

General Information

1995
Chassis: C4E
CRT: A41EAN40X50
Remote Control:
23120092 (CT 9616)
Main Power Button:
23443649

Specifications

Input Power Rating 54 W, AC220 - 240V, 50Hz
 Aerial Input Impedance 75 ohm unbalanced type for UHF

Receiving Channels
 PAL-I Standard UHF 21 - 69
 Intermediate Frequencies:
 Picture IF 39.5 MHz
 Sound IF 33.5 MHz
 Colour Sub-Carrier 35.07 MHz
 Picture Tube 90 degree deflection (41cm)
 Sound Output 1.5W (at 10% harmonic distortion) x 1
 Speakers 77mm round 1pc
 Aux Terminals 21 pin socket (FULL)

Recommended Safety Parts

Item	Part No.	Description
C440	24082347	PF, 6700pF, ±3%, 1500V
C463	24212222	CD, 2200pF, ±10%
C801	24082363	PF, 0.22µF, m20%, AC250V
C802, C803	24094656	CD, 2200pF, ±20%, AC400V
F801	23144898	Fuse, 3.15A
F803	23144876	Fuse, 0.5A
IC835	23318299	IC, L78MR05
L462		DY, Supplied with V901
L901	23200696	Coil, Degaussing, TSB-2293AT
P801	23176934	Power Cord
Q404	A6871242	Transistor, 2SD1554
Q801	23314146	IC(STR), STR58041
Q826	A8643108	IC, Photo Coupler, TLP621(GR-LF)
R327	24339569	OMF, 5.6 ohm, 2W
R444	24338398	OMF, 0.39 ohm, 1W
R448	24338338	OMF, 0.33 ohm, 1W
R801	24009954	Metal-Glazed Resistor, 2.2M ohm, 1/2W
R844	24005007	Metal-Glazed Resistor, 8.2M ohm, 1W
R890	24000918	PTC Thermistor, 18 ohm, ±20%, 290V
R920	24000884	FR, 3 ohm, 1W
S801	23145434	Switch, Power, 2C2P
T401	23224983	Transformer, Horiz. Drive, TLN 1039
T461	23236465	Transformer, Flyback, TTFB4124AP
T801	23211929	Line Filter, TRF3130
T803	23217240	Transformer, Converter, TPW3301AR
V901	23312611	Picture Tube, A41EAN40X50
V901A	23902022	Socket, CRT, 8P

Service Adjustments

Safety Instructions

X-Ray Radiation Precaution

1: The E.H.T. must be checked every time the receiver is serviced to ensure that the C.R.T. does not emit X-Ray radiation as result of excessive E.H.T. voltage. The nominal E.H.T. for this receiver is 24.5 kV at zero beam current (minimum brightness) operating at 240v a.c. The maximum E.H.T. voltage permissible in any operating circumstances must not exceed 27.5 kV. When checking the E.H.T. use the 'High Voltage Check' procedure in this manual using an accurate E.H.T. voltmeter.

2: The only source of X-Ray radiation in this receiver is the C.R.T. To prevent X-Ray radiation, the replacement C.R.T. must be

identical to the original fitted as specified in the Parts List.

3: Some components used in this receiver have safety related characteristics preventing the C.R.T. from emitting X-Ray radiation.

Installation and Service Adjustments

Horizontal Centre Adjustment

- 1: Receive the WG PHILIPS pattern.
- 2: Set the contrast and colour to minimum and the brightness to centre.
- 3: Adjust H. CENTRE SUB control (R451) so the pattern can be located for d-c to be +4.0 mm as shown in Fig 1.

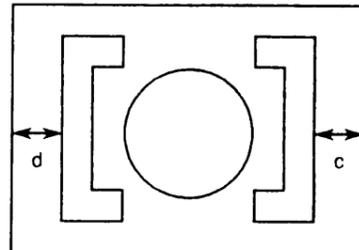


Fig 1.

Focus Adjustment

Adjust FOCUS Control on FLYBACK TRANS. (T461) for well defined scanning lines in the centre area on the screen.

Delayed R-F AGC Adjustment

- 1: Tune the set in the strongest station in your area.
- 2: Turn AGC DELAY Control (R151) on MAIN Board to fully counterclockwise position.
- 3: Adjust AGC DELAY Control clockwise until noise (snow) disappears on the screen.

C.R.T. Grey Scale Adjustment

- 1: Press VIDEO INPUT button on Remote Control unit to turn TV to video input mode. (Video input should have

no signal). Next press PICTURE SELECT button to select function and set CONTRAST to minimum, BRIGHTNESS to maximum and COLOUR to minimum.

- 2: Turn the SCREEN Control (on T461) fully counterclockwise.
- 3: Set the RED, GREEN and BLUE CUT OFF Controls (R557, R558, R559) counterclockwise in the centre position.
- 4: Set the GREEN and BLUE DRIVE Controls (R252, R253) to the centre position.
- 5: Set the CUT OFF SW. (S202) in the H. line position.
- 6: Set the SUB BRIGHTNESS Control to minimum.
- 7: Rotate the SCREEN Control gradually clockwise until the first horizontal line of a colour (RED, GREEN or BLUE) appears slightly on the screen. Set the SCREEN Control to this position.
- 8: Adjust the CUT OFF Controls to obtain the slightly lighted horizontal lines in the same levels of three colours (RED, GREEN and BLUE)
- 9: Return the CUT OFF SW (S202) in the receiving position. Press VIDEO INPUT button to turn TV to the TV mode.
- 10: Set the BRIGHTNESS Control to the maximum and COLOUR Control to the centre.
- 11: Adjust the BLUE and GREEN DRIVE Controls (R252/R253) to obtain proper white-balanced picture in high light areas.
- 12: Set the BRIGHTNESS and CONTRAST Controls to obtain dark grey raster. Then check the white balance in low brightness. If the white balance is not proper, retouch the CUT OFF Controls to obtain a good white balance in both low and high light areas.

Sub-Brightness Adjustment

- 1: Tune in a colour programme of Phillips pattern.
- 2: Set the CONTRAST Control to the minimum and the BRIGHTNESS

Control to the centre.

- 3: Set the COLOUR Control to the minimum.
- 4: Set the SUB-BRIGHT. Control (R551) so that the voltage across terminals Y-Z can be $0.2 \pm 0.05v$ with voltmeter and leave the receiver for five minutes in this state.
- 5: Watching the picture well, adjust the SUB-BRIGHT. Control in the position where the picture does not show evidence of blooming in high bright area and not appear too dark in low bright portion.
- 6: Check the proper picture variation by rotating the CONTRAST and BRIGHTNESS Controls to both extremes.
- 7: If the picture does not appear dark with the CONTRAST and BRIGHTNESS Controls turned to the minimum, or not appear bright with the controls turned to the maximum, adjust the SUB-BRIGHT. Control again for an acceptable picture.

Picture I-F Alignment

General:

Refer to fig. 2 for test equipment connection.

Preliminary Steps:

Supply +5 volts to the 5V-1 line.

Signal Generator:

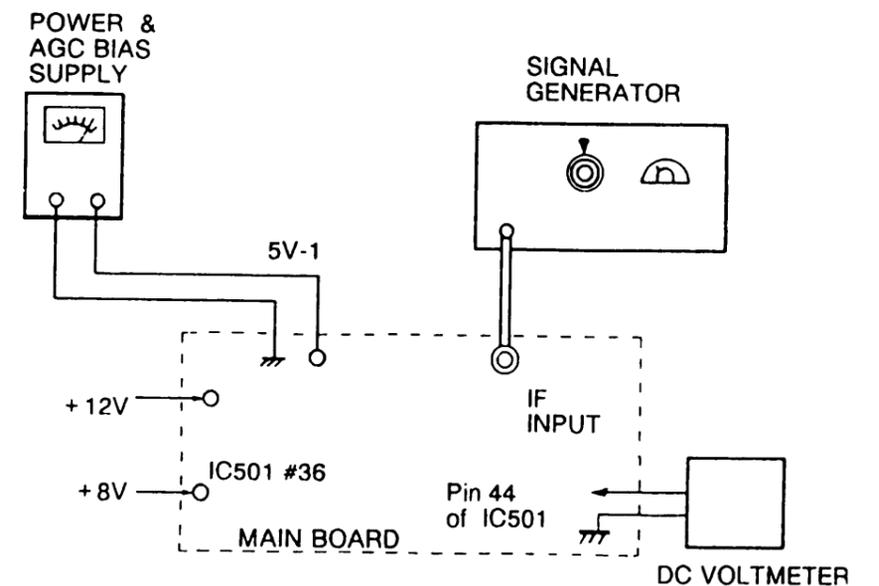


Fig 2.

Connect to both leads of R101 with signal level of 75 dBµ, and open the solder-link at IF OUT of tuner on the Main Board (see fig. 2).

DVM:

Connect to pin #44 of IC501 on the Main Board through the detector.

Step:

Detector Coil

Signal Generator:

39.5 MHz Carrier Wave (Level 75dBµ)

Adjust:

T103

Remarks:

- 1: Supply external DC power (+5v) to 5V-1 line.
- 2: Supply +8V to pin 36 of IC501.
- 3: Supply external DC power to +12V line.
- 4: Apply test signal to IF input.
- 5: Adjust T103 so that DC voltage at pin 44 of IC501 becomes $3.2V \pm 0.5V$.

After completing the above steps, disconnect the equipment and re-solder the links on the Main Board, and adjust the AGC Delay Control (R151) following DELAYED RF AGC ADJUSTMENTS.

Main Diagram

