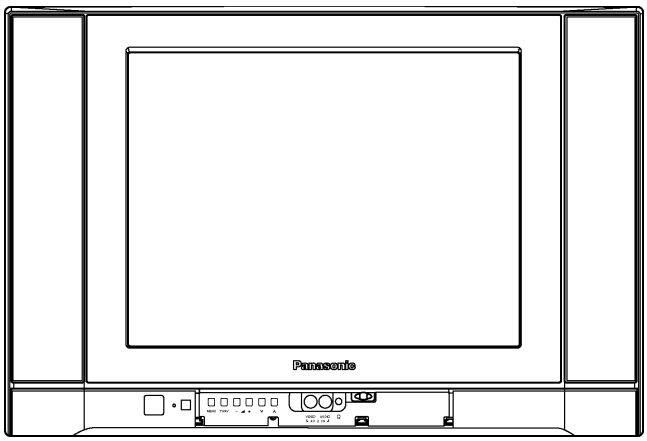
ORDER NO. MTV0308236C3-CIS

Service Manual

Colour Television



TC-21PM70R

GP3 Chassis

Specifications

Power Source :	AC AUTO 110-240V, 50/60 Hz
Power Consumption :	71W
Aerial Impedance :	75Ω unbalanced
	Coaxial type
Receiving System :	17 Systems
Receiving Channels :	
VHF	2-12 (PAL/SECAM B, K1)
	0-12 (PAL B AUST.)
	1-9 (PAL B N.Z.)
	1-12 (PAL/SECAM D)
	1-12 (NTSC M JAPAN)
	2-13 (NTSC M U.S.A.)
UHF	21-69 (PAL G, H, I/SECAM G, K, K1)
	28-69 (PAL B AUST.)
	13-57 (PAL D, K)
	13-62 (NTSC M JAPAN)
	14-69 (NTSC M U.S.A.)
CATV	S1-S41 (OSCAR)
	1-125 (U.S.A. CATV)
	C13-C41 (JAPAN)
	S21-S41 (HYPER)
	Z1-Z37 (CHINA)
Intermediate Frequency :	
Video	38.0 MHz
Sound	31.5 MHz (D, K, K1) / 32.5 MHz (B, G)
	32.0 MHz (I) / 32.5 MHz (M)
Colour	33.57 MHz (PAL)
	33.6 MHz (SECAM)
	32.5 MHz (B, G)
	33.75 MHz (SECAM)
	34.42 MHz (NTSC)
Video / Audio Terminals :	
FAV In	Video In 1 Vp-p 75Ω
	Audio In Approx. 400mVrms
RAV In	Video In 1 Vp-p 75Ω
	Audio In Approx. 400mVrms
Monitor Out	Video Out 1 Vp-p 75Ω
	Audio Out Approx. 400mVrms
High Voltage :	27.5kV (±1.5)
	at zero beam current
Picture Tube :	A51QDX992X
	51cm (21 inches)
	Measured diagonally,
	90° deflection
Audio Output :	7W
Speaker :	8Ω
Dimensions :	Height : 464.0 mm
	Width : 682.0 mm
	Depth : 484.0 mm

Panasonic®

Mass : 25 kg (Net Wt.)

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

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

CONTENTS

1 Safety Precautions

1.1. General Guide Lines

1. It is advisable to insert an isolation transformer in the AC supply before servicing this hot chassis.
2. When servicing, observe the original lead dress, especially the 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 to it that all the protective devices such as insulation barriers, insulation papers, shields and isolation R-C combinations, are properly installed.
4. When the receiver is not to be used for a long period of time, unplug the power cord from the AC cord outlet.
5. Potential, as high as **29.0kV** is 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 thoroughly familiar with the precautions necessary when working on high voltage equipment. Always discharge the anode of the picture tube to the receiver chassis before handling the tube. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.2. Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Turn on the receiver's power switch.
   Measure the resistance value, with an ohmmeter, between the jumper 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 4 MΩ and 20 MΩ. When the exposed metal does not have a return path to the chassis, the reading must be infinite.

1.3. Leakage Current Hot Check (Fig. 1)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Check a 2 kΩ non-inductive resistor and an AC/DC current meter, in series with each exposed metallic part on the receiver in turn and an earth such as a water pipe.

   The current from any point should not exceed 0.7 mA peak AC or 2 mA DC. In the case of a measurement being outside of these 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.

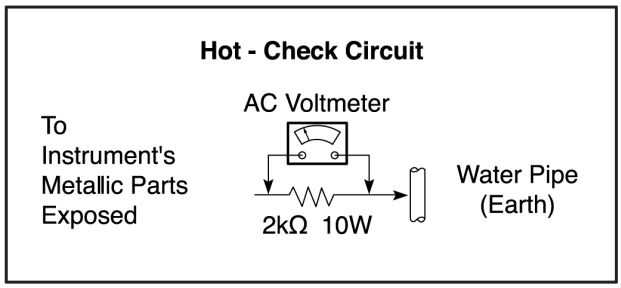


Fig. 1

1.4. X-Radiation

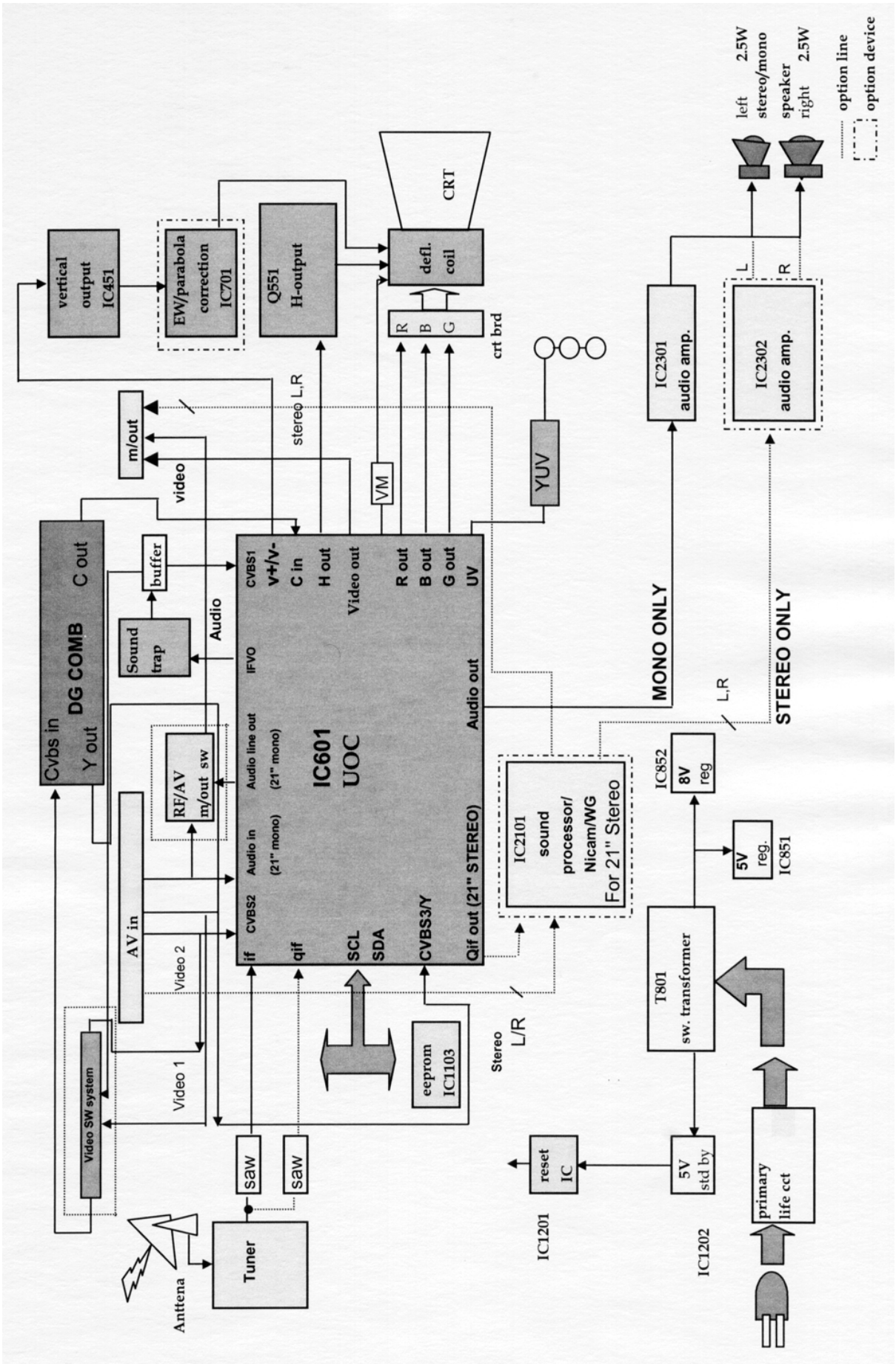
Warning:

The potential sources of X-Radiation in TV set are the EHT section and the picture tube. When using a picture tube test jig for service, ensure that jig is capable of handling **29.0kV** without causing X-Radiation.

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

1. Set the brightness to minimum.
2. Use the remocon to get into Service Mode.
3. Measure the EHT. The meter reading should indicate **27.5 (±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.
4. To prevent the possibility X-Radiation, it is essential to use the specified picture tube, if service replacement becomes necessary.

1.5. GP3 Chassis Block Diagram



2 Service Hints

2.1. Service Position for E-Board

1. Remove the back cover.
2. Stand the TV set as shown in Fig. 2.
3. Remove the A-Board from the TV set by pulling the main board out as shown in Fig. 2.

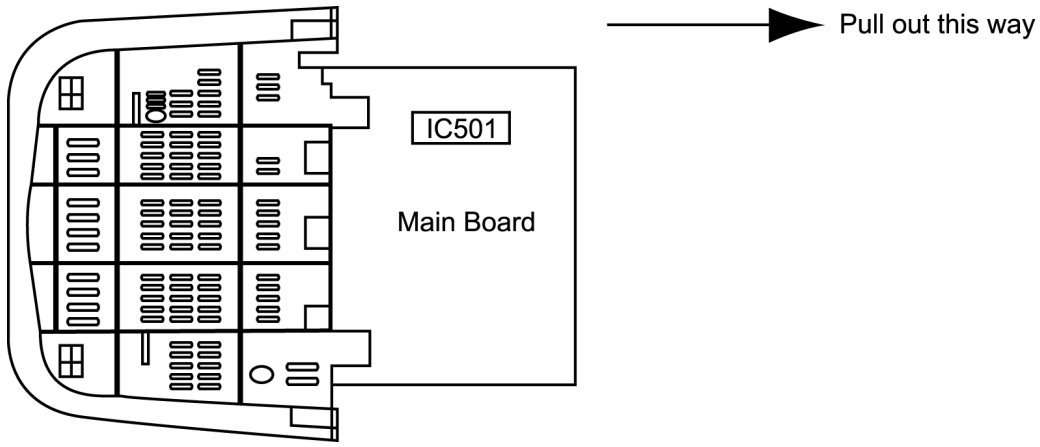


Fig. 2

2.2. Factory Mode Adjustment

How to set : To set the Factory mode, press Volume 0 dac on the TV and Timer Setting 30 min on the remote control and press Volume (-) Down button on the TV together press recall on the remote control.
CHK should appear on right of TV screen.
To move from CHK1 to CHK2 mode, etc. please follow below rotation :

To Set Self-Check : Press the Volume Down button on TV then press the Off Timer button on remote control.

CHK1 -----➤ CHK2 -----➤ CHK3 -----➤ CHK4 -----➤ CHK1

←----- "1" ←----- "1" ←----- "1" ←----- "1"

2.3. Adjustment for White Balance

Preparation:

1. Receive the white balance pattern and aging should have been performed over 30 minutes.
2. Set the picture menu to DYNAMIC NORMAL.
3. Degausse the CRT face.
4. Fix the CRT colour analyzer receiver unit to CRT face.

Adjustment of Low Light.

1. Adjustment Sub Bright, so that Y = 6.3 ± 1.0 nit.
2. Adjustment R-CUT OFF, so that X = 0.235 ± 0.010 nit.
3. Adjustment G-CUT OFF, so that Y = 0.235 ± 0.010 nit.

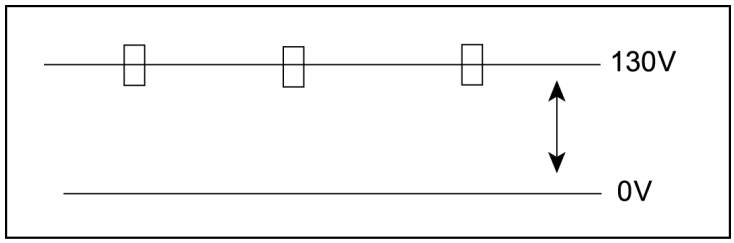
Adjustment of High Light

1. Adjustment Sub Bright, so that Y = 270 nit.
2. Adjustment R-Drive, so that X = 0.265 ± 0.010 nit.
3. Adjustment B-Drive, so that Y = 0.265 ± 0.010 nit.

2.4. Adjustment for CRT CUT OFF

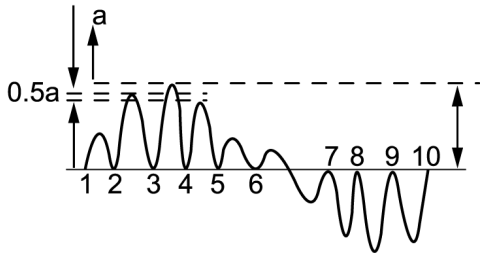
Preparation:

1. Connect the oscilloscope probe to TPL5.
2. Screen VR min.
3. Set the data Sub Bright, Bright.
4. In service Mode at “Bright” dac press [5] in factory mode to enter vertical line and adjust by Volume Down or Up button.
5. Adjust “Screen VR” until 1-H Line appears. (AKB OFF)
6. Adjust Bright, so the voltage at TPL5 is 130 volt.



7. Press digit key “5” AKB ON and confirm in picture mode.

2.5. Adjustment Procedure

Item / Preparation	Adjustment Procedure
+B Voltage 1. Operate the TV set. 2. Set control as follows : Brightness .....minimum Contrast ..... minimum	Confirm the DC voltage at the indicated test points, as follows : TPA 10 : 140.5 ± 1.5V TPA 8 : 8 ± 1V TPA 9 : 5 ± 1V TPA 21 : 175 ± 15V
RF AGC 1. Receive a colour bar signal at an RF level of 69 ± 1-2 dBU with 75Ω loaded. 2. Connect digital multimeter to RF AGC at Tuner.	1. Select “RF AGC” indication in CHK2, on Screen by remote control at factory mode. 2. Set RF AGC by using remote control Volume (+) or Volume (-) button until voltage AGC at Tuner reaches 2.6 ± 0.1V at TPA 15 (Tuner point). 3. Increase RF signal strength by 2dB, confirm AGC at Tuner voltage drop.
High Voltage 1. Receive the crosshatch pattern. 2. Set to 0 Beam. Screen VR ..... minimum Contrast ..... minimum	1. Connect a DC voltage meter to TPA 20 and confirm the +B voltage is 140.5 ± 1.5V. 2. Connect a high frequency voltmeter to heater and confirm that voltage reads 6.3 ± 0.48 (VRMS). 3. Normalize the brightness and contrast.
Item / Preparation	**Adjustment Procedure**
NTSC TINT COLOUR Connect a short jumper between TPA 10 and TPA 20. Press Main Menu and set system to use AV-NTSC (3.58 MHz). DYNAMIC ..... Normal Channel CLR Set ..... STD	1. Adjust Sub-Tint so that No. 2, 3 and 4 becomes level waveform is similar to Fig. 3. 2. Confirm phase at Tint is changes more than ± 30 by Tint control. 3. Confirm that colour level is maximum when colour DAC is adjusted to maximum position. Note: Use remote control only when adjusting user mode to Sub-Tint.  Fig. 3

2.6. PAL Colour

1. Receive the PAL B/G studio colour bar pattern and adjust local frequency at the best tuned position.
2. Pic Menu: Dynamic Normal, Confirm Contrast - 100AC, Sub Contrast - 21DAC.
3. Channel colour set --------- STD.
4. “CHK2” and press digit key “5” (AKB OFF) also confirm OSD become blue colour.
5. Set ABL OFF (Note : ABL is set off in (CHK2).
6. Set (A) to 2.3 ± 0.2V by BRT (CHK2) at measurement point TPL 2 Fig. 4.

2.7. Adjustment

1. Connect oscilloscope probe to TPL 2 (G OUT) with 10kΩ series resistor and adjust Contrast so that (B) as in Fig. 4 is 2.6 ± 0.1V.
2. Adjust “Sub Colour” so that waveform as in Fig. 4 (1) 2.5 ± 0.1V.
3. Connect oscilloscope probe to TPL 1 (R OUT) with 10kΩ series resistor and confirm waveform as in Fig. 5 is (2) 2.7 ± 0.4V.
4. Set ABL ON (Note : Exit (CHK2 mode).
5. Press digit key “5” (AKB ON) and confirm the OSD become white colour.

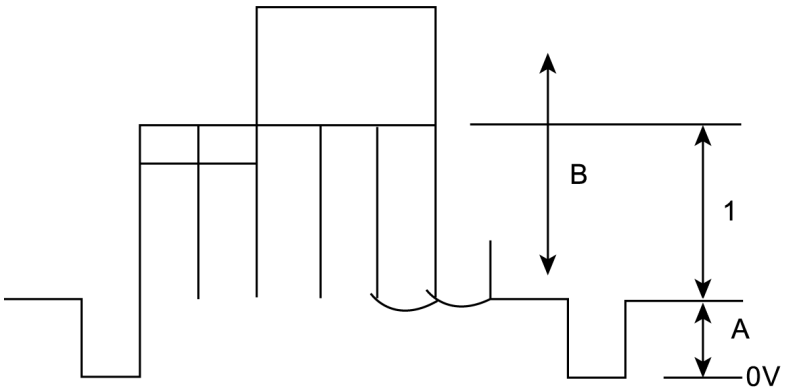


Fig. 4

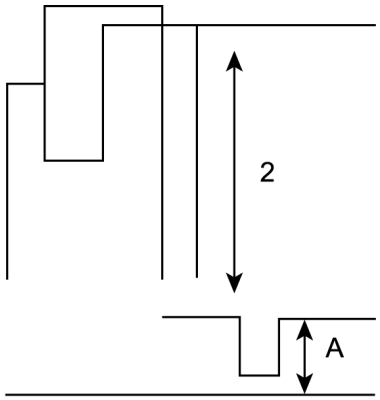


Fig. 5

Before Colour Purity, Convergence and White Balance adjustment are attempted, V. Height, H. Centre and Focus adjustments must be completed.

Colour Purity

1. Set the Brightness and Contrast controls to their maximum positions.
2. Operate the TV set for 60 minutes.
3. Fully degausse the picture tube by using an external degaussing coil.
4. Apply a crosshatch pattern signal and adjust the static convergence magnets to the approximately correct position.
5. Receive a black and white signal.
6. Set the control as follows:
   Red.....minimum
   Green.....minimum
   Blue.....minimum
   Press the Shipping button on the remote control twice to select CRT Adjustment Mode to select low light.
7. Loosen the clamp screw for the Deflection Yoke A in Fig. 10 and move the Deflection Yoke as close to the purity magnet as possible.
8. Adjust the purity magnetic rings so that a vertical green field is obtained at the centre of the screen.

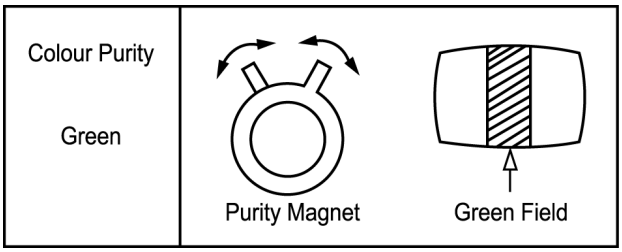


Fig. 6

9. Slowly push the Deflection Yoke and set it where a uniform green field is obtained.

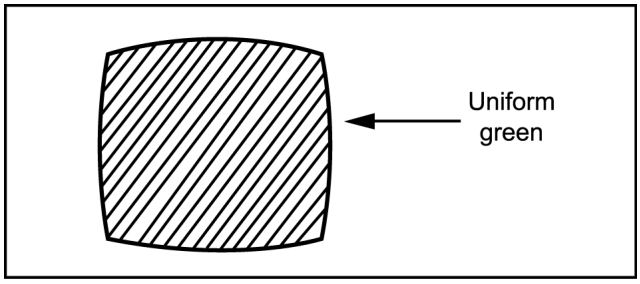


Fig. 7

10. Re-adjust the Low Light controls to their correct settings and make sure that a uniform white field is obtained.
11. Tighten the clamp screw A in Fig. 10.

Convergence

1. Apply a crosshatch pattern signal and Normalize Contrast control to the maximum positions.
2. Adjust Brightness until the grey position of the crosshatch pattern just becomes black.
3. Adjust the Red and Blue line at the centre of the screen by rotating the R-B static.

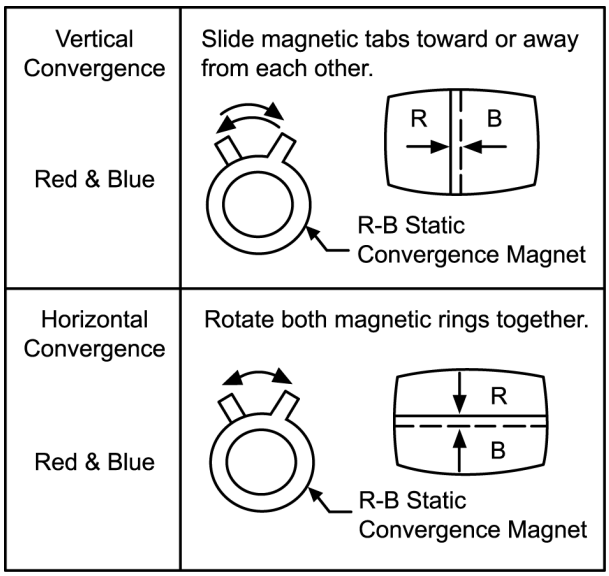


Fig. 8

4. Adjust Red and Blue with Green line at centre of the screen by rotating (RB)-G static convergence magnetic rings.
5. Lock convergence magnets with silicone sealer.
6. Remove the DY wedges and slightly tilt the Deflection Yoke vertically and horizontally to obtain the good overall convergence.

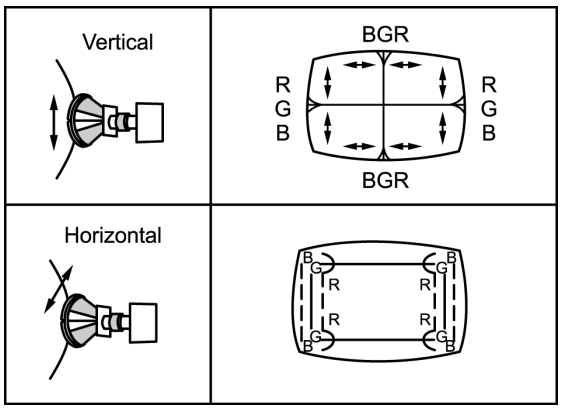


Fig. 9

7. Fix the Deflection Yoke by reinserting the DY wedges. Refer to Fig. 10.
8. If purity error is found, repeat “Colour Purity” adjustment.

Adjustment of CRT VRS

1. Preparation
   a. Set DY to CRT not to tilt up and down left and right deflection.
   b. Set CY to CRT and set CY magnet primarily (Fig.1)
      Purity magnet : Set purity magnet that 2 magnets are (TOP POSITION)
      VRS magnet : Set purity magnet 2 magnets are (HORIZONTAL POSITION)
2. Adjustment
   a. Receive that Cross Hatch pattern.
   b. Adjust V-SHIFT-50Hz.
   c. Set 2 magnets of horizontal position to up and down equally so that it will be the center part of CRT. (Fig. 2)

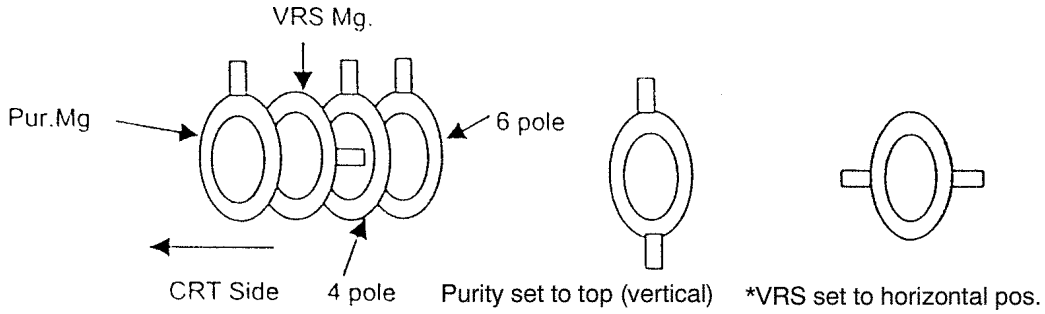
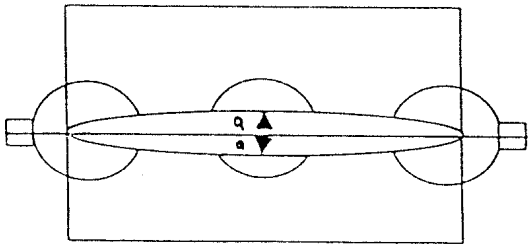


FIG 1.



a ≤ 0 ± 1mm

FIG 2.

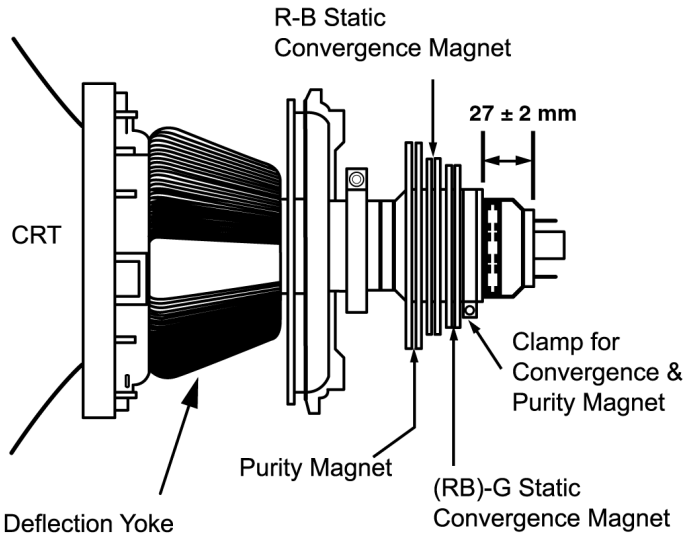


Fig. 10

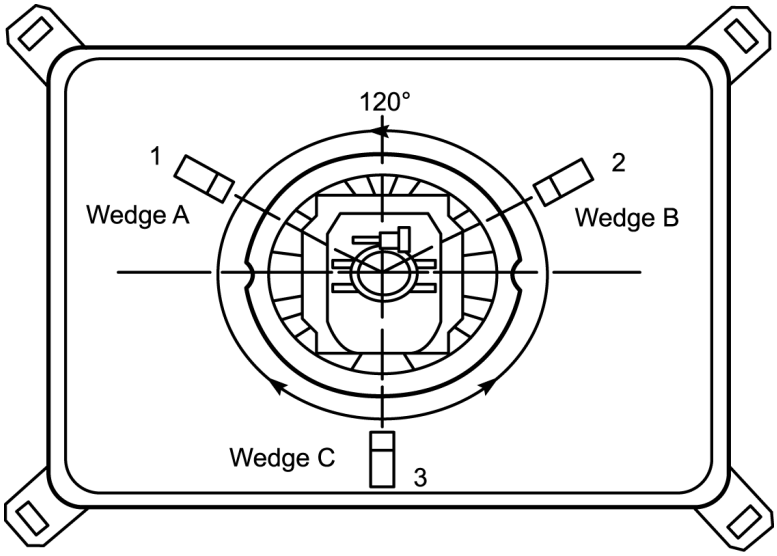
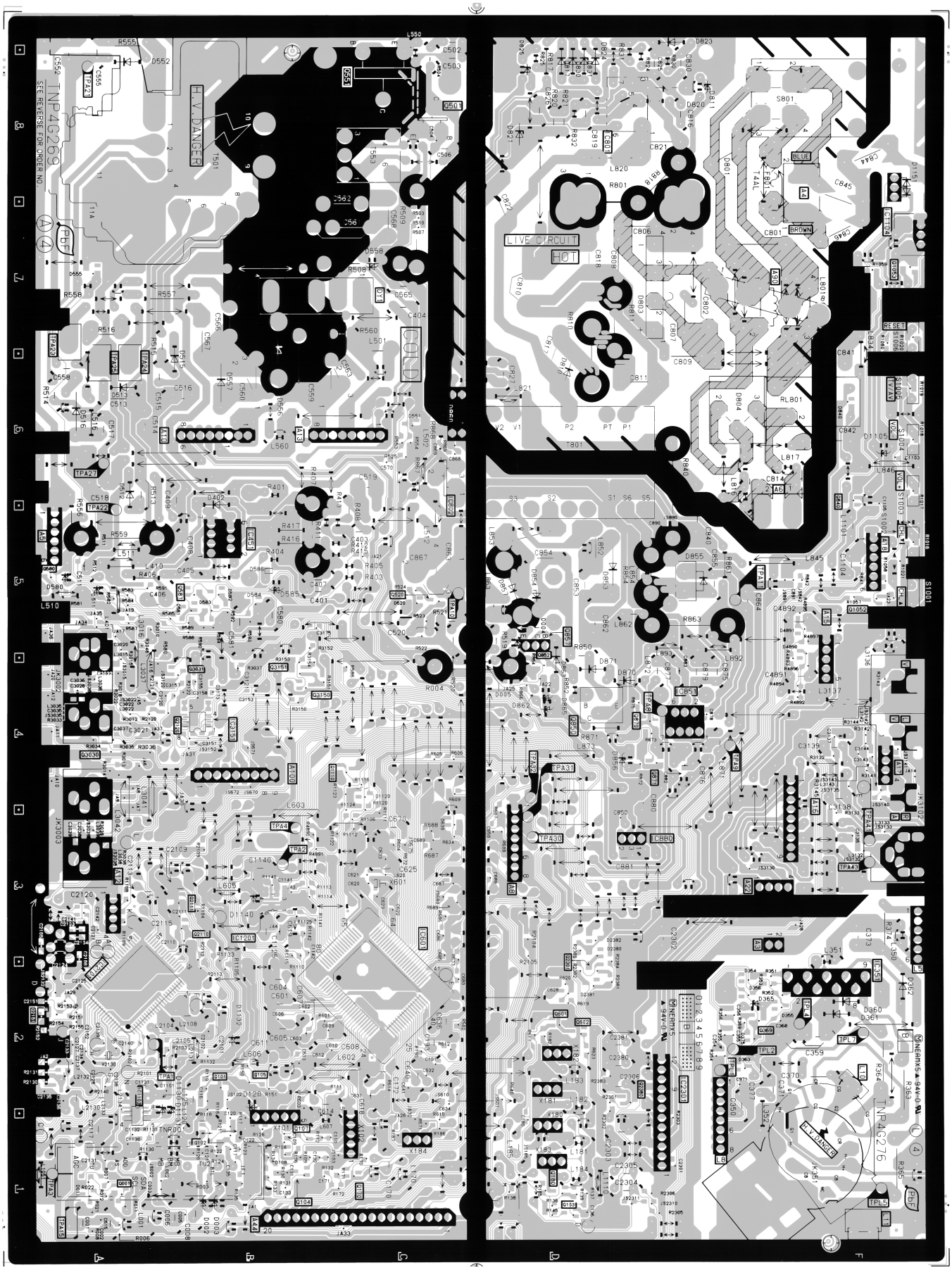


Fig. 11

Notes:

1. Wedge A, B and C should be inserted following the sequence of 1, 2 and 3 shown in Fig. 11.
2. The wedges should be set 120° apart from each other.
3. Be certain that three wedges are firmly fixed and the Deflection Yoke is tightly clamped in place. Otherwise the Deflection Yoke may shift its position and cause a loss of convergence and purity.

3 Conductor Views



4 Schematic Diagram

Important Safety Notice

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

Notes :

1. Resistor
   All resistors are carbon 1/4W resistors unless marked as follows :
   Unit of resistance is OHM (Ω) (K = 1 000 M = 1 000 000)

○	Nonflammable	⊠	Metal Oxide
△	Solid	◎	Metal Film
⊠	Wire Wound	⊗	Fuse

2. Capacitor
   All capacitors are ceramic 50V capacitors unless marked as follows :
   Unit of capacitance is μF unless otherwise noted.

⊗	Temperature Compensation	+ -	Electrolytic
Ⓜ	Polyester	NP	Bipolar
ⓜ	Metalized Polyester	Ⓣ	Dipped Tantalum
⊠	Polypropylene	Ⓩ	Z-Type

3. Coil
   Unit of inductance is μH, unless otherwise noted.

4. Test Point
   ⏚ : Test Point position

5. Earth Symbol
   ⏚ : Chassis Earth (Cold) ⏚ : Line Earth (Hot)

6. Voltage Measurement
   Voltage is measured using DC voltmeter.
   Conditions of the measurement are the following :
   Power Source..... AC AUTO 110-240V, 50/60 Hz
   Receiving Signal.....Colour Bar signal (RF)
   All customer's controls.....Maximum positions

7. Number in red circle indicates waveform number.
   (See waveform pattern table.)

8. When arrow mark (↗) is found, connection is easily found from the direction of arrow.

9. → : Indicates the major signal flow.

10. This schematic diagram is the latest at the time of printing and subject to change without notice.

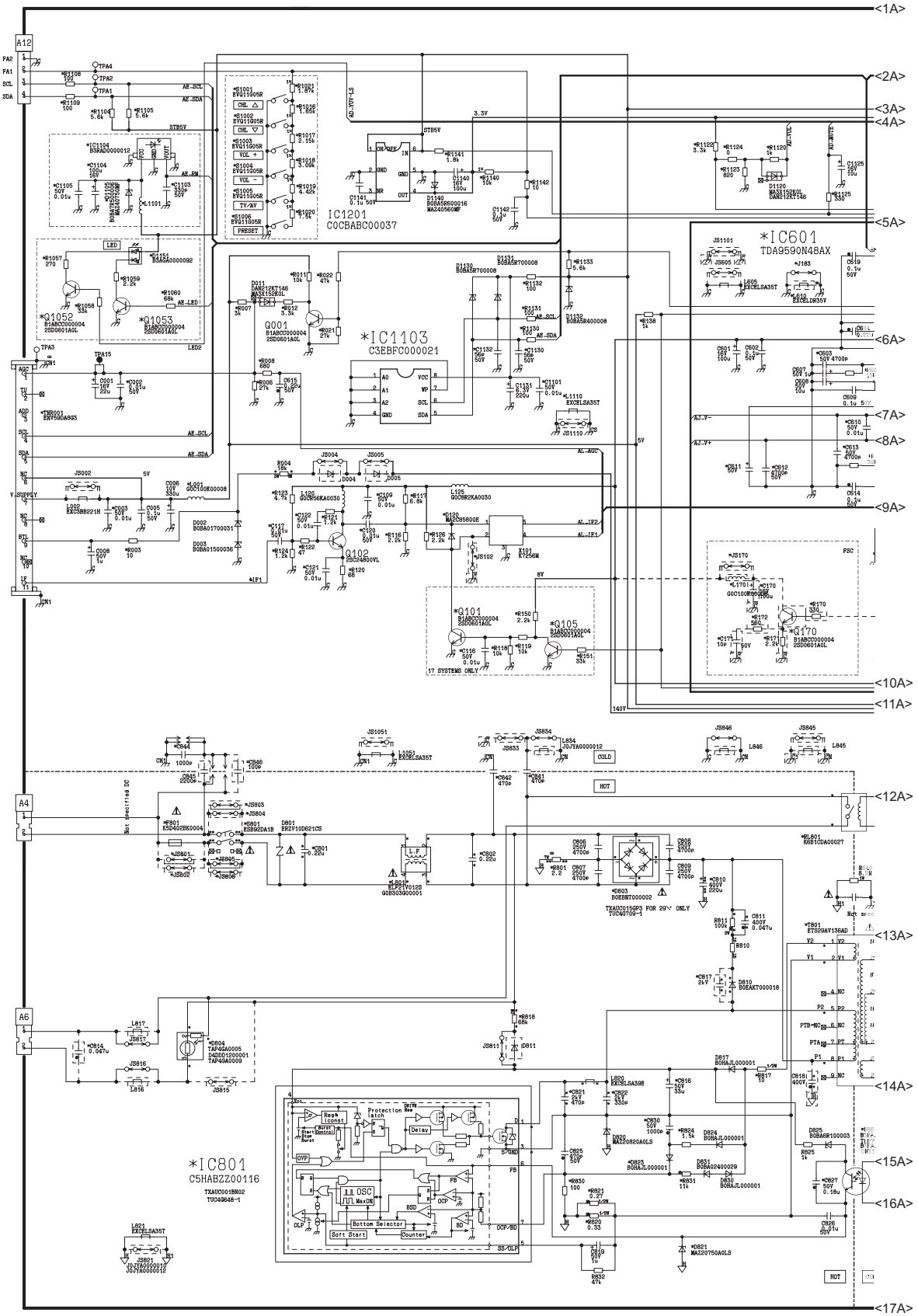
Remarks :

The Power Circuit contains a circuit area which uses a seperate power supply to isolate the earth connection.
The circuit is defined by HOT and COLD indications in the schematic diagram.
Take the following precautions :
All circuits, except the Power Circuit are cold.
Precautions :

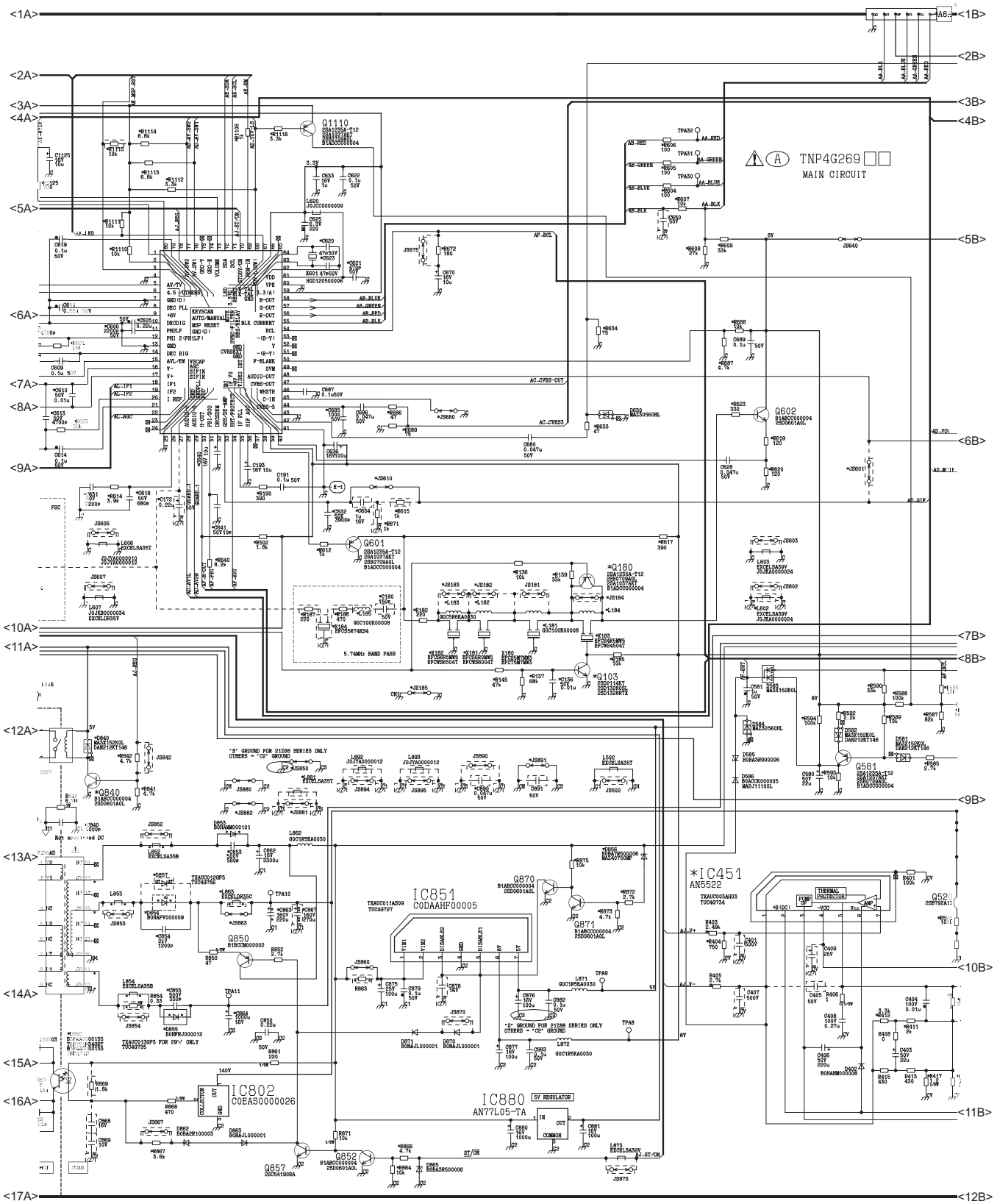
a. Do not touch the hot part or the hot and cold parts at the same time or you may be shocked.
b. Do not short-circuit the hot and cold circuits or a fuse may blow and parts may break.
c. Do not connect an instrument such as an oscilloscope to the hot and cold circuits simultaneously or a fuse may be blown.
   Connect the earth of instruments to the earth connection of the circuit being measured.
d. Make sure to disconnect the power plug before removing the chassis.

4.1. A BOARD

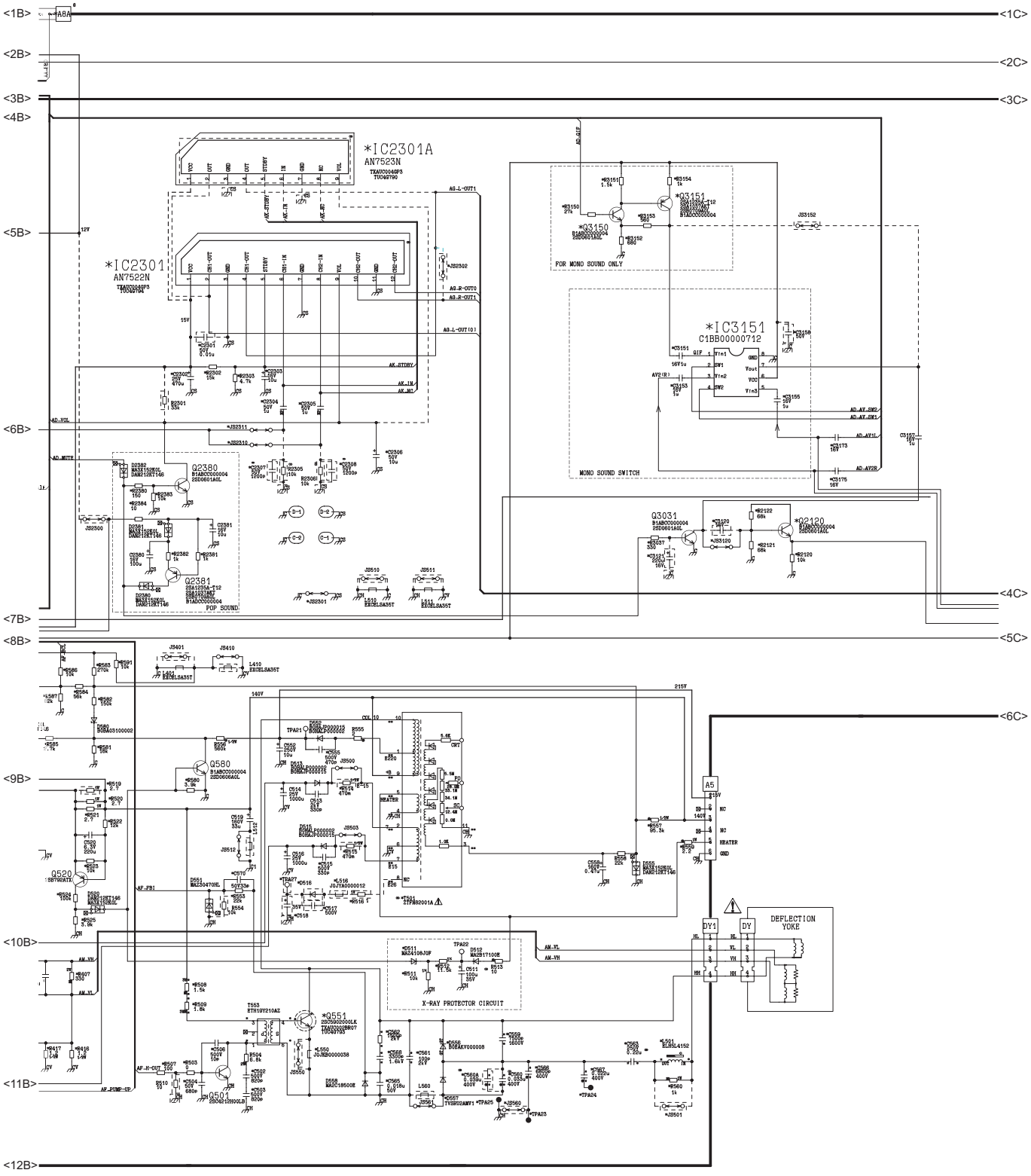
4.1.1. A BOARD 1/4



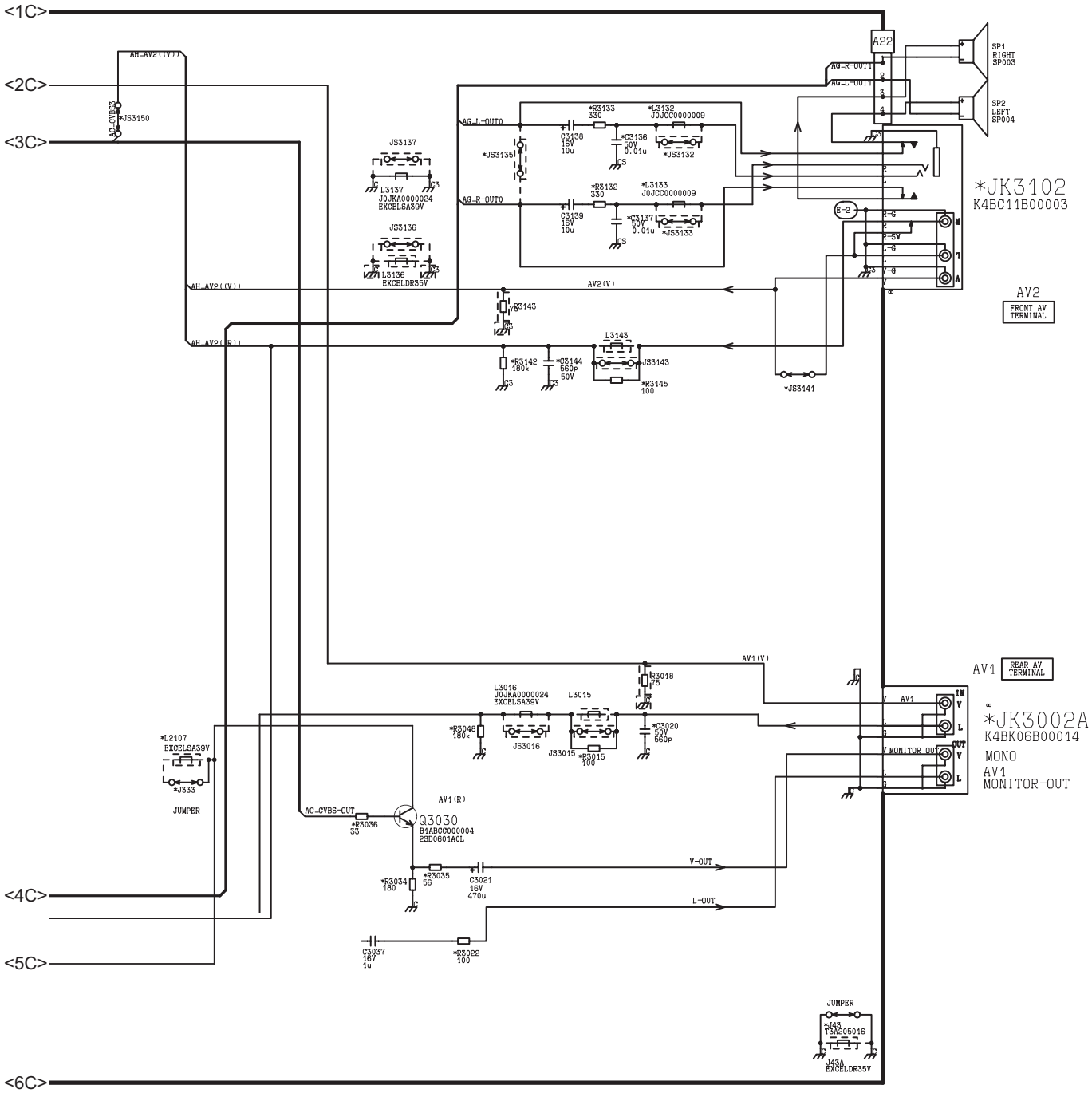
4.1.2. A BOARD 2/4



4.1.3. A BOARD 3/4



4.1.4. A BOARD 4/4

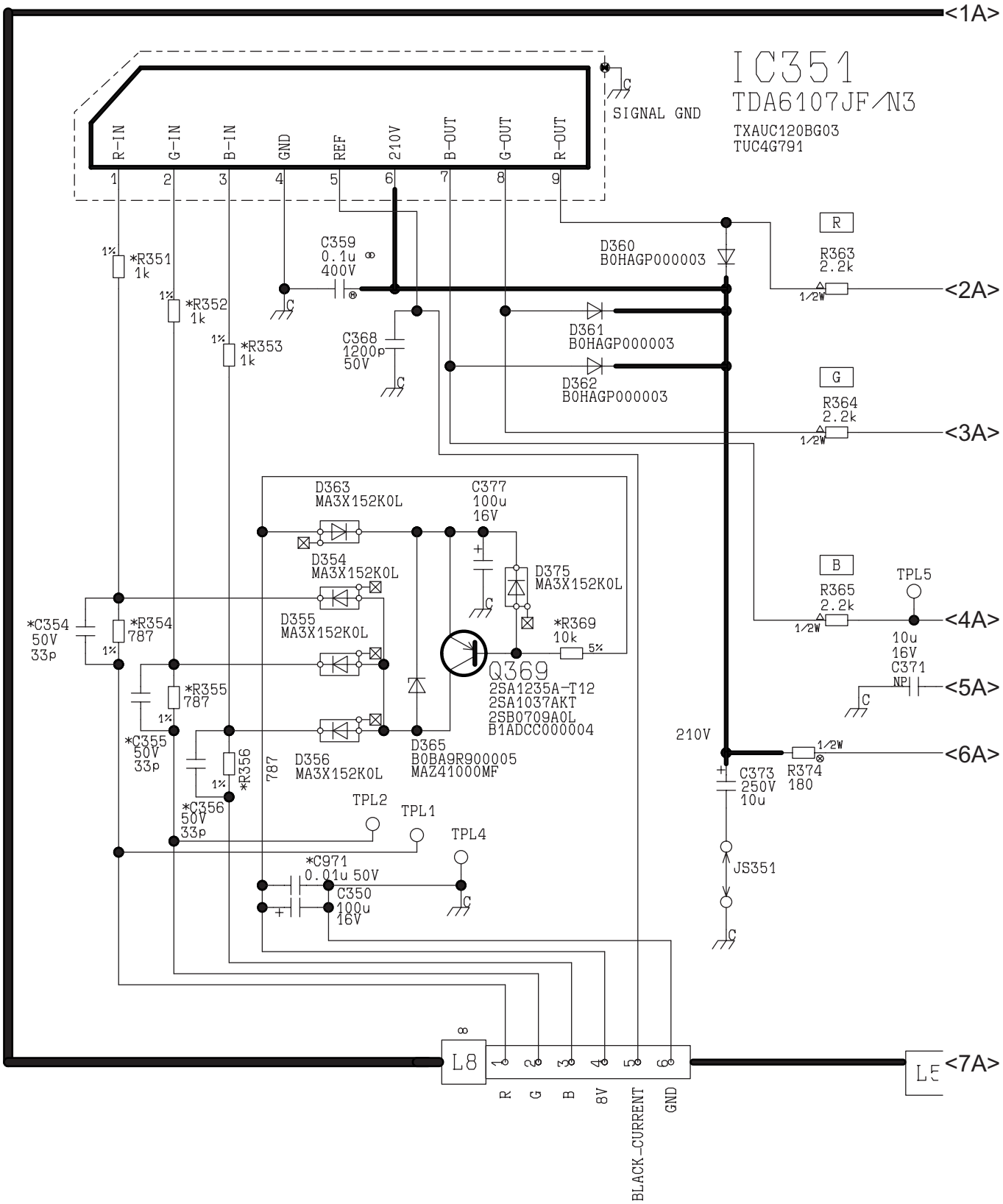


* PLEASE REFER TO PARTLIST
FOR PART NUMBER

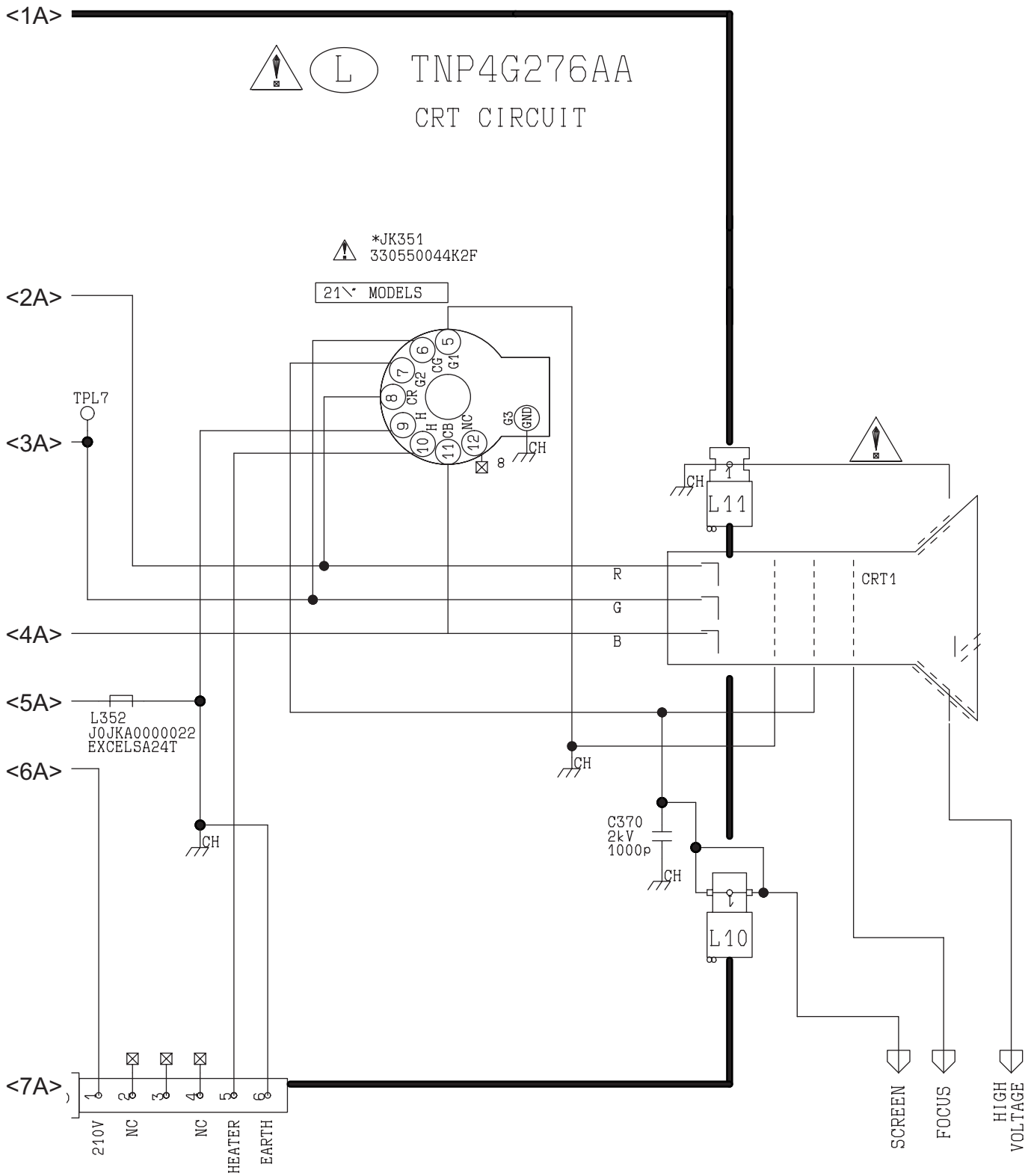
TNP4G269AB	TC-21PM50K TC-21PM50R	MALAYSIA SINGAPORE
TNP4G269AD TNP4G269AE TNP4G269AG	TC-21PM70R TX-21PM50T TC-21PM50R	C.I.S
TNP4G269AK	TC-21PM50A TC-21PM50R	AUSTRALIA PX / M.EAST
TNP4G269AM	TC-21PM50Z	NEW ZEALAND

4.2. L BOARD

4.2.1. L BOARD 1/2



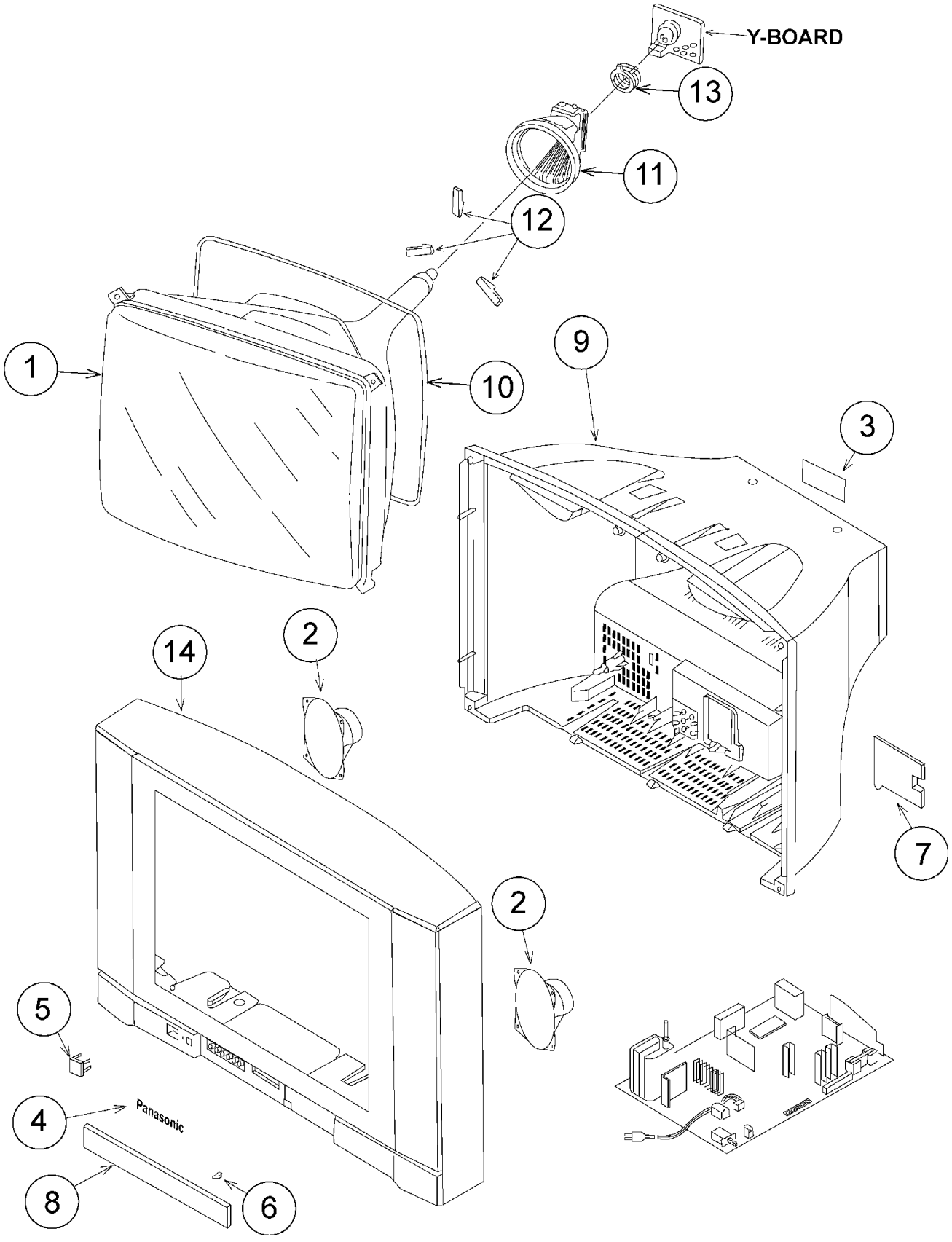
4.2.2. L BOARD 2/2



5 Parts Location

PARTS LOCATION

Note: The number on mechanical parts indicates Ref. No. of Replacement Parts List.



6 Replacement Parts List

Important Safety Notice

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

Note: Printed circuit board assembly with "NLA" is no longer available after production discontinuation of the complete set.

Abbreviation of part name and description

1. Resistor

Example :

ERD25TJ104 **C** 100KΩ, **J**, 1/4W
Type Allowance

Type	Allowance
C : Carbon	F : ± 1%
F : Fuse	G : ± 2%
M : Metal Oxide Metal Film	J : ± 5% K : ± 10%
S : Solid	M : ± 20%
W : Wire Wound	

2. Capacitor

Example :

ECKF1H103ZF **C** 0.01μF, **Z**, 50V
Type Allowance

Type	Allowance
C : Carbon	C : ± 0.25pF
E : Electrolytic	D : ± 0.5pF
P : Polyester Polypropylene	F : ± 1pF G : ± 3%
T : Tantalum	J : ± 5%
	K : ± 10%
	L : ± 15%
	M : ± 20%
	P : ± 100%, -0%
	Z : ± 80%, -20%

6.1. Replacement Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
1	A51QDX992X	PICTURE TUBE	⚠
2	EASG12D562A2	SPEAKER	
	EUR7717030	REMOTE CONTROL	
3	TBM4G0992	MODEL NAME PLATE	⚠
4	TBM4G3011	PANASONIC BADGE	
5	TBX4G88201	POWER BUTTON	
6	TEK6935	DOOR SWITCH	
	TES4G206	COIL SPRING	
	THT4G1005R	CRT SCREW	
	THT4G1010R	SCREW (SPEAKER)	
	THT4G1013R	SCREW	
7	TKP4G11744	AC CORD BRACKET	
8	TKP4G13001	DOOR	
9	TKU4G9830-1	BACK COVER	
10	TLK4G9037S	DEGAUSSING COIL	⚠
11	TLY4G324S	DEFLECTION YOKE	⚠
	TMM4G502	RUBBER WASHER	
12	TMM4G503	RUBBER WEDGE	
NLA	TNP4G269AD	A BOARD	⚠
NLA	TNP4G276AA	L BOARD	⚠
13	TP-13000PX2	CONVERGENCE YOKE	
	TPD4G2083	CUSHION (BOTTOM)	
	TPE4G14003	LAMI BAG	
	TPE4G14025	SET COVER	
	TQB4G3559	FAN BAG	
	TSM10032-3	MAGNET	
	TSN63115-4	PURITY MAGNET	
	TSX4G169H	AC POWER CORD	⚠
14	TXFKY01BR04	CABINET ASSY	
	TXFPC01BR04	CARTON	
	TXFPD01WU2S	CUSHION (TOP)	
	RESISTORS		
R003	ERJ6GEYJ100	M 10OHM,J,1/10W	
R004	ERG3FJ183H	M 18KOHM,J, 3W	
R006	ERJ6GEYJ273	M 27KOHM,J,1/10W	
R007	ERJ6GEYJ302	M 3KOHM,J,1/10W	
R008	ERJ6GEYJ681	M 680OHM,J,1/10W	
R011	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R012	ERJ6GEYJ332	M 3.3KOHM,J,1/10W	
R021	ERJ6GEYJ273	M 27KOHM,J,1/10W	
R022	ERJ6GEYJ473	M 47KOHM,J,1/10W	
R116	ERJ6GEYJ222	M 2.2KOHM,J,1/10W	
R117	ERJ6GEYJ682	M 6.8KOHM,J,1/10W	
R118	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R119	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R120	ERJ6GEYJ680	M 68OHM,J,1/10W	
R121	ERJ6GEYJ122	M 1.2KOHM,J,1/10W	
R122	ERJ6GEYJ470	M 47OHM,J,1/10W	
R123	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	
R124	ERJ6GEYJ122	M 1.2KOHM,J,1/10W	
R126	ERJ6GEYJ222	M 2.2KOHM,J,1/10W	
R136	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R137	ERJ6GEYJ683	M 68KOHM,J,1/10W	
R138	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R139	ERJ6GEYJ333	M 33KOHM,J,1/10W	
R145	ERJ6GEYJ473	M 47KOHM,J,1/10W	
R150	ERJ6GEYJ222	M 2.2KOHM,J,1/10W	
R151	ERJ6GEYJ333	M 33KOHM,J,1/10W	
R182	ERJ6GEYJ221	M 220OHM,J,1/10W	
R185	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R190	ERJ6GEYJ391	M 390OHM,J,1/10W	
R351	ERJ6ENF1001	M 1KOHM, 1/10W	
R352	ERJ6ENF1001	M 1KOHM, 1/10W	
R353	ERJ6ENF1001	M 1KOHM, 1/10W	
R354	ERJ6ENF7870	M 787OHM, 1/10W	
R355	ERJ6ENF7870	M 787OHM, 1/10W	
R617	ERJ6GEYJ391	M 390OHM,J,1/10W	
R619	ERJ6GEYJ121	M 120OHM,J,1/10W	
R620	ERJ6GEYJ121	M 120OHM,J,1/10W	
R623	ERJ6GEYJ331	M 330OHM,J,1/10W	
R633	ERJ6GEYJ470	M 47OHM,J,1/10W	
R634	ERJ6GEYJ750	M 75OHM, 1/10W	

Ref. No.	Part No.	Part Name & Description	Remarks
R640	ERJ6GEYJ822	M 8.2KOHM,J,1/10W	
R672	ERJ6GEYJ181	M 180OHM,J,1/10W	
R686	ERJ6GEYJ470	M 47OHM,J,1/10W	
R687	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	
R688	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R689	ERJ6GEYJ750	M 75OHM, 1/10W	
R801	ERF7ZK2R2	W 2.2OHM, 7W	⚠
R810	ERG2FJ470	M 47OHM,J, 2W	
R811	ERG2FJ104H	M 100KOHM,J, 2W	
R817	ERDS1TJ100	C 10OHM,J, 1/2W	
R818	ERG2FJ683H	M 68KOHM,J, 2W	
R820	ERX12SJR33E	M 0.33OHM,J, 1/2W	
R821	ERX12SJR27E	M 0.27OHM,J, 1/2W	
R824	ERDS2TJ152	C 1.5KOHM,J, 1/4W	
R825	ERDS2TJ102	C 1KOHM,J, 1/4W	
R830	ERDS2TJ101	C 100OHM,J, 1/4W	
R831	ER0S2CKF1102	M 11KOHM,F, 1/4W	
R832	ERDS2TJ473	C 47KOHM,J, 1/4W	
R840	ERD75TAJ825	C 8.2MOHM,J, 3/4W	
R841	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	
R842	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	
R850	ERQ12AJ470E	F 47OHM,J, 1/2W	
R852	ERDS2TJ272	C 2.7KOHM,J, 1/4W	
R861	ERDS1TJ221	C 220OHM,J, 1/2W	
R864	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R866	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	
R867	D0AE362JA046	C 3.6KOHM,J, 1/4W	
R868	ERDS1TJ471	C 470OHM,J, 1/2W	
R871	ERDS1TJ103	C 10KOHM,J, 1/2W	
R872	ERJ6GEYJ272	M 2.7KOHM,J,1/10W	
R873	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	
R875	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R1016	ERJ6ENF1651	M1.65KOHM, 1/10W	
R1017	ERJ6ENF2151	M2.15KOHM, 1/10W	
R1018	ERJ6ENF3091	M3.09KOHM, 1/10W	
R1019	ERJ6ENF4421	M4.42KOHM, 1/10W	
R1020	ERJ6ENF7501	M 7.5KOHM, 1/10W	
R1021	ERJ6ENF1871	M1.87KOHM, 1/10W	
R1057	ERJ6GEYJ271	M 270OHM,J,1/10W	
R1058	ERJ6GEYJ333	M 33KOHM,J,1/10W	
R1059	ERJ6GEYJ222	M 2.2KOHM,J,1/10W	
R1060	ERJ6GEYJ683	M 68KOHM,J,1/10W	
R1104	ERJ6GEYJ562	M 5.6KOHM,J,1/10W	
R1105	ERJ6GEYJ562	M 5.6KOHM,J,1/10W	
R1106	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R1108	ERJ6GEYJ101	M 100OHM,J,1/10W	
R1109	ERJ6GEYJ101	M 100OHM,J,1/10W	
R1110	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R1111	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R1112	ERJ6GEYJ332	M 3.3KOHM,J,1/10W	
R1113	ERJ6GEYJ682	M 6.8KOHM,J,1/10W	
R1114	ERJ6GEYJ682	M 6.8KOHM,J,1/10W	
R1116	ERJ6GEYJ332	M 3.3KOHM,J,1/10W	
R1120	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R1122	ERJ6GEYJ332	M 3.3KOHM,J,1/10W	
R1123	ERJ6GEYJ821	M 820OHM,J,1/10W	
R1124	ERJ6GEY0R00	M 0OHM,J,1/10W	
R1125	ERJ6GEYJ331	M 330OHM,J,1/10W	
R1130	ERJ6GEYJ101	M 100OHM,J,1/10W	
R1131	ERJ6GEYJ101	M 100OHM,J,1/10W	
R1132	ERJ6GEYJ101	M 100OHM,J,1/10W	
C515	ECKR2H331KB5	C 330PF, K,500V	
C516	ECA1EM102B	E 1000UF, 25V	
C519	ECA2CM330B	E 33UF, 160V	
C520	ECA0JM221B	E 220UF, 6.3V	
C552	ECA2EM100B	E 10UF, 250V	
C555	ECKR2H471KB5	C 470PF, K,500V	
C558	ECA2CMR47B	E 0.47UF, 160V	
C559	ECWH16752JVB	P 7500PF,J,1.6KV	
C560	ECQM4333JZ	P 0.033UF, 400V	
C561	ECKW3D101KBR	C 100PF, K, 2KV	
C562	ECKW3D152KBR	C 1500PF, K, 2KV	
C563	ECWF2224JSR	P 0.22UF, J,250V	
C565	ECQP1H183JZ	P 0.018UF, J, 50V	

Ref. No.	Part No.	Part Name & Description	Remarks
C566	ECQM4682JZ	P 6800PF, J,400V	
C567	ECQM4223JZ	P 0.022UF, J,400V	
C568	ECWH16332JVB	P 3300PF,J,1.6KV	
C570	ECUX1H330JCX	C 33PF, J, 50V	
C580	ECA1HM220B	E 22UF, 50V	
C581	ECQV1H105JM	P 1UF, J, 50V	
C601	ECEA1CKA101	E 100UF, 16V	
C602	ECUX1H104KBX	C 0.1UF, K, 50V	
C603	ECJ2VB1H472K	C 4700PF, K, 50V	
C604	ECQV1H224JL	P 0.22UF, J, 50V	
C605	ECQV1H224JL	P 0.22UF, J, 50V	
C606	ECJ2VC1H222J	C 2200PF, J, 50V	
C607	ECEA1HKA010	E 1UF, 50V	
C608	ECEA1HKA100	E 10UF, 50V	
C609	ECUX1H104KBX	C 0.1UF, K, 50V	
C610	ECJ2VB1H103J	C 0.01UF, 50V	
C611	ECEA1HKAR22	E 0.22UF, 50V	
C612	ECJ2VB1H472K	C 4700PF, K, 50V	
C613	ECJ2VB1H472K	C 4700PF, K, 50V	
C614	ECQV1H104JL	P 0.1UF, J, 50V	
C615	ECQV1H224JL	P 0.22UF, J, 50V	
C618	ECKR1H681KB5	C 680PF, K, 50V	
C619	ECQV1H104JL	P 0.1UF, J, 50V	
C620	ECJ2VC1H470J	C 47PF, J, 50V	
C621	ECJ2VB1H471K	C 470PF, K, 50V	
C622	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C623	ECJ2VC1H270J	C 27PF, J, 50V	
C625	ECEA0JN221U	E 220UF, 6.3V	
C628	ECJ2YB1H473K	C 0.047UF, K, 50V	
C631	ECJ2VB1H222K	C 2200PF, K, 50V	
C632	ECJ2VB1H392K	C 3900PF, K, 50V	
C633	ECJ2ZF1C105Z	C 1UF, Z, 16V	
C636	ECA1CM101B	E 100UF, 16V	
C640	ECA1CM100B	E 10UF, 16V	
C641	ECJ2VC1H100C	C 10PF, C, 50V	
C670	ECA1CM100B	E 10UF, 16V	
C680	ECJ2YB1H473K	C 0.047UF, K, 50V	
C685	ECJ2VC1H101K	C 100PF, K, 50V	
C686	ECJ2YB1H473K	C 0.047UF, K, 50V	
C687	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C689	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C801	ECQU2A224BN9	P 0.22UF, 250V	⚠
C802	ECQU2A224BN9	P 0.22UF, 250V	⚠
C806	ECKWAE472ZED	C 4700PF, Z,500V	
C807	ECKWAE472ZED	C 4700PF, Z,500V	
C808	ECKWAE472ZED	C 4700PF, Z,500V	
C809	ECKWAE472ZED	C 4700PF, Z,500V	
C810	EETHC2G221H	E 220UF, 400V	
C811	ECQM4473JZ	P 0.047UF, J,400V	
C816	F2A1H330A115	E 33UF, 50V	
C819	ECA1HM010B	E 1UF, 50V	
C821	ECKW3D471KBR	C 470PF, K, 2KV	
C822	ECKW3D331JBR	C 330PF, J, 2KV	
C825	ECQB1H471JF	P 470PF, J, 50V	
L501	ELH5L4152	LINEARITY COIL	
L502	EXCELSA35T	BEAD CORE	
L510	EXCELSA35T	BEAD CORE	
L511	EXCELSA35T	BEAD CORE	
L550	EXCELDR25V	CORE	
L603	EXCELSA39V	BEAD CORE	
L605	EXCELSA35T	BEAD CORE	
L606	EXCELSA35T	BEAD CORE	
L607	EXCELDR35V	CORE	
L620	TSK1045	BEAD CORE	
L801	G0B303G00001	LINE FILTER	⚠
L820	EXCELSA39E	BEAD CHOKE	
L821	EXCELSA35T	BEAD CORE	
L852	EXCELSA35B	BEAD CORE	
L853	EXCELSA39E	BEAD CHOKE	
L854	EXCELSA35B	BEAD CORE	
L862	TLTACT1R5K	PEAKING COIL	
L871	TLTACT1R5K	PEAKING COIL	
L872	TLTACT1R5K	PEAKING COIL	
L873	EXCELSA39V	BEAD CORE	

Ref. No.	Part No.	Part Name & Description	Remarks
L1051	EXCELSA35T	BEAD CORE	
L1101	TALV35VB331K	PEAKING COIL	
L1110	EXCELSA35T	BEAD CORE	
L3016	EXCELSA39V	BEAD CORE	
L3132	TSK1045	BEAD CORE	
L3133	TSK1045	BEAD CORE	
L3137	EXCELSA39V	BEAD CORE	
	TRANSFORMERS		
T501	ZTFN82001A	FLYBACK TRANS	⚠
T553	ETH19Y210AZ	H DRIVE TRANS	⚠
T801	ETS29AV136AD	SWITCHING TRANS	⚠
	DIODES		
D002	MTZJ18B	ZENER DIODE	
D003	MTZJ16A	ZENER DIODE	
D011	MA152KTX	DIODE	
D120	MA858	DIODE	
D354	MA152KTX	DIODE	
D355	MA152KTX	DIODE	
D356	MA152KTX	DIODE	
D360	ERA22-04	DIODE	
D361	ERA22-04	DIODE	
D362	ERA22-04	DIODE	
D363	MA152KTX	DIODE	
D365	MTZJ10C	ZENER DIODE	
D375	MA152KTX	DIODE	
D402	B0HAHM000008	DIODE	
D511	MA4108J	DIODE	
D512	MA171	DIODE	
D513	B0HAJP000015	DIODE	
D515	B0HAJP000015	DIODE	
D520	MA152KTX	DIODE	
D551	MA3047HTX	DIODE	
D552	B0HAJP000015	DIODE	
D555	MA152KTX	DIODE	
D556	ERB06-15	DIODE	
D557	TVSRU2AM	DIODE	
D558	MA185	DIODE	
D580	MTZJ33B	ZENER DIODE	
D581	MA152KTX	DIODE	
D582	MA152KTX	DIODE	
D583	MA3X152E0L	DIODE	
D584	MAZ30560HL	DIODE	
D585	MTZJ3.9A	ZENER DIODE	
D586	B0ACCK000005	DIODE	
D630	MAZ30560HL	DIODE	
D801	ERZV10D621CS	VARISTOR	⚠
D803	D4SB80	DIODE	
Q1110	2SB709ATX	TRANSISTOR	
Q2120	2SD0601A0L	TRANSISTOR	
Q2380	2SD0601A0L	TRANSISTOR	
Q2381	2SB709ATX	TRANSISTOR	
Q3030	2SD0601A0L	TRANSISTOR	
Q3031	2SD0601A0L	TRANSISTOR	
Q3150	2SD0601A0L	TRANSISTOR	
Q3151	2SB709ATX	TRANSISTOR	
	OTHERS		
A5	TJS3A9670	6P CONNECTOR	
A8	TJS3A9670	6P CONNECTOR	
A12	TJSF29204	CONNECTOR	
A22	TJS3A9650	4P CONNECTOR	
F801	XBA2C40TR0	FUSE 250V 4A	⚠
JA1	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA3	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA4	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA5	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA6	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA7	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA8	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA9	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA10	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA11	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA12	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA14	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA16	ERJ6GEY0R00	M 0OHM,J,1/10W	

Ref. No.	Part No.	Part Name & Description	Remarks
JA17	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA19	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA20	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA22	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA23	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA25	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA28	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA29	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA30	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA31	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA32	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA36	ERJ6GEY0R00	M 0OHM,J,1/10W	
JK351	330550044K2F	CRT SOCKET	⚠
JK3002	K4BK06B00014	REAR AV TERMINAL	
JK3102	K4BC11B00003	AV TERMINAL	
JS185	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS610	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS680	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS891	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS2310	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS2311	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS3120	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS3141	ERJ6GEY0R00	M 0OHM,J,1/10W	
L5	TJS3A9670	6P CONNECTOR	
L8	TJS3A9670	6P CONNECTOR	
RL801	K6B1CDA00027	RELAY	⚠
S801	ESB92DA1B	SWITCH	⚠
S1001	EVQ11G05R	SWITCH	
S1002	EVQ11G05R	SWITCH	
S1003	EVQ11G05R	SWITCH	
S1004	EVQ11G05R	SWITCH	
S1005	EVQ11G05R	SWITCH	
S1006	EVQ11G05R	SWITCH	
TNR001	ENV59DA8G3	TUNER	⚠
X101	K7256M	SAW FILTER	⚠
X180	EFCS5M7MW3	CERAMIC FILTER	
X181	EFCS6R0MW5	CERAMIC FILTER	
X182	EFCS6R5MW5	CERAMIC FILTER	
X183	EFCS4R5MW5	CERAMIC FILTER	
X601	H0D120500006	CRYSTAL OSC	
R356	ERJ6ENF7870	M 787OHM, 1/10W	
R363	ERC12GK222	S 2.2KOHM,K, 1/2W	
R364	ERC12GK222	S 2.2KOHM,K, 1/2W	
R365	ERC12GK222	S 2.2KOHM,K, 1/2W	
R369	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R374	ERQ12AJ181P	F 180OHM,J, 1/2W	
R401	ERDS2TJ104	C 100KOHM,J, 1/4W	
R403	ER0S2CHF2491	M2.49KOHM,F, 1/4W	
R404	D0AE751JA046	C 750OHM,J, 1/4W	
R405	ER0S2CHF2701	M 2.7KOHM,F, 1/4W	
R406	ERDS1FJ1R0	C 1OHM,J, 1/2W	
R407	ERG2FJ331H	M 330OHM,J, 2W	
R408	ERD25V0R00T	C 0OHM, 1/4W	
R411	D0AE202JA046	C 2KOHM,J, 1/4W	
R412	ERDS2TJ332	C 3.3KOHM,J, 1/4W	
R413	D0AE431JA046	C 430OHM,J, 1/4W	
R415	D0AE431JA046	C 430OHM,J, 1/4W	
R416	ERDS1TJ1R2	C 1.2OHM,J, 1/2W	
R417	ERDS1TJ1R2	C 1.2OHM,J, 1/2W	
R502	ERJ6GEYJ182	M 1.8KOHM,J,1/10W	
R503	ERJ6GEY0R00	M 0OHM,J,1/10W	
R504	ERG2SJ682E	M 6.8KOHM,J, 2W	
R507	ERJ6GEYJ101	M 100OHM,J,1/10W	
R508	ERG3FJ152H	M 1.5KOHM,J, 3W	
R509	ERG3FJ182H	M 1.8KOHM,J, 3W	
R511	ERJ6ENF1002	M 10KOHM, 1/10W	
R512	ERJ6ENF1152	M11.5KOHM, 1/10W	
R513	ERQ14AJ100E	F 10OHM,J, 1/4W	
R520	ERQ12AJ2R7E	F 2.7OHM,J, 1/2W	
R521	ERQ12AJ2R7E	F 2.7OHM,J, 1/2W	
R522	ERJ6GEYJ123	M 12KOHM,J,1/10W	
R523	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R524	ERJ6GEYJ104	M 100KOHM,J,1/10W	
R525	ERJ6GEYJ392	M 3.9KOHM,J,1/10W	

Ref. No.	Part No.	Part Name & Description	Remarks
R553	ERJ6GEYJ223	M 22KOHM,J,1/10W	
R555	ERQ14AJ2R0P	F 2.0OHM,J, 1/4W	
R556	ER050CKF5603	M 560KOHM,F, 1/2W	
R557	ER050CKF9532	M95.3KOHM,F, 1/2W	
R558	ERDS2TJ223	C 22KOHM,J, 1/4W	
R559	ERQ1CJP2R2S	M 2.2OHM,J, 1W	
R560	ERG1SJ102E	M 1KOHM,J, 1W	
R580	ERJ6GEYJ392	M 3.9KOHM,J,1/10W	
R581	ERJ6GEYJ183	M 18KOHM,J,1/10W	
R582	ERJ6GEYJ154	M 150KOHM,J,1/10W	
R583	ERJ6GEYJ274	M 270KOHM,J,1/10W	
R584	ERJ6GEYJ563	M 56KOHM,J,1/10W	
R585	ERJ6GEYJ272	M 2.7KOHM,J,1/10W	
R586	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R587	ERJ6GEYJ823	M 82KOHM,J,1/10W	
R588	ERJ6GEYJ104	M 100KOHM,J,1/10W	
R589	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R590	ERJ6GEYJ333	M 33KOHM,J,1/10W	
R591	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R592	ERJ6GEYJ222	M 2.2KOHM,J,1/10W	
R593	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R594	ERJ6GEYJ104	M 100KOHM,J,1/10W	
R601	ERJ6GEYJ153	M 15KOHM,J,1/10W	
R603	ERJ6GEYJ393	M 39KOHM,J,1/10W	
R604	ERJ6GEYJ101	M 100OHM,J,1/10W	
R605	ERJ6GEYJ101	M 100OHM,J,1/10W	
R606	ERJ6GEYJ101	M 100OHM,J,1/10W	
R607	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R608	ERJ6GEYJ273	M 27KOHM,J,1/10W	
R609	ERJ6GEYJ333	M 33KOHM,J,1/10W	
R612	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R614	ERJ6GEYJ392	M 3.9KOHM,J,1/10W	
R1133	ERJ6GEYJ562	M 5.6KOHM,J,1/10W	
R1140	ERJ6ENF1002	M 10KOHM, 1/10W	
R1141	ERJ6GEYJ182	M 1.8KOHM,J,1/10W	
R1142	ERJ6GEYJ100	M 10OHM,J,1/10W	
R2120	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R2121	ERJ6GEYJ683	M 68KOHM,J,1/10W	
R2122	ERJ6GEYJ683	M 68KOHM,J,1/10W	
R2302	ERJ6GEYJ153	M 15KOHM,J,1/10W	
R2303	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	
R2380	ERJ6GEYJ151	M 150OHM,J,1/10W	
R2381	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R2382	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R2383	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R2384	ERJ6GEYJ470	M 47OHM,J,1/10W	
R3015	ERJ6GEYJ101	M 100OHM,J,1/10W	
R3022	ERJ6GEYJ101	M 100OHM,J,1/10W	
R3034	ERJ6GEYJ181	M 180OHM,J,1/10W	
R3035	ERJ6GEYJ560	M 56OHM,J,1/10W	
R3036	ERJ6GEYJ330	M 33OHM,J,1/10W	
R3037	ERJ6GEYJ331	M 330OHM,J,1/10W	
R3048	ERJ6GEYJ184	M 180KOHM,J,1/10W	
R3132	ERJ6GEYJ331	M 330OHM,J,1/10W	
R3133	ERJ6GEYJ331	M 330OHM,J,1/10W	
R3142	ERJ6GEYJ184	M 180KOHM,J,1/10W	
R3145	ERJ6GEYJ101	M 100OHM,J,1/10W	
R3150	ERJ6GEYJ273	M 27KOHM,J,1/10W	
R3151	ERJ6GEYJ152	M 1.5KOHM,J,1/10W	
R3152	ERJ6GEYJ681	M 680OHM,J,1/10W	
R3153	ERJ6GEYJ561	M 560OHM,J,1/10W	
R3154	ERJ6GEYJ102	M 1KOHM,J,1/10W	
	CAPACITORS		
C001	ECEA1CKA220	E 22UF, 16V	
C002	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C003	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C005	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C006	ECA1AM331B	E 330UF, 10V	
C008	ECEA1HKA010	E 1UF, 50V	
C109	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C116	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C117	ECJ2VB1H103J	C 0.01UF, 50V	
C120	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C121	ECJ2VF1H103Z	C 0.01UF, Z, 50V	

Ref. No.	Part No.	Part Name & Description	Remarks
C122	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C136	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C191	ECUX1H104KBX	C 0.1UF, K, 50V	
C193	ECA1CM100B	E 10UF, 16V	
C350	ECA1CM101B	E 100UF, 16V	
C354	ECUX1H330JCX	C 33PF, J, 50V	
C355	ECUX1H330JCX	C 33PF, J, 50V	
C356	ECUX1H330JCX	C 33PF, J, 50V	
C359	ECQM4104KZ	P 0.1UF, K,400V	
C368	ECJ2VC1H122J	C 1200PF, J, 50V	
C370	ECKW3D102KBP	C 1000PF, K, 2KV	
C371	ECEA1CN100U	E 10UF, 16V	
C373	ECA2EM100B	E 10UF, 250V	
C377	ECA1CM101B	E 100UF, 16V	
C403	ECA1HM220B	E 22UF, 50V	
C404	ECQB1103JF	P 0.01UF, J,100V	
C406	ECA1HHG221	E 220UF, 50V	
C408	ECQB1274JF	P 0.27UF, J,100V	
C502	ECKR2H821KB5	C 820PF, K,500V	
C503	ECKR2H821KB5	C 820PF, K,500V	
C504	ECJ2VB1H681K	C 680PF, K, 50V	
C506	L5SL4B100D	C 10PF, 500V	
C511	ECA1VM101B	E 100UF, 35V	
C513	ECKW3D331JBP	C 330PF, J, 2KV	
C514	ECA1EM102B	E 1000UF, 25V	
C826	F0A1H103A039	CAPACITOR	
C827	ECQV1H184JM	P 0.18UF, J, 50V	
C830	ECQB1H102JF	P 1000PF, 50V	
C840	ECKCNA102MB7	C 1000PF, M,	
C841	ECKCNA471MB7	C 470PF, M,	
C842	ECKCNA471MB7	C 470PF, M,	
C844	ECKCNA102MB7	C 1000PF, M,	
C850	ECJ2VF1H224Z	C 0.22UF, Z, 50V	
C853	ECKR2H561KB5	C 560PF, K,500V	
C854	ECKW3D122KBP	C 1200PF, K, 2KV	
C855	ECKR2H331KB5	C 330PF, K,500V	
C862	ECA1CHG332E	E 3300UF, 16V	
C863	F2A2C221A021	E 220UF, 160V	
C864	EEUFC1C102SB	E 1000UF, 16V	
C875	ECA1EM101B	E 100UF, 25V	
C876	ECA1CM101B	E 100UF, 16V	
C877	ECA1CM101B	E 100UF, 16V	
C879	ECQV1H104JL	P 0.1UF, J, 50V	
C880	ECA1CM102B	E 1000UF, 16V	
C881	ECA1CM101B	E 100UF, 16V	
C882	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C883	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C971	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C1101	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C1103	ECJ2VC1H331J	C 330PF, J, 50V	
C1104	ECA1CM101B	E 100UF, 16V	
C1105	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C1125	ECEA1CKA100	E 10UF, 16V	
C1130	ECJ2VC1H560J	C 56PF, J, 50V	
C1131	ECA0JM221B	E 220UF, 6.3V	
C1132	ECJ2VC1H560J	C 56PF, J, 50V	
C1140	ECEA1CKA101	E 100UF, 16V	
C1141	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C1142	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C2302	ECA1EM471B	E 470UF, 25V	
C2303	ECA1CM100B	E 10UF, 16V	
C2304	ECEA1HKN010	E 1UF, 50V	
C2305	ECEA1HKN010	E 1UF, 50V	
C2306	ECA1HM100B	E 10UF, 50V	
C2380	ECA1CM101B	E 100UF, 16V	
C2381	ECA1CM100B	E 10UF, 16V	
C3020	ECJ2VC1H561K	C 560PF, K, 50V	
C3021	ECA1CM471B	E 470UF, 16V	
C3037	ECJ2VF1C105Z	C 1UF, Z, 16V	
C3136	ECJ2VB1H103J	C 0.01UF, 50V	
C3137	ECJ2VB1H103J	C 0.01UF, 50V	
C3138	ECA1CM100B	E 10UF, 16V	
C3139	ECA1CM100B	E 10UF, 16V	
C3144	ECJ2VC1H561K	C 560PF, K, 50V	

Ref. No.	Part No.	Part Name & Description	Remarks
C3151	ECJ2VF1C105Z	C 1UF, Z, 16V	
C3153	ECJ2VF1C105Z	C 1UF, Z, 16V	
C3155	ECJ2VF1C105Z	C 1UF, Z, 16V	
C3157	ECJ2VF1C105Z	C 1UF, Z, 16V	
C3173	ECJ2VF1C105Z	C 1UF, Z, 16V	
C3175	ECJ2VF1C105Z	C 1UF, Z, 16V	
	COILS		
L10	K1ZZ00001205	CONNECTOR	
L001	TLTACT100K	PEAKING COIL 10U	
L002	EXC3BB221H	CHIP BEAD CORE	
L120	TLTACTR56K	PEAKING COIL	
L125	TALV35VB8R2K	PEAKING COIL	
L181	TLTACT100K	PEAKING COIL 10U	
L182	TALV35VB6R8K	PEAKING COIL	
L183	TALV35VB5R6K	PEAKING COIL	
L184	TALV35VB6R8K	PEAKING COIL	
L352	EXCELSA24T	BEAD CORE	
L401	EXCELSA35T	BEAD CORE	
D804	TAP4GA0005	POSISTOR	
D810	B0EAKT000018	DIODE	
D817	AG01Z	DIODE	
D820	MAZ20820A0LS	DIODE	
D821	MAZ20750A0LS	DIODE	
D823	AG01Z	DIODE	
D824	AG01Z	DIODE	
D825	B0BA6R100003	DIODE	
D830	AG01Z	DIODE	
D831	B0BA02400029	ZENER DIODE	
D840	MA152KTX	DIODE	
D853	RN1ZLF-A1	DIODE	
D854	FMGG2CSLF665	DIODE	
D855	FMLG12S	DIODE	
D856	MTZJ7.5C	ZENER DIODE	
D860	PC123F2	DIODE	
D862	MTZJ2.0B	ZENER DIODE	
D863	AG01Z	DIODE	
D865	MTZJ3.6A	ZENER DIODE	
D870	AG01Z	DIODE	
D871	AG01Z	DIODE	
D1105	MTZJ7.5C	ZENER DIODE	
D1120	MA152KTX	DIODE	
D1130	MTZJ5.6C	ZENER DIODE	
D1131	MTZJ5.6C	ZENER DIODE	
D1132	MTZJ5.6A	ZENER DIODE	
D1140	MTZJ5.6B	ZENER DIODE	
D1151	B3AGA0000092	DIODE	
D2380	MA152KTX	DIODE	
D2381	MA152KTX	DIODE	
D2382	MA152KTX	DIODE	
	INTEGRATED CIRCUITS		
IC351	TDA6107JF/N3	IC	
IC451	AN5522	IC	
IC601	TDA9590N48AX	IC	
IC801	C5HABZZ00116	IC, POWER SUPPLY	⚠
IC802	C0EAS0000026	IC	
IC851	C0DAAHF00005	IC, POWER SUPPLY	⚠
IC880	AN77L05	LINEAR IC	
IC1103	TVR4GAS204	EEPROM IC	
IC1104	B3RAD0000012	REMOTE RECEIVER I	
IC1201	PQ1R33	LINEAR IC	
IC2301	AN7522N	IC	
IC3151	C1BB00000712	IC	
	TRANSISTORS		
Q001	2SD0601A0L	TRANSISTOR	
Q101	2SD0601A0L	TRANSISTOR	
Q102	2SC2480TX	TRANSISTOR	
Q103	2SD2114KT	TRANSISTOR	
Q105	2SD0601A0L	TRANSISTOR	
Q180	2SB709ATX	TRANSISTOR	
Q369	2SB709ATX	TRANSISTOR	
Q501	2SC4212H	TRANSISTOR	
Q520	2SB792ATX	TRANSISTOR	
Q551	2SC5902000LK	TRANSISTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
Q580	2SD0601A0L	TRANSISTOR	
Q581	2SB709ATX	TRANSISTOR	
Q601	2SB709ATX	TRANSISTOR	
Q602	2SD0601A0L	TRANSISTOR	
Q840	2SD0601A0L	TRANSISTOR	
Q850	B1BCCM000002	TRANSISTOR	
Q852	2SD0601A0L	TRANSISTOR	
Q857	2SC54190RA	TRANSISTOR	
Q870	2SD0601A0L	TRANSISTOR	
Q871	2SD0601A0L	TRANSISTOR	
Q1052	2SD0601A0L	TRANSISTOR	
Q1053	2SD0601A0L	TRANSISTOR	