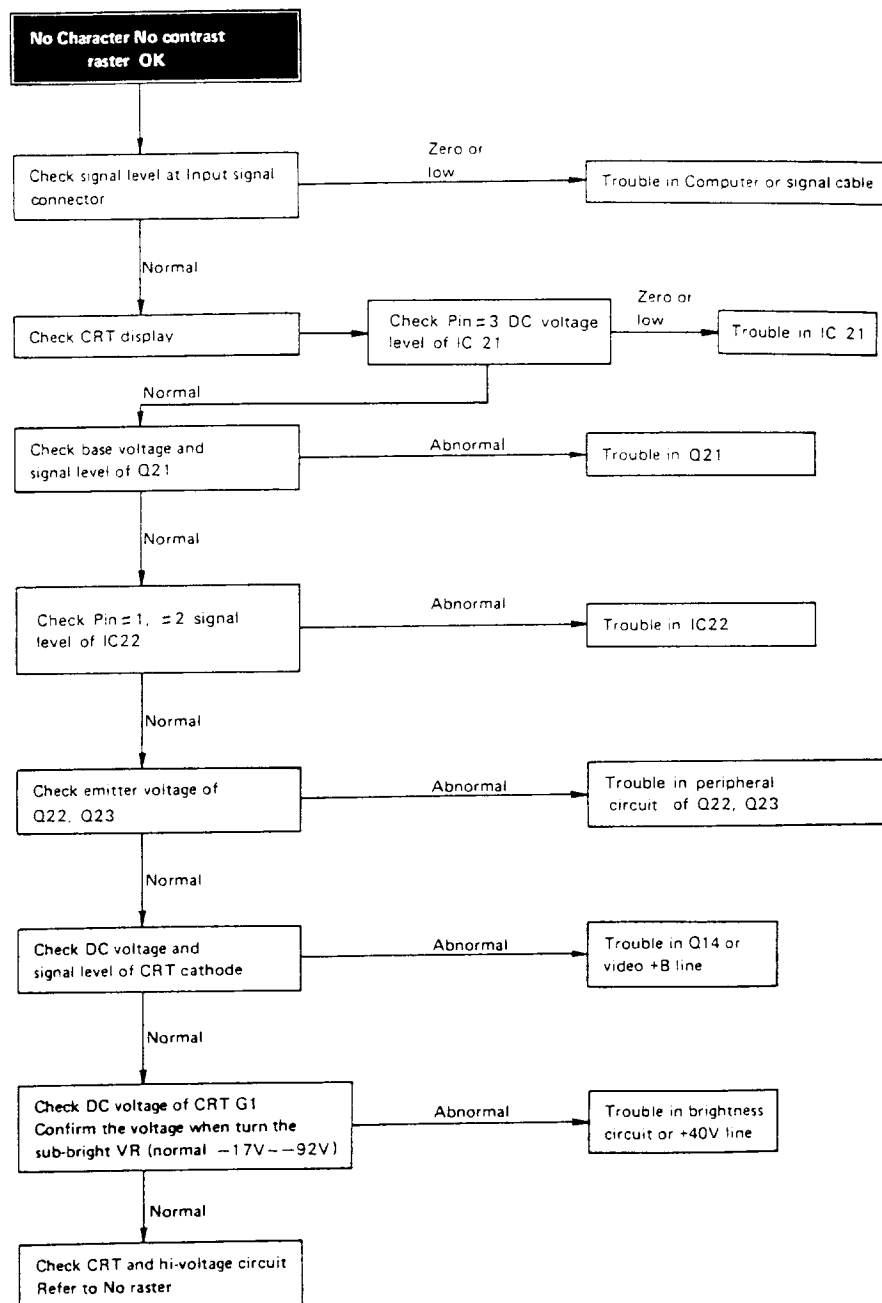
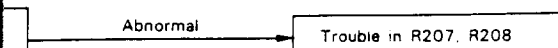
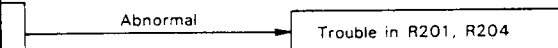
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el of Q44

G2, G2A



Control Board (TNP890008-Z)

