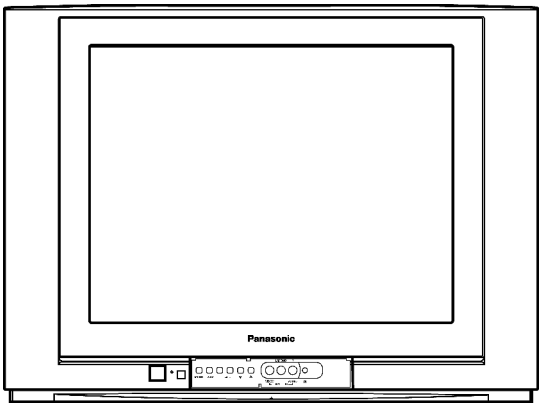
ORDER NO. MTV0501365C3

Service Manual

Colour Television



TC-21FG20M-SINGAPORE

GP31 Chassis

Specifications

Power Source :	AC AUTO 110-240V, 50/60 Hz
Power Consumption :	83W
Aerial Impedance :	75Ω unbalanced
	Coaxial type
Receiving System :	17 Systems
Receiving Channels :	
VHF	1-11 PAL B (Australia & N.Zealand)
	1-12 PAL/SECAM D
	1-12 NTSC M JAPAN
	2-12 PAL/SECAM B, G
	2-13 NTSC M U.S.A.
UHF	21-69 PAL G I/SECAM B, G, K1
	28-69 PAL G (Australia)
	13-56 PAL D
	13-52 NTSC M JAPAN
	14-69 NTSC NTSC M U.S.A.
CATV	S1-S41 (Hyper)
Intermediate Frequency :	
Video	38.0 MHz
Sound	31.5 MHz (D, K, K1)
	32 MHz (I)
	32.5 MHz (B, G)
	33.5 MHz (M)
Colour	33.57 MHz (PAL)
	33.6 MHz (SECAM)
	33.75 MHz (SECAM)
	34.42 MHz (NTSC)
Video / Terminals :	AV1, 2
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 :	A51LXR195X
	51cm (21 inches)
	Measured diagonally,
	90° deflection
Audio Output :	16.0W
Dimensions :	Height : 473 mm
	Width : 648 mm
	Depth : 488 mm
Mass :	24 kg (Net Wt.)

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

Panasonic®

⚠ 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.

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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.

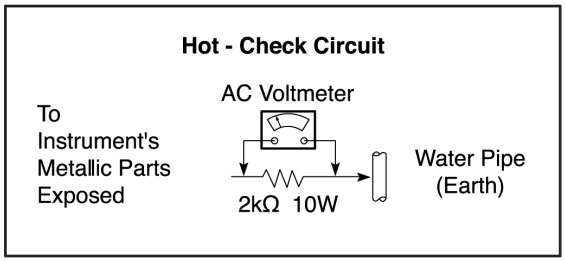


Fig. 1

,

1.4. X-Radiation

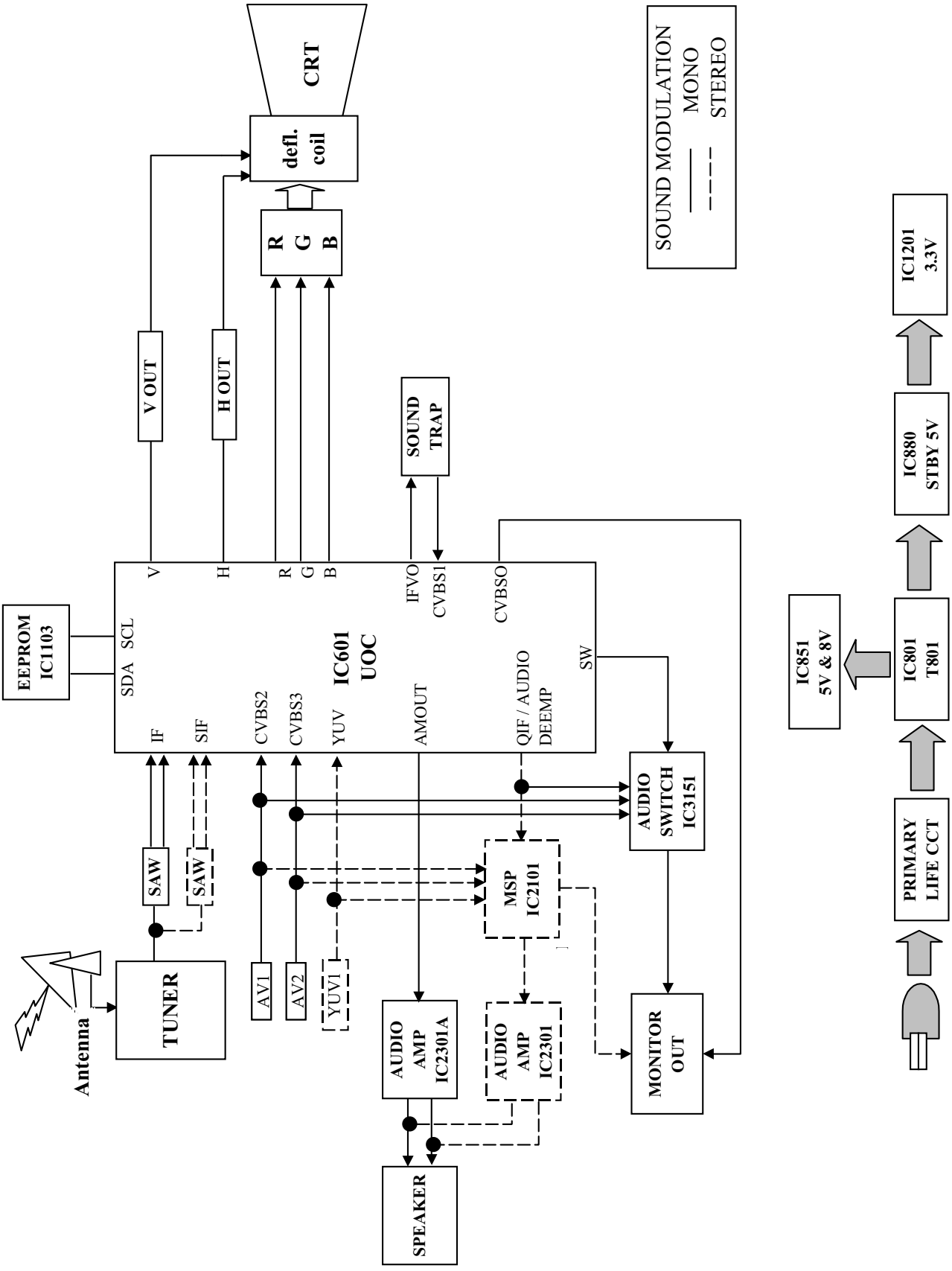
Warning:

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±1.5kV**. 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. GP31 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 Figure 2.

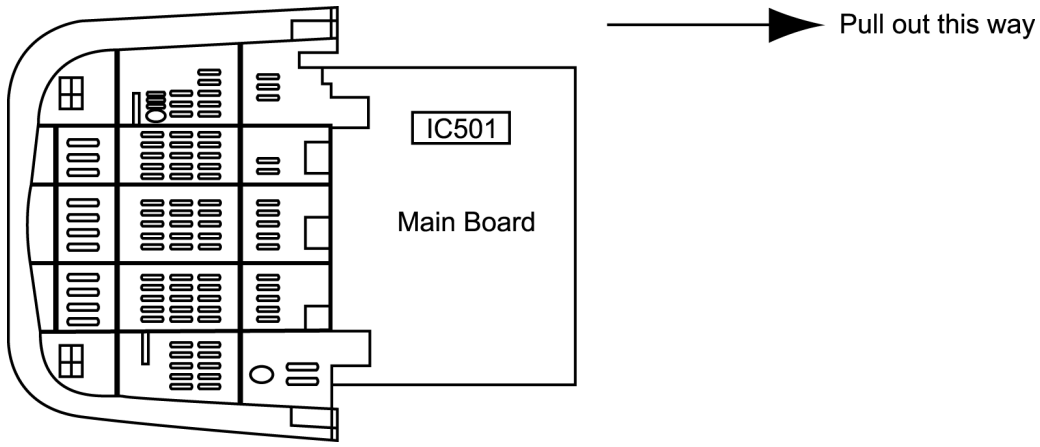


Fig. 2

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.

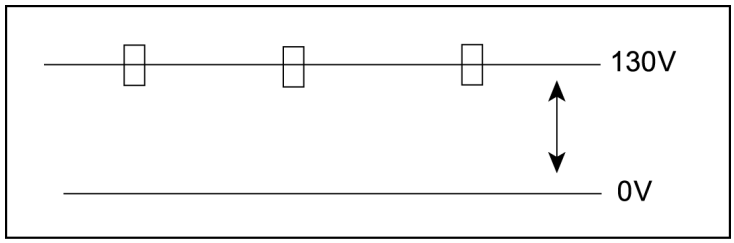
Adjustment of High Light

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.



2.5. Adjustment Procedure

2.5.1. +B Voltage

Item / preparation

1. Operate the TV set.
2. Set control as follows :

   Brightness ..... minimum

   Contrast ..... minimum

Adjustment procedure

1. Confirm the DC voltage at the indicated test points, as follows :

   TPA 10 : 141.0 ± 1.5V

   TPA 8 : 8 ± 1V

   TPA 9 : 5 ± 1V

   TPA 21 : 175 ± 15V

2.5.2. RF AGC

Item / preparation

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.

Adjustment procedure

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 2.3 ± 0.1V at TPA 15 (Tuner point).
3. Increase RF signal strength by 2dB, confirm AGC at Tuner voltage drop.

2.5.3. High Voltage

Item / preparation

1. Receive the crosshatch pattern.
2. Set to 0 Beam.

   Screen VR ..... minimum

   Contrast ..... minimum

Adjustment procedure

1. Connect a DC voltage meter to TPA 10 and confirm the +B voltage is 141.0 ± 1.5V.
2. Connect a high frequency voltmeter to heater and confirm that voltage reads 6.3 ± 0.24 (VRMS).
3. Normalize the brightness and contrast.

2.5.4. NTSC TINT COLOUR

Item / preparation

1. Connect oscilloscope probe to TPL1 (R OUT) with 10kΩ series resistor.
2. Press Main Menu and set system to use AV-NTSC (3.58 MHz).

   DYNAMIC ..... Normal

   Channel CLR Set ..... STD

Adjustment procedure

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 ± 15 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.

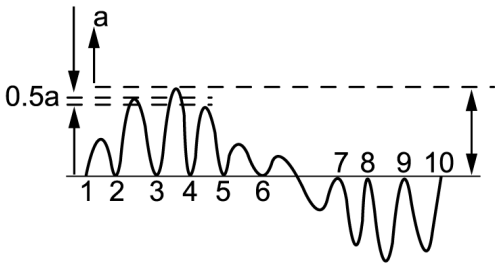


Fig. 3

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 - 100 DAC, Sub Contrast - 21 dac.
3. Channel colour set --------- STD
4. “CHK2” and press digit key “5” (AKB OFF) also confirm OSD become blue colour.
5. Set (A) to 2.1 ± 0.1V 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 2.4 ± 0.05V.
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. Press digit key “5” (AKB ON) and confirm the OSD become white colour.

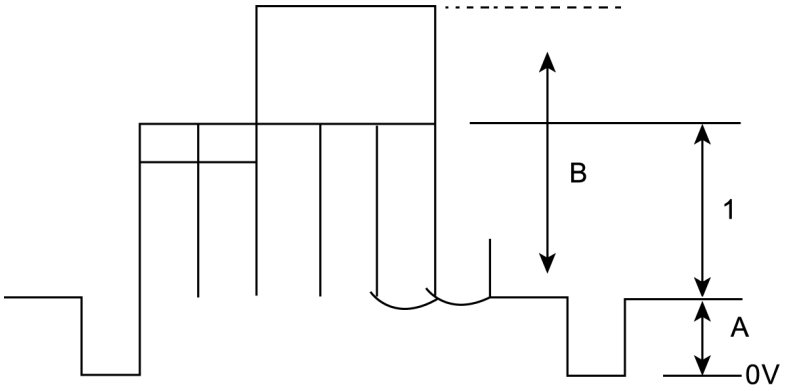


Fig. 4

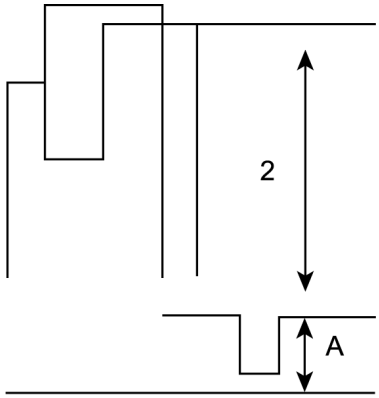


Fig. 5

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.

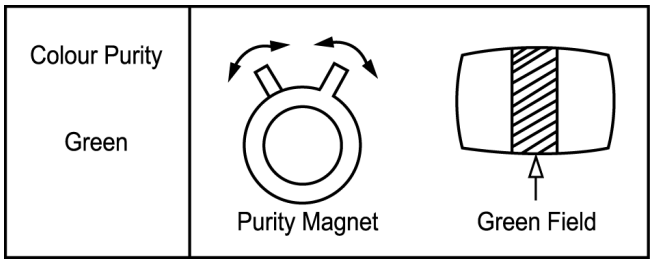


Fig. 6

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

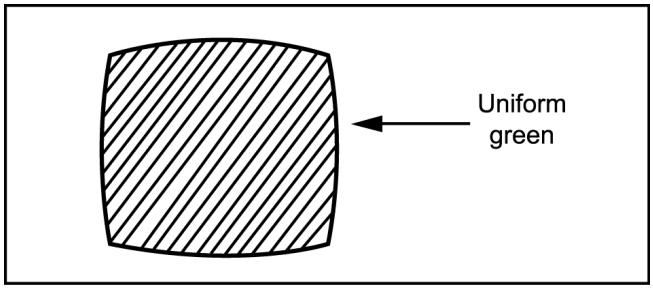


Fig. 21

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.

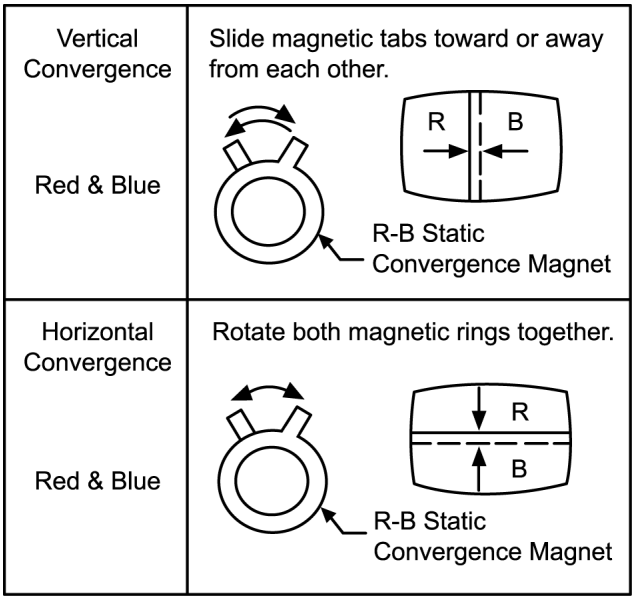


Fig. 8

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.

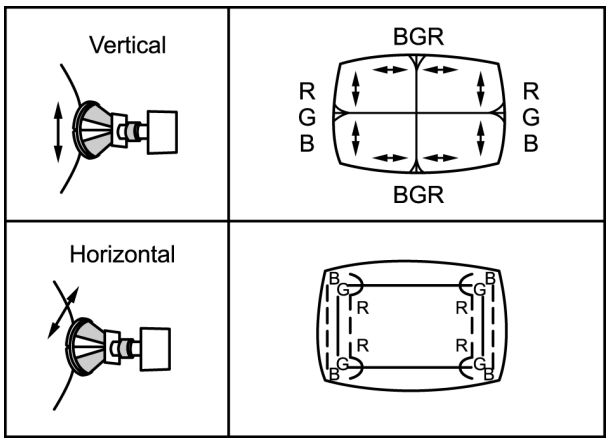


Fig. 9

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)

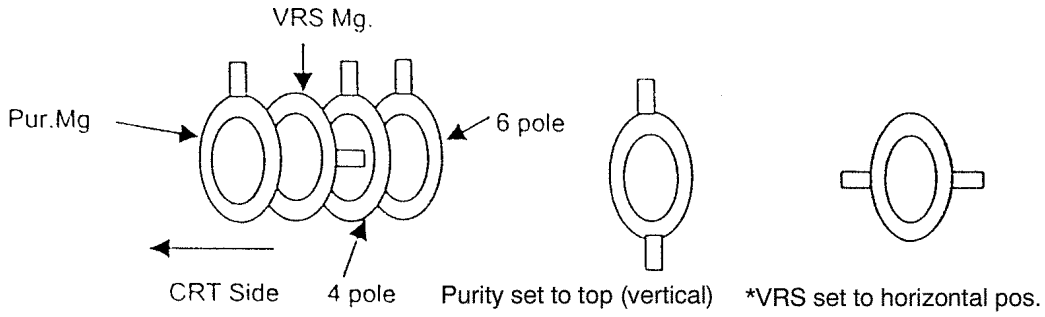
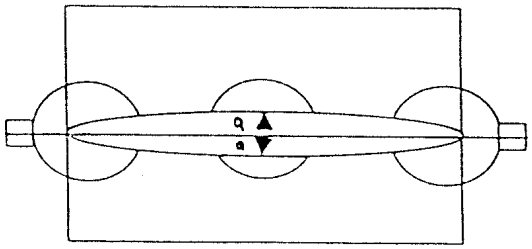


FIG 1.



a ≤ 0 ± 1mm

FIG 2.

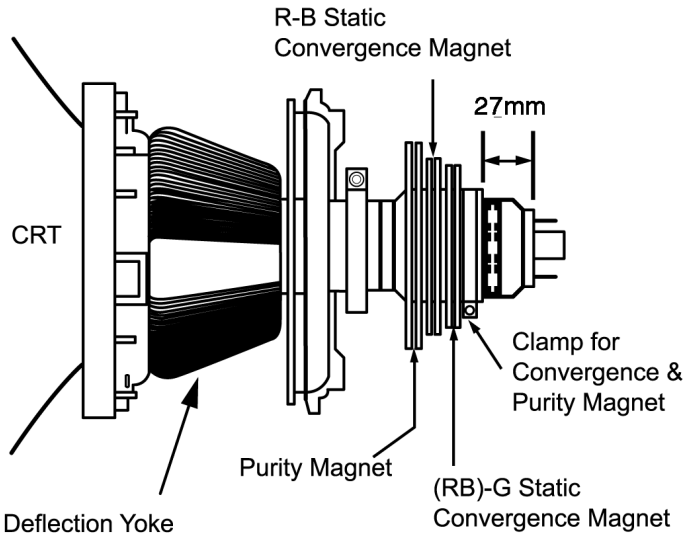


Fig. 10

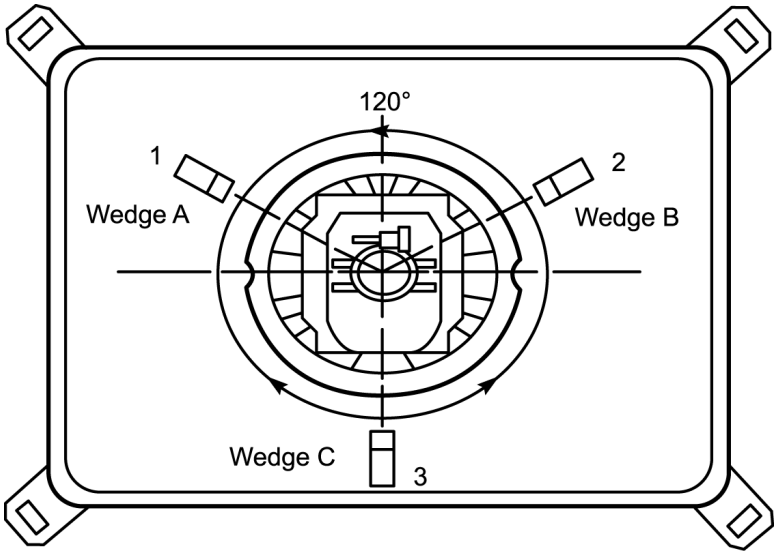
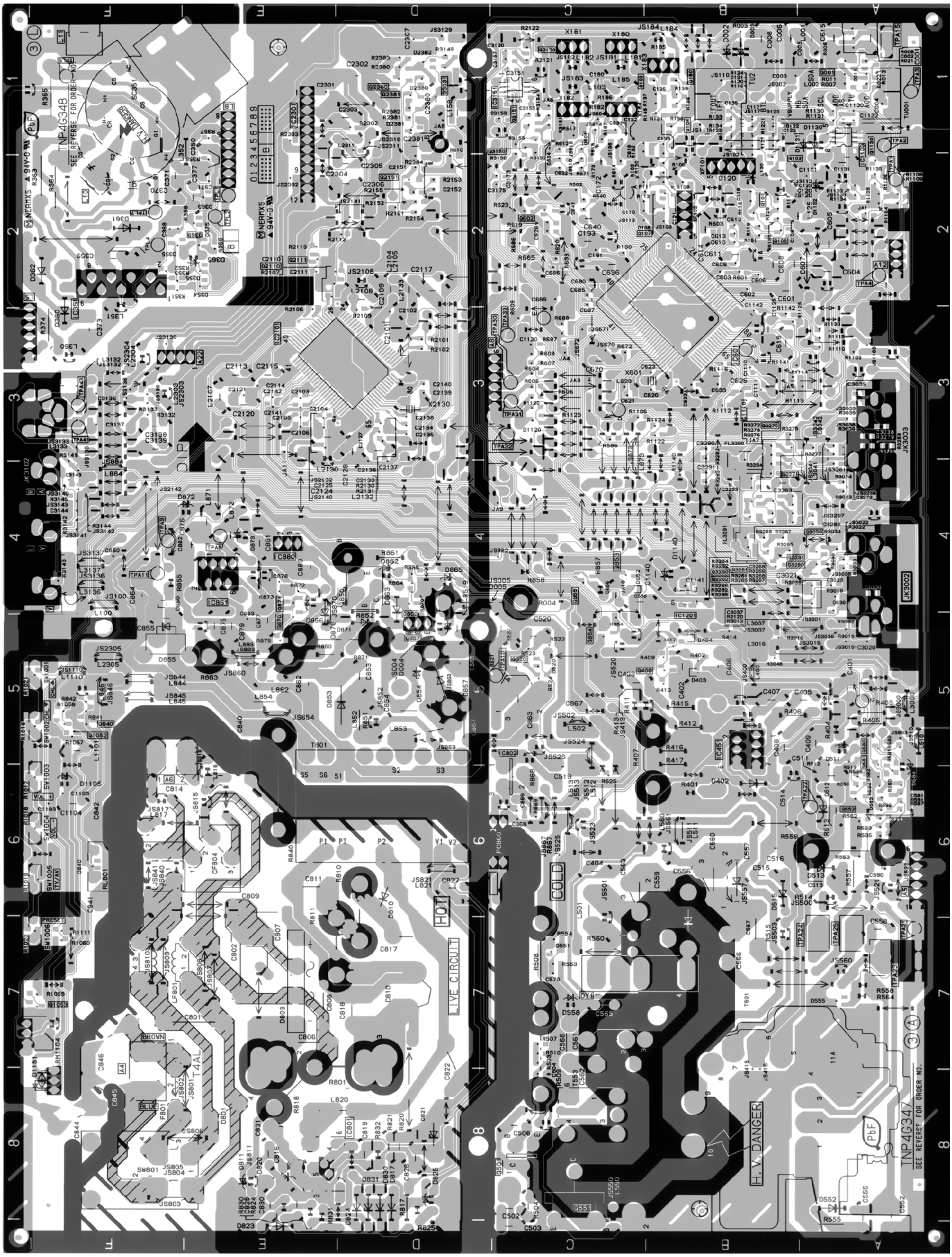


Fig. 11

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, 50/60Hz
   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.

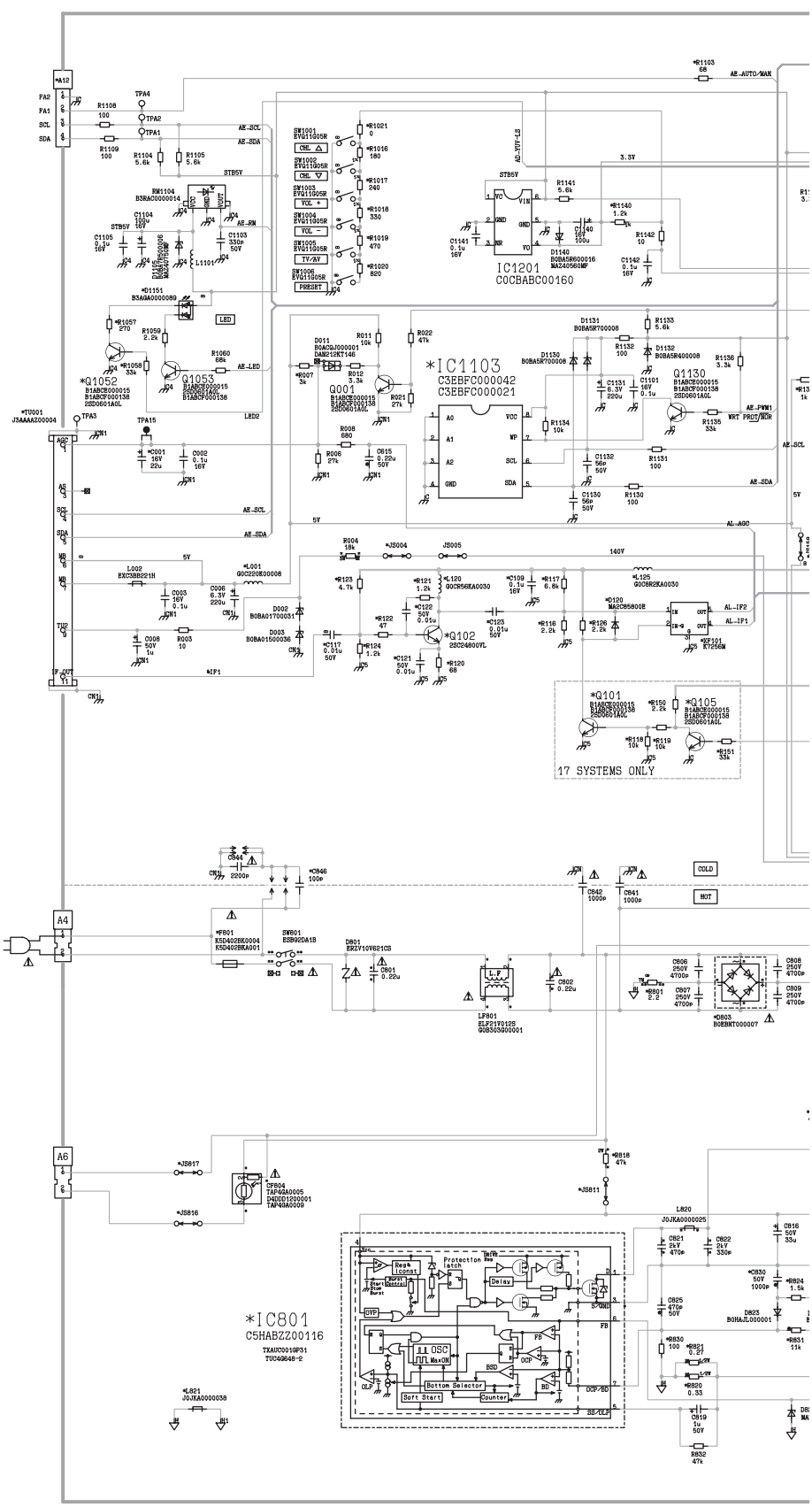
Remarks :

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 (1/6)



<A1>

<A2>

<A3>

<A4>

<A5>

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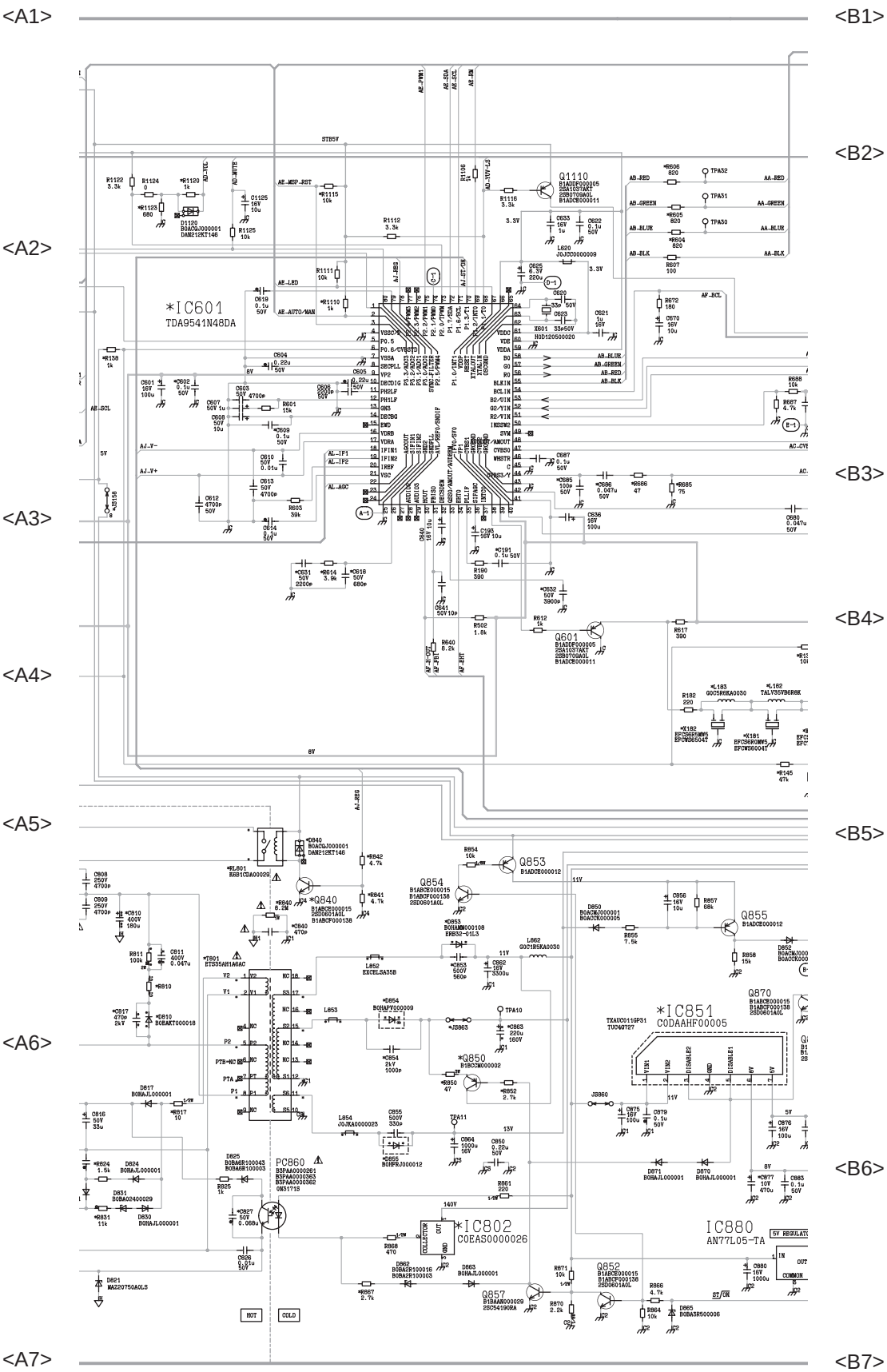
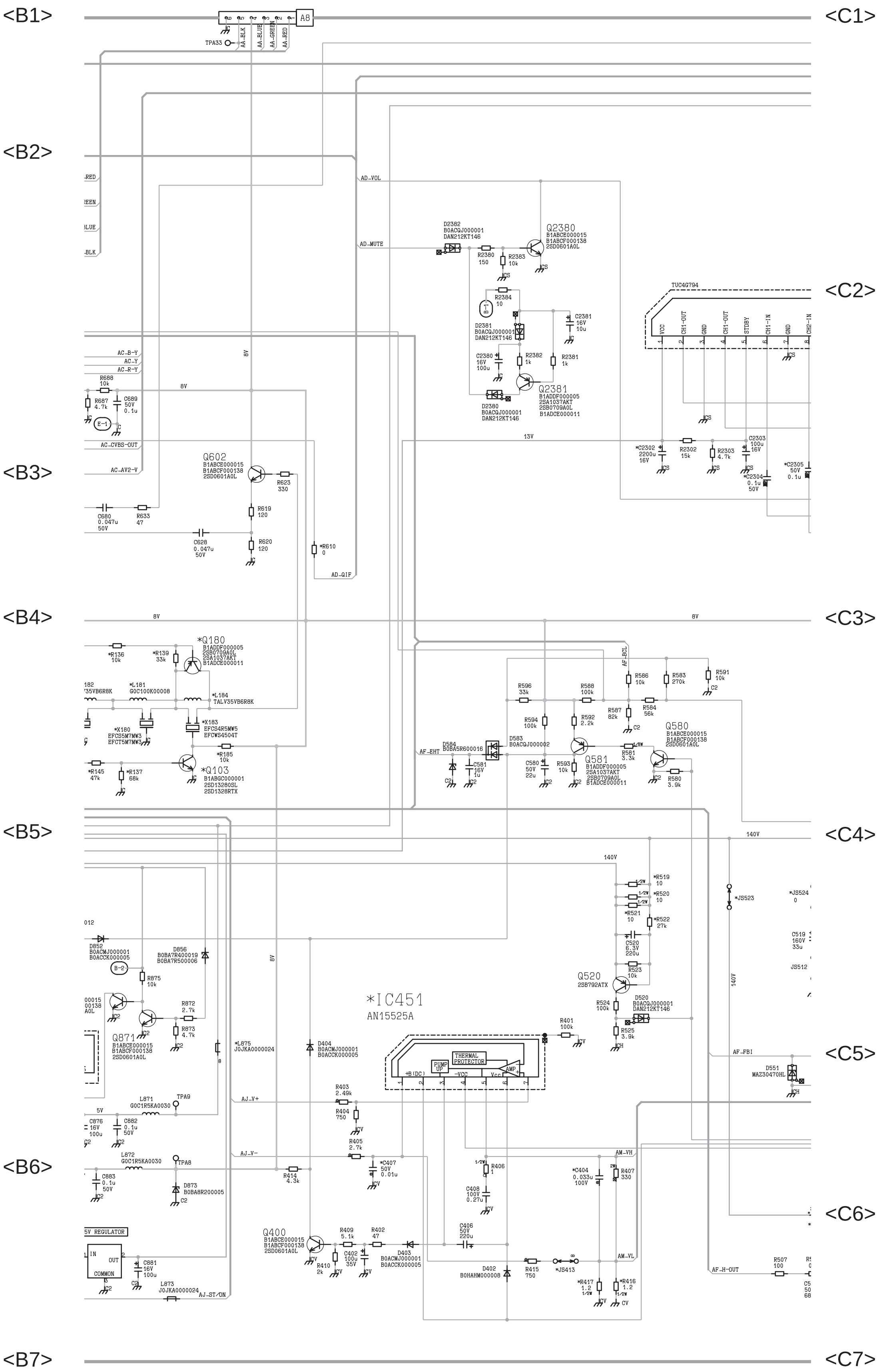
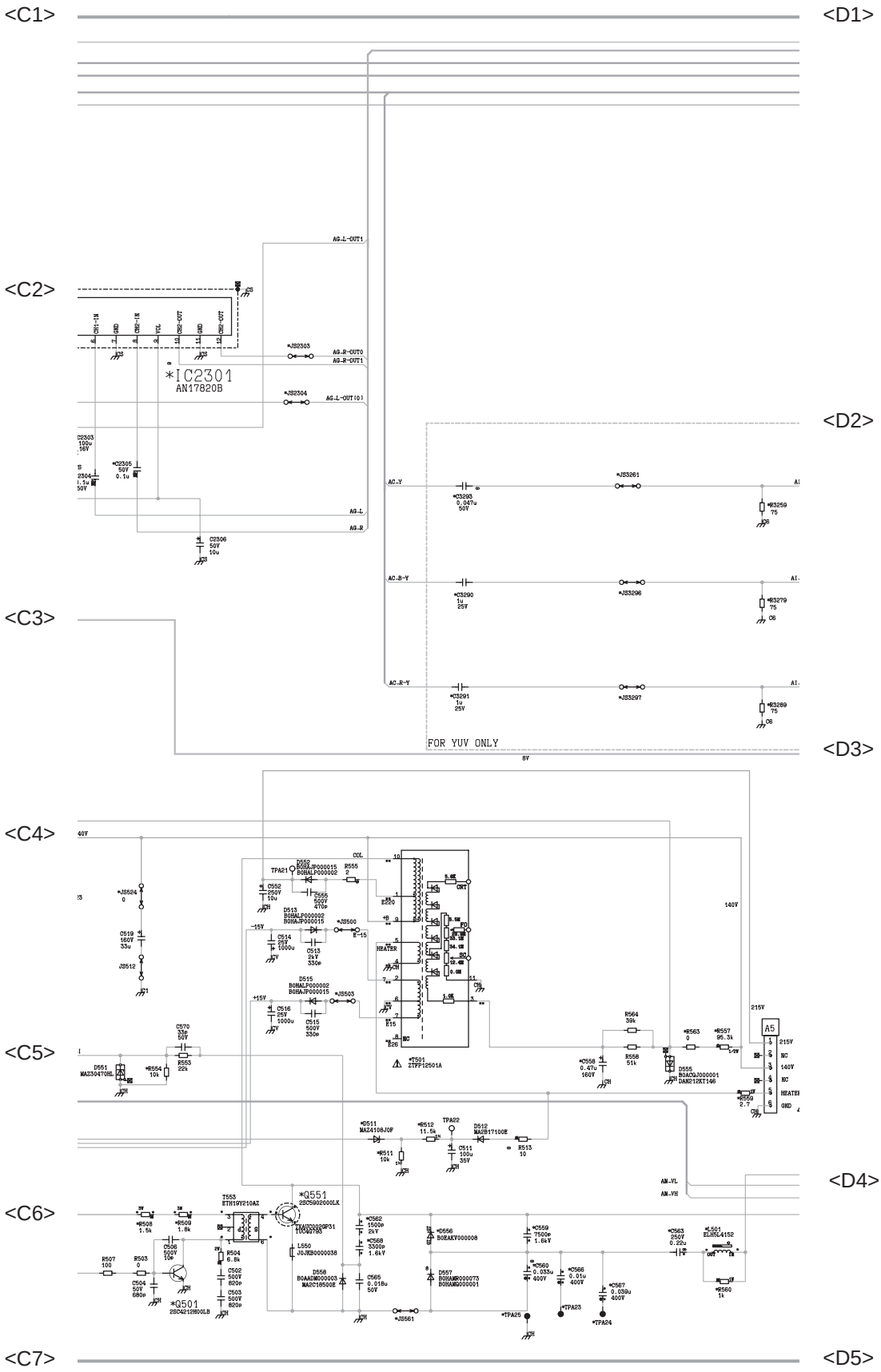
4.1.2. A Board (2/6)



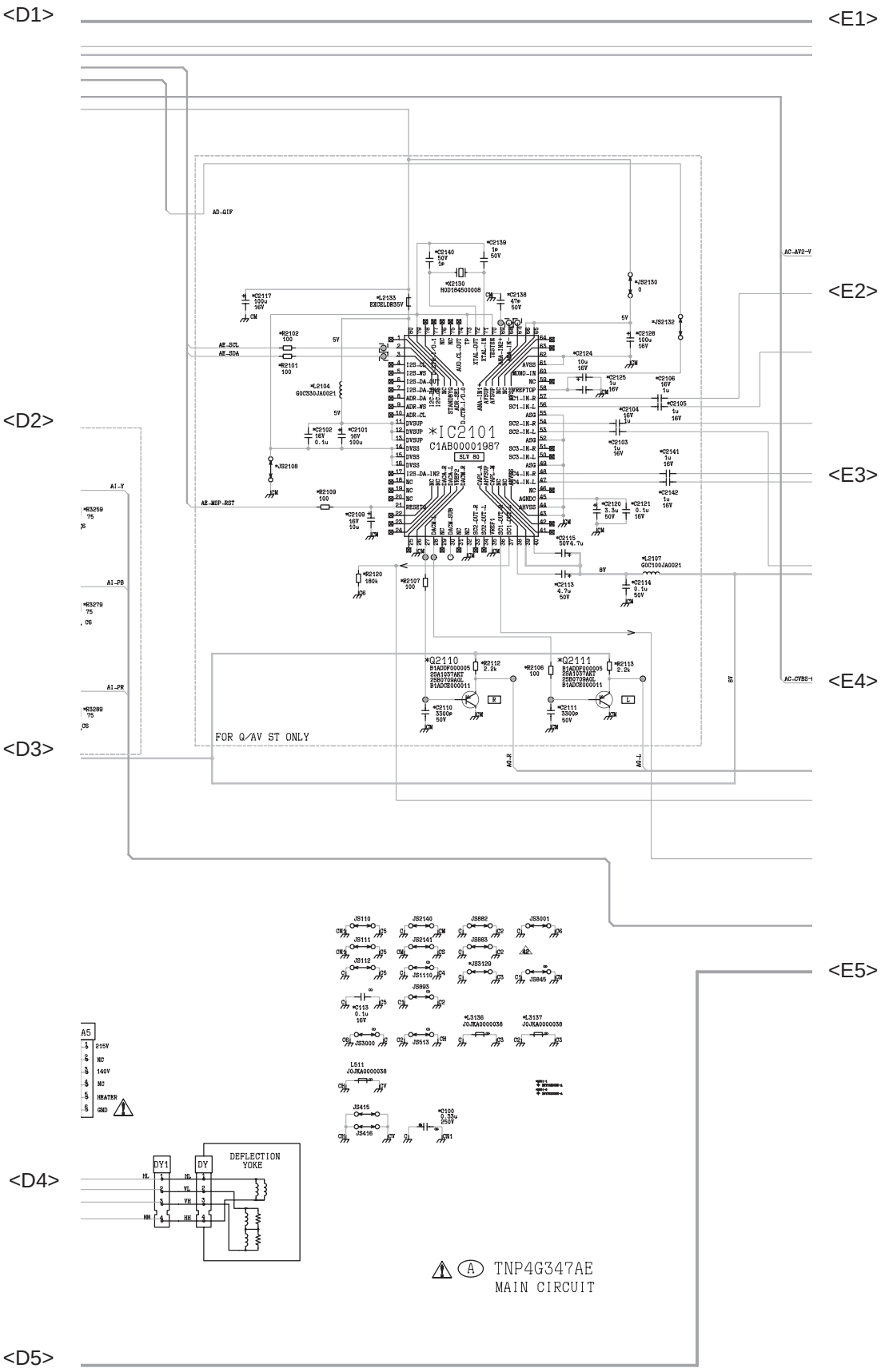
4.1.3. A Board (3/6)



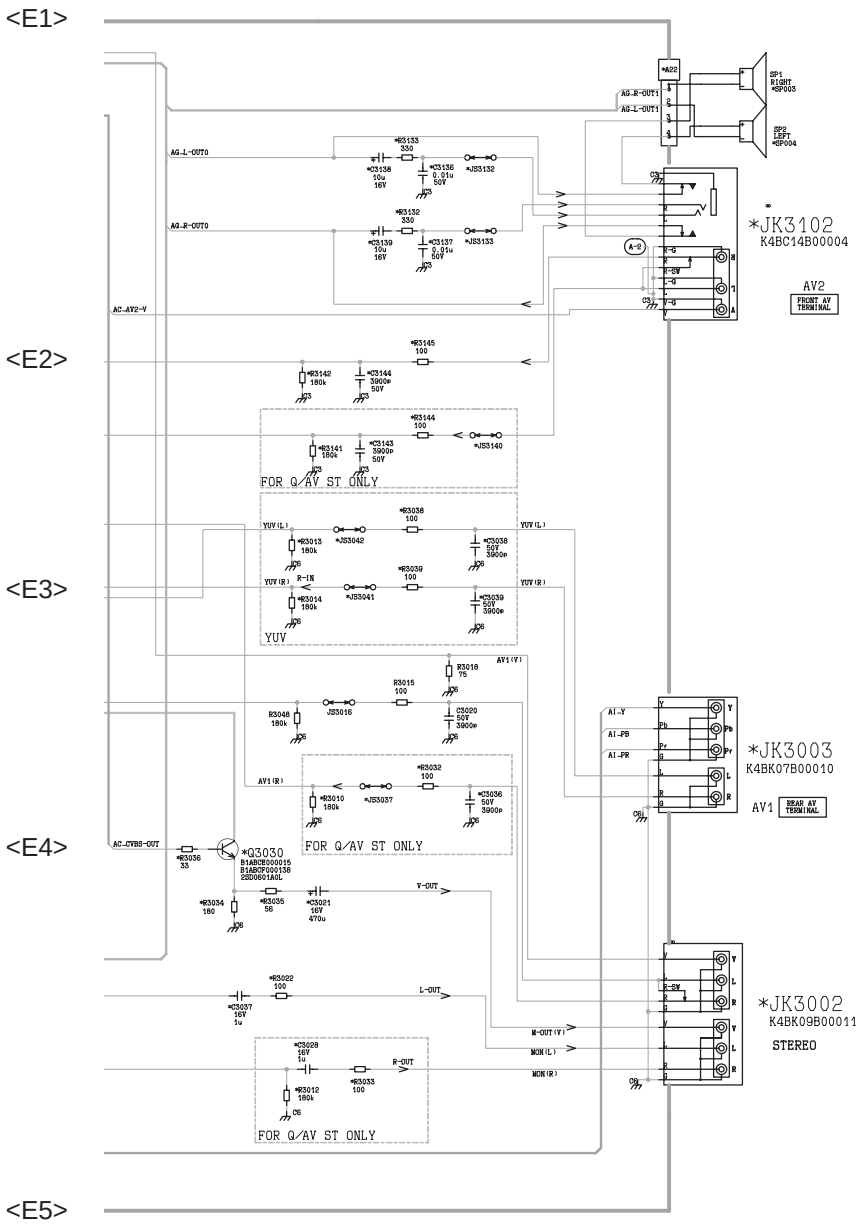
4.1.4. A Board (4/6)



4.1.5. A Board (5/6)

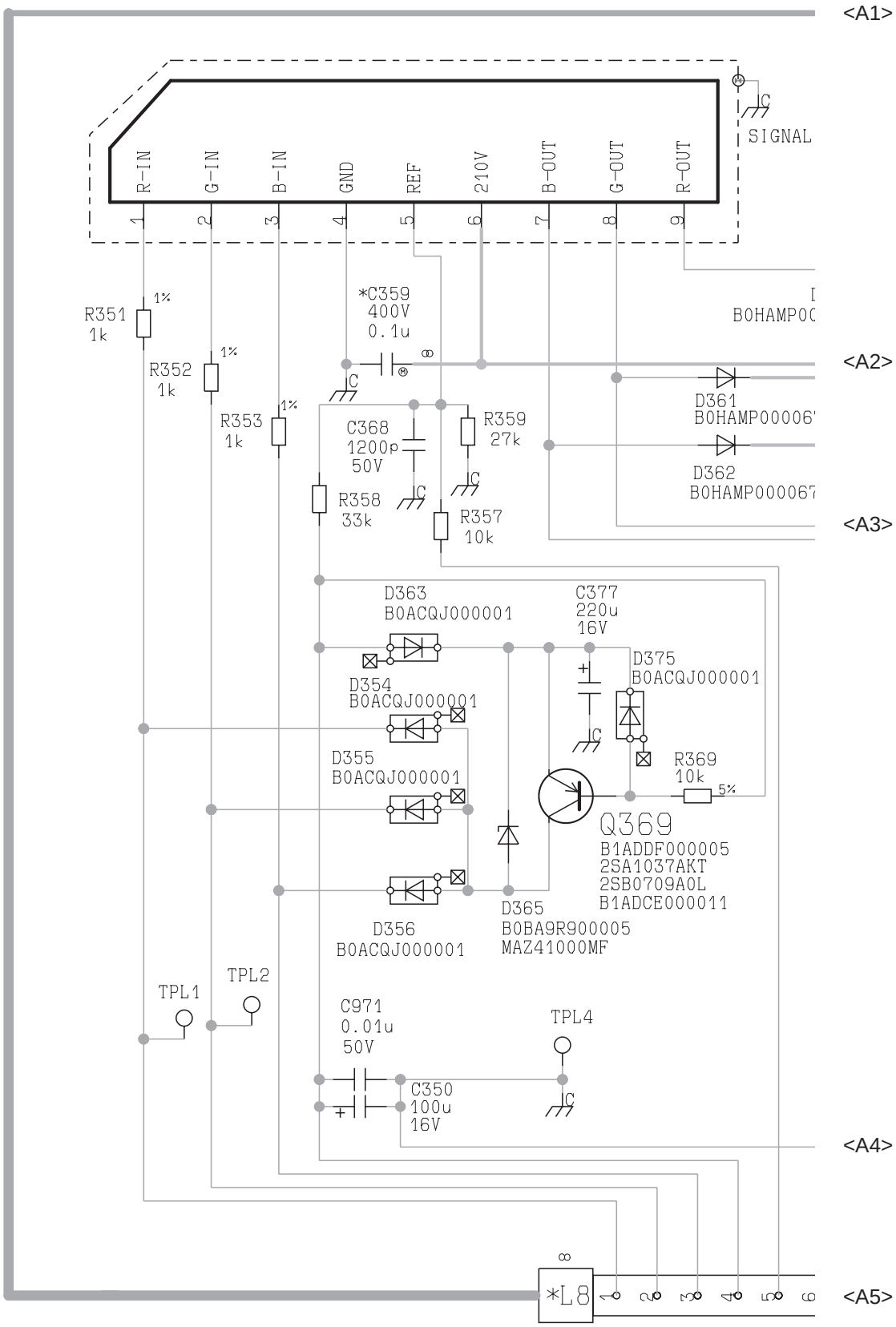


4.1.6. A Board (6/6)

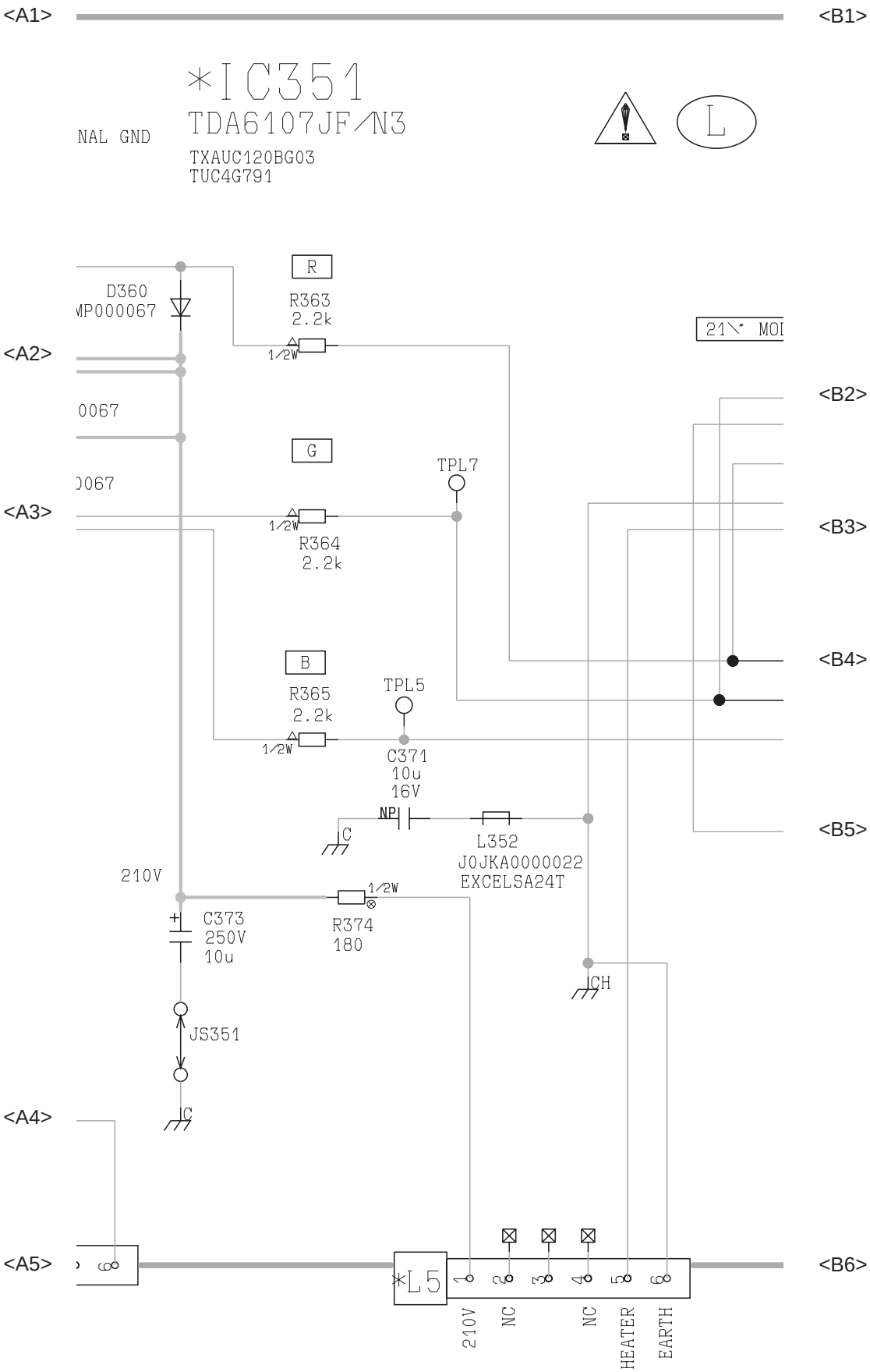


4.2. L Board

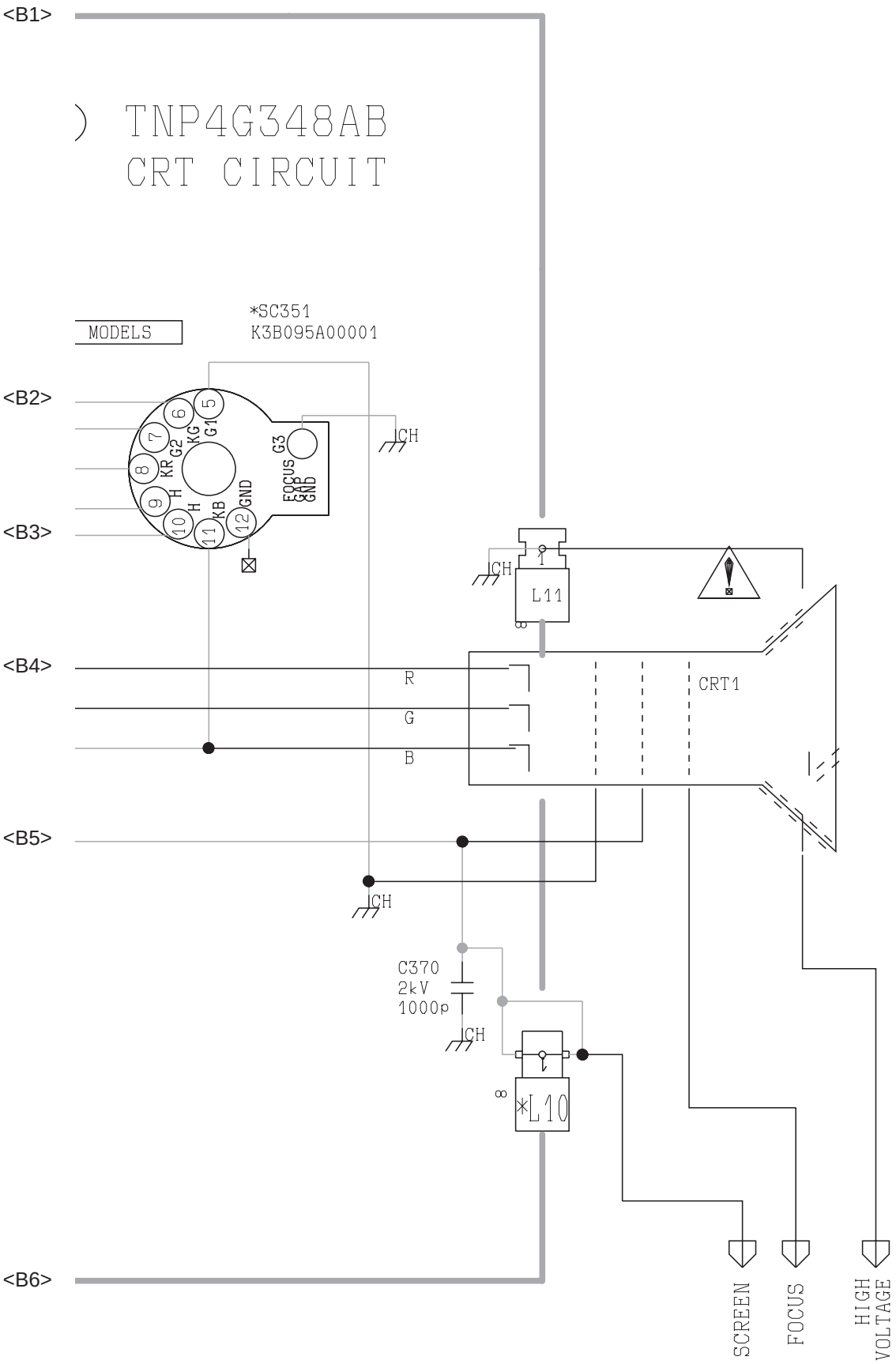
4.2.1. L Board (13)



4.2.2. L Board (2/3)



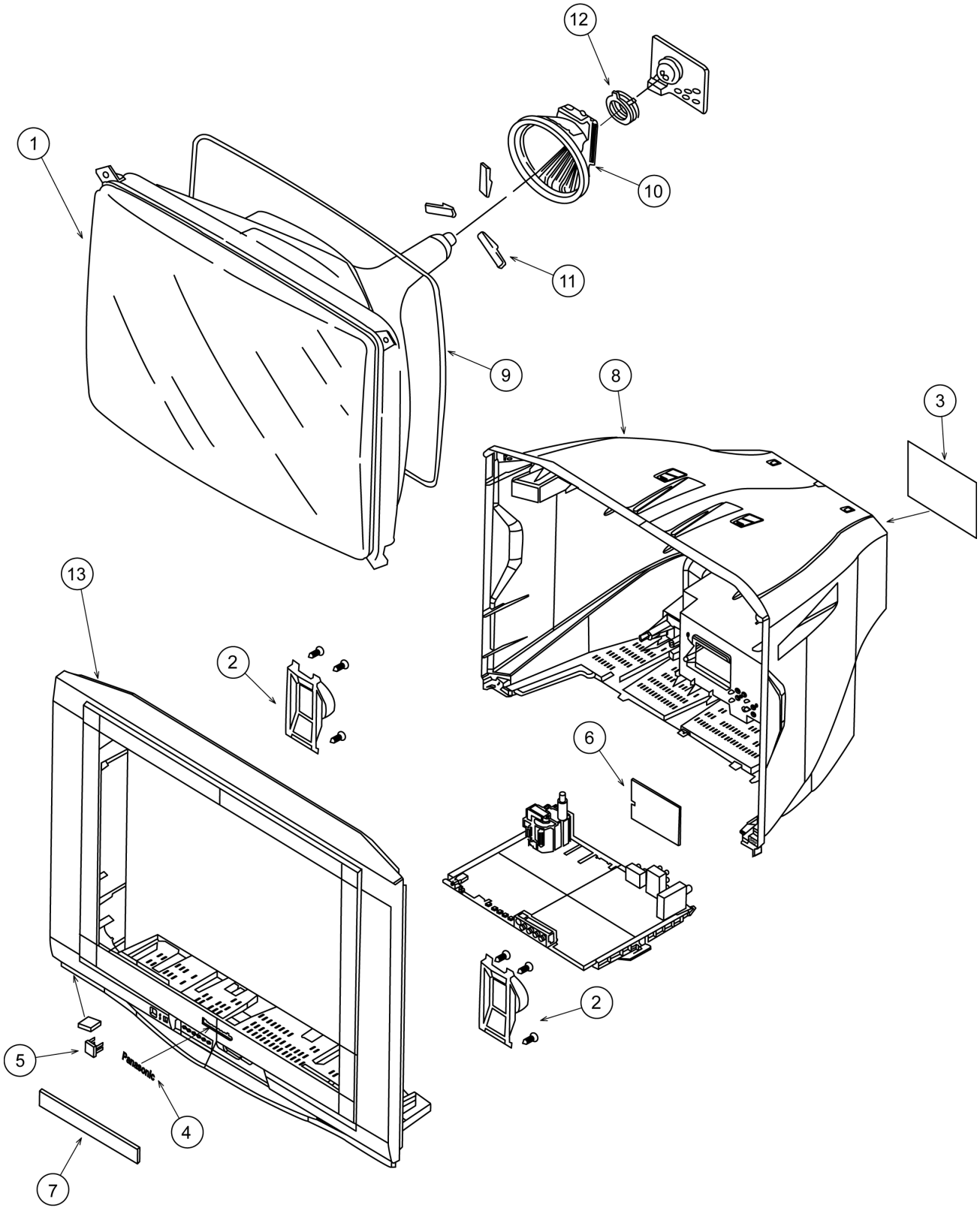
4.2.3. L Board (3/3)



5 Parts Locations

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	A51LXR195X	PICTURE TUBE	⚠
2	EASG15S02H2	SPEAKER	
	EUR7717010	REMOTE CONTROL	
3	TBM4G1205	MODEL NAME PLATE	⚠
4	TBM4G3013	PANASONIC BADGE	
5	TBX4G90411	POWER BUTTON	
	TES4G206	COIL SPRING	
	TES4G214	SPRING (POWER BUTTON)	
6	TKP4G11744	AC CORD BRACKET	
7	TKP4G13291	DOOR	
8	TKU4GA1340	BACK COVER	
9	TLK4G9037S	DEGAUSSING COIL	⚠
10	TLY4G343S	DEFLECTION YOKE	⚠
11	TMM4G503	RUBBER WEDGE	
	TMM4G904	RUBBER WASHER	
NLA	TNP4G347AE	A BOARD	⚠
NLA	TNP4G348AB	L BOARD	⚠
12	TP-5400PW	CONVERGENCE YOKE	
	TPE4G14003	LAMI BAG	
	TPE4G14025	SET COVER	
	TQB4G3867	FAN BAG	
	TSMA011	MAGNET	
	TSN63115-4	PURITY MAGNET	
	TSX4G111L	AC POWER CORD	⚠
13	TXFKY02CS12	CABINET ASSY	
	TXFPC02CS12	CARTON	
	TXFPD01CG13	CUSHION (TOP)	
	TXFPD02CG13	CUSHION (BOTTOM)	
	CAPACITORS		
C001	F2A1C220A147	E 22UF, 16V	
C002	ECJ2VF1C104Z	C 0.1UF, Z, 16V	
C003	ECJ2VF1C104Z	C 0.1UF, Z, 16V	
C006	ECA0JM221B	E 220UF, 6.3V	
C008	F2A1H1R0A145	E 1UF, 50V	
C100	ECQE2334KF	P 0.33UF, K,250V	
C109	ECJ2VF1C104Z	C 0.1UF, Z, 16V	
C1101	ECJ2VF1C104Z	C 0.1UF, Z, 16V	
C1103	ECJ2VC1H331J	C 330PF, J, 50V	
C1104	ECA1CM101B	E 100UF, 16V	
C1105	ECJ2VF1C104Z	C 0.1UF, Z, 16V	
C1125	F2A1C100A147	E 10UF, 16V	
C113	ECJ2VF1C104Z	C 0.1UF, Z, 16V	
C1130	ECJ2VC1H560J	C 56PF, J, 50V	
C1131	ECA0JM221B	E 220UF, 6.3V	
C1132	ECJ2VC1H560J	C 56PF, J, 50V	
C1140	ECA1CM101B	E 100UF, 16V	
C1141	ECJ2VF1C104Z	C 0.1UF, Z, 16V	
C1142	ECJ2VF1C104Z	C 0.1UF, Z, 16V	
C117	ECJ2VB1H103J	C 0.01UF, 50V	
C121	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C122	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C123	ECJ2VB1H103J	C 0.01UF, 50V	
C191	F1J1H104A717	C 0.1UF, 50V	
C193	ECA1CM100B	E 10UF, 16V	
C2101	ECA1CM101B	E 100UF, 16V	
C2102	ECJ2VF1C104Z	C 0.1UF, Z, 16V	
C2103	ECJ2VF1C105Z	C 1UF, Z, 16V	
C2104	ECJ2VF1C105Z	C 1UF, Z, 16V	
C2105	ECJ2VF1C105Z	C 1UF, Z, 16V	
C2106	ECJ2VF1C105Z	C 1UF, Z, 16V	
C2109	ECA1CM100B	E 10UF, 16V	
C2110	ECJ2VB1H332K	C 3300PF, K, 50V	
C2111	ECJ2VB1H332K	C 3300PF, K, 50V	
C2113	ECA1HM4R7B	E 4.7UF, 50V	
C2114	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C2115	ECA1HM4R7B	E 4.7UF, 50V	
C2117	ECA1CM101B	E 100UF, 16V	
C2120	ECA1HM3R3B	E 3.3UF, 50V	
C2121	ECJ2VF1C104Z	C 0.1UF, Z, 16V	
C2124	ECA1CM100B	E 10UF, 16V	
C2125	ECJ2VF1C105Z	C 1UF, Z, 16V	
C2128	ECA1CM101B	E 100UF, 16V	
C2138	ECJ2VC1H470J	C 47PF, J, 50V	
C2139	ECJ2VC1H010C	C 1PF, C, 50V	
C2140	ECJ2VC1H010C	C 1PF, C, 50V	
C2141	ECJ2VF1C105Z	C 1UF, Z, 16V	
C2142	ECJ2VF1C105Z	C 1UF, Z, 16V	
C2302	F2A1C222A117	E 100UF, 16V	
C2303	ECA1CM101B	E 100UF, 16V	
C2304	ECEA1HKN0R1	E 0.1UF, 50V	
C2305	ECEA1HKN0R1	E 0.1UF, 50V	
C2306	F2A1H100A162	E 10UF, 50V	
C2380	ECA1CM101B	E 100UF, 16V	
C2381	ECA1CM100B	E 10UF, 16V	
C3020	ECJ2VB1H392K	C 3900PF, K, 50V	
C3021	ECA1CM471B	E 470UF, 16V	
C3028	ECJ2VF1C105Z	C 1UF, Z, 16V	
C3036	ECJ2VB1H392K	C 3900PF, K, 50V	
C3037	ECJ2VF1C105Z	C 1UF, Z, 16V	
C3038	ECJ2VB1H392K	C 3900PF, K, 50V	
C3039	ECJ2VB1H392K	C 3900PF, K, 50V	
C3136	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C3137	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C3138	ECA1CM100B	E 10UF, 16V	
C3139	ECA1CM100B	E 10UF, 16V	
C3143	ECJ2VB1H392K	C 3900PF, K, 50V	
C3144	ECJ2VB1H392K	C 3900PF, K, 50V	
C3290	ECJ2FB1E105K	C 1UF, K, 25V	
C3291	ECJ2FB1E105K	C 1UF, K, 25V	
C3293	ECJ2YB1H473K	C 0.047UF, K, 50V	
C350	ECA1CM101B	E 100UF, 16V	
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	ECA1CM221B	E 220UF, 16V	
C402	ECA1VM101B	E 100UF, 35V	
C404	ECQB1333JF	P 0.033UF, J,100V	
C406	F2A1H221A247	E 220UF, 50V	
C407	ECQB1H103JF	P 0.01UF, 50V	
C408	ECQB1274JF	P 0.27UF, J,100V	
C502	F1B2H821A025	C 820PF, 500V	
C503	F1B2H821A025	C 820PF, 500V	
C504	ECJ2VB1H681K	C 680PF, K, 50V	
C506	F1A2H1000002	C 10PF, 500V	
C511	ECA1VM101B	E 100UF, 35V	
C513	ECKW3D331JBP	C 330PF, J, 2KV	
C514	F2A1E102A151	E 1000UF, 25V	
C515	F1B2H331A025	C 330PF, 500V	
C516	F2A1E102A151	E 1000UF, 25V	
C519	F2A2C330A096	E 330UF, 160V	
C520	ECA0JM221B	E 220UF, 6.3V	
C552	ECA2EM100B	E 10UF, 250V	
C555	F1B2H471A025	C 470PF, 500V	
C558	ECA2CMR47B	E 0.47UF, 160V	
C559	ECWH16752JVB	P 7500PF,J,1.6KV	
C560	ECQM4333JZ	P 0.033UF, 400V	
C562	ECKW3D152KBR	C 1500PF, K, 2KV	
C563	ECWF2224JSR	P 0.22UF, J,250V	
C565	ECQP1H183JZ	P 0.018UF, J, 50V	
C566	ECQM4103RJZ	P 0.01UF, J, 400V	
C567	ECQM4393JZ	P 0.039UF, J,400V	
C568	ECWH16332JVB	P 3300PF,J,1.6KV	
C570	ECJ2VC1H330J	C 33PF, 50V	
C580	F2A1H220A162	E 22UF, 50V	
C581	ECJ2VF1C105Z	C 1UF, Z, 16V	
C601	ECA1CM101B	E 100UF, 16V	
C602	F1J1H104A717	C 0.1UF, 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	F2A1H1R0A145	E 1UF, 50V	
C608	F2A1H100A145	E 1UF, 50V	
C609	F1J1H104A717	C 0.1UF, 50V	

Ref. No.	Part No.	Part Name & Description	Remarks
C610	ECJ2VB1H103J	C 0.01UF, 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	F1B1H681A130	C 680PF, 50V	
C619	ECQV1H104JL	P 0.1UF, J, 50V	
C620	ECJ2VC1H330J	C 33PF, 50V	
C621	ECJ2VF1C105Z	C 1UF, Z, 16V	
C622	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C623	ECJ2VC1H330J	C 33PF, 50V	
C625	ECA0JM221B	E 220UF, 6.3V	
C628	ECJ2YB1H473K	C 0.047UF, K, 50V	
C631	ECJ2VB1H222K	C 2200PF, K, 50V	
C632	ECJ2VB1H392K	C 3900PF, K, 50V	
C633	ECJ2VF1C105Z	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, 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	EETHC2G271J	E 180UF, 400V	
C811	ECQM4473JZ	P 0.047UF, J,400V	
C816	F2A1H3300037	E 680PF, 50V	
C817	ECKW3D471KBR	C 470PF, K, 2KV	
C819	F2A1H1R0A162	E 0.1PF, 50V	
C821	ECKW3D471KBR	C 470PF, K, 2KV	
C822	ECKW3D331JBR	C 330PF, J, 2KV	
C825	ECQB1H471JF	P 470PF, J, 50V	
C826	F0A1H103A039	CAPACITOR	
C827	ECQB1H683JF	P 0.068UF, J, 50V	
C830	ECQB1H102JF	P 1000PF, 50V	
C840	F1A2E471A002	C 470PF, 250V	
C841	ECKCNA102MB7	C 1000PF, M,	
C842	F1A2E102A001	C 1000PF	
C844	ECKCNA222ME7	C 2200PF, M,	
C846	F1A2E101A002	C 100PF	
C850	ECJ2VF1H224Z	C 0.22UF, Z, 50V	
C853	F1B2H561A025	C 560PF, 500V	
C854	ECKW3D102KBP	C 1000PF, K, 2KV	
C855	F1B2H331A025	C 330PF, 500V	
C856	ECA1CM100B	E 10UF, 16V	
C862	F2A1C332A232	E 3300UF, 16V	
C863	F2A2C2210013	E 220UF, 160V	
C864	F2A1C102A252	E 1000UF, 16V	
C875	ECA1CM101B	E 100UF, 16V	
C876	ECA1CM101B	E 100UF, 16V	
C877	ECA1AM471B	E 470UF, 10V	
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	
	DIODES		
D002	MTZJ18B	ZENER DIODE	
D003	MTZJ16A	ZENER DIODE	
D011	B0ACQJ000001	DIODE	
D1105	MTZJ7.5C	ZENER DIODE	
D1120	B0ACQJ000001	DIODE	
D1130	MTZJ5.6C	ZENER DIODE	
D1131	MTZJ5.6C	ZENER DIODE	
D1132	MTZJ5.6A	ZENER DIODE	
D1140	MTZJ5.6B	ZENER DIODE	

Ref. No.	Part No.	Part Name & Description	Remarks
D1151	B3AGA0000089	DIODE	
D120	MA858	DIODE	
D2380	B0ACQJ000001	DIODE	
D2381	B0ACQJ000001	DIODE	
D2382	B0ACQJ000001	DIODE	
D354	B0ACQJ000001	DIODE	
D355	B0ACQJ000001	DIODE	
D356	B0ACQJ000001	DIODE	
D360	B0HAMP000067	DIODE	
D361	B0HAMP000067	DIODE	
D362	B0HAMP000067	DIODE	
D363	B0ACQJ000001	DIODE	
D365	MTZJ10C	ZENER DIODE	
D375	B0ACQJ000001	DIODE	
D402	B0HAHM000008	DIODE	
D403	B0ACMJ000001	DIODE	
D404	B0ACMJ000001	DIODE	
D511	MA4108J	DIODE	
D512	MA171	DIODE	
D513	B0HAJP000015	DIODE	
D515	B0HAJP000015	DIODE	
D520	B0ACQJ000001	DIODE	
D551	MA3047HTX	DIODE	
D552	B0HAJP000015	DIODE	
D555	B0ACQJ000001	DIODE	
D556	ERB06-15	DIODE	
D557	B0HAMQ000001	DIODE	
D558	B0AADM000003	DIODE	
D583	B0ACQJ000002	DIODE	
D584	MTZJ5.6B	ZENER DIODE	
D801	ERZV10V621CS	VARISTOR	⚠
D803	B0EBNT000007	DIODE	
D810	B0EAKT000018	DIODE	
D817	AG01Z	DIODE	
D821	MAZ20750A0LS	DIODE	
D823	AG01Z	DIODE	
D824	AG01Z	DIODE	
D825	B0BA6R100003	DIODE	
D830	AG01Z	DIODE	
D831	B0BA02400029	ZENER DIODE	
D840	B0ACQJ000001	DIODE	
D850	B0ACMJ000001	DIODE	
D852	B0ACMJ000001	DIODE	
D853	B0HAMM000108	DIODE	
D854	FMGG2CSLF665	DIODE	
D855	FMLG12S	DIODE	
D856	MTZJ7.5C	ZENER DIODE	
D862	MTZJ2.0B	ZENER DIODE	
D863	AG01Z	DIODE	
D865	MTZJ3.6A	ZENER DIODE	
D870	AG01Z	DIODE	
D871	AG01Z	DIODE	
D873	MTZJ8.2C	ZENER DIODE	
	INTEDGRATED CIRCUITS		
IC1103	TVR4GAS383	EEPROM IC	
IC1201	C0CBABC00160	IC, POWER SUPPLY	
IC2101	C1AB00001987	IC	
IC2301	AN17820B	IC	
IC351	TDA6107JF/N3	IC	
IC451	AN15525A	IC	
IC601	TDA9541N48DA	IC	
IC801	C5HABZZ00116	IC, POWER SUPPLY	⚠
IC802	C0EAS0000026	IC	
IC851	C0DAAHF00005	IC, POWER SUPPLY	⚠
IC880	AN77L05	LINEAR IC	
	COILS		
L001	TALV35VB220K	PEAKING COIL	
L002	EXC3BB221H	CHIP BEAD CORE	
L1101	TALV35VB331K	PEAKING COIL	
L120	TLTACTR56K	PEAKING COIL	
L125	TALV35VB8R2K	PEAKING COIL	
L181	G0C100K00008	COIL	
L182	TALV35VB6R8K	PEAKING COIL	

Ref. No.	Part No.	Part Name & Description	Remarks
L183	TALV35VB5R6K	PEAKING COIL	
L184	TALV35VB6R8K	PEAKING COIL	
L2104	TLTACT330J	PEAKING COIL	
L2107	TALV35VB100J	PEAKING COIL	
L2133	EXCELDR35V	CORE	
L3136	J0JKA0000038	BEAD CORE	
L3137	J0JKA0000038	BEAD CORE	
L352	EXCELSA24T	BEAD CORE	
L501	ELH5L4152	LINEARITY COIL	
L511	J0JKA0000038	BEAD CORE	
L550	J0JKB0000038	COIL	
L620	TSK1045	BEAD CORE	
L820	J0JKA0000025	BEAD CORE	
L821	J0JKA0000038	BEAD CORE	
L852	EXCELSA35B	BEAD CORE	
L853	J0JKA0000025	BEAD CORE	
L854	J0JKA0000023	BEAD CORE	
L862	TLTACT1R5K	PEAKING COIL	
L871	TLTACT1R5K	PEAKING COIL	
L872	TLTACT1R5K	PEAKING COIL	
L873	J0JKA0000024	EMI FILTER	
L875	J0JKA0000024	EMI FILTER	
	TRANSISTORS		
Q001	B1ABCE000015	TRANSISTOR	
Q101	B1ABCE000015	TRANSISTOR	
Q102	2SC2480TX	TRANSISTOR	
Q103	B1ABGC000001	TRANSISTOR	
Q105	B1ABCE000015	TRANSISTOR	
Q1052	B1ABCE000015	TRANSISTOR	
Q1053	B1ABCE000015	TRANSISTOR	
Q1110	B1ADDF000005	TRANSISTOR	
Q1130	B1ABCE000015	TRANSISTOR	
Q180	B1ADDF000005	TRANSISTOR	
Q2110	B1ADDF000005	TRANSISTOR	
Q2111	B1ADDF000005	TRANSISTOR	
Q2380	B1ABCE000015	TRANSISTOR	
Q2381	B1ADDF000005	TRANSISTOR	
Q3030	B1ABCE000015	TRANSISTOR	
Q369	B1ADDF000005	TRANSISTOR	
Q400	B1ABCE000015	TRANSISTOR	
Q501	2SC4212H	TRANSISTOR	
Q520	2SB792ATX	TRANSISTOR	
Q551	2SC5902000LK	TRANSISTOR	
Q580	B1ABCE000015	TRANSISTOR	
Q581	B1ADDF000005	TRANSISTOR	
Q601	B1ADDF000005	TRANSISTOR	
Q602	B1ABCE000015	TRANSISTOR	
Q840	B1ABCE000015	TRANSISTOR	
Q850	B1BCCM000002	TRANSISTOR	
Q852	B1ABCE000015	TRANSISTOR	
Q853	B1ADCE000012	TRANSISTOR	
Q854	B1ABCE000015	TRANSISTOR	
Q855	B1ADCE000012	TRANSISTOR	
Q857	B1BAAN000029	TRANSISTOR	
Q870	B1ABCE000015	TRANSISTOR	
Q871	B1ABCE000015	TRANSISTOR	
	RESISTORS		
R003	D0GD100JA017	F 10OHM,J, 1/10W	
R004	ERG3FJ183H	M 18KOHM,J, 3W	
R006	D0GD273JA017	F 27OHM,J, 1/10W	
R007	D0GD302JA017	F 3KOHM,J, 1/10W	
R008	D0GD681JA017	F 680OHM,J, 1/10W	
R011	D0GD103JA017	F 10KOHM,J, 1/10W	
R012	D0GD332JA017	F 3.3KOHM,J, 1/10W	
R021	D0GD273JA017	F 27KOHM,J, 1/10W	
R022	D0GD473JA017	F 47KOHM,J, 1/10W	
R1016	ERJ6ENF1800	F 180OHM,J, 1/10W	
R1017	ERJ6ENF2400	F 240OHM,J, 1/10W	
R1018	ERJ6ENF3300	M 330OHM, 1/10W	
R1019	ERJ6ENF4700	M 470OHM, 1/10W	
R1020	ERJ6ENF8200	M 820OHM, 1/10W	
R1021	ERJ6GEY0R00	M 0OHM,J,1/10W	
R1057	D0GD271JA017	F 270OHM,J, 1/10W	
R1058	D0GD333JA017	F 33KOHM,J, 1/10W	

Ref. No.	Part No.	Part Name & Description	Remarks
R1059	D0GD222JA017	F 2.2KOHM,J, 1/10W	
R1060	D0GD683JA017	F 68KOHM,J, 1/10W	
R1103	D0GD680JA017	F 68OHM,J, 1/10W	
R1104	D0GD562JA017	F 5.6KOHM,J, 1/10W	
R1105	D0GD562JA017	F 5.6KOHM,J, 1/10W	
R1106	D0GD102JA017	F 1KOHM,J, 1/10W	
R1108	D0GD101JA017	F 100OHM,J, 1/10W	
R1109	D0GD101JA017	F 100OHM,J, 1/10W	
R1110	D0GD102JA017	F 1KOHM,J, 1/10W	
R1111	D0GD103JA017	F 10KOHM,J, 1/10W	
R1112	D0GD332JA017	F 3.3KOHM,J, 1/10W	
R1115	D0GD103JA017	F 10KOHM,J, 1/10W	
R1116	D0GD332JA017	F 3.3KOHM,J, 1/10W	
R1120	D0GD102JA017	F 1KOHM,J, 1/10W	
R1122	D0GD332JA017	F 3.3KOHM,J, 1/10W	
R1123	D0GD681JA017	F 820OHM,J, 1/10W	
R1124	ERJ6GEY0R00	M 0OHM,J,1/10W	
R1125	D0GD103JA017	F 10KOHM,J, 1/10W	
R1130	D0GD101JA017	F 100OHM,J, 1/10W	
R1131	D0GD101JA017	F 100OHM,J, 1/10W	
R1132	D0GD101JA017	F 100OHM,J, 1/10W	
R1133	D0GD562JA017	F 56KOHM,J, 1/10W	
R1134	D0GD103JA017	F 10KOHM,J, 1/10W	
R1135	D0GD333JA017	F 33KOHM,J, 1/10W	
R1136	D0GD332JA017	F 3.3KOHM,J, 1/10W	
R1140	ERJ6ENF1201	M 1.2KOHM, 1/10W	
R1141	D0GD562JA017	F 56KOHM,J, 1/10W	
R1142	D0GD100JA017	F 10OHM,J, 1/10W	
R116	D0GD222JA017	F 2.2KOHM,J, 1/10W	
R117	D0GD682JA017	F 6.8KOHM,J, 1/10W	
R118	D0GD103JA017	F 10KOHM,J, 1/10W	
R119	D0GD103JA017	F 10KOHM,J, 1/10W	
R120	D0GD680JA017	F 68OHM,J, 1/10W	
R121	D0GD122JA017	F 1.2KOHM,J, 1/10W	
R122	D0GD470JA017	F 47OHM,J, 1/10W	
R123	D0GD472JA017	F 4.7KOHM,J, 1/10W	
R124	D0GD122JA017	F 1.2KOHM,J, 1/10W	
R126	D0GD222JA017	F 2.2KOHM,J, 1/10W	
R136	D0GD103JA017	F 10KOHM,J, 1/10W	
R137	D0GD683JA017	F 68KOHM,J, 1/10W	
R138	D0GD102JA017	F 1KOHM,J, 1/10W	
R139	D0GD333JA017	F 33KOHM,J, 1/10W	
R145	D0GD473JA017	F 47KOHM,J, 1/10W	
R150	D0GD222JA017	F 2.2KOHM,J, 1/10W	
R151	D0GD333JA017	F 33KOHM,J, 1/10W	
R182	D0GD221JA017	F 220OHM,J, 1/10W	
R185	D0GD103JA017	F 10KOHM,J, 1/10W	
R190	D0GD391JA017	F 390OHM,J, 1/10W	
R2101	D0GD101JA017	F 100OHM,J, 1/10W	
R2102	D0GD101JA017	F 100OHM,J, 1/10W	
R2106	D0GD101JA017	F 100OHM,J, 1/10W	
R2107	D0GD101JA017	F 100OHM,J, 1/10W	
R2109	D0GD101JA017	F 100OHM,J, 1/10W	
R2112	D0GD222JA017	F 2.2KOHM,J, 1/10W	
R2113	D0GD222JA017	F 2.2KOHM,J, 1/10W	
R2120	D0GD184JA017	F 180KOHM,J, 1/10W	
R2302	D0GD153JA017	F 15KOHM,J, 1/10W	
R2303	D0GD472JA017	F 4.7KOHM,J, 1/10W	
R2380	D0GD151JA017	F 150OHM,J, 1/10W	
R2381	D0GD102JA017	F 1KOHM,J, 1/10W	
R2382	D0GD102JA017	F 1KOHM,J, 1/10W	
R2383	D0GD103JA017	F 10KOHM,J, 1/10W	
R2384	D0GD100JA017	F 10OHM,J, 1/10W	
R3010	D0GD184JA017	F 180KOHM,J, 1/10W	
R3012	D0GD184JA017	F 180KOHM,J, 1/10W	
R3013	D0GD184JA017	F 180KOHM,J, 1/10W	
R3014	D0GD184JA017	F 180KOHM,J, 1/10W	
R3015	D0GD101JA017	F 100OHM,J, 1/10W	
R3018	D0GD750JA017	F 75KOHM,J, 1/10W	
R3022	D0GD101JA017	F 100OHM,J, 1/10W	
R3032	D0GD101JA017	F 100OHM,J, 1/10W	
R3033	D0GD101JA017	F 100OHM,J, 1/10W	
R3034	D0GD181JA017	F 180OHM,J, 1/10W	
R3035	D0GD560JA017	F 56OHM,J, 1/10W	

Ref. No.	Part No.	Part Name & Description	Remarks
R3036	D0GD330JA017	F 33OHM,J, 1/10W	
R3038	D0GD101JA017	F 100OHM,J, 1/10W	
R3039	D0GD101JA017	F 100OHM,J, 1/10W	
R3048	D0GD184JA017	F 180KOHM,J, 1/10W	
R3132	D0GD331JA017	F 330OHM,J, 1/10W	
R3133	D0GD331JA017	F 330OHM,J, 1/10W	
R3141	D0GD184JA017	F 180KOHM,J, 1/10W	
R3142	D0GD184JA017	F 180KOHM,J, 1/10W	
R3144	D0GD101JA017	F 100OHM,J, 1/10W	
R3145	D0GD101JA017	F 100OHM,J, 1/10W	
R3259	D0GD750JA017	F 75KOHM,J, 1/10W	
R3279	D0GD750JA017	F 75KOHM,J, 1/10W	
R3289	D0GD750JA017	F 75KOHM,J, 1/10W	
R351	ERJ6ENF1001	M 1KOHM, 1/10W	
R352	ERJ6ENF1001	M 1KOHM, 1/10W	
R353	ERJ6ENF1001	M 1KOHM, 1/10W	
R357	D0GD103JA017	F 10KOHM,J, 1/10W	
R358	D0GD333JA017	F 33KOHM,J, 1/10W	
R359	D0GD273JA017	F 27KOHM,J, 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	D0GD103JA017	F 10KOHM,J, 1/10W	
R374	ERQ12AJ181P	F 180OHM,J, 1/2W	
R401	ERDS2TJ104	C 100KOHM,J, 1/4W	
R402	D0GD470JA017	F 47OHM,J, 1/10W	
R403	ER0S2CHF2491	M 2.49KOHM, 1/10W	
R404	D0AE751JA046	C 750OHM,J, 1/4W	
R405	ER0S2CHF2701	M 2.7KOHM, 1/10W	
R406	ERDS1FJ1R0	C 1OHM,J, 1/2W	
R407	ERG2FJ331H	M 330OHM,J, 2W	
R409	D0GD512JA017	F 5.1KOHM,J, 1/10W	
R410	D0GD202JA017	F 2KOHM,J, 1/10W	
R414	D0GD432JA017	F 4.3KOHM,J, 1/10W	
R415	ER0S2CHF7500	M 750OHM,J, 1/4W	
R416	ERDS1TJ1R2	C 1.2OHM,J, 1/2W	
R417	ERDS1TJ1R2	C 1.2OHM,J, 1/2W	
R502	D0GD182JA017	F 1.8KOHM,J, 1/10W	
R503	ERJ6GEY0R00	M 0OHM,J,1/10W	
R504	ERG2SJ682E	M 6.8KOHM,J, 2W	
R507	D0GD101JA017	F 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	
R519	ERQ12AJ100E	F 10OHM,J, 1/4W	
R520	ERQ12AJ100E	F 10OHM,J, 1/2W	
R521	ERQ12AJ100E	F 10OHM,J, 1/2W	
R522	D0GD273JA017	F 10OHM,J, 1/2W	
R523	D0GD103JA017	F 27KOHM,J, 1/10W	
R524	D0GD104JA017	F 10KOHM,J, 1/10W	
R525	D0GD392JA017	F 100KOHM,J, 1/10W	
R553	D0GD223JA017	F 3.9KOHM,J, 1/10W	
R554	ERJ6GEYJ103	F 22KOHM,J, 1/10W	
R555	ERQ14AJ2R0P	F 2.0OHM, J,1/4W	
R557	ER050CKF9532	M95.3KOHM,F, 1/2W	
R558	ERDS2TJ513	C 51KOHM,J, 1/4W	
R559	ERQ1CJP2R7S	F 2.7OHM, J,1W	
R560	ERG1SJ102E	M 1KOHM,J, 1W	
R563	ERJ6GEY0R00	M 0OHM,J,1/10W	
R564	ERDS2TJ393	C 39KOHM,J, 1/4W	
R580	D0GD392JA017	F 3.9KOHM,J, 1/10W	
R581	ERJ6GEYJ332	M 3.3KOHM,J,1/10W	
R583	D0GD274JA017	F 270KOHM,J, 1/10W	
R584	D0GD563JA017	F 56KOHM,J, 1/10W	
R586	D0GD103JA017	F 10KOHM,J, 1/10W	
R587	D0GD823JA017	F 82KOHM,J, 1/10W	
R588	D0GD104JA017	F 100KOHM,J, 1/10W	
R591	D0GD103JA017	F 10KOHM,J, 1/10W	
R592	D0GD222JA017	F 2.2KOHM,J, 1/10W	
R593	D0GD103JA017	F 10KOHM,J, 1/10W	
R594	D0GD104JA017	F 100KOHM,J, 1/10W	
R596	ERJ6GEYJ333	M 33KOHM,J,1/10W	

Ref. No.	Part No.	Part Name & Description	Remarks
R601	D0GD153JA017	F 15KOHM,J, 1/10W	
R603	D0GD393JA017	F 39KOHM,J, 1/10W	
R604	ERJ6GEYJ821	M 820OHM,J,1/10W	
R605	ERJ6GEYJ821	M 820OHM,J,1/10W	
R606	ERJ6GEYJ821	M 820OHM,J,1/10W	
R607	D0GD101JA017	F 100OHM,J, 1/10W	
R610	ERJ6GEY0R00	M 0OHM,J,1/10W	
R612	D0GD102JA017	F 1KOHM,J, 1/10W	
R614	D0GD392JA017	F 3.9KOHM,J, 1/10W	
R617	D0GD391JA017	F 390OHM,J, 1/10W	
R619	D0GD121JA017	F 120OHM,J, 1/10W	
R620	D0GD121JA017	F 120OHM,J, 1/10W	
R623	D0GD331JA017	F 330OHM,J, 1/10W	
R633	D0GD470JA017	F 47OHM,J, 1/10W	
R640	D0GD822JA017	F 8.2KOHM,J, 1/10W	
R672	D0GD181JA017	F 180OHM,J, 1/10W	
R685	D0GD750JA017	F 75OHM,J, 1/10W	
R686	D0GD470JA017	F 47OHM,J, 1/10W	
R687	D0GD472JA017	F 4.7KOHM,J, 1/10W	
R688	D0GD103JA017	F 10KOHM,J, 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	ERG2FJ473H	M 47KOHM, 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	D0GD472JA017	F 4.7KOHM,J, 1/10W	
R842	D0GD472JA017	F 4.7KOHM,J, 1/10W	
R850	ERG3SJS470H	M 47OHM, J , 3W	
R852	ERDS2TJ272	C 2.7KOHM,J, 1/4W	
R854	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R855	ERDS2TJ752	C 7.5KOHM,J, 1/4W	
R857	ERDS2TJ683	C 68KOHM,J, 1/4W	
R858	ERDS2TJ153	C 15KOHM,J, 1/4W	
R861	ERDS1TJ221	C 220OHM,J, 1/2W	
R864	D0GD103JA017	F 10KOHM,J, 1/10W	
R866	D0GD472JA017	F 4.7KOHM,J, 1/10W	
R867	ERDS2TJ272	C 2.7KOHM,J, 1/4W	
R868	ERDS1TJ471	C 470OHM,J, 1/2W	
R870	ERJ6GEYJ222	M 2.2KOHM,J,1/10W	
R871	ERDS1TJ103	C 10KOHM,J, 1/2W	
R872	D0GD272JA017	F 2.7KOHM,J, 1/10W	
R873	D0GD472JA017	F 4.7KOHM,J, 1/10W	
R875	D0GD103JA017	F 10KOHM,J, 1/10W	
	TRANSFORMERS		
T501	ZTFP12501A	FLYBACK TRANS	⚠
T553	ETH19Y210AZ	H DRIVE TRANS	⚠
T801	ETS35AH1A6AC	SWITCHING TRANS	⚠
	OTHERS		
A12	K1KA04AA0093	CONNECTOR	
A22	K1KA04AA0190	CONNECTOR	
A5	K1KA13A00138	CONNECTOR	
A8	K1KA13A00138	CONNECTOR	
CF804	TAP4GA0005	POSISTOR	⚠
F801	XBA2C40TR0	FUSE 250V 4A	⚠
JA1	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA10	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA12	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	
JA7	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA8	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA9	ERJ6GEY0R00	M 0OHM,J,1/10W	
JK3002	K4BK09B00010	AV TERMINAL	
JK3003	K4BK07B00010	AV TERMINAL	
JK3102	K4BC14B00004	FRONT AV TERMINAL	

Ref. No.	Part No.	Part Name & Description	Remarks
JS110	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS111	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS112	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS2132	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS2140	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS2141	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS3001	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS3129	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS3132	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS3133	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS3140	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS3261	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS3296	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS3297	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS415	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS416	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS882	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS883	ERJ6GEY0R00	M 0OHM,J,1/10W	
L5	K1KA13A00138	CONNECTOR	
L8	K1KA13A00138	CONNECTOR	
L10	K1ZZ00001301	CONNECTOR	
LF801	ELF21V012S	LINE FILTER	⚠
PC860	B3PAA0000261	PHOTO COUPLER	⚠
RL801	K6B1CDA00029	RELAY	⚠
RM1104	B3RAC0000014	REMOCON RECEIVER	
SC351	K3B095A00001	CRT SOCKET	⚠
SW1001	EVQ11G05R	SWITCH	
SW1002	EVQ11G05R	SWITCH	
SW1003	EVQ11G05R	SWITCH	
SW1004	EVQ11G05R	SWITCH	
SW1005	EVQ11G05R	SWITCH	
SW1006	EVQ11G05R	SWITCH	
SW801	ESB92DA1B	SWITCH	⚠
TU001	J3AAAAZ00004	TUNER	⚠
X180	EFCS5M7MW3	CERAMIC FILTER	
X181	EFCS6R0MW5	CERAMIC FILTER	
X182	EFCS6R5MW5	CERAMIC FILTER	
X183	EFCS4R5MW5	CERAMIC FILTER	
X2130	TSSA128	CRYSTAL OSC	
X601	H0D120500020	CRYSTAL OSC	
XF101	K7256M	SAW FILTER	⚠