

General Information

Chassis: EC2-A 14
CRT's: A34EAC01X06
A34ED413X01
A34JFQ40X(W)
A34EFU33X91
Remote Control:
6450020636 (JXRA)
Battery Lid: 6102470178
Main Power Button:
6102485769

Specifications

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.

Power Source: AC 220 - 240V 50 Hz
 Television System: System 1
 Colour System: PAL
 Receiving Channel: UHF 21 - 69
 Aerial Input Impedance: 75 ohm
 AV Terminal 21 pin Socket: CENELEC standard
 Sound Output: 2 watts
 Picture Tube: 37cm diagonal, 90 degree
 (Visible Picture Diagonal) 34 cm

Service Adjustments

Safety Precaution

- 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 this set.
 - 2: Comply with all caution and safety-related notes provided on the cabinet back, inside the cabinet, on the chassis or picture tube.
 - 3: When replacing a chassis in the cabinet, always be certain that all the protective devices are installed properly, such as, control knobs, adjustment covers or shields, barriers, isolation resistor-capacitor networks etc.
- Note:** 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

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 the suffix letter. Excessive high voltage may produce potentially hazardous X-Radiation. To avoid such hazards, the high voltage must be maintained within a

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 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 REG 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 REG. No deviations from resistance wattage or voltage ratings may be made for replacement items designated by mark REG.

Service Control Adjustment

B1 Power Supply Adjustment

- 1: Set VR351 to be mechanical centre before pressing the main switch.
- 2: Tune the receiver to PAL circular pattern.
- 3: Set brightness and contrast controls to normal.
- 4: Connect digital voltmeter to R351.
- 5: By using VR351, adjust voltage to 130 ± 0.5V.

TU-AFT Adjustment

- 1: Tune the receiver to the clearest station.
- 2: By using L230, adjust AFT to obtain 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 direction which causes snow noise to appear, then in the opposite direction until snow noise just disappears.

Grey Scale Adjustment

(Screen VR Adjustment)

- 1: Tune the receiver to black and white pattern.
- 2: Set brightness control to display centre and contrast control to normal.
- 3: Set SW220 to "SERVICE" position.
- 4: Set VR601 and VR611 to be mechanical centre.
- 5: Turn VR602, VR612 and VR622 fully counter-clockwise.
- 6: Set screen VR for one colour to be just visible.

(Bias VR Adjustment)

- 7: By using VR612 or VR622, adjust line to be white.

(Drive VR Adjustment)

- 9: By using VR601 and VR611, adjust white balance.

High Voltage and Width Confirm

(High Voltage Confirm)

- 1: Tune the receiver to PAL circular pattern.
 - 2: Set brightness and contrast controls to normal.
 - 3: Connect digital voltmeter to test point (+) "TP-H" and (-) "TP-G", and high voltage meter to CRT anode.
 - 4: Confirm high voltage to be 21.0 ± 1 kV at beam current 0.7 ± 0.05, and less than 25.0 kV at 0 beam current.
- ##### (H-Width Confirm)
- 5: If H-width is too wide or narrow, connect or disconnect AJ1.
 - 6: Reconfirm high voltage.

H-Centre Adjustment

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

V-Size Adjustment

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

Focus Adjustment

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

Circuit Alignment

VIF Alignment

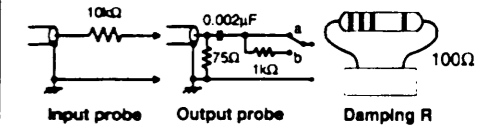


Fig. 1

Setting	Detector Adjustment	Overall Waveform
DC 15V	IC351-1	IC351-1
AGC voltage	IC101-48p	IC101-48p
Output Probe	Tuner TP (Side B)	Tuner TP (Side B)
Input Probe	TP-F	TP-F
Band	FREE	FREE
Damping R	-	KV-1 & KV-2
System SW	I	I
Sweep ATT	25	25

Adjustment By using L230, adjust "P" to be maximum amplitude
 By using Tuner converter coil and L101, make the marker positions to P=45 ± 10% C=55 ± 10%

VIF Waveform

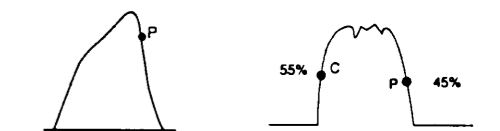


Fig. 2

Fig. 3

Recommended Safety Parts

Item	Part No.	Description
C301, C302	4040473602	MT-Polyest 0.1u M 125V
C351	4031658605	Ceramic 470P K 2K
C435	4040610403	MT-Polypro 4500P J 1.5K
C436	4031657608	Ceramic 220P K 3K
F301	4230222102	Fuse 250V 4A
L901	6450042669	Coil, Degaussing
Q901	4140065509	CRT A34JFQ40X(W)
R331, R332	4020008305	Solid 5.6M KA 1/2W
R357	4020644404	Fusible Res 10 J- 1W
T471	6450000089	Trans Flyback
W901	6450002458	Cord, Power
C14EA80B-01 (CB 1443)		
A101	6102391145	UHF Varactor Tuner
C108	4030333612	Ceramic 82P J 50V
C108A	4030106117	Ceramic 12P J 50V
C109	4030305411	Ceramic 68P J 50V
C110	4030282019	Ceramic 56P J 50V
C217	N/A	
C332	4040599203	Ceramic 1000P M 400V
C409	4030748911	Ceramic 680P K 50V
C435	4030441700	MT-Polypro 5400P J 1.5K
C436	N/A	
C441	4030827824	Polypro 0.18U J 1.5K
L101	6010375727	S Trans
L101	6450048371	Degaussing Coil
L125	6450039751	Inductor 18U K
L201, L202,		
L203	J-LINK	
L441	6100321250	Inductor 150U K
L442	6102109689	Coil
L853	J-LINK	
Q101	4050133305	TR 2SC2216 (SAN)

Recommended Safety Parts Cont'd.

Item	Part No.	Description
C14EA80B-01 (CB 1443) Cont'd.		
Q901	4140080403	CRT A34EAC01X06 (Phillips)
R102	J-LINK	
R107	4100263707	Carbon 33 JA 1/6W
R138	4010251308	Carbon 150 JA 1/6W
R206, R207,		
R208	4010246700	Carbon 100 JA 1/6W
R214	4010247400	Carbon 10K JA 1/6W
R222	4010278602	Carbon 8.2K JA 1/6W
R442	4010688807	Oxide-MT 5.6K JA 50V
C14EA80B-02 (CB 1453)		
A101	6450095993	Tuner U
C109	J-LINK	
C111, C112	4030269713	Ceramic 5P C 50V
C331	4040606505	Ceramic 2200P M 400V
	4040606604	Ceramic 2200P M 400V
C435	4030441700	MT-Polypro 5400P J 1.5K
C441	4030827824	Polypro 0.18U J 1.5K
K601	6450093821	CRT Socket
L101	6450048371	Degaussing Coil
L125	6450039751	Inductor 18U K
L201, L202,		
L203	6450015663	Inductor 4.7U K
L441	6100321250	Inductor 150U K
L442	6102109689	Coil
L853	6450014727	Inductor 10U K
Q101	4050133305	TR 2SC2216 (SAN)
Q101	4140077403	CRT A34ED413X01 (Policolor)
R102	4010269323	Carbon 47 JA 1/6W
R107	4010260429	Carbon 27 JA 1/6W
R138	4010263905	Carbon 330 JA 1/6W
R206, R207,		
R208	J-LINK	
R222	4010272600	Carbon 5.6K JA 1/6W
T102	6100377103	S TRANS
Z101A	6102490732	Shield Case-A-E7CD
Z101B	6102490749	Shield Case-B-E7CD

Recommended Safety Parts Cont'd.

Item	Part No.	Description
C14EA80B-02 (CB 1453) Cont'd.		
R208	J-LINK	
R222	4010272600	Carbon 5.6K JA 1/6W
R402	4010279302	Carbon 820K JA 1/6W
R442	4010688807	Oxide-MT 5.6K JA 50V
T102	6100377103	S TRANS
W901	6450118838	Power Cord
Z101A	6102490732	Shield Case-A-E7CD
Z101B	6102490749	Shield Case-B-E7CD
C14EA80B-03 (CB 1453)		
A101	6450095993	Tuner U
C109	J-LINK	
C111, C112	4030269713	Ceramic 5P C 50V
C240	4030698315	Ceramic 0.01U Z 50V
C331	4040606505	Ceramic 2200P M 50V
	4040606504	Ceramic 2200P M 50V
L125	6450039751	Inductor 18U K
L201, L202,		
L203	6450015663	Inductor 4.7U K
L853	6450014727	Inductor 10U K
Q101	4050133305	TR 2SC2216 (SAN)
R102	4010269323	Carbon 47 JA 1/6W
R107	4010260429	Carbon 27 JA 1/6W
R138	4010263905	Carbon 330 JA 1/6W
R206, R207,		
R208	J-LINK	
R222	4010272600	Carbon 5.6K JA 1/6W
T102	6100377103	S TRANS
Z101A	6102490732	Shield Case-A-E7CD
Z101B	6102490749	Shield Case-B-E7CD

Service Adjustments Cont'd.

VIF Alignment Cont'd.

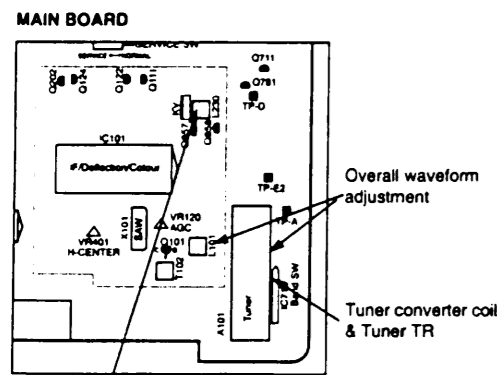


Fig. 4

Memory IC Replacement

Note: When IC790 (X24C01P or X24C02P) is replaced, 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 press the Recall button on the RC transmitter, the following picture will appear on the screen.
- 2: Confirm SET number of all items is "0" by the Function button.
- 3: If it is not "0", change to "0" by the level (+/-) button. (Changing the SET number, automatically memorised).
- 4: Press the Recall button to return to normal TV mode.

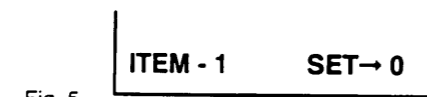


Fig. 5

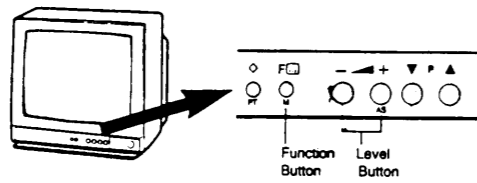


Fig. 6

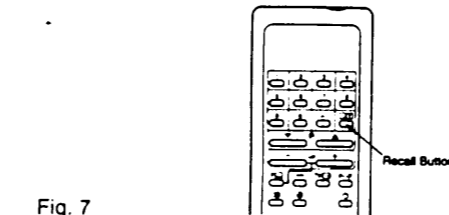


Fig. 7
Circuit Alignment for C14EA08B-02/03/04/05/06

VIF Alignment

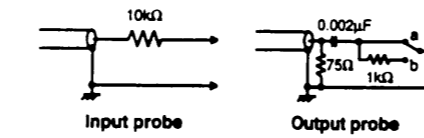


Fig. 8

Setting	Detector	Overall Adjustment
DC 15V	IC351-1	IC351-1
AGC voltage	IC101-48p	No
Output Probe, Tuner IF	(Side B)	Tuner IF (Side A)
Input Probe	TP-F	Q101-C (use probe)
Tuning Volt	Tuner TU	No
Band	No	FREE No
Damping R	-	No
System SW	I	I
Sweep ATT	25	9

Detector Adjustment
By using L230, adjust "P" to be maximum amplitude.

Overall Adjustment
By using T102 adjust "A" to be bottom of channel trap

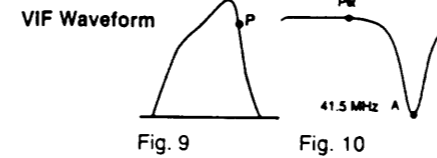


Fig. 9

Fig. 10

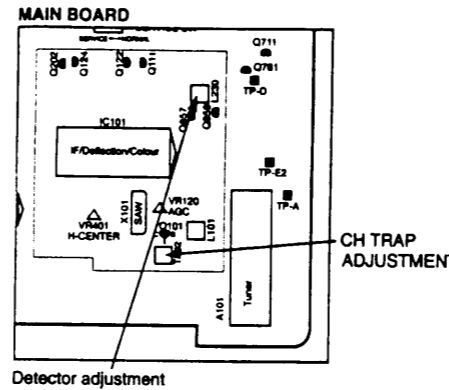
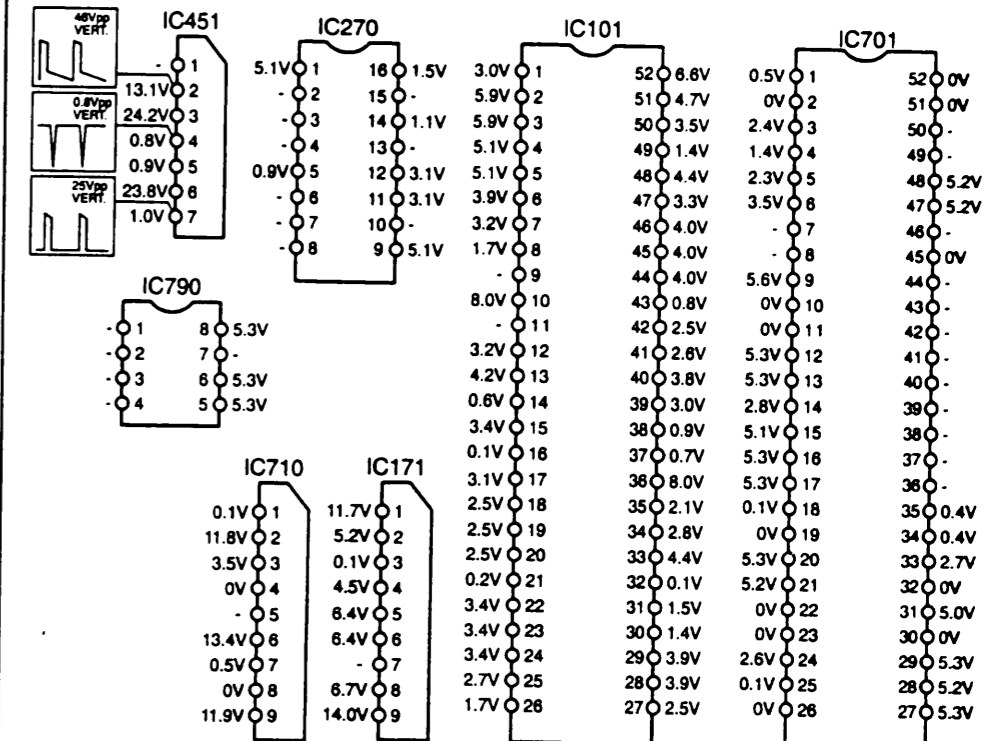


Fig. 11

IC Diagram



Recommended Safety Parts Cont'd.

Item	Part No.	Description
C14EA80B-04 (CB 1443)		
A101	6450095993	Tuner U
C109	J-LINK	
C111, C112	4030269713	Ceramic 5P C 50V
C121, C122,		
C132, C135,		
C180	4030573701	Polypro 0.1U K 50V
C137, C172,		
C206	4030677805	MT-COMPO 0.47U J 50V
C184, C187,		
C731	4032635704	MT-COMBO 0.22U J 50V
C215, C437	4030698315	Ceramic 0.01U Z 50V
C331	4040606505	Ceramic 2200P M 400V
	4040606604	Ceramic 2200P M 400V
C402	4030621006	Polyester 0.047U K 50V
C435	4030441700	MT-Polypro 5400P J 1.5K
C436	N/A	
C441	4030827824	Polypro 0.18U J 1.5K
L101	6450048371	Degaussing Coil
L125	6450039751	Inductor 18U K
L201, L202,		
L203	6450015663	Inductor 4.7U K
L441	6100321250	Inductor 150U K
L442	6102109689	Coil
L853	6450014727	Inductor 10U K
Q101	4050133305	TR 2SC2216 (SAN)
Q101	4140077403	CRT A34ED13X01 (Polkolor)
R102	4010269323	Carbon 47 JA 1/6W
R107	4010260429	Carbon 27 JA 1/6W
R138	4010263905	Carbon 330 JA 1/6W
R206, R207, R208	J-LINK	
R222	4010272600	Carbon 5.6K JA 1/6W
R442	4010688807	OXIDE-MT 5.6K JA 50V
T102	6100377103	S TRANS
W901	6450118838	Power Cord
Z101A	6102490732	Shield Case-A-E7CD
Z101B	6102490749	Shield Case-B-E7CD

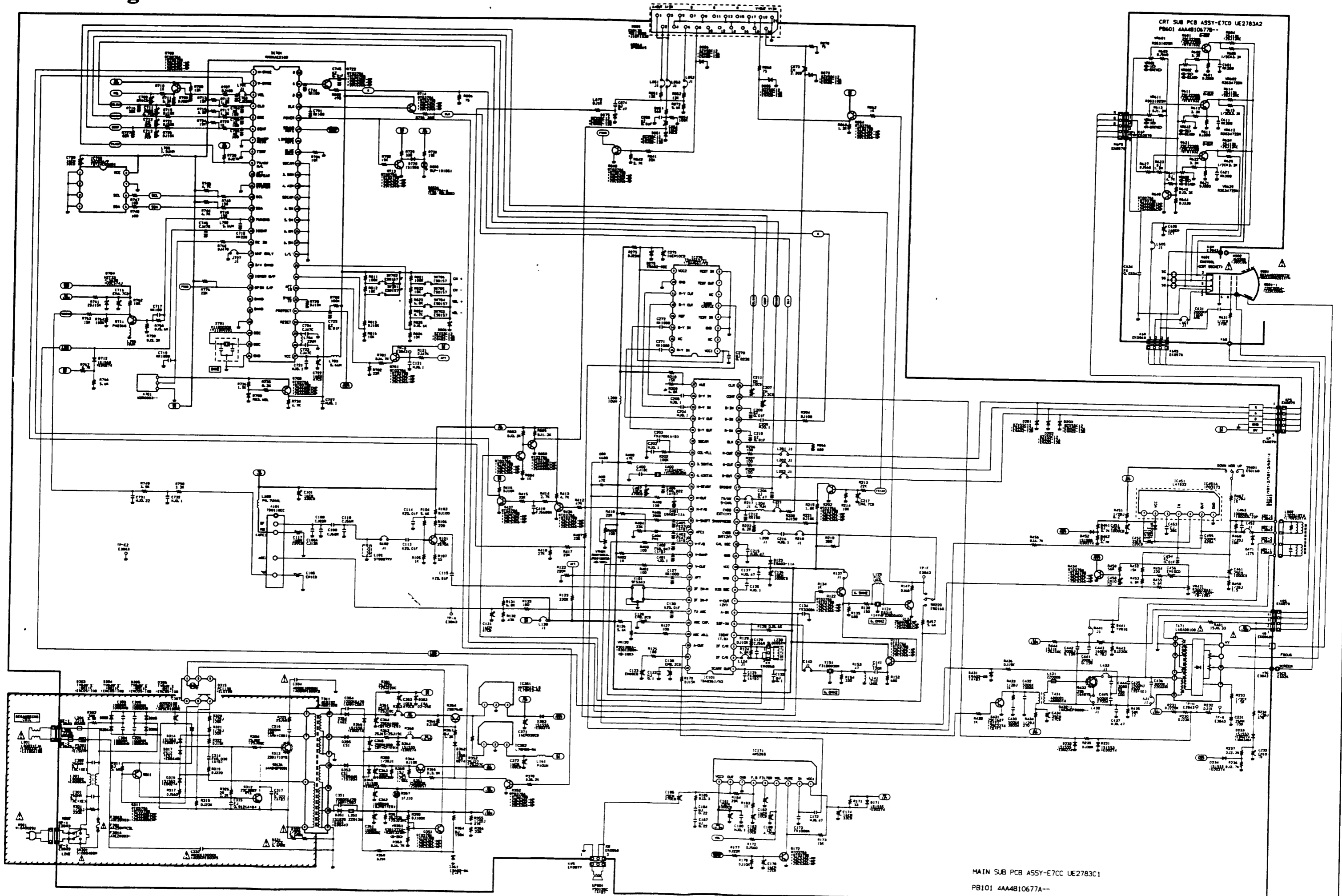
Recommended Safety Parts Cont'd.

Item	Part No.	Description
C14EA80B-05 (CB 1443)		
A101	6450095993	Tuner U
A701	6450071546	Unit Remcon Receiver
C109	J-LINK	
C111, C112	4030269713	Ceramic 5P C 50V
C121, C122,		
C132, C135,		
C180	4030573701	Polypro 0.1U K 50V
C137, C172,		
C206	4030677805	MT-COMPO 0.47U J 50V
C184, C187,		
C731	4032635704	MT-COMBO 0.22U J 50V
C215, C240,		
C437	4030698315	Ceramic 0.01U Z 50V
C331A	4040606505	Ceramic 2200P M 400V
C402	4030621006	Polyester 0.047U K 50V
C435	4030441700	MT-Polypro 5400P J 1.5K
C436	N/A	
C441	4030827824	Polypro 0.18U J 1.5K
L101	6450048371	Degaussing Coil
L125	6450039751	Inductor 18UHK
L201, L202,		
L203	6450015663	Inductor 4.7UHK
L441	6100321250	Inductor 150UHK
L442	6102109689	Coil
L853	6450014727	Inductor 10UHK
Q101	4050133305	TR 2SC2216 (SAN)
Q101	4140077403	CRT A34ED13X01 (Polkolor)
Q901	4140080403	CRT A34EAC01X06 Philips
R102	4010269323	Carbon 47 JA 1/6W
R107	4010260429	Carbon 27 JA 1/6W
R138	4010263905	Carbon 330 JA 1/6W
R206, R207,		
R208	J-LINK	
R222	4010272600	Carbon 5.6K JA 1/6W
R442	4010688807	OXIDE-MT 5.6K JA 50V
T102	6100377103	S TRANS

Recommended Safety Parts Cont'd.

Item	Part No.	Description
C14EA80B-05 (CB 1443) Cont'd.		
W901	6450118838	Power Cord
Z101A	6102490732	Shield Case-A-E7CD
Z101B	6102490749	Shield Case-B-E7CD
C14EA80B-06 (CB 1443)		
A101	6450095993	Tuner U
C109	J-LINK	
C111, C112	4030269713	Ceramic 5P C 50V
C121, C122,		
C132, C135,		
C180	4030573701	Polypro 0.1U K 50V
C137, C172,		
C206	4030677805	MT-COMPO 0.47U J 50V
C184, C187,		
C731	4032635704	MT-COMBO 0.22U J 50V
C215, C437	4030698315	Ceramic 0.01U Z 50V
C331	4040606505	Ceramic 2200P M 400V
	4040606604	Ceramic 2200P M 400V
C402	4030621006	Polyester 0.047U K 50V
K601	6450098253	CRT Socket
L125	6450039751	Inductor 18U K
L201, L202,		
L203	6450015663	Inductor 4.7U K
L853	6450014727	Inductor 10U K
L901	6450118159	Deflection Yoke
Q101	4050133305	TR 2SC2216 (SAN)
R102	4010269323	Carbon 47 JA 1/6W
R107	4010260429	Carbon 27 JA 1/6W
R138	4010263905	Carbon 330 JA 1/6W
R206, R207,		
R208	J-LINK	
R222	4010272600	Carbon 5.6K JA 1/6W
T102	6100377103	S TRANS
W901	6450118838	Power Cord
Z101A	6102490732	Shield Case-A-E7CD
Z101B	6102490749	Shield Case-B-E7CD

Main Diagram



MAIN SUB PCB ASSY-E7CC UE2783C1
PB101 4AA4B10677A--