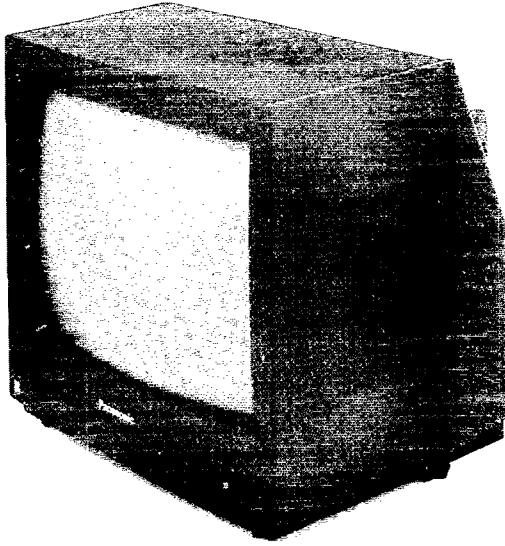


Service Manual



Colour Television

TC-14R1

Z-3 Chassis

Specifications

Power Source :	240 V AC, 50Hz
Power Consumption :	50W
Aerial Impedance :	75 Ω unbalanced, Coaxial Type
Receiving System :	PAL- I
Receiving Channels :	UHF E21 - E69
Intermediate Frequency :	Video 39.5 MHz Sound 33.5 MHz Colour 35.07 MHz (PAL)

Video/Audio Terminals

RCA IN	Video 1 V _{p-p} 75 Ω
RCA IN	Audio 0.5 V _{rms} , 10K Ω
High Voltage :	22.2kV at zero beam current
Picture Tube :	A34EAC01X06 34 cm V FST 90° measured diagonally.

Audio Output :	3 Watt
Speaker	10 cm, 8 Ω , Round type
Accessories supplied :	Remote Control 2 x R6(UM3) Batteries
Dimensions :	Height : 344mm Width : 365mm Depth : 376mm
Net Weight	10Kg

Specifications are subject to change without notice.
Weight and dimensions shown are approximate.

IMPORTANT

This receiver uses a HOT chassis, after service please ensure that the chassis is returned to its correct position.
Particular care being taken to the position of the customer controls.
Failure to do so could endanger customer safety.

Panasonic

Panasonic (U.K.) LTD.
WILLOUGHBY ROAD,
BRACKNELL,
BERKS,
RG12 8FT.

Contents

Safety Precautions	2
Location of Controls	3
Service Hints	3
Adjustment Procedure	4
Conductor Views	5
Schematic Diagrams	7
Exploded Views	11
Parts List	12

Safety Precautions

General Guide Lines

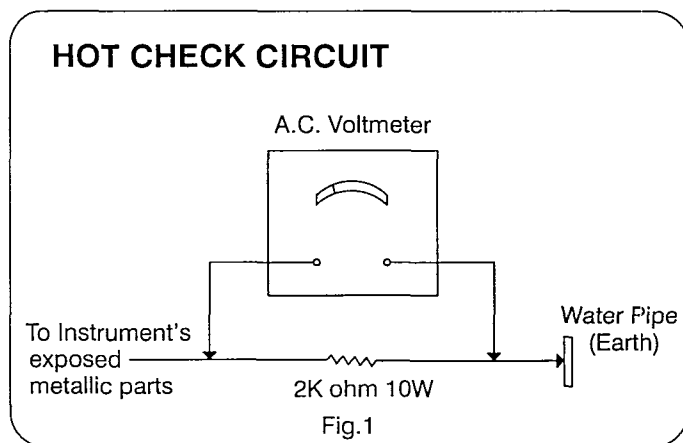
1. It is advisable to insert an isolation transformer in the AC supply before servicing a hot chassis.
 2. When servicing, observe the original lead dress in the high voltage circuits. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
 3. After servicing, see that all the protective devices such as insulation barriers, insulation papers, shields and isolation R-C combinations are correctly installed.
 4. When the receiver is not being used for a long period of time, unplug the power cord from the AC outlet.
 5. Potentials as high as 24.0 kV are present when this receiver is in operation. Operation of the receiver without the rear cover involves the danger of a shock hazard from the receiver power supply. Servicing should not be attempted by anyone who is not familiar with the precautions necessary when working on high voltage equipment. Always discharge the anode of the picture to the chassis before handling the tube.
 6. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazards.
4. Check each exposed Metallic part and check the voltage at each point.
 5. Reverse the AC plug at the outlet and repeat each of the above measurements.
 6. The potential at any point should not exceed 1.4 Vrms. In case a measurement is outside the limits specified, there is a possibility of a shock hazard, and the receiver should be repaired and rechecked before it is returned to the customer.

Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs of the plug.
2. Turn on the receiver's power switch.
3. Measure the resistance value with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the receiver, such as screw heads, aerials, connectors, control shafts etc. When the exposed metallic part has a return path to the chassis the reading should be between 4M Ω and 20M Ω . When the exposed metal does not have a return path to the chassis the reading must be infinite.

Leakage Current Hot Check

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 2k ohm 10W resistor in series with an exposed metallic part on the receiver and an earth such as a water pipe.
3. Use an AC voltmeter with high impedance to measure the potential across the resistor.



X-Radiation Warning

1. The potential sources of X-Radiation in TV sets are the high voltage section and the picture tube.
2. When using a picture tube test jig for service ensure that the jig is capable of handling 24.0 kV without causing X-Radiation.

NOTE : It is important to use an accurate periodically calibrated high voltage meter

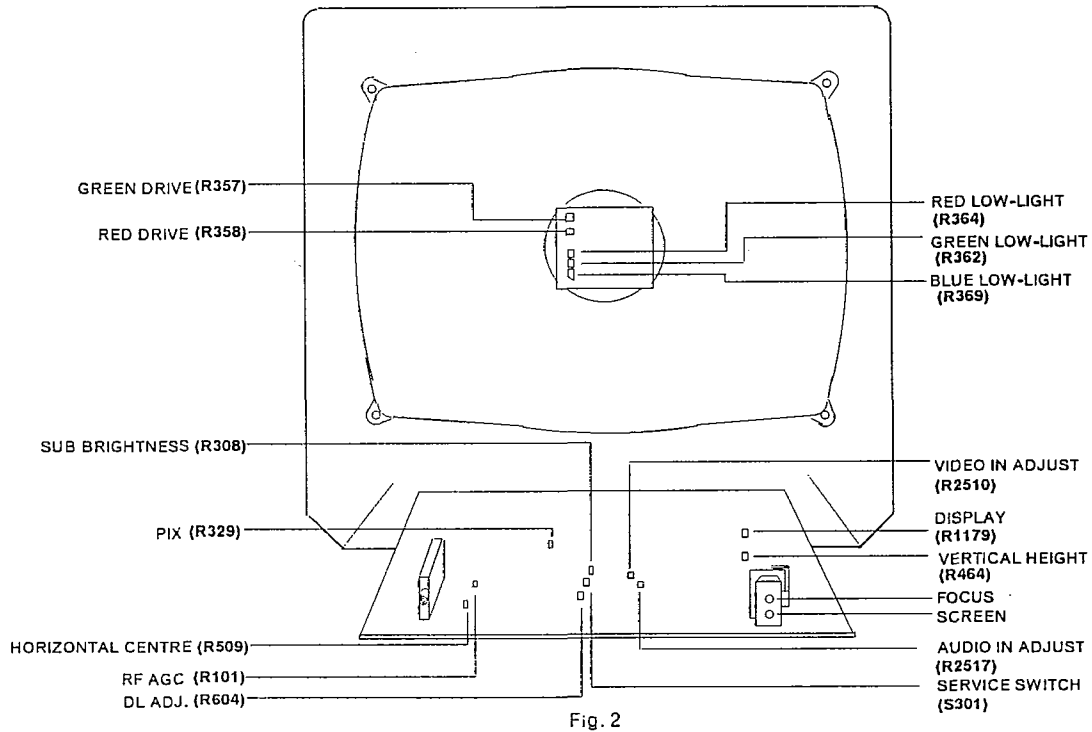
1. Set the brightness to minimum.
2. Measure the high voltage. The meter should indicate 22.2 kV +/- 1.5 kV, if the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.
3. To prevent an X-Radiation possibility, it is essential to use the specified tube.

SHUT DOWN CIRCUIT TEST

This test must be made as a final check before the set is returned to the customer.

1. Receive the Phillips pattern.
2. Check that the shut-down circuit functions when -60V is applied to TPE40, but does not function when -40V is applied.

Location Of Controls



Service Hints

Removal of E-Board

If the following procedure is not carried out, damage may occur to E-Board when attempting removal.

1. Using a small screwdriver release the PCB retaining clip (A) as shown in fig.3 and fig.4.
2. To remove the PCB from the cabinet, lift the PCB and pull backwards see fig.5.

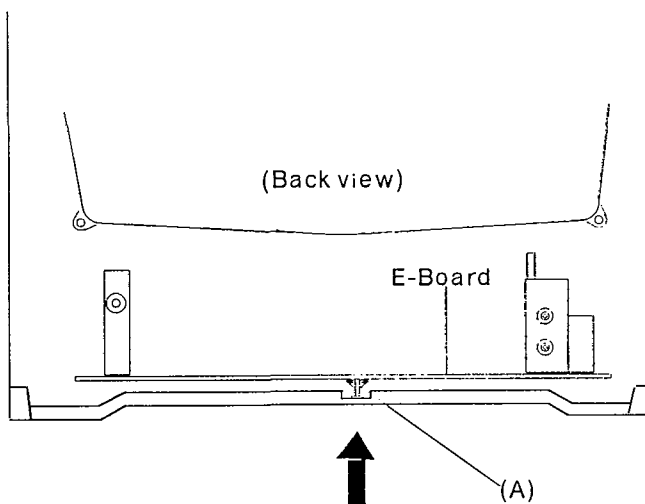
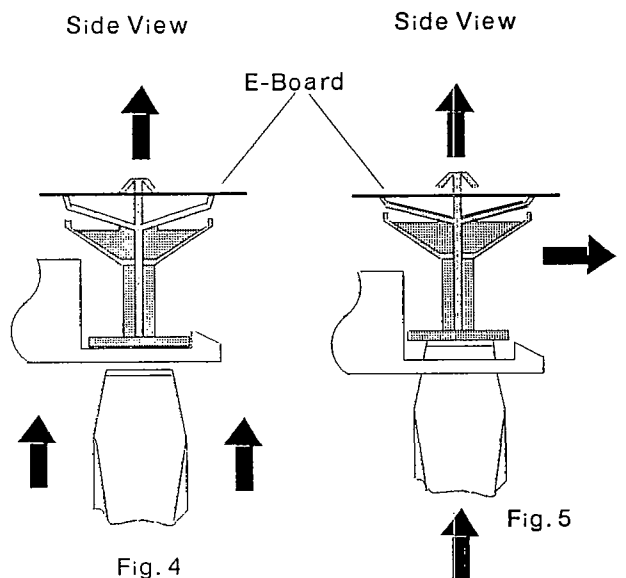
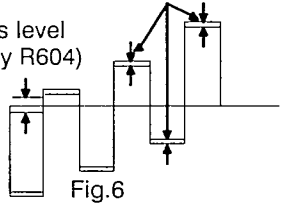


Fig. 3



ADJUSTMENTS

ITEM/PREPARATION	ADJUSTMENT PROCEDURE
<p>B VOLTAGE</p> <p>1. Operate the TV set.</p> <p>2. Set controls :</p> <p style="padding-left: 40px;">Bright (R318) minimum</p> <p style="padding-left: 40px;">Sub Bright (R308) minimum</p>	<p>1. Confirm the indicated test points for the specified voltage.</p> <p>TPE 1: 103±1.5V TPE 2: 5±0.5V</p> <p>TPE 4: 17.0±1V TPE 5: 12±1V</p> <p>TPE 10: 148±10V TPE 12: 26±2V</p> <p>TPE 49: 9±1V</p>
<p>AFC</p> <p>1. Operate the TV set.</p> <p>2. Set Preset switch (S1128) to "NOR".</p> <p>3. Earth TPE3.</p> <p>4. Connect a DVM to TPE27.</p>	<p>1. Apply 39.5 Mhz continuous wave to TP of Tuner (0.5Vp-p/75Ω)</p> <p>2. Adjust L105 so that voltage at TPE27 becomes 4.5±0.1V.</p> <p>3. Change the frequency and confirm the voltage as shown below.</p> <p style="padding-left: 40px;">+ 100kHz: Less than 2.0V</p> <p style="padding-left: 40px;">- 100kHz: more than 7.5V</p> <p>4. Remove the earth link from TPE3.</p>
<p>RF AGC</p> <p>1. Receive the Philips pattern.</p> <p>2. Set the input level to 60 ± 2 dB (75Ω open).</p> <p>3. Connect an oscilloscope to TPE28.</p>	<p>1. Turn RF AGC control (R101) fully counterclockwise.</p> <p>2. Slowly turn RF AGC control clockwise to set it at the point just before voltage at TPE28 drops.</p>
<p>CONTRAST / COLOUR</p> <p>1. Receive the Philips pattern.</p> <p>2. Set controls :</p> <p style="padding-left: 40px;">Contrast Maximum</p> <p style="padding-left: 40px;">Bright Minimum</p> <p style="padding-left: 40px;">Colour Minimum</p>	<p>1. Connect an oscilloscope to TPE26 and confirm the amplitude of waveform is 1.7Vp-p ± 0.3V.</p> <p>2. Set Colour control to maximum.</p> <p>3. Connect oscilloscope to the following test points and confirm the voltage at end test point.</p> <p>TPE 15: 4.2 ± 0.5Vp-p.</p>
<p>HIGH VOLTAGE</p> <p>1. Receive a crosshatch pattern.</p> <p>2. Set Contrast, Bright and Sub-Bright controls to their minimum positions (Zero beam current).</p>	<p>1. Connect a high voltage meter (Electrostatic type) to an anode of the picture tube.</p> <p>2. Confirm that the high voltage is within a range of 22.2kV ± 1.5kV.</p>

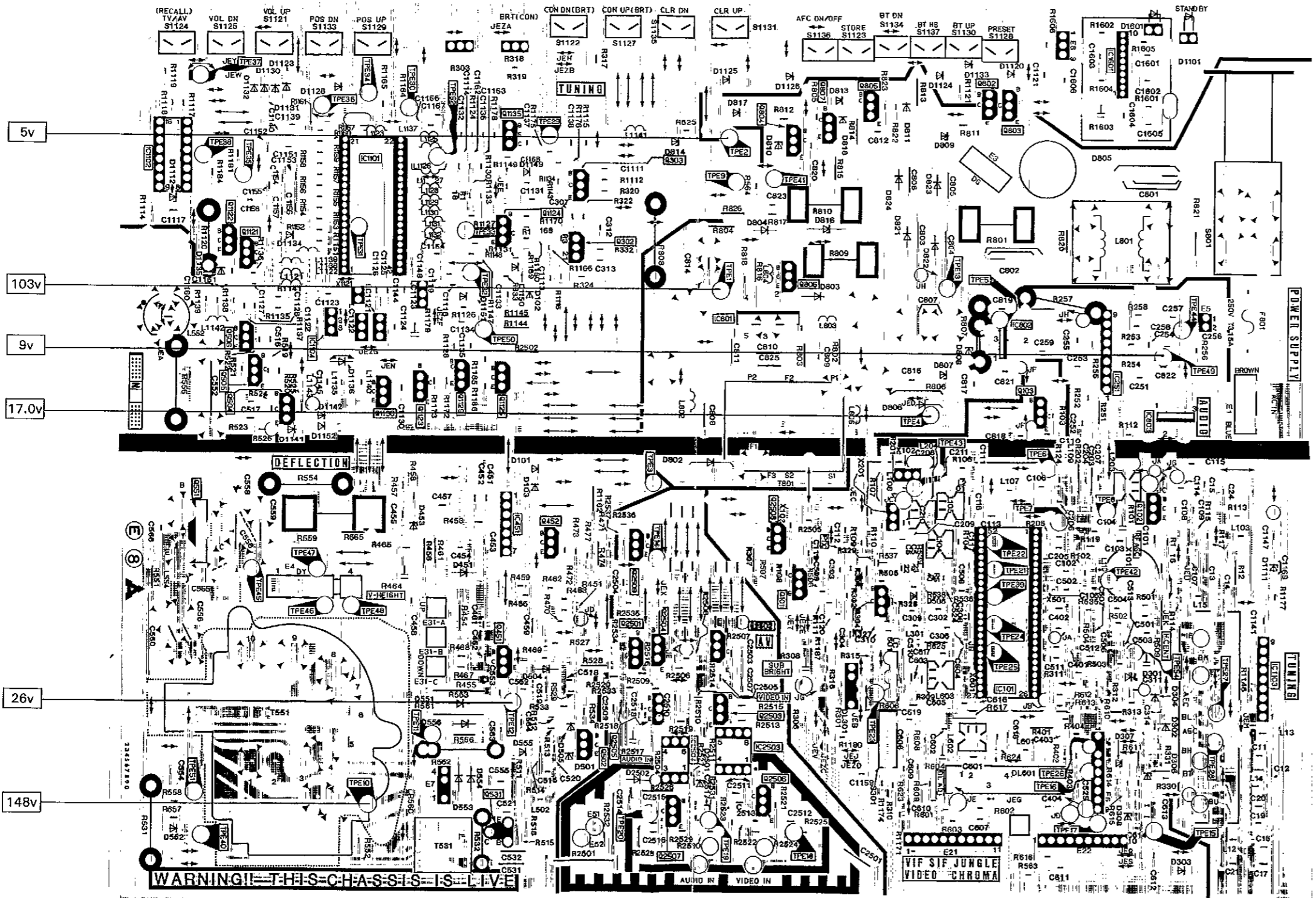
ITEM/PREPARATION	ADJUSTMENT PROCEDURE	WAVEFORM
<p>DELAY LINE</p> <p>1. Receive a colour bar pattern.</p> <p>2. Connect an oscilloscope to TPE 15.</p> <p>3. Set controls:</p> <p style="padding-left: 40px;">Contrast Maximum</p> <p style="padding-left: 40px;">Colour Maximum</p>	<p>1. Adjust DL Adj. (R604) and DL Matching Trans (L602) to obtain waveform at TPE15 as shown in Fig.6</p>	<p>Minimise the differences (by L602)</p> <p>Adjust this level to zero (by R604)</p>  <p style="text-align: center;">Fig.6</p>

CONDUCTOR VIEW
E-BOARD TNP197026BD

IC's	IC1102	IC1104	IC1101	IC451	IC901	IC802 IC101	IC803
TRANSISTORS	Q1121 Q1122 Q506 Q505 Q504 Q551	Q1130 Q1123 Q1129	Q1135 Q452	Q302 Q303 Q804	Q101 Q304	Q103	
DIODES	D552 D1112	D1134 D1131 D1123 D1130 D1128	D556 D453 D551 D554	D504 D101 D505 D102 D103 D555	D802 D817 D818 D803 D811 D823 D821 D1124 D822 D506 D824	D307 D308 D805	D1101 D304 D302 D306 D303 D301
TEST POINTS	TPE35 TPE37 TPE38 TPE40	TPE10 TPE34 TPE31 TPE36	TPE11 TPE52 TPE50 TPE12	TPE29 TPE3 TPE14	TPE2 TPE1 TPE19 TPE41 TPE23	TPE22 TPE39 TPE24 TPE25 TPE16 TPE17 TPE26 TPE6	TPE8 TPE44 TPE49 TPE15 TPE54 TPE27 TPE28

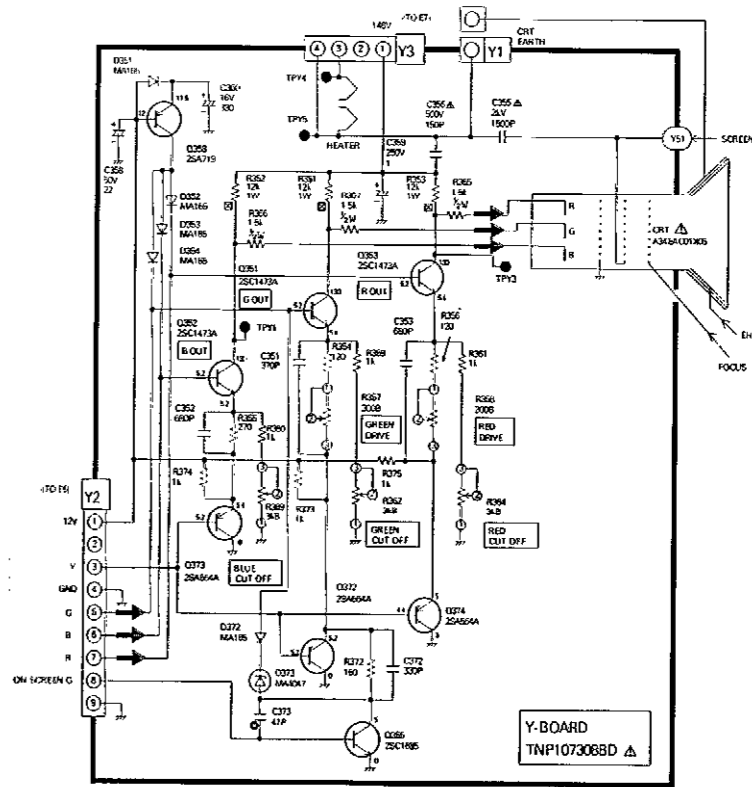
SCHEMATIC DIAGRAM FOR MODELS
TC-14R1
(Z-3 CHASSIS)

IMPORTANT SAFETY NOTICE
Components identified by Δ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

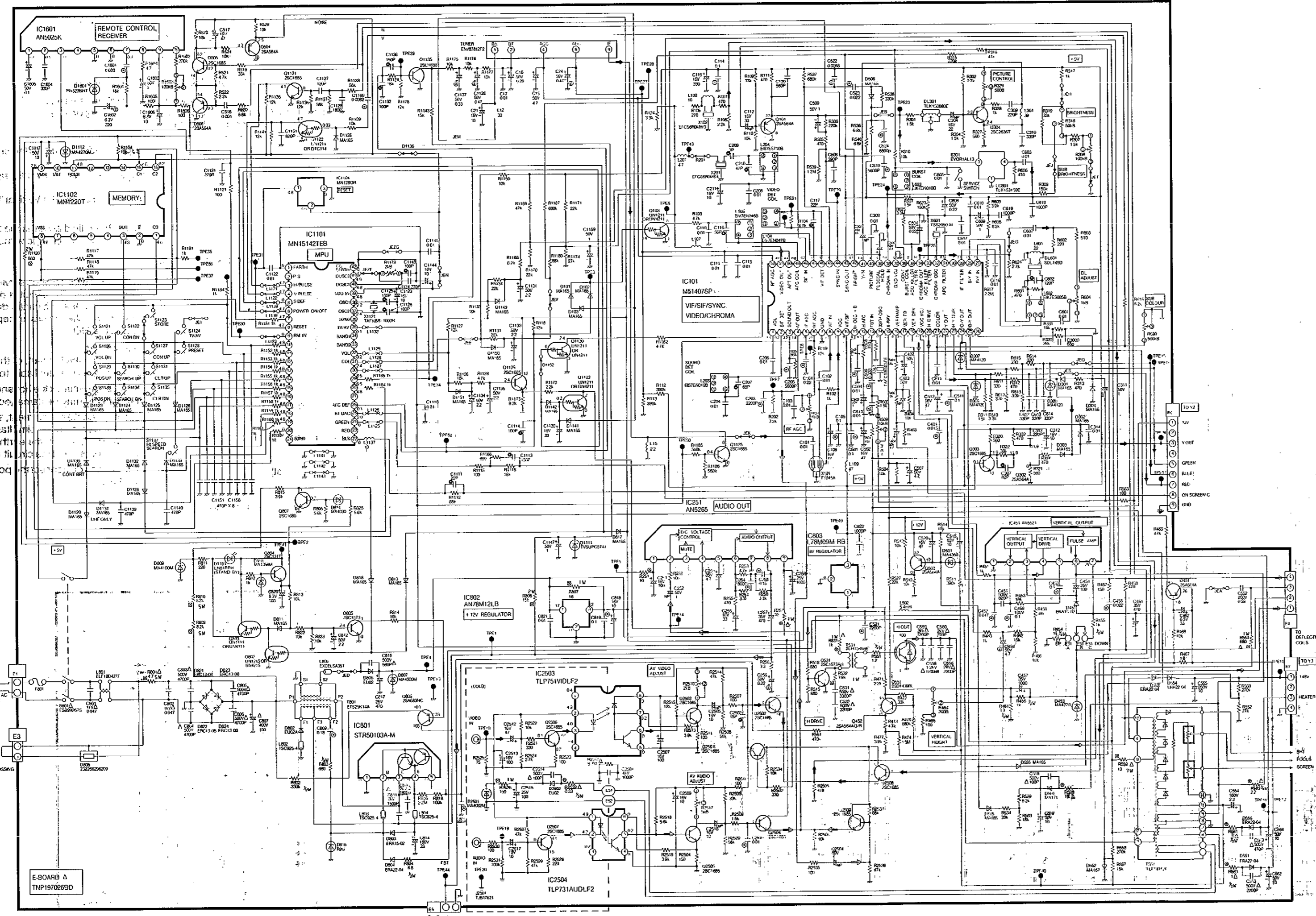
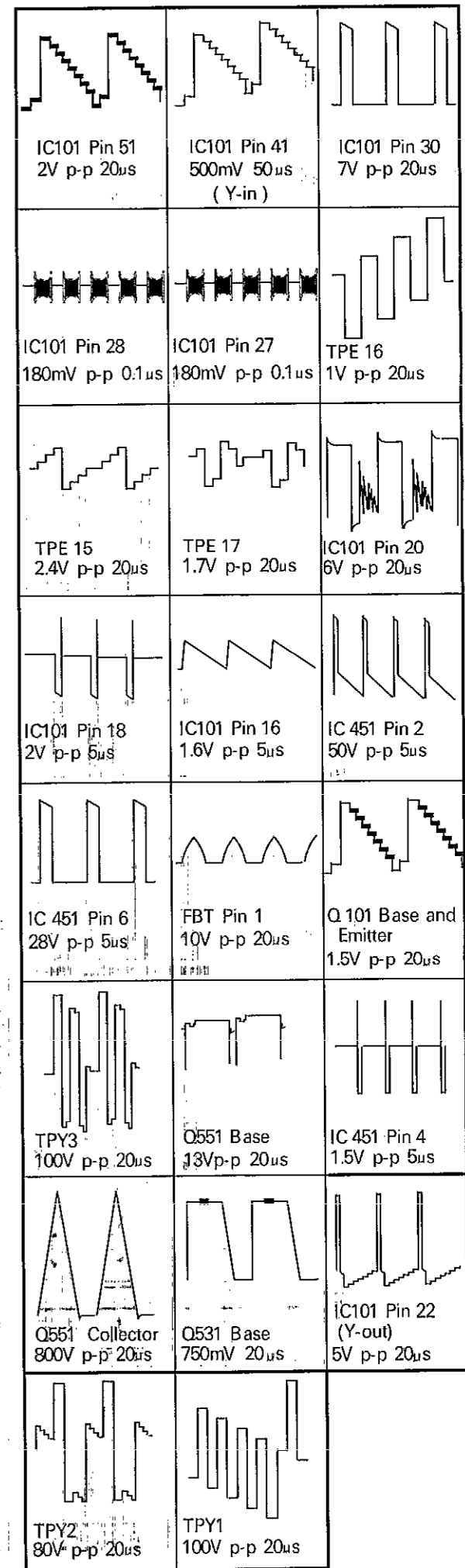


- RESISTOR**
All resistors are carbon 1/4W resistor, unless marked.
Unit of resistance is OHM (Ω) (K=1,000, M=1,000,000).
 - \bullet : Nonflammable
 - \odot : Metal Film
 - \square : Wire Wound
 - \otimes : Metal Oxide
 - \oslash : Fuse
 - \triangle : Solid
- CAPACITOR**
All capacitors are ceramic 50V capacitors, unless marked as follows:
Unit of capacitance is μ F, unless otherwise stated.
 - \oslash : Temperature Compensation
 - \otimes : Polyester
 - \boxtimes : Polypropylene
 - $\oplus \ominus$: Electrolytic
 - m : Metallised Polyester
 - T : Dipped Tantalum
 - NP : Bipolar
 - Z : Z-Type
- COIL**
Unit of inductance is μ H, unless otherwise stated.
- TEST POINT**
 - \odot : Test Point position
 - W : Waveform Test Point position
- EARTH SYMBOL**
 - \perp : Chassis Earth (Cold)
 - /// : Line Earth (Hot)
- VOLTAGE MEASUREMENT**
Voltage is measured by a DC voltmeter. Measurement conditions are as follows:
 Power source AC 240V, 50Hz
 Receiving Signal Colour Bar signal (RF)
 All customer controls Maximum position

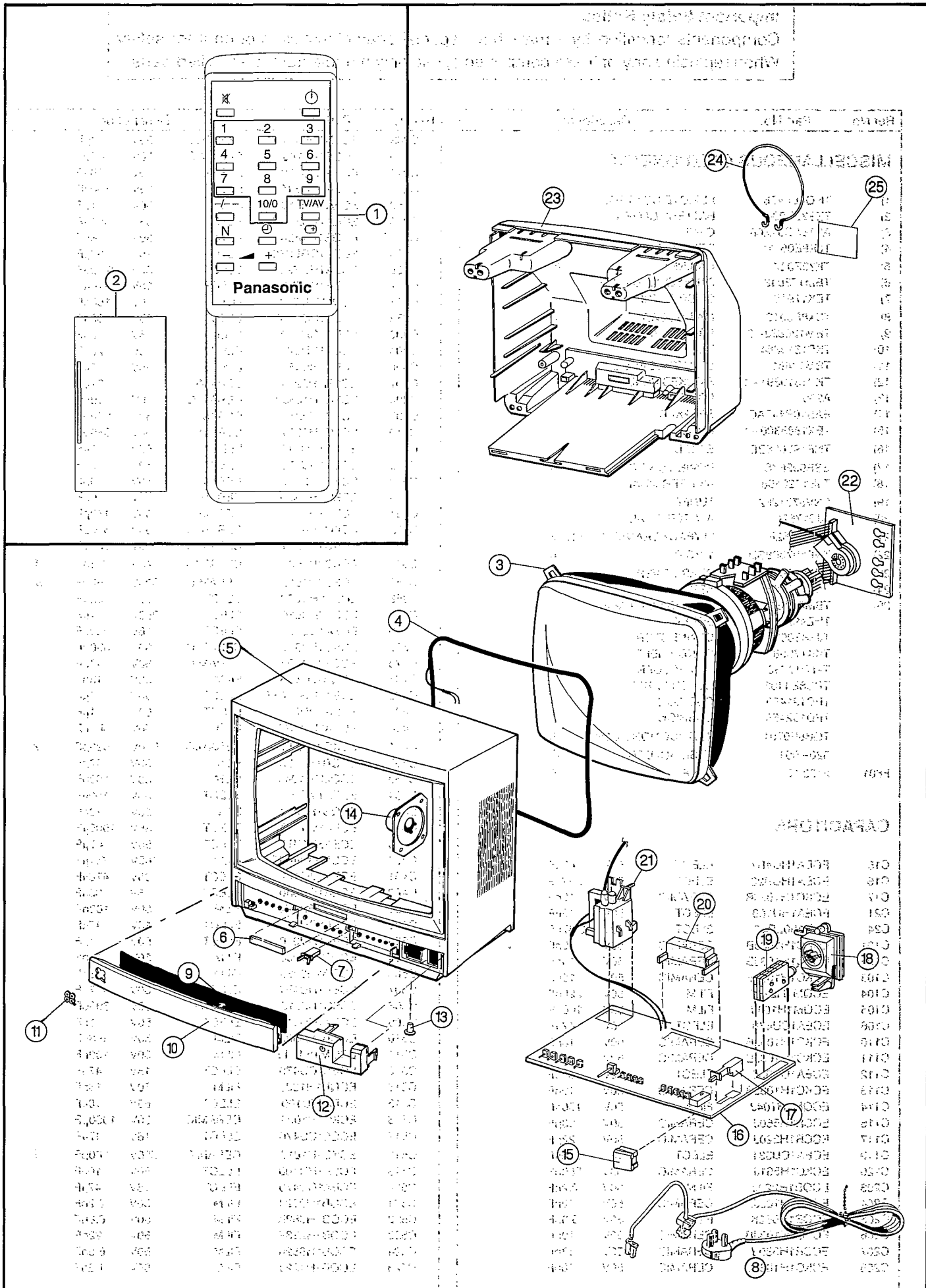
- \rightarrow Indicates the Video signal path
 - \Rightarrow Indicates the Audio signal path
 - \Rightarrow Indicates the Vertical/Horizontal signal path
- Remarks:**
 - Care must be taken when servicing this receiver, as it uses a HOT chassis. The circuit is defined by HOT and COLD indications in the schematic diagram. Take the following precautions. All circuits except the Audio, Video input circuits are HOT.
 - Precautions**
 - Do not touch the hot part, or the hot and cold parts at the same time, as you are liable to a shock hazard.
 - Do not short-circuit the hot and cold circuits as electrical components may be damaged.
 - Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously, as this may cause fuse failure. Connect the earth of the instruments to the earth connection of the circuit being measured.
 - Make sure to disconnect the power plug before removing the chassis.



WAVEFORMS



PARTS LOCATION



REPLACEMENT PARTS LIST

Important Safety Notice

Components identified by Δ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

Ref No.	Part No.	Description
MISCELLANEOUS COMPONENTS		
1)	TNQ8E0456	REMOTE CONTROL
2)	TZS2EK034	BATTERY COVER
3)	A34EAC01X06	C.R.T
4)	TLK8E05111	DEGAUSSING COIL
5)	TKY8E027	CABINET Δ
6)	TBM173048	PANASONIC BADGE
7)	TEK17918	DOOR CATCH
8)	TSX8E0012	MAINS LEAD Δ
9)	TBM120623-2	PRESET LABEL
10)	TKP1810384	LID
11)	TBM17461	QUINTRIX BADGE
12)	TKP1810391-1	SMOKED PANEL
13)	A2051	FOOT
14)	EAS10P447AG	SPEAKER
15)	TBX1888300-1	KNOB
16)	TNP197026BD	E P.C.B. Δ
17)	ESB99267S	POWER SWITCH Δ
18)	TJB1722408	ANT. TERMINAL
19)	ENV87812F2	TUNER Δ
20)	TJB17621	A.V. TERMINAL
21)	TLF14752F	FLYBACK TRANSFORMER Δ
22)	TNP107308BD	Y P.C.B. Δ
23)	TKU526901	REAR COVER Δ
24)	TSA113001	AERIAL
25)	TBM8E1314	REAR COVER LABEL
	THE492-4	SCREW
	TJS8E0001	CONNECTOR
	TKK179686	BLIND SHEET
	TMW17730	LED HOLDER
	TPC8E4403	OUTER CARTON
	TPD191453	CUSHION
	TPD192455	CUSHION
	TQB8E0791	INSTRUCTION BOOK Δ
	520-001	FUSE HOLDER Δ
F801	2133.15	FUSE Δ
CAPACITORS		
C15	ECEA1HU4R7	ELECT 50V 4.7μF
C16	ECEA1HUR22	ELECT 50V 0.22μF
C17	ECKC1H103JB	CERAMIC 50V 10nF
C21	ECEA1HU100	ELECT 50V 10μF
C24	ECEA50ZR47	ELECT 50V 0.47μF
C101	ECKC1H103JB	CERAMIC 50V 10nF
C102	ECKC1H103JB	CERAMIC 50V 10nF
C103	ECKC1H103JB	CERAMIC 50V 10nF
C104	ECQM1H224J	FILM 50V 220nF
C105	ECQM1H104J	FILM 50V 100nF
C106	ECEA1CU470	ELECT 16V 47μF
C110	ECKC1H103JB	CERAMIC 50V 10nF
C111	ECKC1H103JB	CERAMIC 50V 10nF
C112	ECEA1CN330	ELECT 16V 33μF
C113	ECKC1H103JB	CERAMIC 50V 10nF
C114	ECQM1H104J	FILM 50V 100nF
C116	ECCR1H560J	CERAMIC 50V 56pF
C117	ECCR1H220J	CERAMIC 50V 22pF
C119	ECEA1CU331	ELECT 16V 330μF
C120	ECKC1H561J	CERAMIC 50V 560pF
C203	ECQB1H222J	FILM 50V 2.2nF
C204	ECKC1H103JB	CERAMIC 50V 10nF
C205	ECQB1H562K	FILM 50V 5.6nF
C206	ECKC1H103JB	CERAMIC 50V 10nF
C207	ECCR1H680J	CERAMIC 50V 68pF
C208	ECKC1H103JB	CERAMIC 50V 10nF

Ref No.	Part No.	Description
C209	ECCR1H030J	CERAMIC 50V 3pF
C210	ECCR1H470J	CERAMIC 50V 47pF
C211	ECEA1HU100	ELECT 50V 10μF
C251	ECEA1CGE101	ELECT 16V 100μF
C252	ECEA1HN010	ELECT 50V 1μF
C253	ECEA1VGE4R7	ELECT 35V 4.7μF
C254	ECQB1H182K	FILM 50V 1.8nF
C255	ECEA1CGE330	ELECT 16V 33μF
C256	ECEA1HUR22	ELECT 50V 0.22μF
C257	ECEA1VU471	ELECT 35V 470μF
C258	ECQM1H154J	FILM 50V 150nF
C259	ECEA1EGE102	ELECT 25V 1000μF
C302	ECEA1CN100	ELECT 16V 10μF
C304	ECEA1CN220	ELECT 16V 22μF
C306	ECEA1HU4R7	ELECT 50V 4.7μF
C307	ECCR1H820J	CERAMIC 50V 82pF
C308	ECKC1H103JB	CERAMIC 50V 10nF
C309	ECKC1H221J	CERAMIC 50V 220pF
C310	ECKC1H331J	CERAMIC 50V 330pF
C311	ECEA1HN010	ELECT 50V 1μF
C312	ECEA1HU100	ELECT 50V 10μF
C313	ECKC1H221J	CERAMIC 50V 220pF
C314	ECKC1H103JB	CERAMIC 50V 10nF
C351	ECKC1H471J	CERAMIC 50V 470pF
C352	ECKC1H681J	CERAMIC 50V 680pF
C353	ECKC1H681J	CERAMIC 50V 680pF
C355	ECKC3D152J	CERAMIC 2KV 1.5nF Δ
C356	ECKC2H151J	CERAMIC 500V 150pF Δ
C358	ECEA1HU220	ELECT 50V 22μF
C359	ECEA2EU010	ELECT 250V 1μF
C360	ECEA1CU331	ELECT 16V 330μF
C372	ECKC1H331J	CERAMIC 50V 330pF
C373	ECCR1H470J	CERAMIC 50V 47pF
C401	ECQB1H153K	FILM 50V 15nF
C402	ECEA1HG010SB	ELECT 50V 1μF
C403	ECEA1HN010	ELECT 50V 1μF
C404	ECEA1HU4R7	ELECT 50V 4.7μF
C451	ECKC2H821J	CERAMIC 500V 820pF Δ
C452	ECQB1H473K	FILM 50V 47nF
C453	ECQM1H104J	FILM 50V 100nF
C454	ECEA1VU101	ELECT 35V 100μF
C455	ECQB1H223K	FILM 50V 22nF
C457	ECEA1VU102	ELECT 35V 1000μF
C458	ECEA50Z4R7	ELECT 50V 4.7μF
C459	ECQM1104KJZ	FILM 100V 0.1μF
C461	ECEA1VU471	ELECT 35V 470μF
C462	ECEA1CU330	ELECT 16V 33μF
C501	ECQM1H104J	FILM 50V 100nF
C502	ECEA1CU470	ELECT 16V 47μF
C503	ECEA1HU010	ELECT 50V 1μF
C504	ECQB1H103J	FILM 50V 10nF
C506	ECQB1H333J	FILM 50V 33nF
C507	ECEA1HU4R7	ELECT 50V 4.7μF
C508	ECKC1H391J	CERAMIC 50V 390pF
C509	ECEA1HU010	ELECT 50V 1μF
C510	ECQB1H562K	FILM 50V 5.6nF
C511	ECQM1H104J	FILM 50V 100nF
C512	ECEA1CU470	ELECT 16V 47μF
C513	ECQB1H183J	FILM 50V 18nF
C515	ECEA1JU100	ELECT 63V 10μF
C516	ECKC1H102J	CERAMIC 50V 1000pF
C517	ECEA1CU470	ELECT 16V 47μF
C518	ECKC2H101J	CERAMIC 500V 100pF Δ
C519	ECEA1HU100	ELECT 50V 10μF
C520	ECEA1CU470	ELECT 16V 47μF
C521	ECQB1H222J	FILM 50V 2.2nF
C522	ECQB1H682K	FILM 50V 6.8nF
C523	ECQB1H223K	FILM 50V 22nF
C524	ECQB1H682K	FILM 50V 6.8nF
C528	ECQB1H122J	FILM 50V 1.2nF

Ref No.	Part No.	Description
C531	ECKC2H332J	CERAMIC 500V 3.3nF Δ
C532	ECKC2H332J	CERAMIC 500V 3.3nF Δ
C552	ECQM2H394J	FILM 500V 0.39μF
C553	ECKC2H222J	CERAMIC 500V 2200pF Δ
C554	ECEA2CU2R2	ELECT 160V 2.2μF
C555	ECEA2EU100	ELECT 250V 10μF
C556	ECKC3D222JB	CERAMIC 2KV 2200pF Δ
C558	ECWH12H682J	CERAMIC 500V 6.8nF Δ
C559	ECKC3D122J	CERAMIC 2KV 1200pF Δ
C560	ECKC3D271JB	CERAMIC 2KV 270pF Δ
C562	ECEA1HU100	ELECT 50V 10μF
C563	ECKC2H471J	CERAMIC 500V 470pF Δ
C564	ECEA1HU100	ELECT 50V 10μF
C601	ECKC1H103JB	CERAMIC 50V 10nF
C602	ECCR1H121J	CERAMIC 50V 120pF
C603	ECKC1H103JB	CERAMIC 50V 10nF
C604	ECEA1HUR22	ELECT 50V 0.22μF
C605	ECKC1H103JB	CERAMIC 50V 10nF
C606	ECEA1HUR22	ELECT 50V 0.22μF
C607	ECKC1H103JB	CERAMIC 50V 10nF
C609	ECEA1HU010	ELECT 50V 1μF
C610	ECKC1H103JB	CERAMIC 50V 10nF
C611	ECKC1H103JB	CERAMIC 50V 10nF
C612	ECKC1H331J	CERAMIC 50V 330pF
C613	ECKC1H331J	CERAMIC 50V 330pF
C614	ECKC1H331J	CERAMIC 50V 330pF
C616	ECKC1H103JB	CERAMIC 50V 10nF
C617	ECKC1H103JB	CERAMIC 50V 10nF
C618	ECKC1H102J	CERAMIC 50V 1000pF
C619	ECKC1H102J	CERAMIC 50V 1000pF
C801	222233040473	FILM 400V 47nF Δ
C802	222233040473	FILM 400V 47nF Δ
C803	ECKC2H472J	CERAMIC 500V 4.7nF Δ
C804	ECKC2H472J	CERAMIC 500V 4.7nF Δ
C805	ECKC2H472J	CERAMIC 500V 4.7nF Δ
C806	ECKC2H472J	CERAMIC 500V 4.7nF Δ
C807	ECES2GU101	ELECT 400V 100μF Δ
C809	ECQM1H184J	FILM 50V 0.18μF
C810	ECKC3D152J	CERAMIC 2KV 1.5nF Δ
C811	ECKC3D152J	CERAMIC 2KV 1.5nF Δ
C812	ECEA1HU2R2	ELECT 50V 2.2μF
C814	ECEA160V33	ELECT 160V 33μF
C816	ECKC2H561J	CERAMIC 500V 560pF Δ
C817	ECEA1EU471	ELECT 25V 470μF
C818	ECEA1HU100	ELECT 50V 10μF
C819	ECQM1H104J	FILM 50V 100nF
C820	ECEA1EU101	ELECT 25V 100μF
C821	ECKC1H103JB	CERAMIC 50V 10nF
C822	ECKC1H102J	CERAMIC 50V 1000pF
C823	ECQB1H332K	FILM 50V 3.3nF
C1111	ECCR1H220J	CERAMIC 50V 22pF
C1113	ECCR1H151J	CERAMIC 50V 150pF
C1114	ECCR1H101J	CERAMIC 50V 100pF
C1117	ECEA1HU100	ELECT 50V 10μF
C1118	ECKC1H103JB	CERAMIC 50V 10nF
C1121	ECKC1H271J	CERAMIC 50V 270pF
C1122	ECKC1H103JB	CERAMIC 50V 10nF
C1123	ECEA1HU100	ELECT 50V 10μF
C1124	ECKC1H271J	CERAMIC 50V 270pF
C1125	ECCR1H101J	CERAMIC 50V 100pF
C1126	ECCR1H101J	CERAMIC 50V 100pF
C1127	ECKC1H121J	CERAMIC 50V 120pF
C1128	ECKC1H181J	CERAMIC 50V 180pF
C1130	ECEA1CU330	ELECT 16V 33μF
C1131	ECEA1HU2R2	ELECT 50V 2.2μF
C1132	ECCR1H101J	CERAMIC 50V 100pF
C1133	ECEA1HU2R2	ELECT 50V 2.2μF
C1134	ECEA1HU2R2	ELECT 50V 2.2μF
C1135	ECEA1HU2R2	ELECT 50V 2.2μF
C1136	ECCR1H151J	CERAMIC 50V 150pF
C1137	ECEA50ZR33	ELECT 50V 0.33μF
C1138	ECEA50ZR47	ELECT 50V 0.47μF
C1139	ECKC1H471J	CERAMIC 50V 470pF
C1140	ECKC1H471J	CERAMIC 50V 470pF
C1144	ECEA1HU100	ELECT 50V 10μF
C1145	ECKC1H103JB	CERAMIC 50V 10nF
C1147	ECEA1HU010	ELECT 50V 1μF
C1148	ECCR1H101J	CERAMIC 50V 100pF

Ref No.	Part No.	Description
C1151	ECKC1H471J	CERAMIC 50V 470pF
C1152	ECKC1H471J	CERAMIC 50V 470pF
C1153	ECKC1H471J	CERAMIC 50V 470pF
C1154	ECKC1H471J	CERAMIC 50V 470pF
C1155	ECKC1H471J	CERAMIC 50V 470pF
C1156	ECKC1H471J	CERAMIC 50V 470pF
C1157	ECKC1H471J	CERAMIC 50V 470pF
C1158	ECKC1H471J	CERAMIC 50V 470pF
C1159	ECEA1HU010	ELECT 50V 1μF
C1160	ECQB1H822K	FILM 50V 8.2nF
C1161	ECKC1H821J	CERAMIC 50V 820pF
C1601	ECQB1H333J	FILM 50V 33nF
C1602	ECEA6Z220	ELECT 6.3V 22μF
C1603	ECEA1HU010	ELECT 50V 1μF
C1604	ECKC1H331J	CERAMIC 50V 330pF
C1605	ECEA1HU0R1	ELECT 50V 0.1μF
C1606	ECEA1CU100	ELECT 16V 10μF
C2501	ECKDNS102MBX	CERAMIC 1.2KV 1000pF
C2503	ECCR1H150J	CERAMIC 50V 15pF
C2504	ECEA1HN010	ELECT 50V 1μF
C2505	ECEA1CN100	ELECT 16V 10μF
C2507	ECEA1EU101	ELECT 25V 100μF
C2509	ECEA1HU100	ELECT 50V 10μF
C2510	ECQB1H103J	FILM 50V 10nF
C2512	ECEA1CU470	ELECT 16V 47μF
C2513	ECEA1EU101	ELECT 25V 100μF
C2514	ECKC2H101J	CERAMIC 500V 100pF Δ
C2515	ECEA1EU101	ELECT 25V 100μF
C2517	ECEA1HU100	ELECT 50V 10μF
C2518	ECEA1CN100	ELECT 16V 10μF

RESISTORS

Ref No.	Part No.	Description
R101	EVND4AA00B14	CONTROL 10KΩ
R102	ERD25TJ102	CARBON 0.25W 5% 1KΩ
R103	ERD25TJ472	CARBON 0.25W 5% 4K7Ω
R104	ERD25TJ472	CARBON 0.25W 5% 4K7Ω
R106	ERD25TJ271	CARBON 0.25W 5% 270Ω
R107	ERD25TJ471	CARBON 0.25W 5% 470Ω
R108	ERD25TJ222	CARBON 0.25W 5% 2K2Ω
R109	ERD25TJ333	CARBON 0.25W 5% 33KΩ
R110	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R111	ERD25TJ471	CARBON 0.25W 5% 470Ω
R112	ERD25TJ394	CARBON 0.25W 5% 390KΩ
R113	ERD25TJ394	CARBON 0.25W 5% 390KΩ
R118	ERD25TJ123	CARBON 0.25W 5% 12KΩ
R119	ERD25TJ123	CARBON 0.25W 5% 12KΩ
R124	ERD25TJ332	CARBON 0.25W 5% 3K3Ω
R202	ERD25TJ332	CARBON 0.25W 5% 3K3Ω
R205	ERD25TJ563	CARBON 0.25W 5% 56KΩ
R251	ERQ14AJ100	METAL 0.25W 5% 10Ω Δ
R252	ERD25TJ101	CARBON 0.25W 5% 100Ω
R253	ERD25TJ472	CARBON 0.25W 5% 4K7Ω
R254	ERD25TJ332	CARBON 0.25W 5% 3K3Ω
R255	ERD25TJ471	CARBON 0.25W 5% 470Ω
R256	ERD25TJ3R3	CARBON 0.25W 5% 3R3Ω
R257	ERQ1CJP100	METAL 1W 5% 10Ω Δ
R258	ERD25TJ332	CARBON 0.25W 5% 3K3Ω
R301	ERD25TJ152	CARBON 0.25W 5% 1K5Ω
R302	ERD25TJ272	CARBON 0.25W 5% 2K7Ω
R304	ERD25TJ152	CARBON 0.25W 5% 1K5Ω
R307	ERD25TJ152	CARBON 0.25W 5% 1K5Ω
R308	EVND4AA00B15	CONTROL 100KΩ
R309	ERD25TJ154	CARBON 0.25W 5% 150KΩ
R310	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R311	ERD25TJ152	CARBON 0.25W 5% 1K5Ω
R312	ERD25TJ471	CARBON 0.25W 5% 470Ω
R313	ERD25TJ471	CARBON 0.25W 5% 470Ω
R315	ERD25TJ224	CARBON 0.25W 5% 220KΩ
R316	ERD25TJ473	CARBON 0.25W 5% 47KΩ
R317	ERD25TJ102	CARBON 0.25W 5% 1KΩ
R318	EVUE2AM30B54	CONTROL 50KΩ
R319	ERD25TJ333	CARBON 0.25W 5% 33KΩ
R320	ERD25TJ561	CARBON 0.25W 5% 560Ω
R321	ERD25TJ561	CARBON 0.25W 5% 560Ω
R322	ERD25TJ333	CARBON 0.25W 5% 33KΩ
R324	ERD25TJ471	CARBON 0.25W 5% 470Ω
R327	ERD25TJ561	CARBON 0.25W 5% 560Ω
R328	ERD25TJ102	CARBON 0.25W 5% 1KΩ

Ref No.	Part No.	Description			
R329	EVND4AA00B52	CONTROL			500Ω
R330	ERD25TJ393	CARBON	0.25W	5%	39KΩ
R331	ERD25TJ183	CARBON	0.25W	5%	18KΩ
R332	ERD25TJ471	CARBON	0.25W	5%	470Ω
R351	ERG1SJ123	METAL	1W	5%	12KΩ
R352	ERG1SJ123	METAL	1W	5%	12KΩ
R353	ERG1SJ123	METAL	1W	5%	12KΩ
R354	ERD25TJ121	CARBON	0.25W	5%	120Ω
R355	ERD25TJ271	CARBON	0.25W	5%	270Ω
R356	ERD25TJ121	CARBON	0.25W	5%	120Ω
R357	EVN65UA00B32	CONTROL			300Ω
R358	EVN65UA00B32	CONTROL			300Ω
R359	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R360	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R361	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R362	EVN65UA00B33	CONTROL			3KΩ
R364	EVN65UA00B33	CONTROL			3KΩ
R365	ERDS1TJ152	CARBON	0.5W	5%	1K5Ω
R366	ERDS1TJ152	CARBON	0.5W	5%	1K5Ω
R367	ERDS1TJ152	CARBON	0.5W	5%	1K5Ω
R369	EVN65UA00B33	CONTROL			3KΩ
R372	ERD25TJ151	CARBON	0.25W	5%	150Ω
R373	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R374	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R375	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R401	ERD25TJ563	CARBON	0.25W	5%	56KΩ
R402	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R403	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R404	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R451	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R453	ERD25TJ153	CARBON	0.25W	5%	15KΩ
R454	ERDS1TJ102	CARBON	0.5W	5%	1KΩ
R455	ERDS1TJ102	CARBON	0.5W	5%	1KΩ
R456	ERDS1TJ102	CARBON	0.5W	5%	1KΩ
R457	ERD25TJ151	CARBON	0.25W	5%	150Ω
R458	ERD25TJ471	CARBON	0.25W	5%	470Ω
R459	ERD25TJ393	CARBON	0.25W	5%	39KΩ
R461	ERDS1TJ3R3	CARBON	0.5W	5%	3R3Ω
R462	ERD25TJ153	CARBON	0.25W	5%	15KΩ
R463	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R464	EVND4AA00B22	CONTROL			200Ω
R465	ERD25TJ101	CARBON	0.25W	5%	100Ω
R466	ERD25TJ183	CARBON	0.25W	5%	18KΩ
R467	ERD25TJ1R8	CARBON	0.25W	5%	1R8Ω
R468	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R469	ERD25TJ473	CARBON	0.25W	5%	47KΩ
R470	ERD25TJ684	CARBON	0.25W	5%	680KΩ
R471	ERD25TJ222	CARBON	0.25W	5%	2K2Ω
R472	ERD25TJ333	CARBON	0.25W	5%	33KΩ
R473	ERD25TJ472	CARBON	0.25W	5%	4K7Ω
R474	ERD25TJ155	CARBON	0.25W	5%	1M5Ω
R476	ERD25TJ152	CARBON	0.25W	5%	1K5Ω
R477	ERD25TJ392	CARBON	0.25W	5%	3K9Ω
R501	ERD25TJ151	CARBON	0.25W	5%	150Ω
R502	ERD25TJ472	CARBON	0.25W	5%	4K7Ω
R503	ERD25TJ152	CARBON	0.25W	5%	1K5Ω
R504	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R505	ERD25TJ471	CARBON	0.25W	5%	470Ω
R506	ERD25TJ224	CARBON	0.25W	5%	220KΩ
R507	ERD25TJ152	CARBON	0.25W	5%	1K5Ω
R509	EVND4AA00B14	CONTROL			10KΩ
R511	ERD25TJ394	CARBON	0.25W	5%	390KΩ
R512	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R513	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R514	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R515	ERD25TJ681	CARBON	0.25W	5%	680Ω
R518	ERD25TJ681	CARBON	0.25W	5%	680Ω
R519	ERD25TJ333	CARBON	0.25W	5%	33KΩ
R520	ERD25TJ682	CARBON	0.25W	5%	6K8Ω
R521	ERD25TJ472	CARBON	0.25W	5%	4K7Ω
R522	ERD25TJ222	CARBON	0.25W	5%	2K2Ω
R523	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R524	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R526	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R527	ERD25TJ223	CARBON	0.25W	5%	22KΩ
R528	ERQ14AJ180	METAL	0.25W	5%	18Ω
R529	ERD25TJ822	CARBON	0.25W	5%	8K2Ω
R531	ERQ1CJP102	METAL	1W	5%	1KΩ
R532	ERG1SJ392	METAL	1W	5%	3K9Ω
R533	ERD25TJ183	CARBON	0.25W	5%	18KΩ

Ref No.	Part No.	Description			
R534	ERD25TJ333	CARBON	0.25W	5%	33KΩ
R536	ERD25TJ682	CARBON	0.25W	5%	6K8Ω
R537	ERD25TJ684	CARBON	0.25W	5%	680KΩ
R538	ERD25TJ334	CARBON	0.25W	5%	330KΩ
R539	ERD25TJ125	CARBON	0.25W	5%	1M2Ω
R540	ERD25TJ682	CARBON	0.25W	5%	6K8Ω
R551	ERDS1TJ1R2	CARBON	0.5W	5%	1R2Ω
R552	ERD25TJ273	CARBON	0.25W	5%	27KΩ
R553	ERQ12HJU1R0	METAL	0.5W	5%	1R0Ω
R554	ERQ1CJP681	METAL	1W	5%	680Ω
R557	ERD25TJ153	CARBON	0.25W	5%	15KΩ
R558	ERD25TJ274	CARBON	0.25W	5%	270KΩ
R559	ERF7ZJ100	WOUND	7W	5%	10Ω
R560	ERD25TJ274	CARBON	0.25W	5%	270KΩ
R561	ERQ12HJU1R0	METAL	0.5W	5%	1R0Ω
R562	ERQ12HJU2R2	METAL	0.5W	5%	2R2Ω
R563	ERD25TJ101	CARBON	0.25W	5%	100Ω
R564	ERD25TJ474	CARBON	0.25W	5%	470KΩ
R601	ERD25TJ471	CARBON	0.25W	5%	470Ω
R602	ERD25TJ221	CARBON	0.25W	5%	220Ω
R603	ERD25TJ511	CARBON	0.25W	5%	510Ω
R604	EVND4AA00B13	CONTROL			1KΩ
R606	ERD25TJ471	CARBON	0.25W	5%	470Ω
R608	ERD25TJ822	CARBON	0.25W	5%	8K2Ω
R609	ERD25TJ392	CARBON	0.25W	5%	3K9Ω
R610	ERD25TJ332	CARBON	0.25W	5%	3K3Ω
R611	ERD25TJ331	CARBON	0.25W	5%	330Ω
R612	ERD25TJ332	CARBON	0.25W	5%	3K3Ω
R613	ERD25TJ332	CARBON	0.25W	5%	3K3Ω
R614	ERD25TJ331	CARBON	0.25W	5%	330Ω
R615	ERD25TJ331	CARBON	0.25W	5%	330Ω
R616	ERD25TJ822	CARBON	0.25W	5%	8K2Ω
R617	ERD25TJ225	CARBON	0.25W	5%	2M2Ω
R618	ERC12GK825	SOLID	0.5W	10%	8M2Ω
R623	ERD25TJ154	CARBON	0.25W	5%	150KΩ
R624	ERD25TJ272	CARBON	0.25W	5%	2K7Ω
R625	ERD25TJ335	CARBON	0.25W	5%	3M3Ω
R630	EVND4AA00B55	CONTROL			500KΩ
R801	ERF5ZK4R7	WOUND	5W	10%	4R7Ω
R802	ERD50TJ334	CARBON	0.5W	5%	330KΩ
R803	ERDS1TJ681	CARBON	0.5W	5%	680Ω
R804	ERDS1TJ6R8	CARBON	0.5W	5%	6R8Ω
R805	ERD25TJ562	CARBON	0.25W	5%	5K6Ω
R807	ERG1ANJ560	METAL	1W	5%	56Ω
R808	ERG2ANJ153	RESISTOR			
R809	ERG5ZJ822	RESISTOR			
R810	ERG5ZJ822	RESISTOR			
R811	ERD25TJ221	CARBON	0.25W	5%	220Ω
R812	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R813	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R814	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R815	ERD25TJ392	CARBON	0.25W	5%	3K9Ω
R816	ERD25TJ225	CARBON	0.25W	5%	2M2Ω
R818	ERD25TJ104	CARBON	0.25W	5%	100KΩ
R822	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R823	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R825	ERD25TJ562	CARBON	0.25W	5%	5K6Ω
R1112	ERD25TJ683	CARBON	0.25W	5%	68KΩ
R1114	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R1115	ERD25TJ101	CARBON	0.25W	5%	100Ω
R1116	ERD25TJ183	CARBON	0.25W	5%	18KΩ
R1117	ERD25TJ473	CARBON	0.25W	5%	47KΩ
R1118	ERD25TJ473	CARBON	0.25W	5%	47KΩ
R1119	ERD25TJ473	CARBON	0.25W	5%	47KΩ
R1120	ERG2SJU561	METAL	2W	5%	560Ω
R1121	ERD25TJ101	CARBON	0.25W	5%	100Ω
R1124	ERD25TJ183	CARBON	0.25W	5%	18KΩ
R1126	ERD25TJ183	CARBON	0.25W	5%	18KΩ
R1127	ERD25TJ123	CARBON	0.25W	5%	12KΩ
R1128	ERD25TJ472	CARBON	0.25W	5%	4K7Ω
R1131	ERD25TJ223	CARBON	0.25W	5%	22KΩ
R1133	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R1134	ERD25TJ223	CARBON	0.25W	5%	22KΩ
R1135	ERD25TJ123	CARBON	0.25W	5%	12KΩ
R1136	ERD25TJ123	CARBON	0.25W	5%	12KΩ
R1137	ERD25TJ563	CARBON	0.25W	5%	56KΩ
R1138	ERD25TJ563	CARBON	0.25W	5%	56KΩ
R1139	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R1141	ERD25TJ123	CARBON	0.25W	5%	12KΩ

Ref No.	Part No.	Description			
R1143	ERD25TJ153	CARBON	0.25W	5%	15KΩ
R1150	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R1151	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R1152	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R1153	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R1154	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R1155	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R1156	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R1157	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R1158	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R1159	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R1160	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R1161	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R1162	ERD25TJ472	CARBON	0.25W	5%	4K7Ω
R1164	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R1165	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R1166	ERD25TJ681	CARBON	0.25W	5%	680Ω
R1167	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R1168	ERD25TJ682	CARBON	0.25W	5%	6K8Ω
R1169	ERD25TJ273	CARBON	0.25W	5%	27KΩ
R1170	ERD25TJ223	CARBON	0.25W	5%	22KΩ
R1171	ERD25TJ223	CARBON	0.25W	5%	22KΩ
R1172	ERD25TJ222	CARBON	0.25W	5%	2K2Ω
R1173	ERD25TJ822	CARBON	0.25W	5%	8K2Ω
R1174	ERD25TJ273	CARBON	0.25W	5%	27KΩ
R1175	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R1176	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R1177	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R1178	ERD25TJ123	CARBON	0.25W	5%	12KΩ
R1179	EVND4AA00B23	CONTROL			2KΩ
R1180	ERD25TJ473	CARBON	0.25W	5%	47KΩ
R1181	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R1184	ERD25TJ102	CARBON	0.25W	5%	1KΩ
R1185	ERD25TJ564	CARBON	0.25W	5%	560KΩ
R1186	ERD25TJ564	CARBON	0.25W	5%	560KΩ
R1187	ERD25TJ684	CARBON	0.25W	5%	680KΩ
R1601	ERD25TJ183	CARBON	0.25W	5%	18KΩ
R1602	ERD25TJ274	CARBON	0.25W	5%	270KΩ
R1603	EVND4AA00B15	CONTROL			100KΩ
R1604	ERD25TJ47R	RESISTOR			
R1605	ERD25TJ101	CARBON	0.25W	5%	100Ω
R1606	ERD25TJ101	CARBON	0.25W	5%	100Ω
R2501	ERD75TAJ825	CARBON	0.75W	5%	8M2Ω
R2502	ERD25TJ331	CARBON	0.25W	5%	330Ω
R2504	ERD25TJ151	CARBON	0.25W	5%	150Ω
R2505	ERD25TJ471	CARBON	0.25W	5%	470Ω
R2506	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R2507	ERD25TJ101	CARBON	0.25W	5%	100Ω
R2508	ERD25TJ563	CARBON	0.25W	5%	56KΩ
R2509	ERD25TJ152	CARBON	0.25W	5%	1K5Ω
R2510	EVND4AA00B23	CONTROL			2KΩ
R2511	ERD25TJ101	CARBON	0.25W	5%	100Ω
R2513	ERD25TJ392	CARBON	0.25W	5%	3K9Ω
R2514	ERD25TJ473	CARBON	0.25W	5%	47KΩ
R2515	ERD25TJ123	CARBON	0.25W	5%	12KΩ
R2516	ERD25TJ101	CARBON	0.25W	5%	100Ω
R2517	EVND4AA00B53	CONTROL			5KΩ
R2518	ERD25TJ562	CARBON	0.25W	5%	5K6Ω
R2519	ERD25TJ392	CARBON	0.25W	5%	3K9Ω
R2520	ERD25TJ563	CARBON	0.25W	5%	56KΩ
R2521	ERD25TJ331	CARBON	0.25W	5%	330Ω
R2522	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R2523	ERD25TJ101	CARBON	0.25W	5%	100Ω
R2524	ERD25TJ272	CARBON	0.25W	5%	2K7Ω
R2525	ERD25TJ750	CARBON	0.25W	5%	75Ω
R2526	ERG1SJ151	RESISTOR			
R2527	ERD25TJ473	CARBON	0.25W	5%	47KΩ
R2528	ERD25TJ221	CARBON	0.25W	5%	220Ω
R2529	ERD25TJ473	CARBON	0.25W	5%	47KΩ
R2530	ERD25TJ101	CARBON	0.25W	5%	100Ω
R2531	ERD25TJ104	CARBON	0.25W	5%	100KΩ
R2532	ERQ12HKUR33	METAL	0.5W	10%	0.33Ω
R2533	ERD25TJ333	CARBON	0.25W	5%	33KΩ
R2534	ERD25TJ103	CARBON	0.25W	5%	10KΩ
R2535	ERD25TJ101	CARBON	0.25W	5%	100Ω
R2536	ERD25TJ473	CARBON	0.25W	5%	47KΩ
R2537	ERD25TJ683	CARBON	0.25W	5%	68KΩ

Ref No.	Part No.	Description
DIODES		
D101	MA165TA5	DIODE
D102	MA165TA5	DIODE
D103	MA165TA5	DIODE
D301	MA165TA5	DIODE
D302	MA165TA5	DIODE
D303	MA165TA5	DIODE
D304	MA166TA5	DIODE
D306	MA4120	DIODE
D307	MA4120	DIODE
D308	MA4120	DIODE
D351	MA165TA5	DIODE
D352	MA165TA5	DIODE
D353	MA165TA5	DIODE
D354	MA165TA5	DIODE
D372	MA165TA5	DIODE
D373	MA4047	DIODE
D451	ERA15-02V3	DIODE
D453	MA4270	DIODE
D501	MA4360	DIODE
D504	MA171TA5	DIODE
D505	MA165TA5	DIODE
D506	MA165TA5	DIODE
D551	ERA22-04V3	DIODE
D552	MA167TA5	DIODE
D553	ERA22-04V3	DIODE
D554	ERA22-04V3	DIODE
D555	MA165TA5	DIODE
D556	ERA22-04V3	DIODE
D802	EU02A	DIODE
D803	ERA15-02V3	DIODE
D804	ERA22-04V3	DIODE
D805	232266296009	DIODE
D806	EU02	DIODE
D807	MA4300	DIODE
D809	MA4100	DIODE
D810	MA4056	DIODE
D811	MA165TA5	DIODE
D813	MA165TA5	DIODE
D814	MA4030	DIODE
D817	MA165TA5	DIODE
D818	MA165TA5	DIODE
D821	ERC13-08V3	DIODE
D822	ERC13-08V3	DIODE
D823	ERC13-08V3	DIODE
D824	ERC13-08V3	DIODE
D1111	UPC574J	REGULATOR
D1112	MA4270	DIODE
D1120	MA165TA5	DIODE
D1123	MA165TA5	DIODE
D1124	MA165TA5	DIODE
D1125	MA165TA5	DIODE
D1126	MA165TA5	DIODE
D1128	MA165TA5	DIODE
D1130	MA165TA5	DIODE
D1132	MA165TA5	DIODE
D1133	MA165TA5	DIODE
D1134	MA165TA5	DIODE
D1135	MA165TA5	DIODE
D1141	MA165TA5	DIODE
D1142	MA165TA5	DIODE
D1149	MA165TA5	DIODE
D1150	MA165TA5	DIODE
D1151	MA165TA5	DIODE
D1601	PN323BHT	DIODE
D2501	MA4082	DIODE
D2502	EU02	DIODE
DL301	TLK150880E	DELAY LINE
DL601	EFDEN645A61F	DELAY LINE
INTEGRATED CIRCUITS		
IC101	M51407ASP	VIF/SIF SYNC
IC251	AN5265	AUDIO OUTPUT I.C.
IC451	AN5521	VERTICAL OUTPUT
IC801	STR50103A-M	POWER SUPPLY
IC802	L78M12MRB	12V REGULATOR
IC803	L78M09MRB	9V REGULATOR
IC1101	MN15142TEB	MPU
IC1102	MN1220T	MEMORY

Ref No.	Part No.	Description
IC1104	MN1280R	RESET
IC1601	AN5025K	RECEIVER I.C.
IC2503	TLP751VIDLF2	TRANSFORMER
IC2504	TLP731AUDLF2	TRANSFORMER
COILS		
L12	TLT330K991R	COIL
L15	TLT022L991R	COIL
L104	EIV7EN047B	COIL
L105	EIV7EN046B	COIL
L107	TLT010L991R	COIL
L108	TLTAHRA100K	COIL
L109	TLT470K991R	COIL
L201	TLT047L991R	COIL
L203	EIS7EN010B	COIL
L204	EIS7ES710B	TRANSFORMER
L301	TLT390K991R	COIL
L502	TLT542K991K	COIL
L601	TLT220K991R	COIL
L602	EIK7ES005B	COIL
L603	EIK7EN010B	COIL
L801	ELF18D427F	COIL
L802	EXCELSA35T	COIL
L803	EXCELSA35T	COIL
L804	EXCELSA35T	COIL
L806	EXCELSA35T	COIL
L1137	ELEXT100KA	COIL
LC601	TLK153159E	COIL
TRANSISTORS		
Q101	2SA564-S	TRANSISTOR
Q103	DTC114ESTQ	TRANSFORMER
Q302	2SA564-S	TRANSISTOR
Q303	2SC1685-TA	TRANSISTOR
Q304	2SC1215TA	TRANSISTOR
Q351	2SC1473-RN	TRANSISTOR
Q352	2SC1473-RN	TRANSISTOR
Q353	2SC1473-RN	TRANSISTOR
Q355	2SC1685-TA	TRANSISTOR
Q358	2SA719-TA	TRANSISTOR
Q372	2SA564-S	TRANSISTOR
Q373	2SA564-S	TRANSISTOR
Q374	2SA564-S	TRANSISTOR
Q451	2SA564-S	TRANSISTOR
Q452	2SA564-S	TRANSISTOR
Q502	2SA564-S	TRANSISTOR
Q504	2SA564-S	TRANSISTOR
Q505	2SC1685-TA	TRANSISTOR
Q506	2SA564-S	TRANSISTOR
Q531	2SC1573AH	TRANSISTOR
Q551	2SD1439-RL	TRANSISTOR
Q802	DTC114TSTQ	TRANSFORMER
Q803	UN4111TA	TRANSISTOR
Q804	2SC1317-TA	TRANSISTOR

Ref No.	Part No.	Description
Q805	2SC1573AH	TRANSISTOR
Q806	2SA683-RS	TRANSISTOR
Q807	2SC1685-TA	TRANSISTOR
Q1121	2SC1685-TA	TRANSISTOR
Q1122	DTC114ESTQ	TRANSFORMER
Q1123	DTC114ESTQ	TRANSFORMER
Q1125	2SC1685-TA	TRANSISTOR
Q1129	2SC1685-TA	TRANSISTOR
Q1130	DTC114ESTQ	TRANSFORMER
Q1135	2SC1688-TA	TRANSISTOR
Q2501	2SC1685-TA	TRANSISTOR
Q2502	2SC1685-TA	TRANSISTOR
Q2503	2SC1685-TA	TRANSISTOR
Q2504	2SC1685-TA	TRANSISTOR
Q2505	2SC1685-TA	TRANSISTOR
Q2506	2SC1685-TA	TRANSISTOR
Q2507	2SC1685-TA	TRANSISTOR
Q2508	2SC1685-TA	TRANSISTOR
Q2509	2SC1685-TA	TRANSISTOR
SWITCHES		
S301	EVQR1AL13	SWITCH
S801	ESB99267S	SWITCH △
S1121	EVQQBH12T	SWITCH
S1122	EVQQBH12T	SWITCH
S1123	EVQQBH12G	SWITCH
S1124	EVQQBH12T	SWITCH
S1125	EVQQBH12T	SWITCH
S1127	EVQQBH12T	SWITCH
S1128	EVQQBH12G	SWITCH
S1129	EVQQBH12T	SWITCH
S1130	EVQQBH12G	SWITCH
S1131	EVQQBH12T	SWITCH
S1133	EVQQBH12T	SWITCH
S1134	EVQQBH12G	SWITCH
S1135	EVQQBH12T	SWITCH
S1137	EVQQBH12G	SWITCH
TRANSFORMERS		
T531	TLH15458E	TRANSFORMER
T551	TLF14752F	TRANSFORMER △
T801	ETS29K14A	TRANSFORMER
FILTERS		
X101	F1045A	FILTER
X102	EFCS6R0MW3	FILTER
X201	EFCS6R0MS5	FILTER
X501	TAFCSB503F6	FILTER
X601	TSS2050-M	CRYSTAL
X1121	TAFKBR-1000H	CRYSTAL