

SHARP SERVICE MANUAL

CX-2273

S93A6CX-2273/



**PAL SYSTEM
COLOUR TELEVISION**

MODEL

CX-2273

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ELECTRICAL SPECIFICATIONS

Aerial Input Impedance	75 ohm unbalanced
Convergence	Self Converging System
Focus	Bi-potential electrostatic
Audio Power Output Rating	3.5W max.
Intermediate Frequencies	
Picture IF Frequency , , ,	36.875 MHz
Sound Carrier Trap	31.375 MHz
Adjacent Sound Carrier Trap	38.375 MHz
Power Input	240 Volts AC 50 Hz
Power Consumption	90 Watt
Speaker Size	10 cm Round Dynamic x 1 2 cm Round Dynamic x 1
Sweep Deflection	Magnetic
Tuning Ranges	VHF-Channels 0 thru 11 UHF channels 28 thru 63

The manufacturer reserves the right to vary specifications or use alternative materials as may be deemed necessary or desirable at any time, any such change or variation being of a kind as not to reduce the quality performance or appearance substantially.

SHARP CORPORATION OF AUSTRALIA PTY. LTD.

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IMPORTANT SERVICE NOTES

Maintenance and repair of this receiver should be done by qualified service personnel only.

SERVICING OF HIGH VOLTAGE SYSTEM AND PICTURE TUBE

When servicing the high voltage system, remove static charge from it by connecting a 10k ohm Resistor in series with an insulated wire (such as a test probe) between picture tube dag and 2nd anode lead. (AC line cord should be disconnected from AC outlet.)

1. Picture tube in this receiver employs integral implosion protection.
2. Replace with tube of the same type number for continued safety.
3. Do not lift picture tube by the neck.
4. Handle the picture tube only when wearing shatter-proof goggles and after discharging the high voltage completely.

X-RAY

This receiver is designed so that any X-ray radiation is kept to an absolute minimum. Since ceratin malfunctions or servicing may produce potentially hazardous rediation with prolonged exposure at close range, the following precautions should be observed:

1. When repairing the circuit, be sure not to increase the high voltage to more than 28kV, (at beam 1.1mA) for the set.
2. To keep the set in a normal operation, be sure to make it function on 25.0 kV \pm 1.5 kV (at beam 1.2 mA) in the case of the set. The set has been factory-adjusted to the above-mentioned high voltage.
 \therefore If there is a possibility that the high voltage fluctuates as a result of the repairs, never forget to check for such high voltage after the work.
3. Do not substitute a picture tube with unauthorized types and/or brands which may cause excess X-ray radiation.

BEFORE RETURNING THE RECEIVER

Before returning the receiver to the user, perform the following safety checks.

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulating fishpapers, cabinet backs, adjustment and compartment covers or shields, isoiation resistor-capacity networks, **mechanical** insulators etc.

SERVICE ADJUSTMENT

Step	Adjust point	Procedure
1	P-detector coil (T201)	Connect sweep generator's output to TP202. <ul style="list-style-type: none"> • Sweep central frequency: 36.875 MHz • Sweep width center: +3 MHz ~ -7 MHz • Sweep output: 80 dB
2		Connect the response lead of oscilloscope to TP207. <ul style="list-style-type: none"> • Oscilloscope range: 1V_{p-p}
3		Connect bias box to AGC (TP203). Note: The bias supply to AGC must be 4.3 to 4.6V and should not exceed 7V.
4		Adjust AGC voltage so that the waveform on oscilloscope becomes 1V _{p-p} .
5		Adjust T201 so that the waveform peak on oscilloscope becomes aligned with P marker. See Fig. 1.

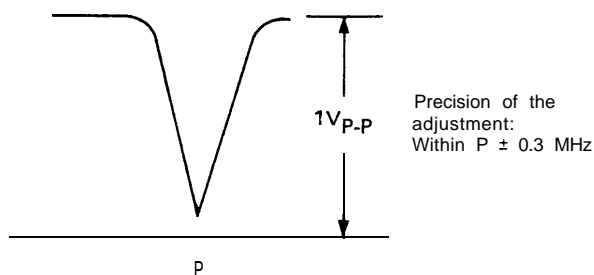


Figure 1.

Step	Adjust point	Procedure
1	Overall waveform	Receive 1 O-ch. signal.
2		Connect sweep generator's output to the tuner's test point across a resistor of 2.7 khoms. <ul style="list-style-type: none"> • Sweep output: 70 dB
3		Connect the response lead of oscilloscope to TP207. <ul style="list-style-type: none"> • Oscilloscope range: 1V_{p-p}
4		Connect a resistor of 100 ohms to both ends of R216.
5		Short-circuit both ends of C235.
6		Apply DC voltage of about 5V to AGC (TP203) and adjust so that the waveform on oscilloscope is 1V _{p-p} .
7		Make sure that the overall waveform is as shown in Fig. 2. If not, adjust it with the aid of IF transformer of the tuner.

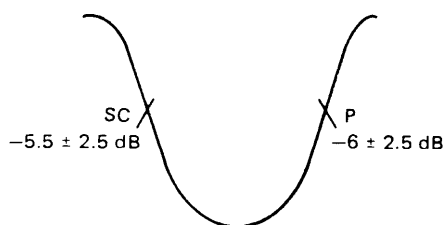


Figure 2.

Step	Adjust point	Procedure
1	RF AGC cut-in control (R213)	Receive sequential colour bar signal.
2		Adjust the signal input level to 57 dB.
3		Connect CR oscillator to TP204 across a capacitor (10 $\mu\text{F}/16\text{V}$). <ul style="list-style-type: none"> • Oscillation frequency: 1 kHz • Output voltage; 0.15Vp-p (Output voltage available at TP204)
4		Connect oscilloscope to TP207.
5		Adjust R213 so that 1 kHz signal output on oscilloscope disappears.
6		Set the sequential colour bar signal input to 60 dB, and make sure that 1 kHz signal output appears on oscilloscope. Without such signal appearance on oscilloscope, set the sequential colour bar signal input to 57 dB and perform the step 5 again.

Step	Adjust point	Procedure
1	AFT (T203)	Receive sequential colour bar signal.
2		Connect 36.875 MHz oscillator to TP202 across a capacitor of 1 pF.
3		Connect oscilloscope to TP207. <ul style="list-style-type: none"> • Oscilloscope range: 0.5V/cm AC, horizontal sync.
4		Adjust the output of 36.875 MHz oscillator to have the waveform beating on oscilloscope be observable.
5		Turn off AFT switch and adjust the tuning control so that the waveform on oscilloscope is free from beating. See Fig. 3.
6		Turn on AFT switch and adjust T202 so that the waveform on oscilloscope is free from beating. See Fig. 3.

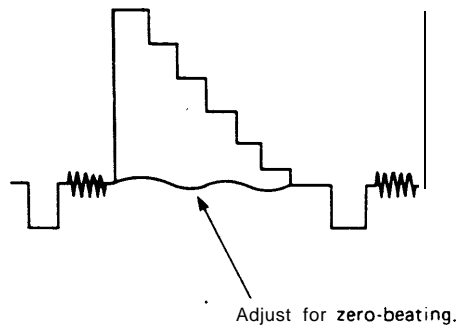


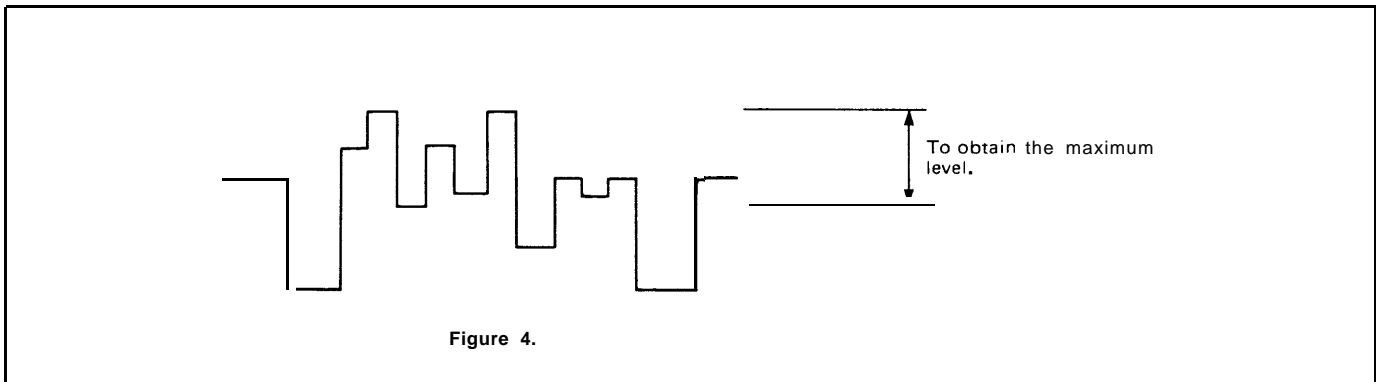
Figure 3.

Step	Adjust point	Procedure
	SIF	Requires no adjustment.
	+B voltage setting	If 115V line voltage is 116V or above, cut off R7 15. On the contrary, if the line voltage is 114V or below, cut off R714. Perform voltage measurement by setting the controls at the following positions: <ul style="list-style-type: none"> • Beam control; Minimum • Contrast control; Minimum • Brightness control; Minimum • Screen control; Minimum

Step	Adjust point	Procedure
1	Background adjustment	Receive lion head pattern signal.
2		Set the controls at the following positions: <ul style="list-style-type: none"> • Sub-brightness control; Minimum • Brightness control; Minimum • Contrast control; Minimum • Screen control; Minimum • G/B drive control; Center • R/G/B bias control; Minimum
3		Short-circuit between TP401 and TP402 and also between TP501 and TP502.
4		Adjust the screen control so that either of the three colours (red, green and blue) appears dimly on screen.
5		Adjust the bias controls except for dimly appearing colour to let the picture on screen be white.
6		Adjust the screen control to obtain cut-off point of CRT.
7		Remove the short-circuit between TP401 and TP402 and between TP501 and TP502.
8		Set the brightness control to the center position and the contrast control to the Maximum position.
9		Adjust the sub-brightness control to have the best black level of the reproduced lion head pattern signal. At that time, also adjust it to let the colour sequence be linear.
10		Adjust the drive control to obtain 7300°K of the white balance. $x = 0.303, y = 0.310$

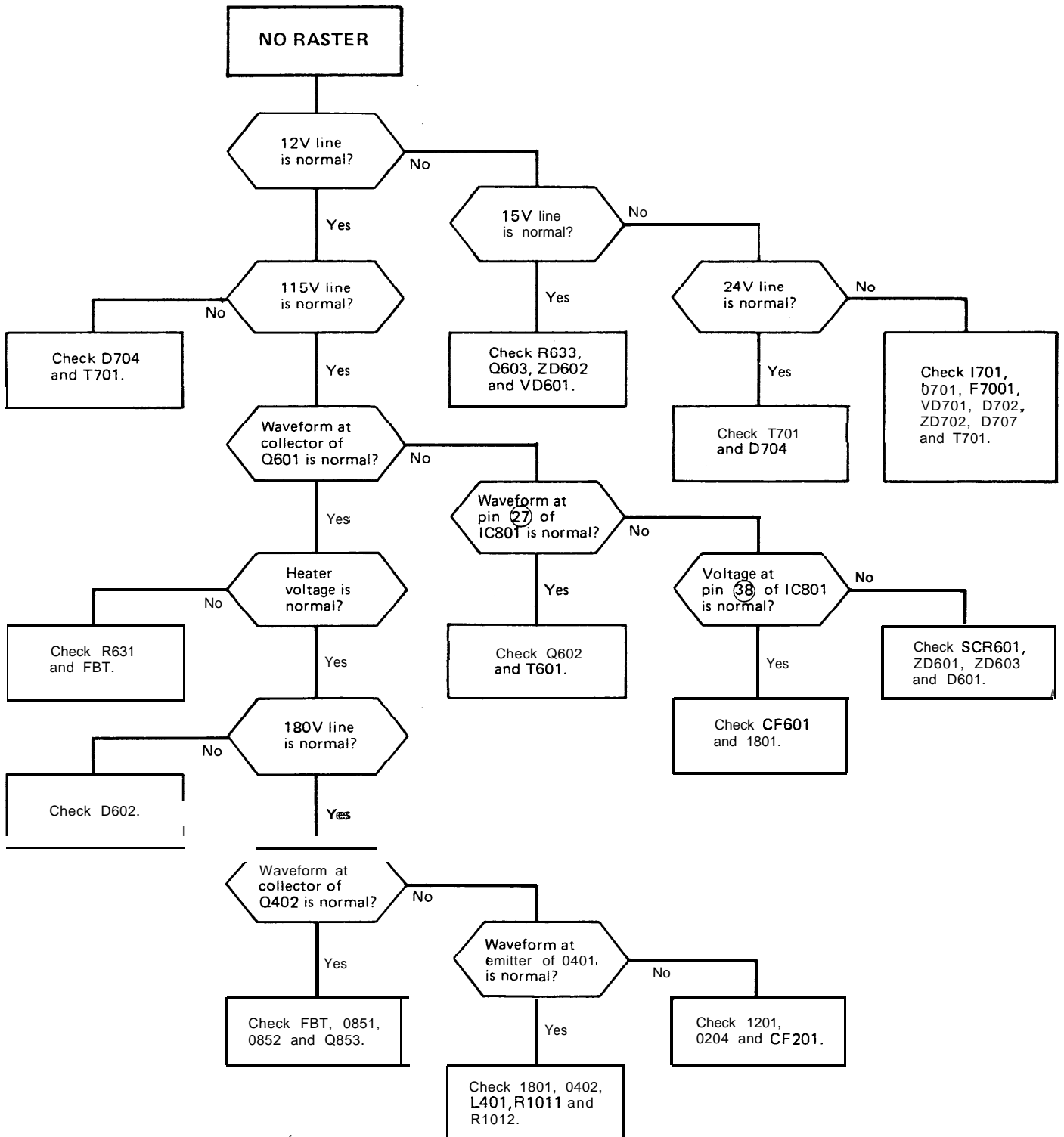
Step	Adjust point	Procedure
1	Sub-colour control (R829)	Receive sequential colour bar signal
2		Set the controls at the following positions: <ul style="list-style-type: none"> • Brightness control; Center • Contrast control; Center • Colour control; Center
3		Connect oscilloscope to the collector of Q85 1.
4		Adjust the sub-colour control so that the red output level is equal to 75% of the white output level.

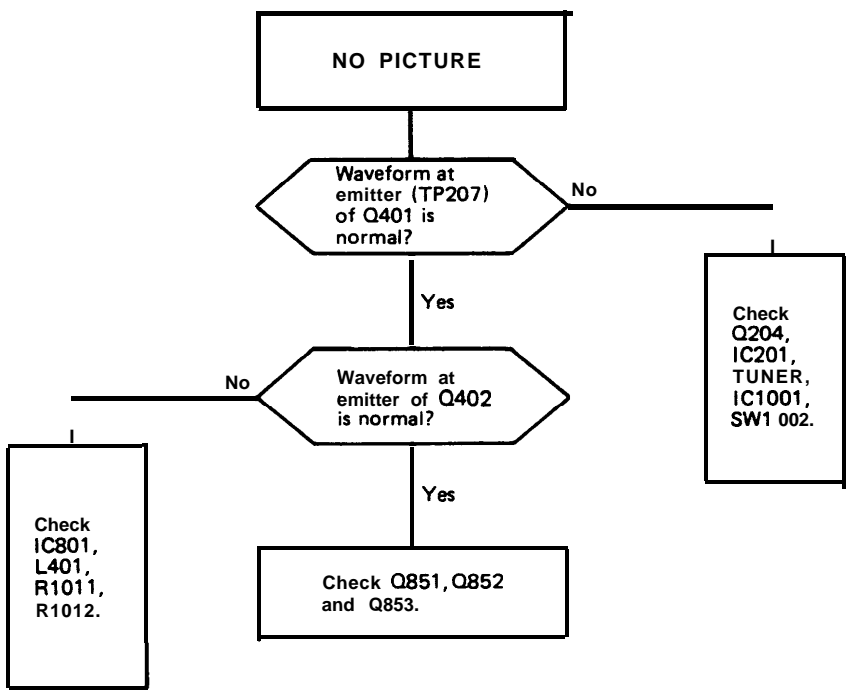
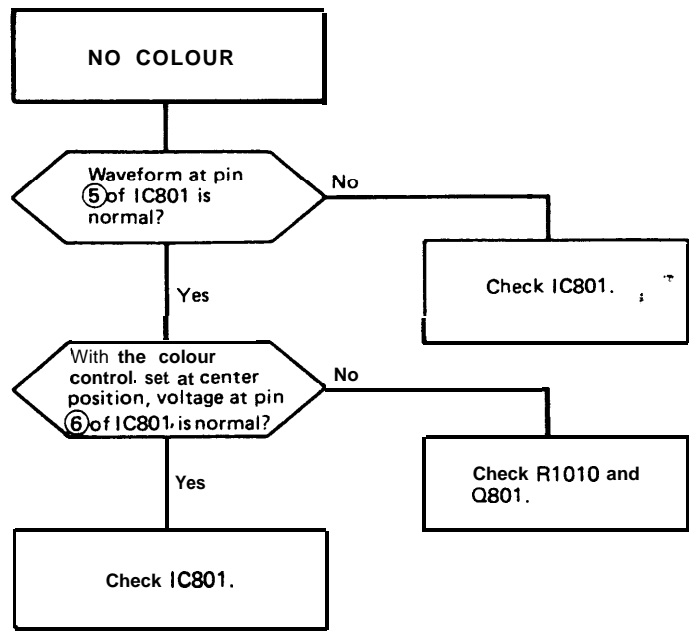
Step	Adjust point	Procedure
1	Phase control (R827)	Receive sequential colour bar signal.
2		Connect oscilloscope to K3 terminal.
3		Adjust the phase control so that B-Y output waveform on oscilloscope becomes maximum as shown in Fig. 4.

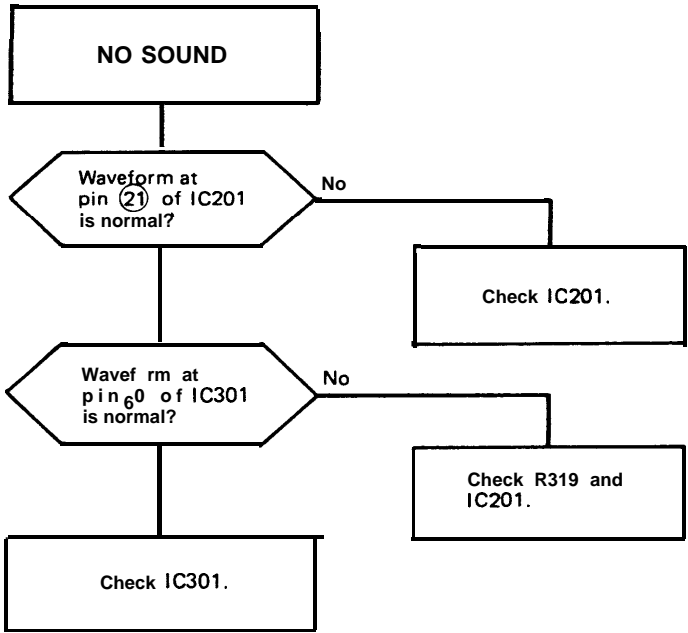
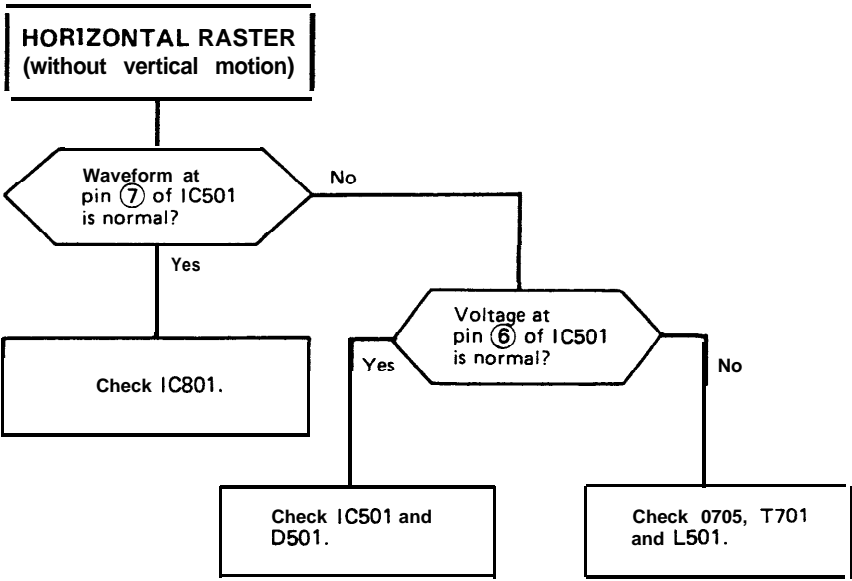


Step	Adjust point	Procedure
	H-size control	When the horizontal overscan is 8% or below, cut off R623 (0.1 μ F).
	H-center control	If the H-center is deviated to right 3mm or more, cut off R635. If the H-center is deviated to left 3mm or more, cut off R636.
	V-size control R504	Adjust the V-size control (R504) to have 10% of the vertical overscan.
	Protector check	The protector should not operate when 25V is applied to the plus side of C615: it should operate when 30V is applied to it. For this operation check, connect a resistor (10 kohm) between the base of Q604 and earth beforehand.

TROUBLE SHOOTING TABLE







CHASSIS LAYOUT

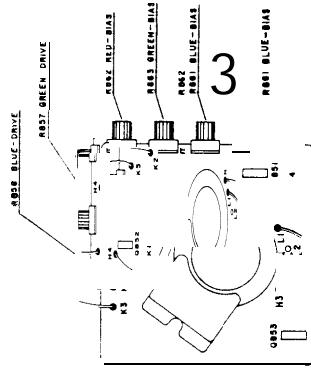
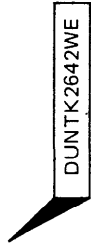
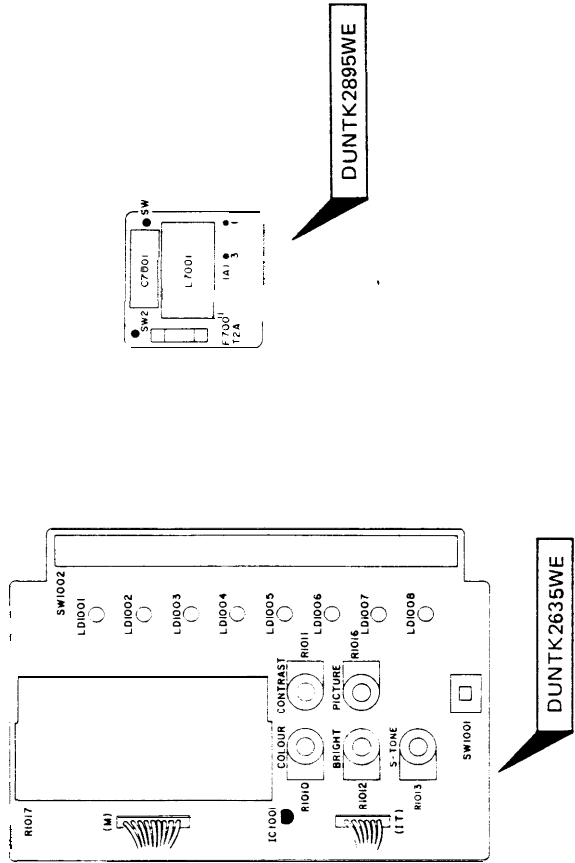
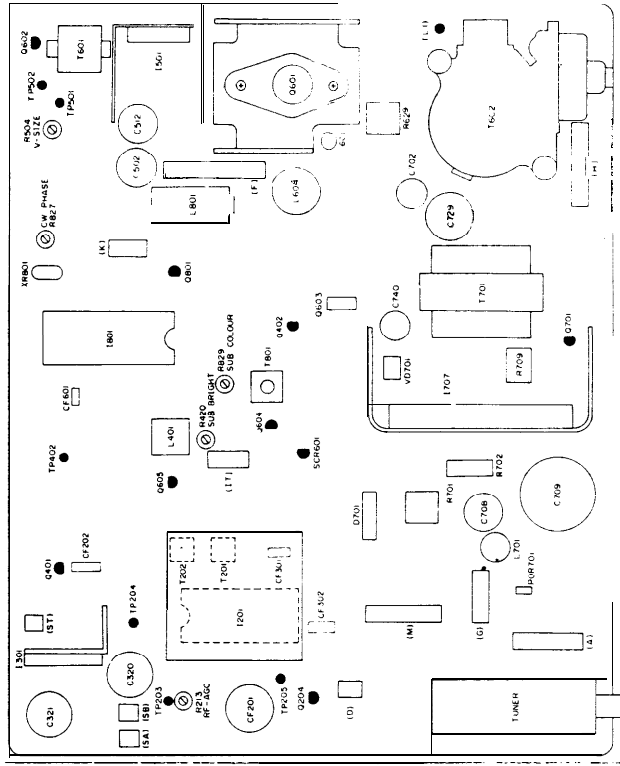
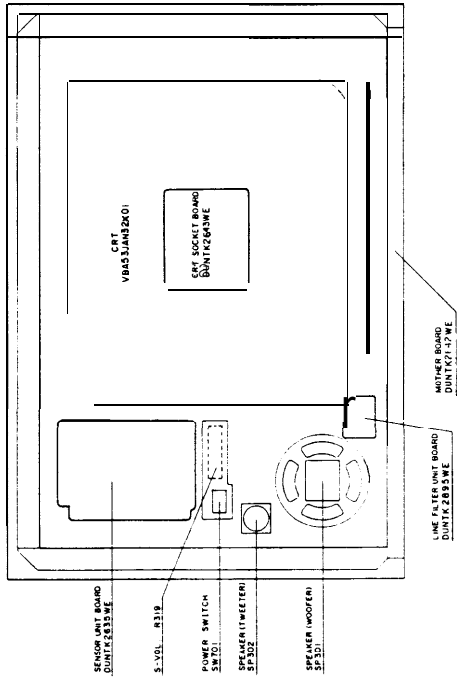


Figure 5.

PRINTED WIRING BOARD ASSEMBLIES

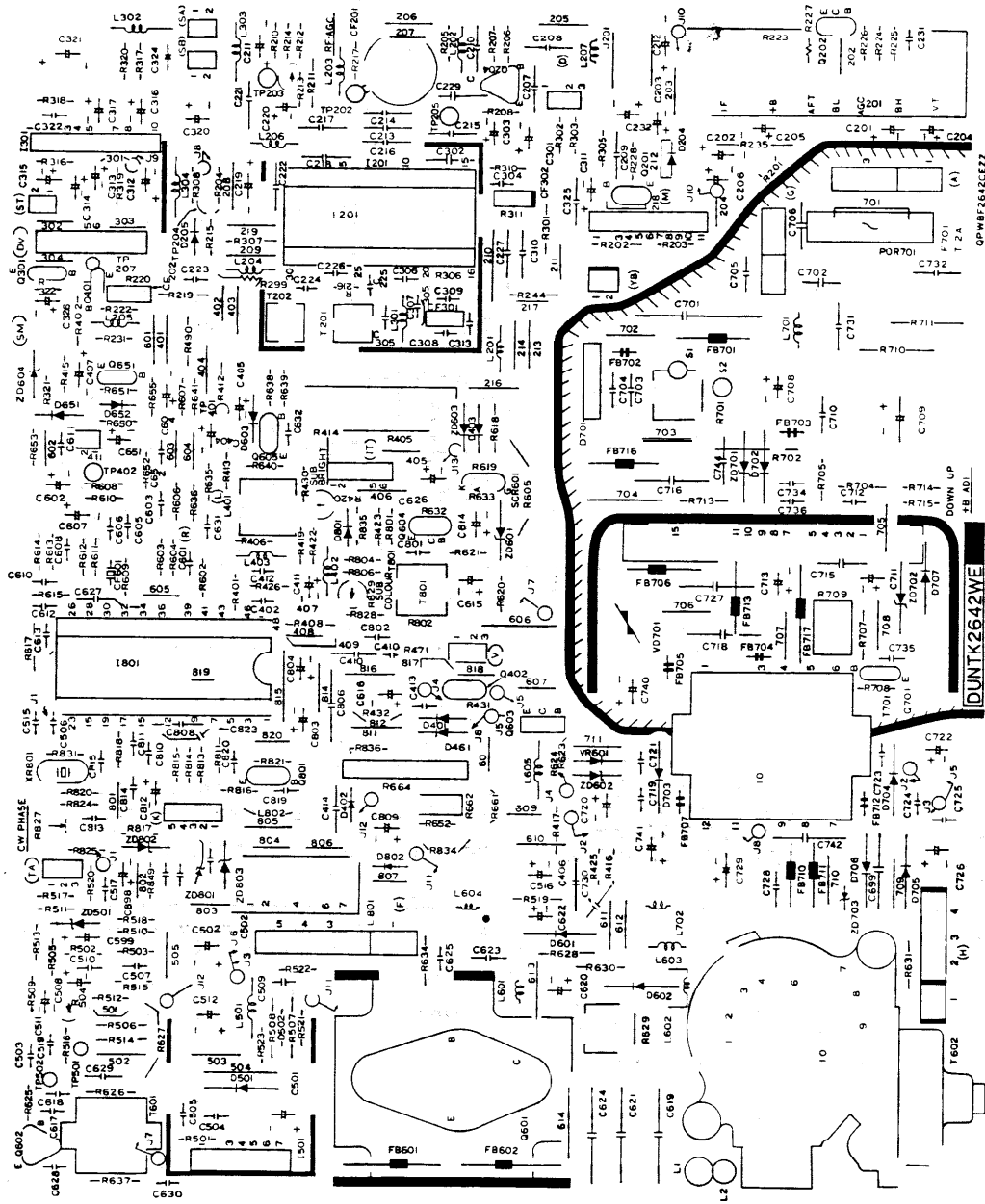


Figure 6. Mother Board (Wiring Side)

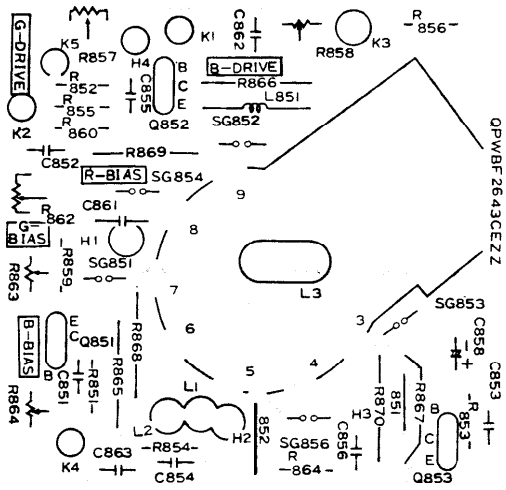


Figure 7. CRT Socket Board (Wiring Side)

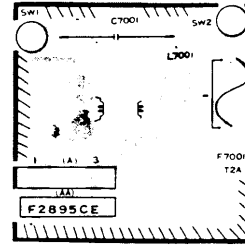


Figure 8. Filter Unit Board (Wiring Side)

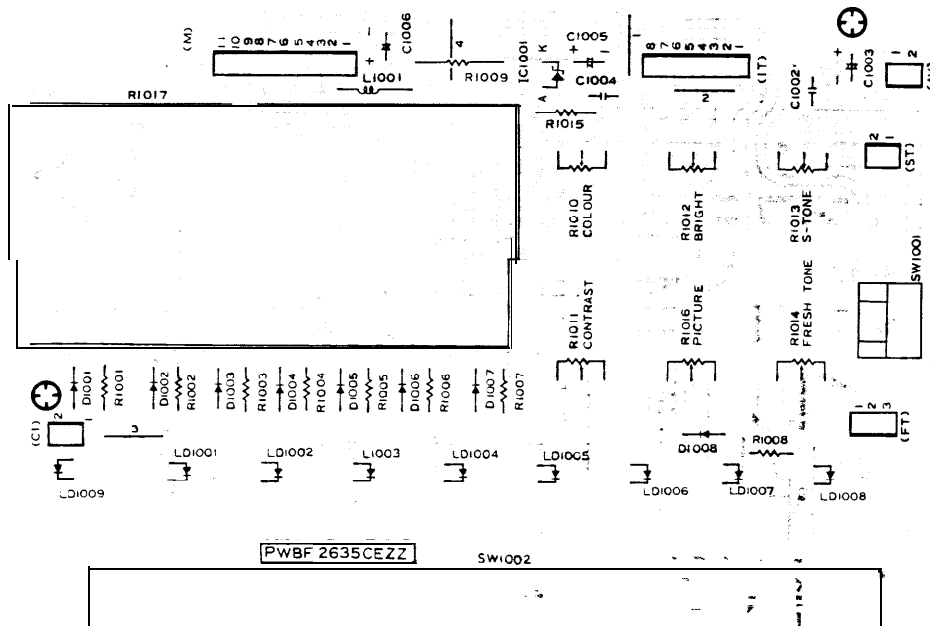


Figure 9. Tuning Unit Board (Wiring Side)

BLOCK DIAGRAM

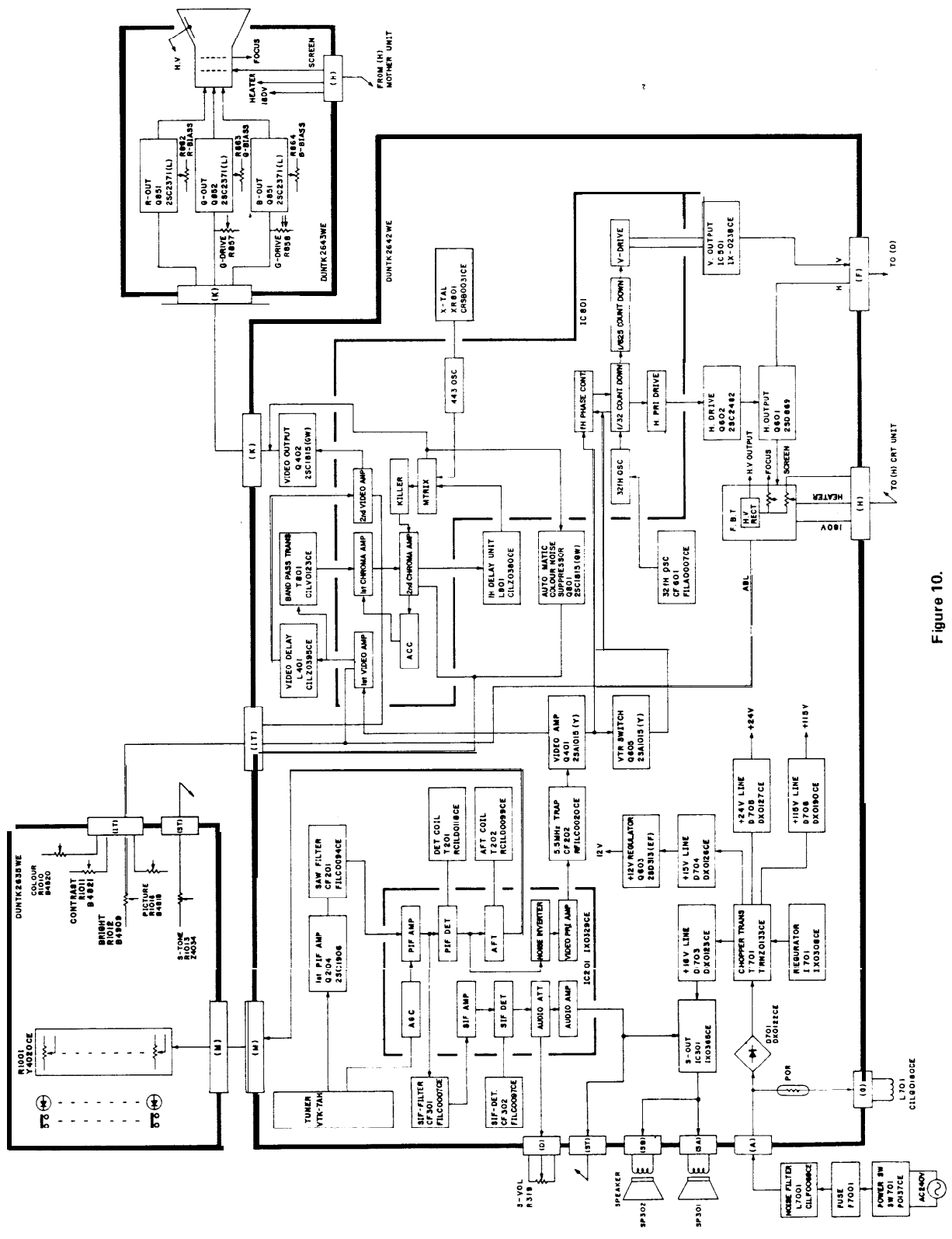
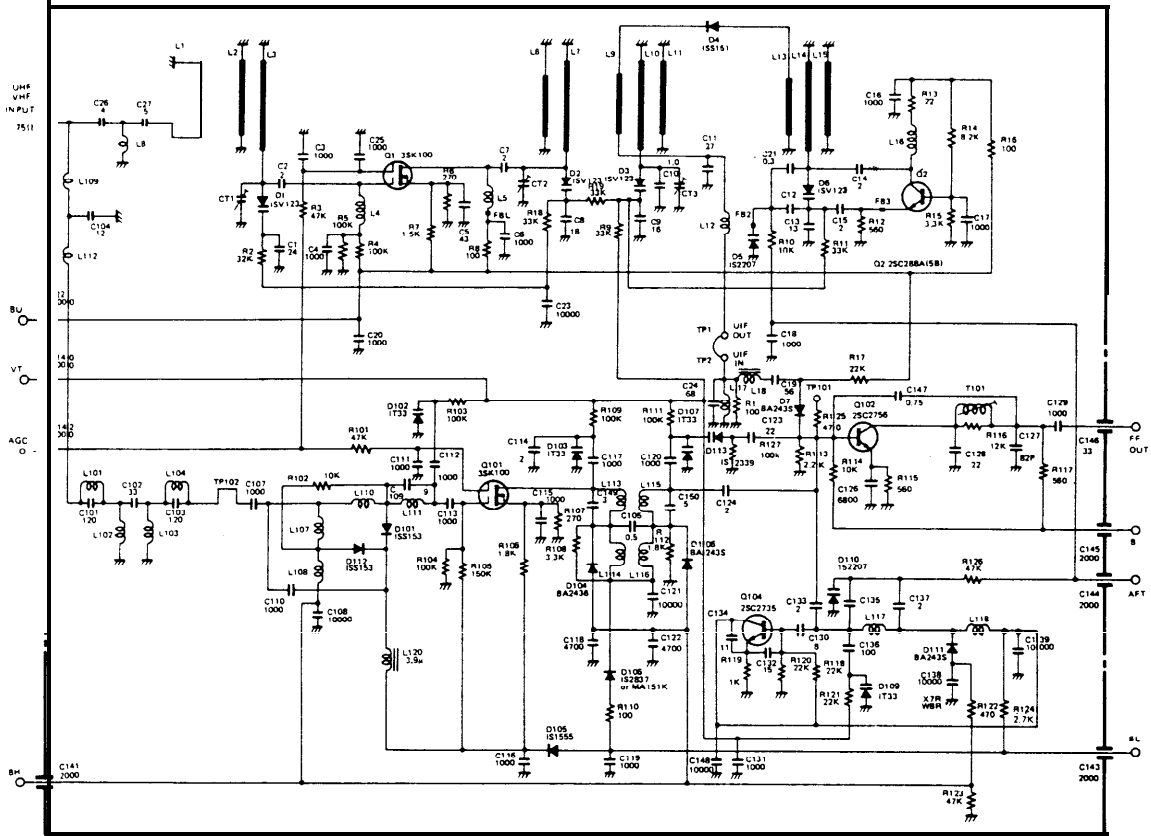


Figure 10.

VTUVTK-7AH///

TUNER



SAFETY NOTE;

1. DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACING PARTS.
2. SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.

PARTS MARKED WITH "△" () ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET. BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFORMANCE OF THE SET.

NOTE:

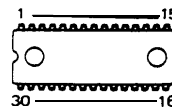
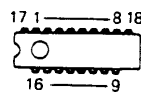
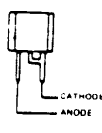
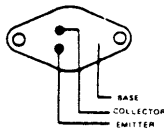
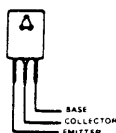
1. The unit of resistance 'ohm' is omitted (k- 1000 ohms M-1 Megohm).
2. All resistors are 1/8 watt, unless otherwise noted.
3. All capacitors μF , unless otherwise noted $\rho-\mu\mu F$.

Voltage Measurement Conditions

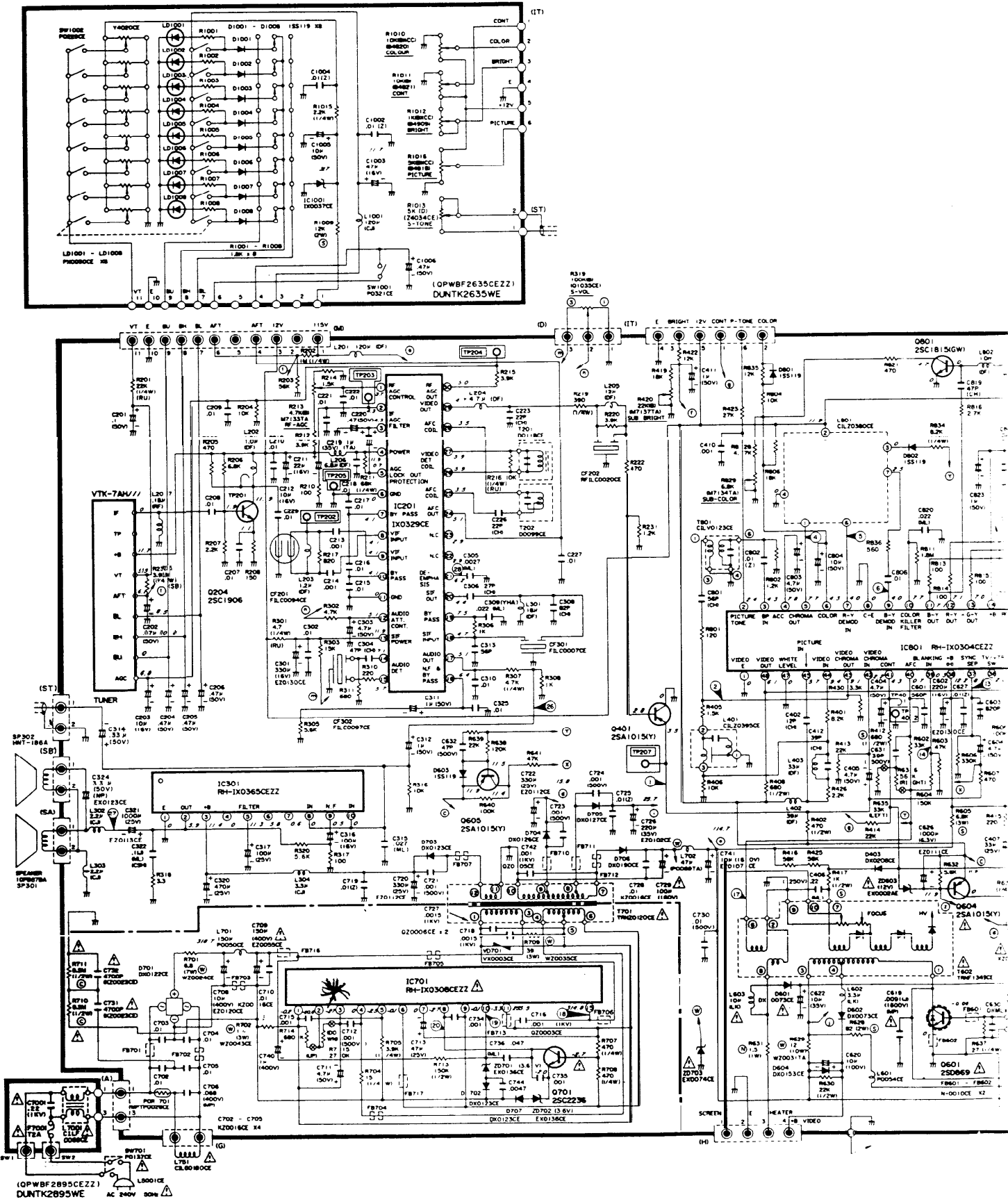
1. All these figures represent the voltage levels measured upon reception of PAL Colour signals.
2. All the voltages in each point are measured with Vacuum Tube Volt Meter.

Waveform Measurement Conditions

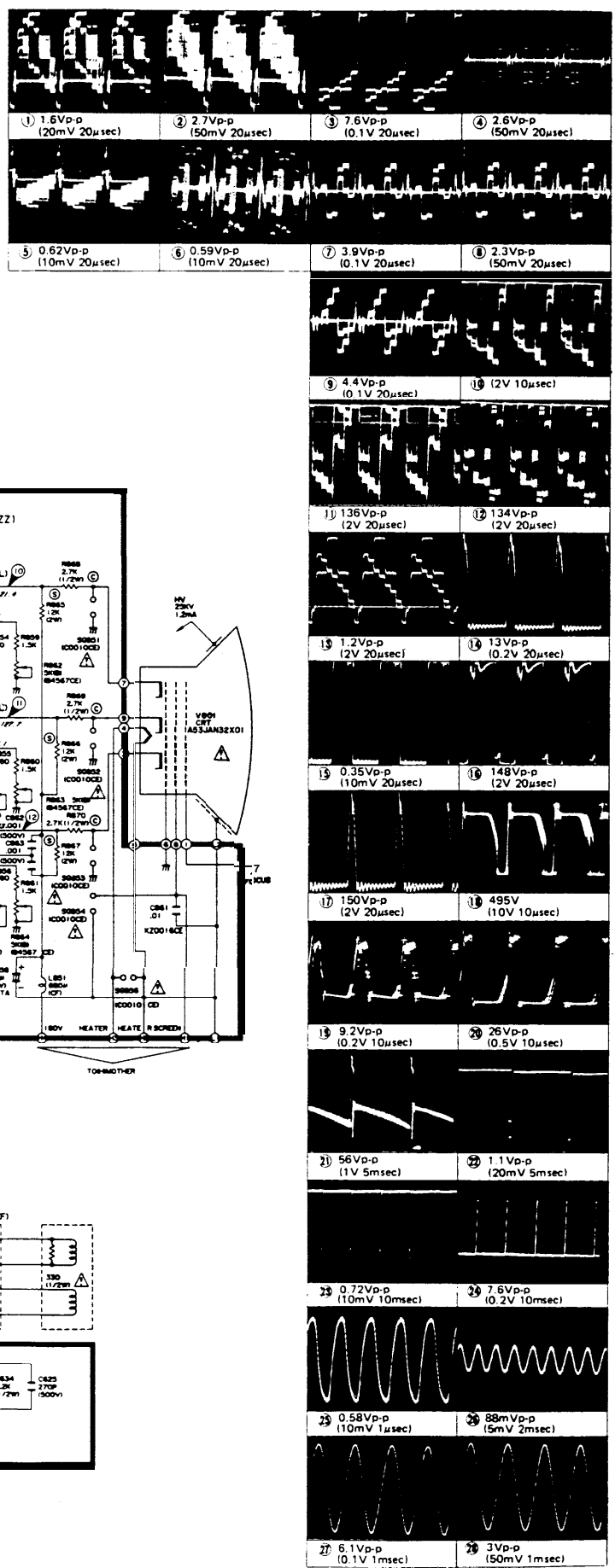
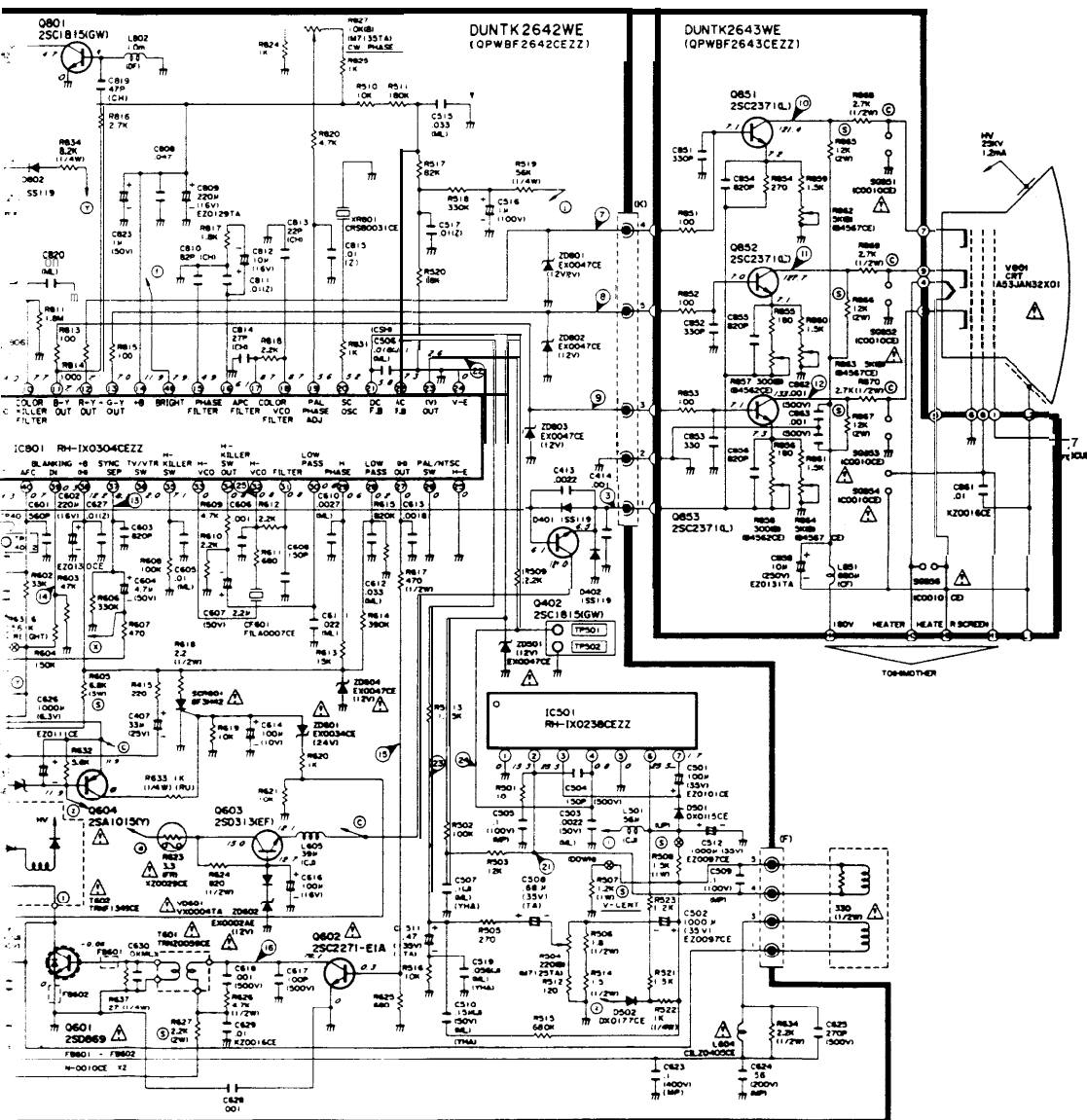
1. Upon receiving colour bar signal of 70 dB in field intensity.



COLOUR TELEVISION MODEL



ON MODEL CX-2273 SCHEMATIC DIAGRAM



PARTS LIST

PARTS REPLACEMENT

Replacement parts which have these special safety characteristics identified in this manual: electrical components having such features are identified by Δ in the Replacement Parts Lists.

The use of a substitute replacement part which does not have the same safety characteristics as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION

Ref. No.	Part No.	Description	Code
TUNER			
NOTE: FOR TUNER REPAIRS, ORDER A COMPLETE REPLACEMENT TUNER.			
	VTUVTK-7AH///	VHF/UHF Tuner	BK
PICTURE TUBE			
Δ va0i	VBA53JAN32X01	CRT	* 8
PRINTED WIRING BOARD ASSEMBLIES (Not Replacement Item)			
	DUNTK2642WEV4	Mother Unit	--
	DUNTK2643WEV4	CRT Socket Unit	--
	DUNTK2895WEV2	Line Filter Unit	--
	DUNTK2635WEV2	Sensor Unit	--
INTEGRATED CIRCUITS			
IC201	RH-iX0329CEZZ	PIF, SIF, DET	AQ
IC301	RH-iX0365CEZZ	s-out	AK
IC501	RH-iX0238CEZZ	v-out	AK
Δ IC701	R H-iX0308CEZZ	Power	AU
IC801	RH-iX0304CEZZ	Video Chrome	AX
11001	RH-iX0037CEZZ	Zener IC	AF
TRANSISTORS			
0204	VS2SC1906//1E	PI F Amp. [2SC1906]	AC
0401	VS2SA1015Y//E	Video Amp. [2SA1015(Y)]	AC
0402	VS2SC1 al 5GW-1	Video Amp. [2SC1815(GW)]	AB
Δ 0601	VS2SD869-//1E	H-Out [2SD869]	AP
Δ 0602	VS2SC2271 -EI A	H-Drive [2SC2271-E1A]	AC
0603	VS2SD313///1A	12V Regulator [2SD313(EF)]	AF

Ref. No.	Part No.	Description	Code
Δ 0604	VS2SA1015Y/1E	Protector Switch [2SA1015(Y)]	AC
0605	VS2SA1015Y/1E	SYNC Gate [2SA1015(Y)]	AC
A 0701	VS2SC2236Y/1E	Power Protector [2SC2236]	AC
Q801	VS2SC1815GW-1	ACC Amp. [2SC1815(GW)]	AB
Q851	VS2SC2371L/1E	R-Out [2SC2371]	AE
Q852	VS2SC2371 L/I E	G-Out [2SC2371]	AE
Q853	VS2SC2371 L/I E	B-Out [2SC2371]	AE
DIODES			
D401, 402	VHD1S119//-1	1S119	AB
D403	RH-DX0206CEZZ		AB
D501	RH-DX0115CEZZ		AF
D502	RH-DX0177CEZZ		AA
a D601, 602	RH-DX0073CEZZ		AD
0603	VHD1S119//-1	1S119	AB
D604	RH-DX0I53CEZZ		AB
D701	RH-DX0122CEZZ		AF
D702, 703	RH-DX0I23CEZZ		AC
D704	R H-DX0126CEZZ		AC
0705	RH-DX0127CEZZ		AC
D706	R H-DX0I 90CEZZ		AD
D707	RH-DX0I23CEZZ		AC
D801, 802, 1001	VHD1S119//-1	1S119	AB
1 008			
Δ ZD501	RH-EX0047CEZZ	Zener Diode	AB
Δ ZD601	RH-EX0034CEZZ	Zener Diode	AC
Δ ZD602, 603	RH-EX0002AEZZ	Zener Diode	AB
Δ ZD604	RH-EX0047CEZZ	Zener Diode	AB
ZD701	RH-EX0136CEZZ	Zener Diode	AC
ZD702	RH-EXO136CEZZ	Zener Diode	AC
Δ ZD703	RH-EX0074CEZZ	Zener Diode	AF
ZD801, 802, 803	RH-EX0047CEZZ	Zener Diode	AB
LD1 00'	RH-PX0030CEZZ	LED, Channel Indicator	AC
1001			
Δ VD601	RH-VX0004TAZZ	Varistor	AC
VD701	RH-VX0003CEZZ	Varistor	AE
Δ SCR601	VHSSF3H42//-1	Silicon Controlled Rectifier [SF3H42]	AG
COILS			
L201	VP-DF121 KO000	120 μ H	AB
L202	VP-DF1 ROM0000	1 μ H	AB
L203	VP-DF1R2M0000	1.2 μ H	AB
L204	VP-DF4R7K0000	4.7 μ H	AB
L205	VP-DF120K0000	12 μ H	AB
L206	VP-DF6R8K0000	6.8 μ H	AB
L207	VP-RFR18K0000	0.18 μ H	AB
L301	VP-DF180K0000	18 μ H	AB
L302, 303	VP-CJ2R2M0000	2.2 μ H	AB
L304	VP-CJ3R3K0000	3.3 μ H	AB

Ref. No.	Part No.	Description	Code	Ref. No.	Part No.	Description	Code
L401	RCiLZ0395CEZZ	Y Delay Line	AH	CAPACITORS			
L402	VP-DF390K0000	39 μ H	AB	c219	VCSATA1VE105K	1 35v Tantalum	AD
L403	VP-DF330K0000	33 μ H	AB	C301	RC-EZ0056GEZZ	330 16V Electrolytic	AC
L501	VP-CJ560K0000	56 μ H	AB	C316	VCEADAI CW107M	100 16V Electrolytic	AC
L601	RCiLP0054CEZZ	3.3 μ H Choke Coil	AD	c317	VCEADAI EW107M	100 25V Electrolytic	AB
L602	VP-LK3R3K0000	3.3 μ H	AB	C320	VCEADAI EW477M	470 25V Electrolytic	AB
Δ L603	VP-LK100K0000	10 μ H	AB	C321	VCEADAI CW477M	470 16V Electrolytic	AD
Δ L604	RCiLZ0405CEZZ	Linearity Coil	AG	C324	RC-EZOI 23CEZZ	3.3 50v Electrolytic	AC
L605	VP-CJ390K0000	39 μ H	AB			(NP)	
L701	RCiLP0050CEZZ	150 μ H	AE	C406	VCFYSB2EB224K	0.22 250V Mylar	AD
L702	RCiLP0069TAZZ	47 μ H	AF	C501	RC-EZ0101 CEZZ	100 35v Electrolytic	AB
Δ L751	RCiLGOI80CEZZ	Degaussing Coil	A V	C502	RC-EZ0097CEZZ	1000 35v Electrolytic	AE
L801	RCiLZ0380CEZZ	1 H Delay Line	AU	C504	VCKYPA2HB151K	150P 500v Ceramic	AA
L802	VP-DF102K0000	1mH	AB	C505	VCFYSB2AB104K	0.1 100v Metalized Polyester	AC
La51	VP-CF681 K0000	680 μ H	AB				
L1001	VP-CJ121 K0000	120 μ H (CX-2074)	AB	C508	VCSATA1VE684K	6.8 35v Tantalum	AC
4 L7001	RCiLF0069CEZZ	Line Filter	AH	C509	VCFYSB2AB104K	0.1 100v Metalized Polyester	AC
TRANSFORMERS							
T201	RCiLD0118CEZZ	Video DET	AD	c511	VCSATA1VE474K	0.47 35v Tantalum	AC
T202	RCiLD0099CEZZ	AFC	AE	C512	RC-EZ0097CEZZ	1000 35v Electrolytic	AE
Δ T601	RTRNZ0059CEZZ	H-Drive	AF	C602	RC-EZ0129TAZZ	220 16V Electrolytic	AC
Δ T602	RTRNF1349CEZZ	F.B.T.	BD	C614	VCEADA1AW107M	100 10V Electrolytic	AC
Δ T701	RTRNZ0120CEZZ	Chopper Trans.	AW	C615	RC-EZ0101 CEZZ	100 25V Electrolytic	AB
T801	RCiLV0123CEZZ	Filter, Phase, Coil	AD	C616	VCEADAI CW107M	100 16V Electrolytic	AC
				C617	VCKYPA2H8101K	100P 500v Ceramic	AA
				C618	VCKYPA2HB102K	0.001 500v Ceramic	AA
				Δ C619	VCFPPD3CA912J	0.0091 1.6kV Metalized Polyester	AE
				C620	VCEAAA2AW106M	10 100v Electrolytic	AB
				C623	VCFYSB2GB104K	0.1 400v Metalized Polyester	AD
				C624	VCFPPD2DB564J	0.56 200v Metal ized Polyester	AF
				C625	VCKYPA2HB271K	270P 500V Ceramic	AA
				C626	RC-EZ0111 CEZZ	1000 6.3V Electrolytic	AC
				C629	RC-KZ0016CEZZ	0.01 500v Ceramic	AC
				C631	VCCSPA2HL390K	39P 500v Ceramic	AA
				C632	VCCSPA2HL470J	47P 500v Ceramic	AA
				C701	VCFYSK3AB224K	3.22 1kV Metalized Polyester	AG
				C702	RC-KZ0016CEZZ	3.01 250V Ceramic	AC
				705			
				C706	VCFYSB2GB683K	0.1068 400v Metal ized Polyester	AD
				C708	RC-EZO120CEZZ	10 400v Electrolytic	AE
				Δ C709	RC-EZ0055CEZZ	150 400v Electrolytic	AN
				C710	RC-KZOOI 6CEZZ	0.01 AC250V Ceramic	AC
				C712	VCKYPA2HB102K	1000P 500v Ceramic	AA
				C716	RC-QZ0003CEZZ	1000P 1kV Polyester Mylar	AE
				C718	RC-QZ0006CEZZ	0.0015 1kV Polyester Mylar	AE
				C720	RC-EZOI 12CEZZ	330 25V Electrolytic	AC
				C721	VCKYPA2HB102K	0.001 500v Ceramic	AA
				C722	RC-EZ0112CEZZ	330 25V Electrolytic	AC
				C723,	VCKYPA2HB102K	0.001 500v Ceramic	AA
				724			
				C726	RC-EZ0102CEZZ	220 35v Electrolytic	AC
				C727	RC-QZ0006CEZZ	0.0015 1kV Polyester Mylar	AE
				C728	RC-KZOOI 6CEZZ	0.01 AC250V Ceramic	AC
				Δ c729	VCEAAH2CW107M	00 160V Electrolytic	AF
				C730	VCKYPB2HB103K	0.01 500v Ceramic	AB
				Δ C731,	RC-KZ0023CEZZ	1700P 2kV Ceramic	AD
				732			
				C740	VCEAAA2GW105M	1 400v Electrolytic	AC
				c741	RC-EZ0107CEZZ	10 160V Electrolytic	AF

Ref. No.	Part No.	Description	Code	Ref. No.	Part No.	Description	Code
C742	RC-QZ0005CEZZ	1000P 1 kV Polyester Mylar	AE	CABINET PARTS			
C809	RC-EZ0129TAZZ	220 16V Electrolytic	AC		CCABA5105CES0	Front Cabinet Ass'y	
C858	RC-EZ01 31TAZZ	10 250V Electrolytic	AD		GLEGP9007CEZZ	Leg	AC
C861	RC-KZ0016CEZZ	0.01 AC250V Ceramic	AC		CWAKP1129CE12	Front Frame Ass'y	BG
C862, 863	VCKYPA2HB102K	1000P 500V Ceramic	AA		GDöRF1248CESA	Door	AL
C7001	VCFYSK3AB224K	0.22 1kV Metalized Polyester	AG		HBDGB3001 GESA	Badge "SHARP"	AF
RESISTORS					HBDGD3016CESA	Badge "Linytron"	AE
					HDECA0346CESA	Decoration-Metal	AC
R507	VRS-VV3AB122J	1.2K 1W Oxide Film	AA		HDECA0347CESA	Channel Decolation Metal	AD
R508	VRS-VV3AB152J	1.5K 1W Oxide Film	AA		HiNDM1980CESA	Indication Metal	AB
R605	VRS-VV3LB682J	6.8K 3w Oxide Film	AB			(inside the door-upper)	
R623	RR-XZOO29CEZZ	3.3 Fuse Resistor	AB		HiNDM1981CESA	Indication Metal	AC
R627	VRS-VV3DB222J	2.2K 2w Oxide Film	AA			(inside the door-bottom)	
R628	VRS-VV3DB820J	82 2w Oxide Film	AA		HiNDP1384CESA	Channel indication Plate	AE
R629	RR-WZ003 1 TAZZ	12 10W Cement	AE		HPNLC1448CESA	Panel	AR
R631	VRN-VV3AB1R5J	1.5 1W Metal Coating	AA		HPNC-0083CESA	Punching Panel	AM
R701	RR-WZ0024CEZZ	6.8 10W Cement	AE		CCABB1458WEV0	Back Cabinet Ass'y	-
R702	RR-WZ0043CEZZ	1 3w Cement	AD		TLABH1138CEZZ	Aerial Label	AA
R709	RR-WZ0035CEZZ	39 3w Cement	AC		TLABM1108CEZZ	Model Label	AB
R710, 711	VRC-UA2HG825K	8.2M 1/2W Solid	AA		JBTN-1064CESA	Button, Channel	AE
R865, 866, 867	VRS-VV3DB123J	12K 2 W Oxide Film	AA		J BTN- 1037CESA	Button, Power	AE
R1009	VRS-VV3DB123J	12K 2W Oxide Film	AA		JKNBP1064CESA	Knob, Slide Control	AC
MISCELLANEOUS							
F7001	QFS-C2022TAZZ	Fuse, T2A	AE				
SW701	QFSHD1002CEZZ	Fuse, Holder	AA				
SW1001	QSW-P0137CEZZ	Power Switch	AL				
SW1001	QSW-P0321CEZZ	AFT Switch	AF				
SG851, 852, 853, 854, 856,	QSW-P0229CEZZ	Channel Switch	AQ				
FB601, 602, 717	QSPGC0010CEZZ	Spark Gap	AB				
FB701, 706, 710, 711, 713, 716	RBLN-0010CEZZ	Ferrite Bead	AC				
FB702, 703, 704, 705, 707, 712	RBLN-0023CEZZ	Ferrite Bead	AB				
XR801	RBLN-0020CEZZ	Ferrite Bead	AB				
POR701	RCRSB0031CEZZ	Crystal	AK				
	RMPTP0028CEZZ	Positive Coefficient Thermistor Degaussing	AG				
	QSöCV0814CEZZ	CRT Socket	AG				
	QACCL500 1 CEZZ	AC Cord	AP				
	VSP0010PB878A	Speaker	AP				
	VSP00HNT-186A	Speaker	AP				

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