

General Information

1996

EC3-A Chassis

CRT: A33LPE02X01

Remote Control: JXRF

Door Flap: 610-260-5228

Main Power Button:

610-237 5756

Also Covers:

Sanyo CB1456

Specifications

Note: give complete "SERVICE REF. NO." for parts order or servicing, it is shown on the rating sheet on the cabinet back of the TV set.

This TV receiver will not work properly in foreign countries where the television transmission system and power source differ from the design specifications. Refer to the specifications for the design specifications.

Power Source: AC 220 - 240V 50 Hz
TV System: System I
Colour System: PAL
Receiving Channel: UHF: 21 -69
Aerial Input Impedance: 75 ohm
Sound Output: 1.5 watts
Picture Tube: 37cm diagonal, 90 degree
(Visible Picture Diagonal): 34cm
Dimensions (W x H x D): 370 x 331 x 381.5 mm
Weight: 9.0Kg

Service Adjustments

Safety Precautions

- 1: An isolation transformer should be connected in the power line between the receiver and the AC line when a service is

performed on the primary of the converter transformer of the set.

2: Comply with all caution and safety related notes provided on the cabinet back, inside the cabinet, on the chassis or the picture tube.

3: When replacing a chassis in the cabinet, always be certain that all protective devices are installed properly, such as, control knobs, adjustment covers or shields, barriers, isolation resistor capacitor networks etc. Before returning any television to the customer, the service technician must be sure that it is completely safe to operate without danger of electrical shock.

X-Radiation Precaution

The primary source of X-Radiation in the television receiver is the picture tube. The picture tube is specially constructed to limit X-Radiation emissions. For continued X-Radiation protection, the replacement tube must be the same type as the original including suffix letter. Excessively high voltage may produce potentially hazardous X-Radiation. To avoid such hazards, the high voltage must be maintained within specified limit. Refer to this service manual high voltage adjustment for specific high voltage limit. If high voltage exceeds specified limits, take necessary corrective action. Carefully follow the instructions for +B1 volt power supply adjustment, and high voltage adjustment to maintain the high voltage within the specified limits.

Product Safety Notice

Product safety should be considered when a component replacement is made in any area of a receiver. Components indicated by mark ! in the parts list and the schematic diagram designate components in which safety can be of special significance. It is particularly recommended that only parts designated on the parts list in this manual be used for component replacement designated by mark !. No deviations from resistance wattage or voltage ratings may be made for replacement items designated by mark !.

B1 Power Supply Adjustment

- 1: Set VR351 to be mechanical centre before pressing the main switch.
- 2: Tune the receiver to the PAL circular pattern.
- 3: Set the brightness and contrast controls to normal.

- 4: Connect digital V-meter between R350 and R354.
- 5: By using VR351, adjust the voltage to $130 \pm 0.5V$.

AFT Adjustment

- 1: Tune the receiver to the clearest station.
- 2: By using L230, adjust AFT to obtain the best picture.

AGC Adjustment

Note: Do not attempt this adjustment with a weak signal.

- 1: Tune the receiver to the clearest station.
- 2: Set AGC VR (VR120) in the direction which causes snow noise just to appear, then in the opposite direction until the snow noise just disappears.

Grey Scale Adjustment

(Screen VR Adjustment)

- 1: Tune the receiver to the white pattern.
- 2: Set the brightness and contrast control to normal.
- 3: Set SW220 to the "SERVICE" position.
- 4: Set VR602 and VR612 to be mechanical centre.
- 5: Turn VR601, VR611 and VR621 fully anti-clockwise.
- 6: Set screen VR for one colour to be just visible.

(Bias VR Adjustment)

- 7: By using VR601, VR611 or VR621, adjust the line until white.
- 8: Set SW220 to "NORMAL" position.

(Drive VR Adjustment)

- 9: By using VR602 and VR612, adjust white balance.

High Voltage Width Adjustment

(High Voltage Adjustment)

- 1: Tune the receiver to the PAL circular pattern.
- 2: Set the brightness and contrast controls to maximum.
- 3: Connect digital V-meter to both terminals of R232 (left side) (+), and a high voltage meter to the CRT anode. Confirm that the high voltage is $21.0 \pm 1KV$ at beam current 0.7mA, and less than 25.0KV at 0 beam current.

(H-Width Adjustment)

- 5: If H-Width is too wide or narrow, connect or disconnect a lead wire AJ1.
- 6: Re-confirm high voltage.

H-Centre Adjustment

- 1: Tune the receiver to the circular pattern.
- 2: Adjust H-Centre by using VR401.

V-Centre Adjustment

- 1: Tune the receiver to the circular pattern.
- 2: If the picture is not in the centre, connect or disconnect a lead wire JR012.

V-Size Adjustment

- 1: Tune the receiver to the circular pattern.
- 2: Adjust V-Size by using VR431.

Focus Adjustment

By using FOCUS VR, adjust focus control for good scanning lines.

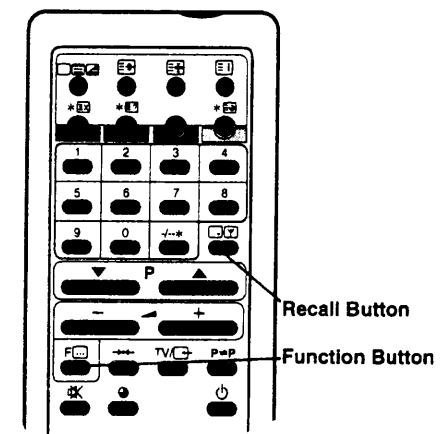
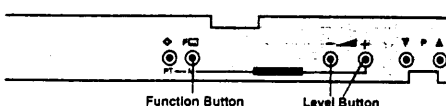
Memory IC Replacement Important Notice:

When you replace the memory IC (IC790) it is necessary to initialise the IC as follows.

Initialisation of Memory IC

- 1: When you press and hold the Function button on the TV set and then press the Recall button on the RC transmitter, the following picture will appear on the screen.
- ITEM -1 SET -0
- 2: Confirm SET number of all items is "0" by pressing the Function button.
 - 3: If it is not "0", change to "0" by the Level (+/-) button. (changing the SET number is automatically memorised).
 - 4: Press the Recall button to return to normal TV mode.

For more information please refer to "special functions" in the instruction manual.



Circuit Alignment

VIF Alignment

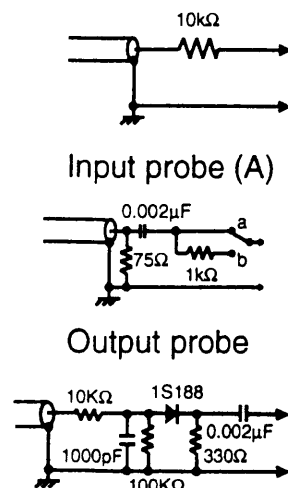
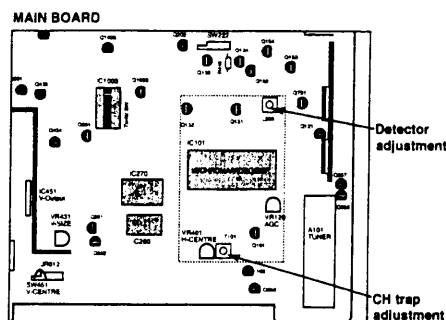
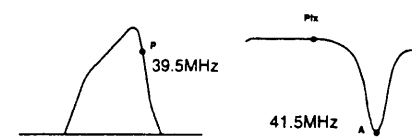


Fig 1.

Setting	Detector Adjustment	CH Trap Adjustment
DC 15V:	R352 & R382	R352 & R382
AGC voltage (4.3-4.5V):	IC101-48p	No
Output probe:	Tuner IF Tuner IF (side b)	(side a)
Input probe (A):	R145 & SW220	Q101-C (use probe B)
Band:	No	No
Damping R:	No	No
System SW:	I	I
Sweep ATT:	9	9

Adjustment By using L230, adjust "P" to be maximum amplitude. By using T101, adjust "A" to bottom of channel trap.

VIF waveform











CRT Waveforms

Q601		
	VOLT.	WAVEFORM
B	2.4V	2.8Vp-p HORIZ.
C	86V	91Vp-p HORIZ.
E	1.9V	

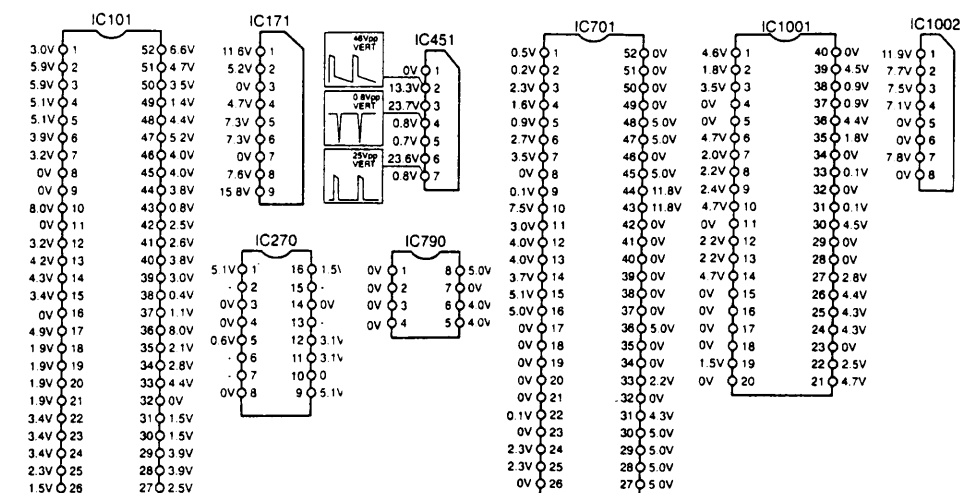
Q611		
	VOLT.	WAVEFORM
B	2.5V	3.4Vp-p HORIZ.
C	87V	100Vp-p HORIZ.
E	2.1V	

Q621		
	VOLT.	WAVEFORM
B	2.5V	3.2Vp-p HORIZ.
C	81V	105Vp-p HORIZ.
E	2.0V	

Main Waveforms

Q312			Q313			Q431			Q432		
	VOLT.	WAVEFORM		VOLT.	WAVEFORM		VOLT.	WAVEFORM		VOLT.	WAVEFORM
B	-0.7V	 6.6Vp-p	B	-0.6V	 4.0Vp-p	B	0.5V	 0.5Vp-p HORIZ.	B	0.1V	 12Vp-p HORIZ.
C	-0.6V	 4.0Vp-p	C	-	 660Vp-p	C	14.0V	 50Vp-p HORIZ.	C	-	 1100Vp-p HORIZ.
E	0V		E	0V		E	0V		E	0V	

IC Diagrams



Main Diagram

