

General Information

1995

CRT: A66ECF10X05

Remote Control:

U79000100301

Door Flap: 219912901045

Door Catch: 70239120102

Main Power Button:

29291290101

Specifications

Picture Tube: 28" (71cm) measured diagonally
Colour System: PAL I
Receiving System: UHF
Channel Coverage: UHF band channels 21 - 69
Tuning System: 60 channels (voltage synthesised)
External Antenna: 75 ohm DIN type
Speaker: 2.75" x 4" (8 ohm)
5" superwoofer (8 ohm)
Audio Output: Max. 5W each side & superwoofer
Audio Monitor Output: RCA jack socket
AV Connection: 21 pin SCART
Headphones: 3.5mm headphone socket

General

Dimension: 732 (W) x 597 (H) x 488 (D) mm
Weight: 37Kg
Mains Supply: AC 240V 50Hz
Power Consumption: 150W

Service Adjustments

Colour Television Alignment Instructions

Test Equipment:

VIF Sweep Generator, SIF Sweep Generator, Colour Bar/Dot/Cross Hatch Generator, DC Power Supply (14V), Oscilloscope, Vacuum Tube Voltmeter, Volt Ohmmeter, High Voltage Meter, Ampere Meter (0.5 Class, DC 3mA max), Demagnetising Coil, Phillips Pattern Generator, Frequency Counter, Continuous Wave Generator.

TV Section

Step 1:

Function

Tank Coil Adjustment

Signal In

VIF Signal Generator.
Tuner test point Tp & tuner case (Earth).

Signal Out

Oscilloscope TP601 & Earth

Method

Adjust AGC bias voltage for maximum amplitude of waveform.
Adjust the output level of VIF sweep generator to achieve 2Vp-p output on oscilloscope.
Adjust T103 to obtain maximum amplitude of response at PC (39.5 MHz).

Remarks

Refer fig. 2 & fig. 3.
Supply DC +12.5V to QUAS TP402 (step 1 to 4 only).
Supply RF AGC bias voltage to TP101, refer fig.1 (step 1-3 only).

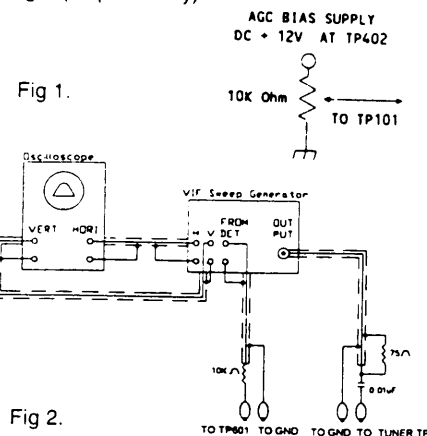


Fig 2.

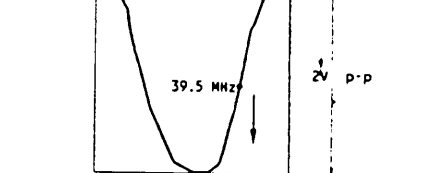


Fig 3.

Step 2:

Function

VIF Adjustment

Signal In

VIF Signal Generator.
Tuner test point & tuner case (Earth).

Signal Out

Oscilloscope TP601 & Earth.

Method

Connect resistor 100 ohm between TP102 and TP 103. Adjust AGC bias voltage for maximum amplitude of waveform.
Adjust the level of sweep generator to achieve 2Vp-p output.
Increase the output level of sweep generator in 20dB.
Adjust AGC bias voltage to achieve 2Vp-p output.
Adjust tuner convert for coil to obtain the waveform shown.

Remarks

Refer fig. 4.
Disconnect 100 ohm resistor after satisfactory results.

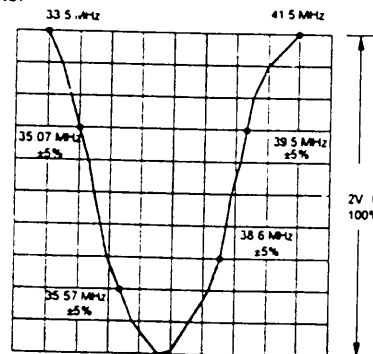


Fig 4.

Step 3:

Function

AFC Alignment.

Signal In

VIF signal generator.
Tuner test point Tp and tuner case (Earth).

Signal Out

Oscilloscope TP107 & Earth.

Method

Adjust the output level of VIF signal generator. For maximum amplitude of waveform without saturation, adjust T102 to obtain frequency response as shown in the fig., at 39.5MHz.

Remarks

Refer fig. 5.

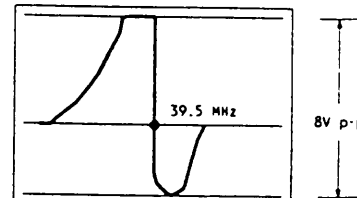


Fig 5.

Step 4:

Function

Inter-carrier Sound Demodulator Adjustment.

Signal In

Receiver colour bar signal with modulation (1KHz) steps 9 -13.

Signal Out

Oscilloscope and AC voltmeter (dual channel): TP603 (AF1) & Earth.

Method

Adjust T105 (AF1) to obtain a maximum compitlute and minimum distortion 1KHz waveform.

Remarks

TP603 through a low pass filter circuit, see fig. 9.

Step 5:

Function

B+ Adjustment.

Signal In

Power On.

Signal Out

AVO meter.

Method

Connect voltmeter to TP405 and Earth.
Adjust VR901 to read DC 150V ± 1V.

Step 6:

Function

Horizontal Circuit Adjustment.

Signal In

Signal Generator.

Signal Out

Frequency counter IC302 pin 41 & Earth.

Method

Set the TV to AV mode, connect the Frequency counter between IC301 pin 41 and Earth. Adjust VR303 (H. FREQ.) to the reading 15625 ± 20Hz, and back to TV mode. Receive Monoscope pattern, adjust VR301 (H. CEN) control to obtain a normal picture.

Step 7:

Function

Vertical Circuit Adjustment.

Signal In

Signal Generator.

Signal Out

Frequency counter V-DEFLECTION YOKE and Earth.

Method

Set the TV to AV mode, connect the Frequency counter between V-Deflection Yoke and Earth, adjust VR304 (V-HOLD) to the reading 44Hz +2-0Hz, and back to TV mode. Receive Monoscope pattern, adjust VR401 (V-HIGH) control to obtain normal picture.

Step 8:

Function

White Balance Adjustment.

Signal In

Receive a black and white picture signal.

Signal Out

Screen.

Method

Set screen controls to minimum, turn R. G. B. VR501, 502, 503 and drv. VR504, 505 to mid position. Turn the Sub-Brightness (VR305) control to mid position, then set the Contrast control and Brightness control to MIN position. Connect jumper wire between TP401 and TP402. Turn screen control clockwise until dim line appears. Then adjust VR503 to get a red H. Line, then adjust VR504 to get yellow line and then adjust VR505 to get white line. Disconnect the jumper wire after white BALANCE adjustment. Adjust VR502, VR501 to obtain a uniform white picture.

Step 9:

Function

Focus.

Signal In

Signal Generator.

Signal Out

Screen.

Method

Set Contrast control max. Brightness to mid position. Adjust Focus control to get sharpest picture.

Step 10:

Function

RF AGC.

Signal In

Signal Generator.

Signal Out

Screen.

Method

Set input signal level to 63dB ± 2dB.
Adjust RF AGC (VR101) control to point

This line make it straight Reduce the difference to exactly (Adjust CT301) minimum (Adjust T301) to Reduce the difference to minimum (Adjust VR302)

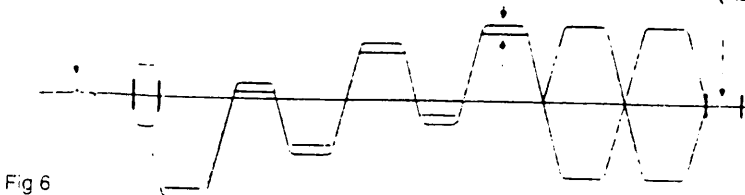


Fig 6

Signal In

Receive a Monoscope Pattern.

Signal Out

Screen

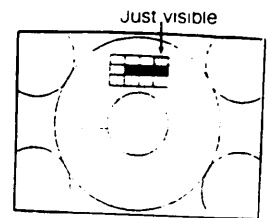


Fig 10.

Method

Set brightness, contrast and colour to centre position.
Adjust Sub-Brightness (VR304) to get NINE step of the grey scale just illuminate in a monoscope pattern as shown in fig. 9.

Remarks

Refer fig. 9.

Step 14:

Function

On Screen Adjustment.

Signal In

Signal Generator.

Signal Out

Screen.

Method

Press the volume up down key. Adjust T601 (OSD CEN.) for adjust the lettering to centre of CRT.

Step 15:

Function

Teletext Picture Adjustment.

Signal In

Receive a pattern with Teletext signal.

Signal Out

Frequency counter TP801 & Earth.

Method

Select a Teletext page, short pin 22 of IC801 to GND. Adjust CT801 until the frequency counter reading 6.0Mz ± 0.2KHz.

Remarks

Apply DC +3V across C023.

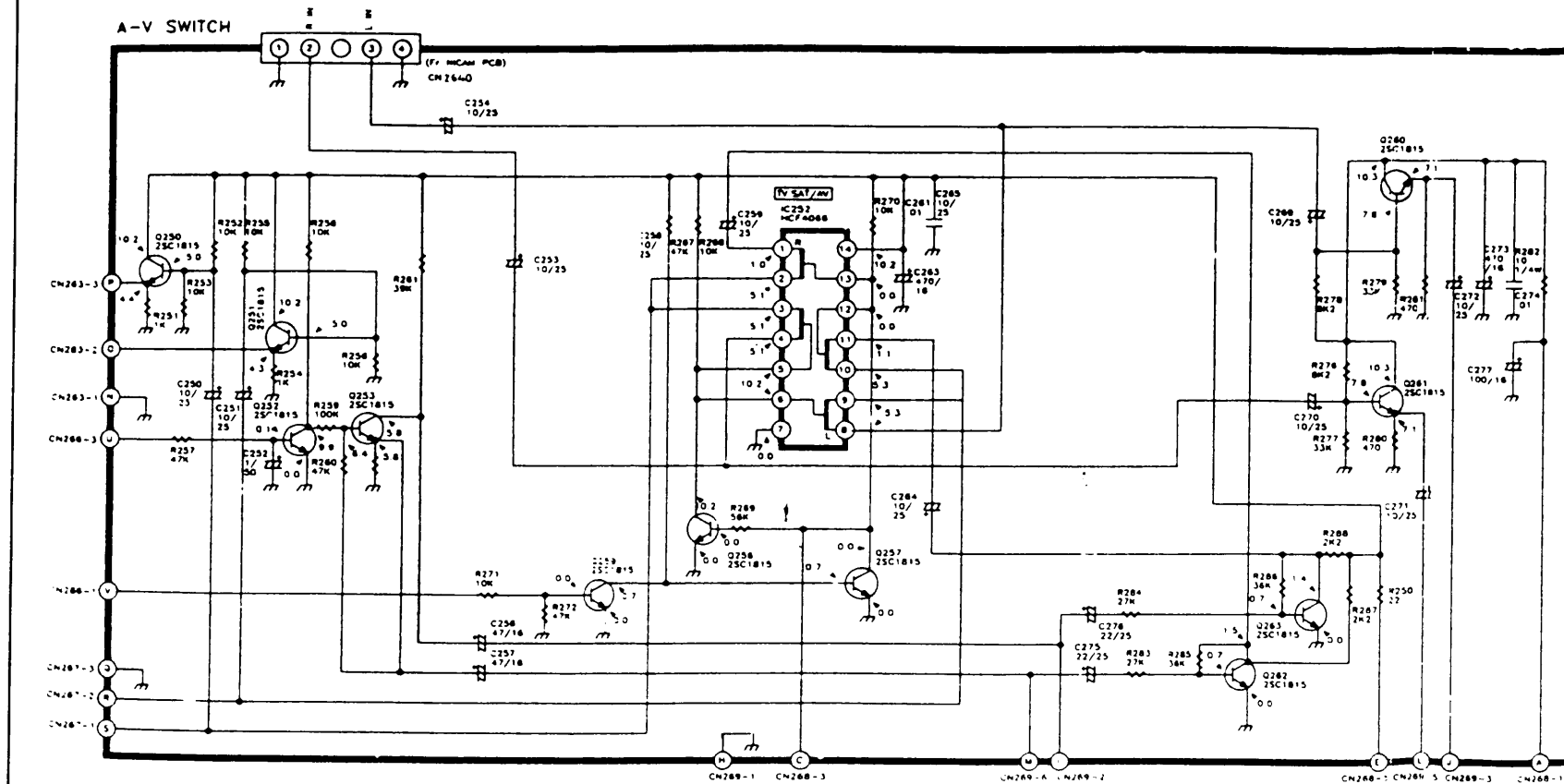
FM Sound Level Alignment

- 1: Receive a colour bar signal with NICAM and FM 1KHz sound.
- 2: Connect the voltmeter to speaker '+' and GND.
- 3: Select the TV set to NICAM mode and set the volume level to 0.5W.
- 4: Change to FM mode and adjust the VR1101 until the reading same as NICAM mode ±1dB.

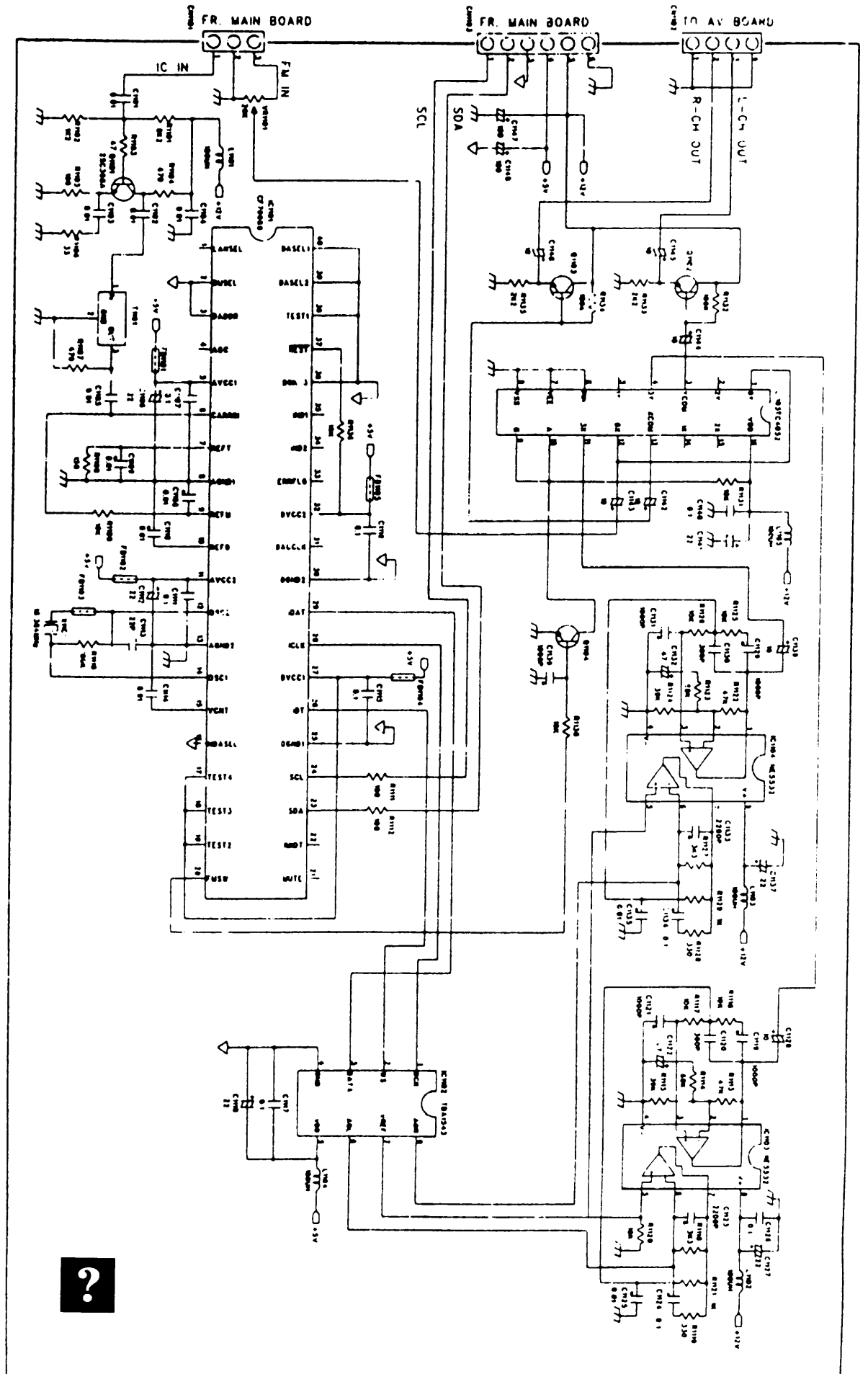
Pin Cushion Adjustment

- 1: Receive the Phillips pattern signal.
- 2: Adjust the H-SIZE control (755) until overscan.
- 3: Adjust the TRAPEZIUM control (756) until the pattern minimum distortion.
- 4: Adjust the EAST/WEST control (757) until the Pin Cushion minimum

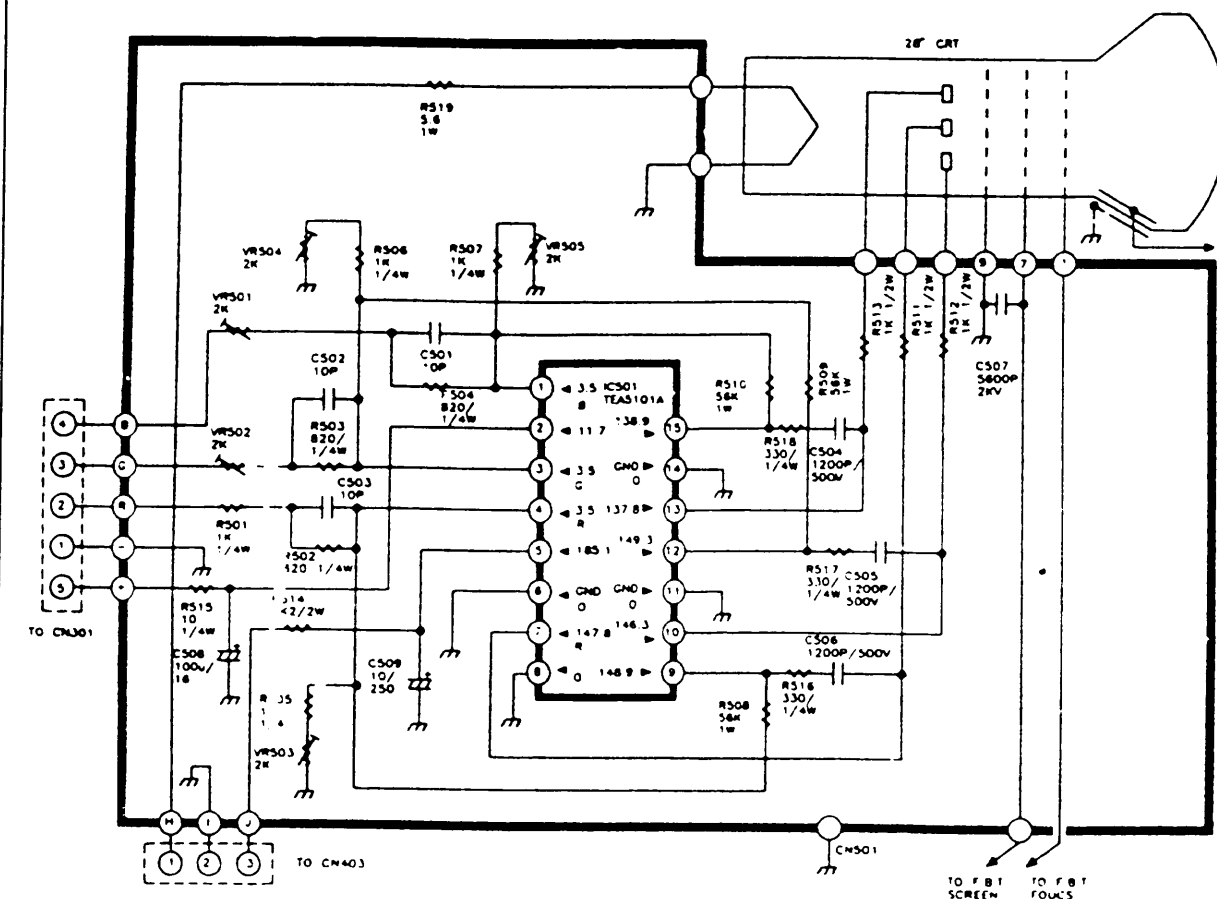
AV Switch Diagram



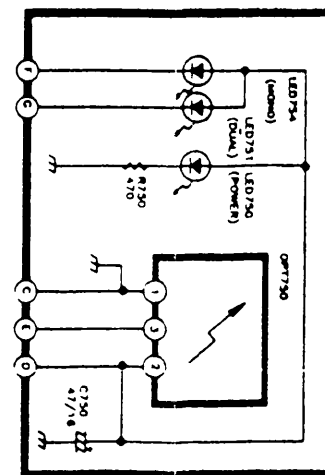
NICAM Diagram



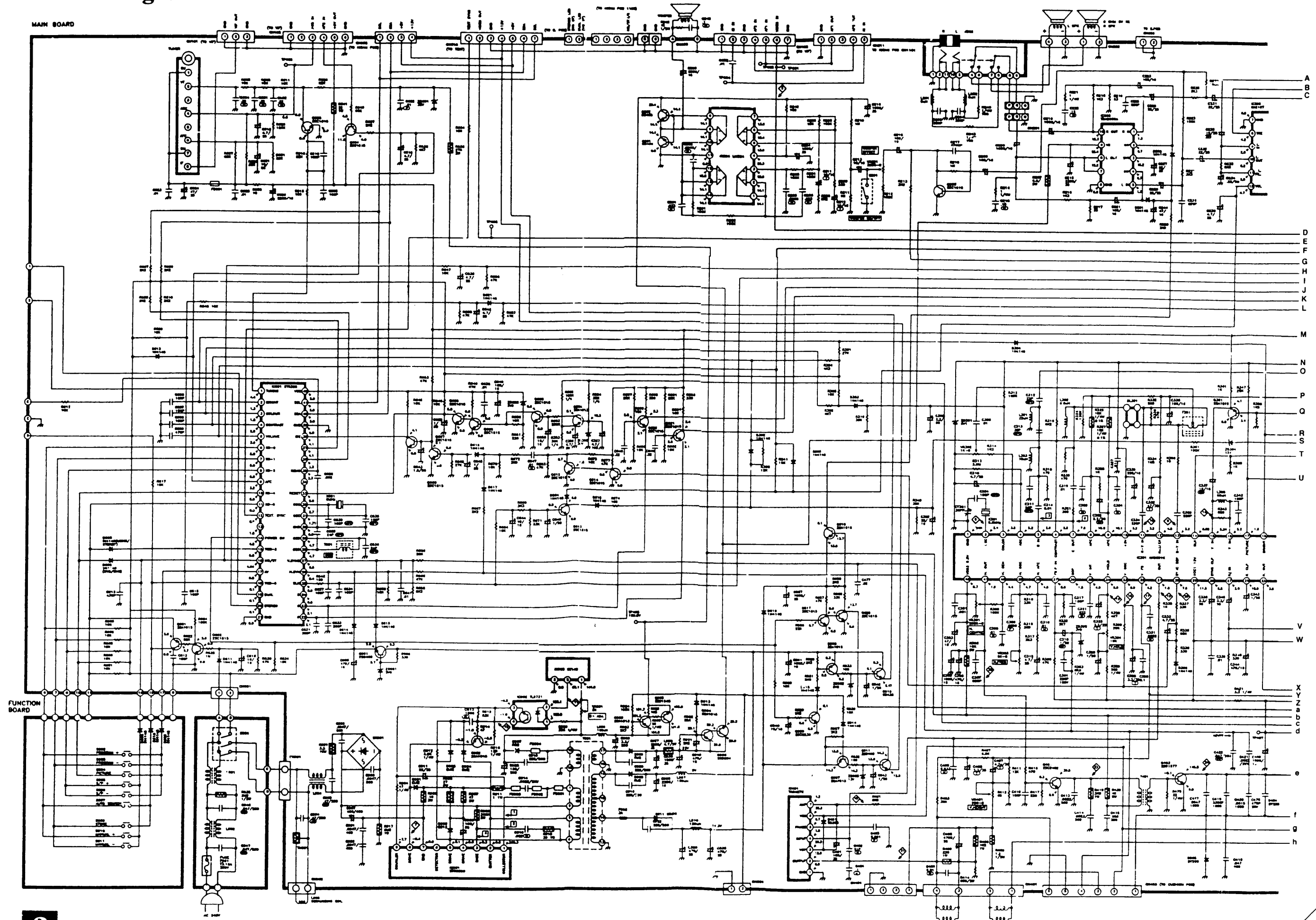
CRT Diagram



LED Diagram



Main Diagram



Continued at 1

Main Diagram Cont'd.

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