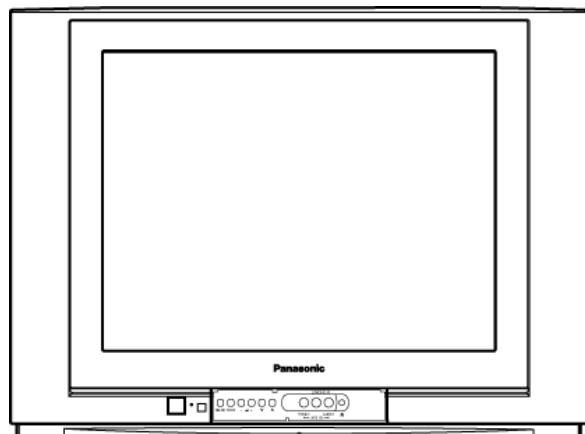


Service Manual

Colour Television



TC-25FG30P

GP4 Chassis

Specification

Power Source	AC AUTO 110-240V, 50/60Hz	Video/Audio/Terminals	
Power Consumption	199 W	AV 1, 2, 3	
	Standby condition : 2 W	Y / P _B / P _R	(Phone Type) Y:1.0Vp-p 75Ω PB, PR:0.7Vp-p 75Ω Video 1.0Vp-p 75Ω Audio Approx. 400mV 47KΩ Video 1.0Vp-p 75Ω Audio Approx. 400mV 47KΩ
Aerial Terminal	Impedance : 75Ω, Coaxial type	Monitor Out	30.0 (+ -1.0kV) at zero beam current
Tuning System	Frequency Synthesizer Auto Search Tuning Pos : 100 Positions	High Voltage	A59QDF891X Type 25 (59 cm) Measured diagonally, 104° deflection
Receiving Channels	Regular TV	Picture Tube	16 W speaker
VHF BAND	2-13 (USA STANDARD)	Audio Output	717 mm x 502 mm x 530.5 mm
UHF BAND	14-69 (USA STANDARD)	Dimensions (W x D x H)	31 kg (Net)
CATV	1-125 (USA STANDARD)	Weight (Mass)	
Intermediate Frequency	38.0 MHz	Note:	Specifications are subject to change without notice. Mass and dimensions shown are approximate.
Video	31.5 MHz (D, K) / 32.5 MHz (B, G) 32.0 MHz (I) / 32.5 MHz (M)		
Sound	33.57 MHz (PAL) /		
Colour	33.6 MHz (SECAM) 34.42 MHz (NTSC) / 33.75 MHz (SECAM)		
Receiving Stereo Sound System	AV STEREO		

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.

Panasonic®

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1 Safety Precautions

1.1. General Guide

1. It is advisable to insert an isolation transformer in the AC supply before servicing a hot chassis. Fig. 1.

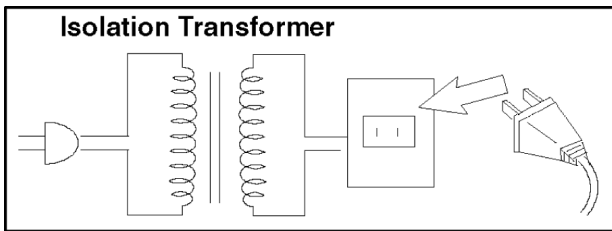


Fig. 1

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, observe that all the protective devices such as insulation barriers, insulation papers, shields, and insulation 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 outlet.
5. Potential, as high as **31kV** kV is present when this receiver is in operation. Operation of the receiver without 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. Fig. 2.

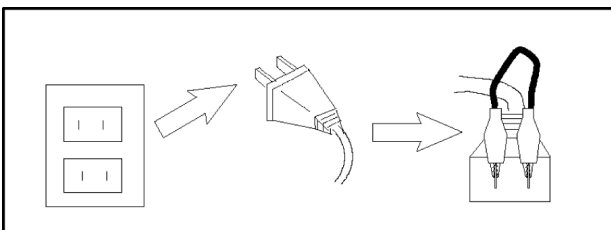


Fig. 2

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 **4 MΩ and 20 MΩ**. When the exposed metal does not have a return path to the chassis, the reading must be zero.

1.3. Leakage Current Hot Check (See Fig. 1)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 2 kΩ, 10 W 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 type, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point. Fig. 3.

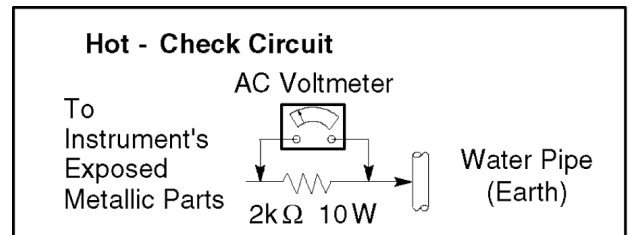


Fig. 3

5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential any point should not exceed **1.0 V rms**. In the case of a measurement being outside of the limits specified, there is a possibility of a shock hazard, and the receiver should be repaired and re-checked before it is returned to the customer. Fig. 4.

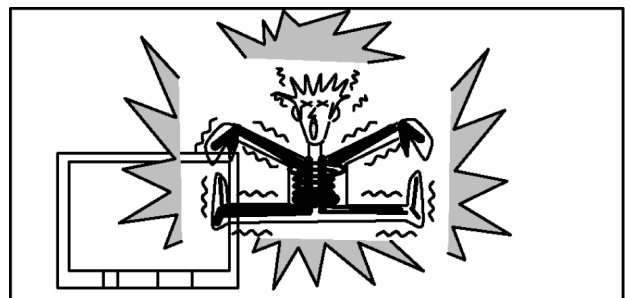


Fig. 4

1.4. X-Radiation

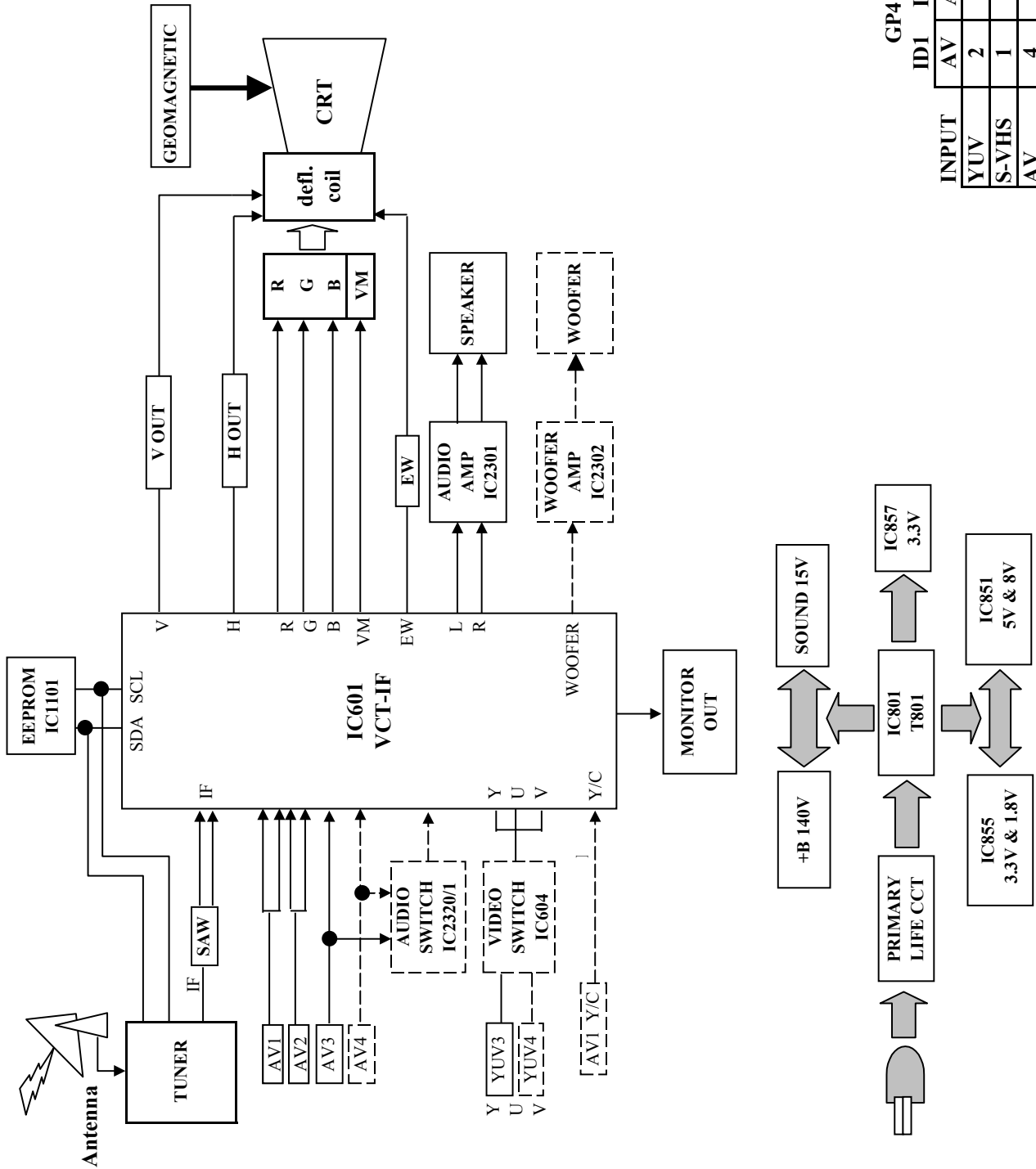
Warning :

1. The potential sources of X-Radiation in TV sets are the EHT section and the picture tube.
2. When using a picture tube test rig for service, ensure that the rig is capable of handling **30 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 reading should indicate **30.0 ± 1.0kV**. 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 the possibility of X-Radiation, it is essential to use the specified picture tube.

1.5. GP4 Block Diagram



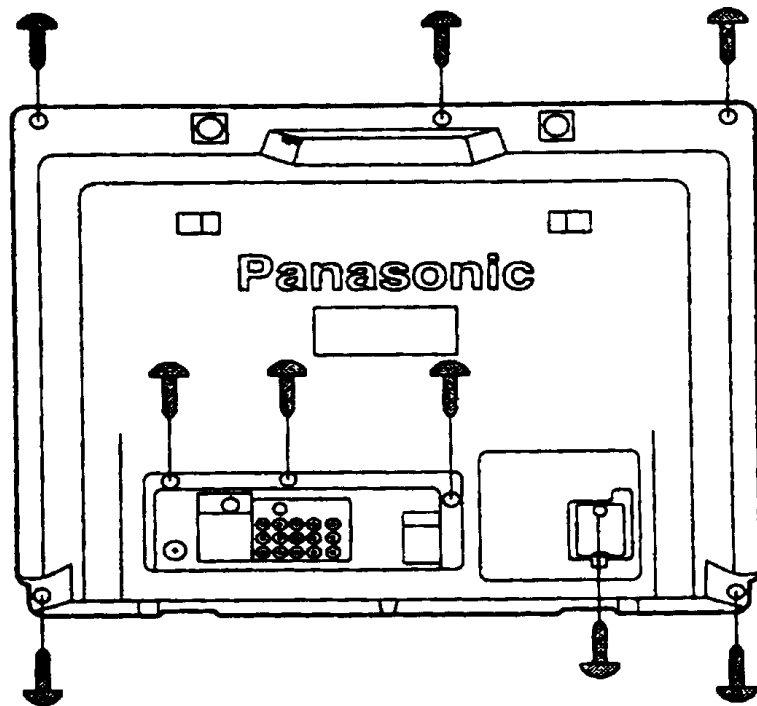
GP4

INPUT	ID1 ID2	
	AV	AV
YUV	2	1
S-VHS	1	-
AV	4	3

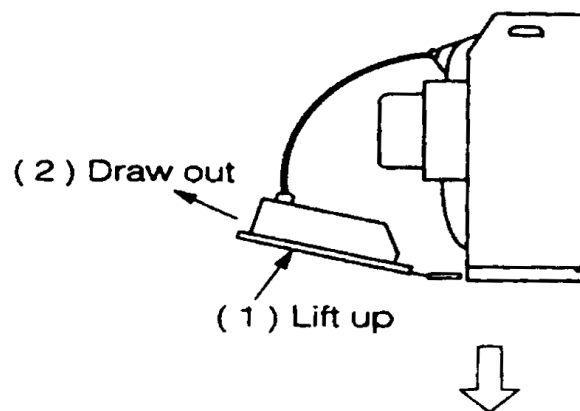
2 Service Hints

2.1. HOW TO MOVE CHASSIS INTO SERVICE POSITION.

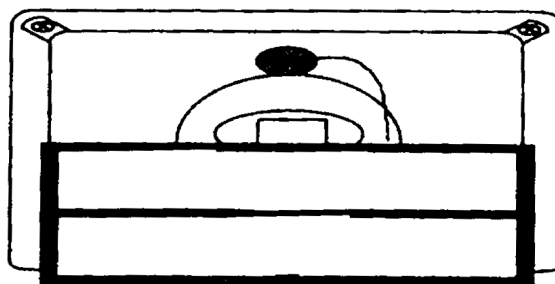
1. Remove 9 screws.



2. Draw out Main Chassis.



3. Stand the Main Chassis.



3 Market Mode Function

3.1. Service Mode Access

1. Set timer ON.
2. Press remote's RECALL and panel's volume down key simultaneously to enter SERVICE 1.

3.2. Service Mode 1 Controls

- | | |
|--|--|
| 1. Key 3 / 4
previous / next service 1 item | 5. Volume -
decrement of selected item |
| 2. Key 8 / 9
adjust user brightness (-/+) | 6. OK (remote)
store / save selected item |
| 3. Program up / down
program position up / down | 7. Normal (remote)
exit service mode |
| 4. Volume +
increment of selected item | |

3.3. Service Mode 1 Function

- | | |
|-----------------------------|----------------------------|
| 1. H-POS
-128~127 | 11. ANGEL
-128~127 |
| 2. V-POS
-128~127 | 12. BOW
-128~127 |
| 3. H-AMP
-128~127 | 13. DVCO
-128~127 |
| 4. V-AMP
-128~127 | 14. R-CUT OFF
-128~127 |
| 5. EW-AMP1
-128~127 | 15. G-CUT OFF
N / A |
| 6. LOW_Corner
-128~127 | 16. B-CUT OFF
0~511 |
| 7. TRAPEZ 1
-128~127 | 17. R-DRIVE
0~511 |
| 8. UPPER_Corner
-128~127 | 18. G-DRIVE
0~511 |
| 9. V-LIN
-128~127 | 19. B-DRIVE
0~511 |
| 10. V-SYM
-128~127 | 20. SUB-Bright
-128~127 |

3.4. Service Mode 2 Controls (OPTION data 1 ~ 3)

- | | |
|--|--|
| 1. Key 3 / 4
previous / next service 2 item | 6. OK (remote)
store / save selected item |
| 2. Key 8 / 9
toggle for options bit 0 - 7 | 7. Normal (remote)
exit service mode |
| 3. Program up / down
program position up / down | |
| 4. Volume +
increment of selected item | |
| 5. Volume -
decrement of selected item | |

NOTE: Service mode 2 options bit refer to each model front cover spec.

4 Adjustment Procedure

4.1. Adjustment Procedure

4.1.1. +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:
TPD 15 : $3.3 \pm 0.2V$
TPD 16 : $141 \pm 2V$
TPD 17 : $8 \pm 2V$
TPD 18 : $1.8 \pm 2V$
TPD 19 : $5 \pm 2V$
TPD 20 : $220 \pm 2V$

4.1.2. 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 D866 and confirm the +B voltage is $141.0 \pm 1.5V$.
2. Connect a high frequency voltmeter to heater and confirm that voltage reads 6.3 ± 0.28 (VRMS).
3. Normalize the brightness and contrast.

4.2. COLOUR PURITY

1. Set Bright and Contrast controls to their maximum positions.
2. Operate the TV set over 60 minutes.
3. Full degauss the picture tube by using an external degaussing coil. By rotating R-B static convergence magnet.
4. Apply a crosshatch pattern signal and adjust roughly the static convergence magnets.
5. Apply a green pattern signal.
6. Loosen a clamp screw for the Deflection Yoke and move the Deflection Yoke as close to the purity magnet as possible.
7. Adjust the purity magnet so that a vertical green field is obtained at the center of the screen.

4.1.3. NTSC TINT COLOUR

Item / Preparation

1. Connect oscilloscope probe to TPL1 (R OUT) with 10k Ω 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.

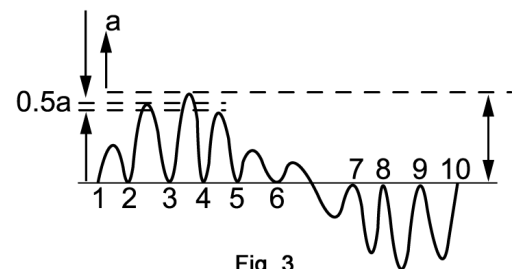
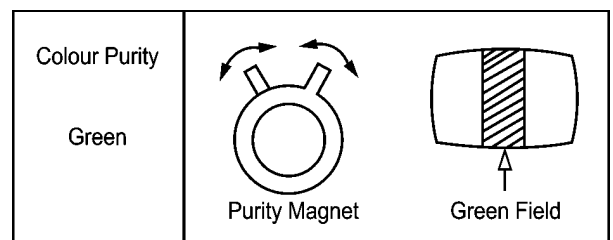
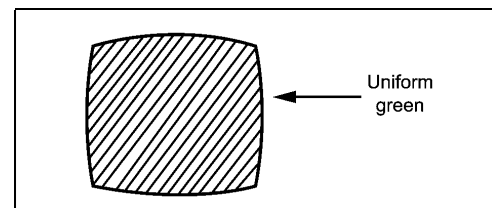


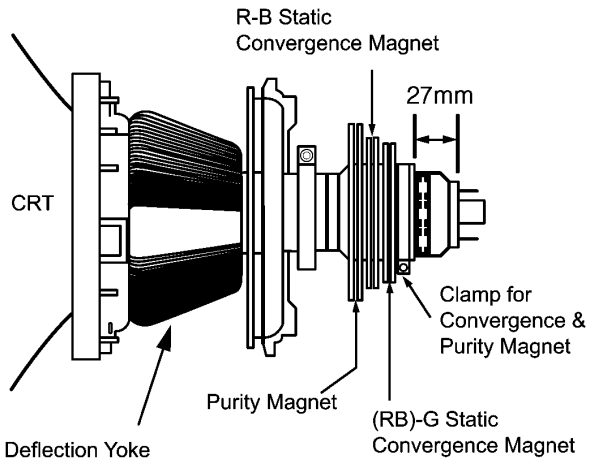
Fig. 3



8. Slowly press the Deflection Yoke and set it where a uniform green field is obtained.

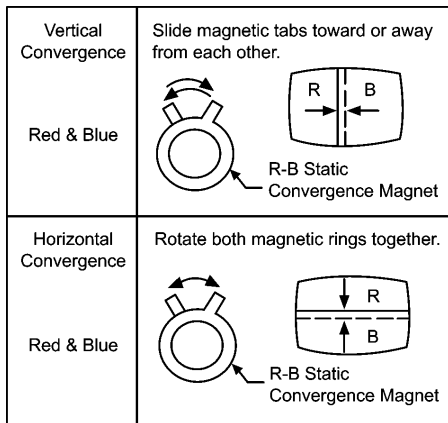


9. Adjust roughly the Low Light controls and make sure that a uniform white field is obtained.
10. Tighten the clamp screw.

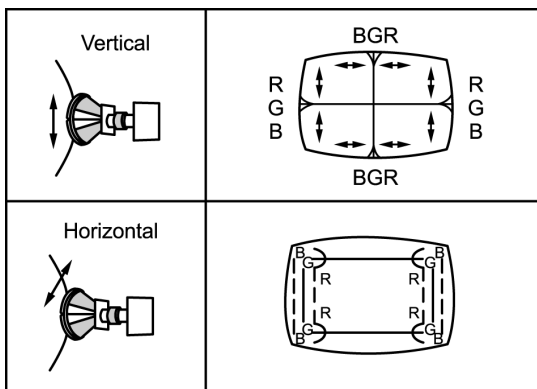


4.3. CONVERGENCE

1. Apply a crosshatch pattern signal and set Contrast control to the maximum position.
2. Adjust Bright control to obtain a clear pattern.
3. Adjust Red and Blue line at center of the screen.



4. Adjust Red and Blue with Green line at center of the screen by rotating (RB)-G static convergence magnet.
5. Lock convergence magnets with silicone sealer.
6. Remove the DY wedges and slightly tilt the Deflection Yoke vertically.



7. Fix the Deflection Yoke by re-inserting the DY wedges.
8. If purity error is found, repeat "Colour Purity" adjustment.

4.4. WHITE BALANCE (MARKET MODE CHK 4)

Preparation

1. Receive a colour bar signal with colour "OFF", and operate the TV set for more than 30 minutes.
2. Set the picture menu to "DYNAMIC NORMAL" and the AI to off.
3. Connect an oscilloscope to TPL5 with DC mode.
4. Set the TV set to Market Mode : white balance adjustment (CHK 4).
5. Screen VR : Min.
6. Set the data level of RGB CUT OFF / DRIVE and SUB BRIGHT.
 - Display : Data Level
 - R-CUT OFF : 63
 - G-CUT OFF : 128
 - B-CUT OFF : 63
 - R-DRIVE : 128
 - B-DRIVE : 128
 - SUB BRIGHT : 63

Adjustment

1. Select G-CUTOFF adjustment mode and collapse vertical scan.
2. Adjust G-CUTOFF control to become the DC=0 V to video level at 180 V as shown in Fig. 1.

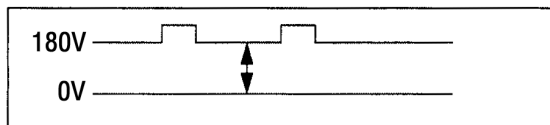
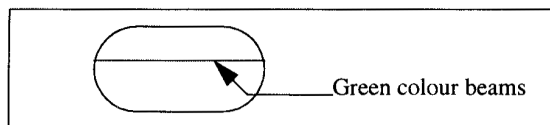


Fig. 1

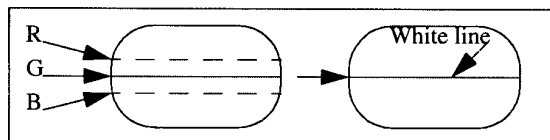
3. Slowly turn the screen control clockwise until a green colour horizontal line appears on the picture tube. This is the setting point for the screen control.

Note:

Do not adjust the G-CUTOFF setting in the following procedure.



4. Adjust the remaining R and B-CUTOFF controls so as to get a white horizontal line on the screen.



5. Return to full field SCAN by pushing the position 5 key on the remote control.
6. Adjust the R-Drive and B-Drive controls as to obtain a uniform white on the white bar of the greyscale pattern.
7. Confirm correct B/W rendition and greyscale tracking or repeat CUTOFF and drive control setup.

Note:

Write down the original value for each address adjustment before adjusting anything.

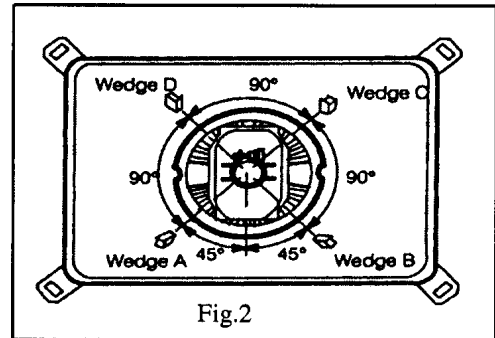


Fig.2

8. Wedge A shown in Fig. 2 should be fixed within a range of 45° to the left of the vertical line as shown.
9. After inserting wedge A, insert wedges B, C and D. The wedges should be set 90° apart from each other.
10. Be certain that the four 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.

4.5. ADJUSTMENT OF CRT VRS

NOTE: FOR FLAT CRT ONLY

PREPARATION

1. Set DY to CRT not to tilt up and down left and right deflection.
2. Set CY to CRT and set CY magnet primarily.
 Pur Mg : Set Pur Mg that 2 magnets are (top position)
 VRS Mag : Set VRS Mg that 2 magnets are (horizontal position) only 21", 25" & 29"
3. Set geomagnetic corection DAC. AS IN TABLE 1.

ADJUSTMENT

1. Receive the white balance pattern.
2. Adjust V-CENTER.
3. Set R, B CUT OFF to minimum, and set G CUT OFF to center.
4. Receive the aging pattern.
5. Set 2 magnet of vertical position to up and down equally so that center part of CRT (Fig 4)

	MANNUAL	AUTO
DAC	0	1

TABLE 1

CY

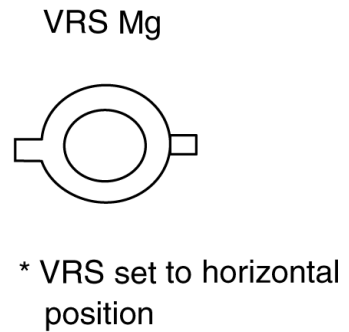
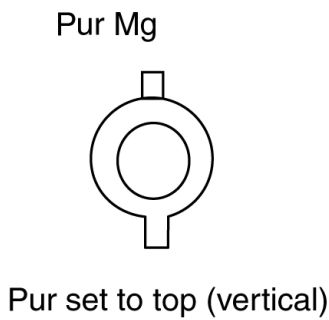
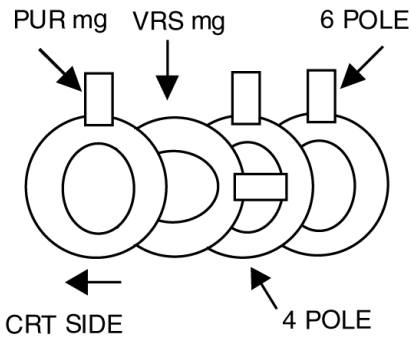


FIG 3

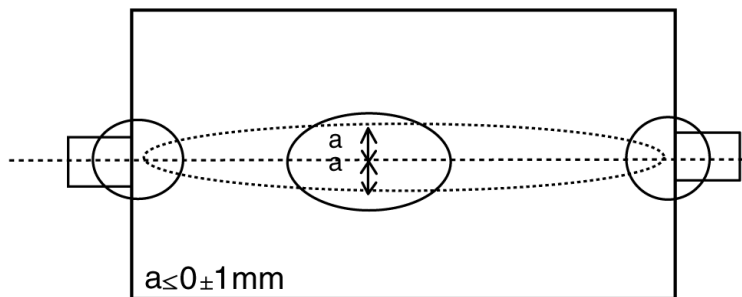
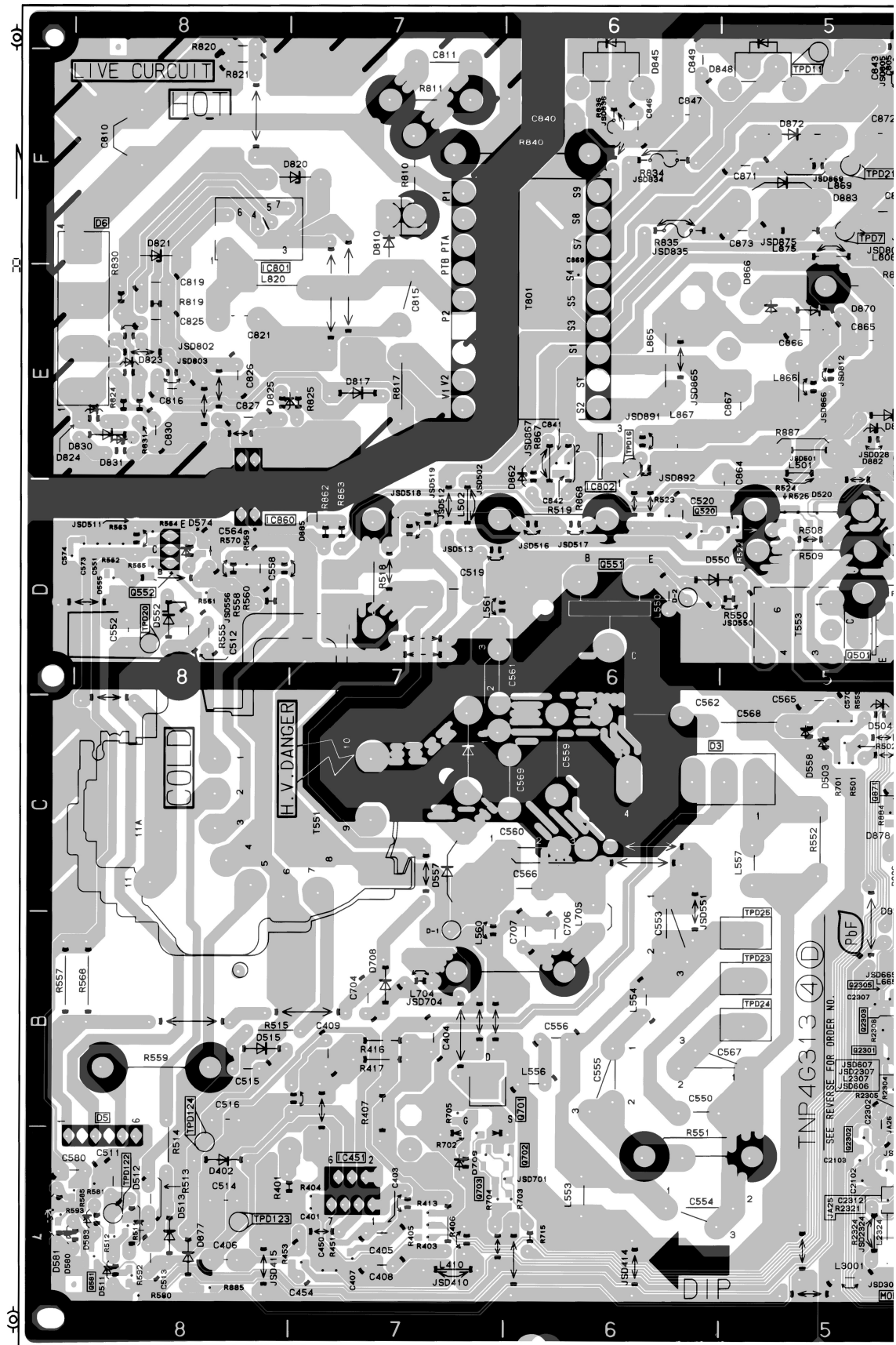


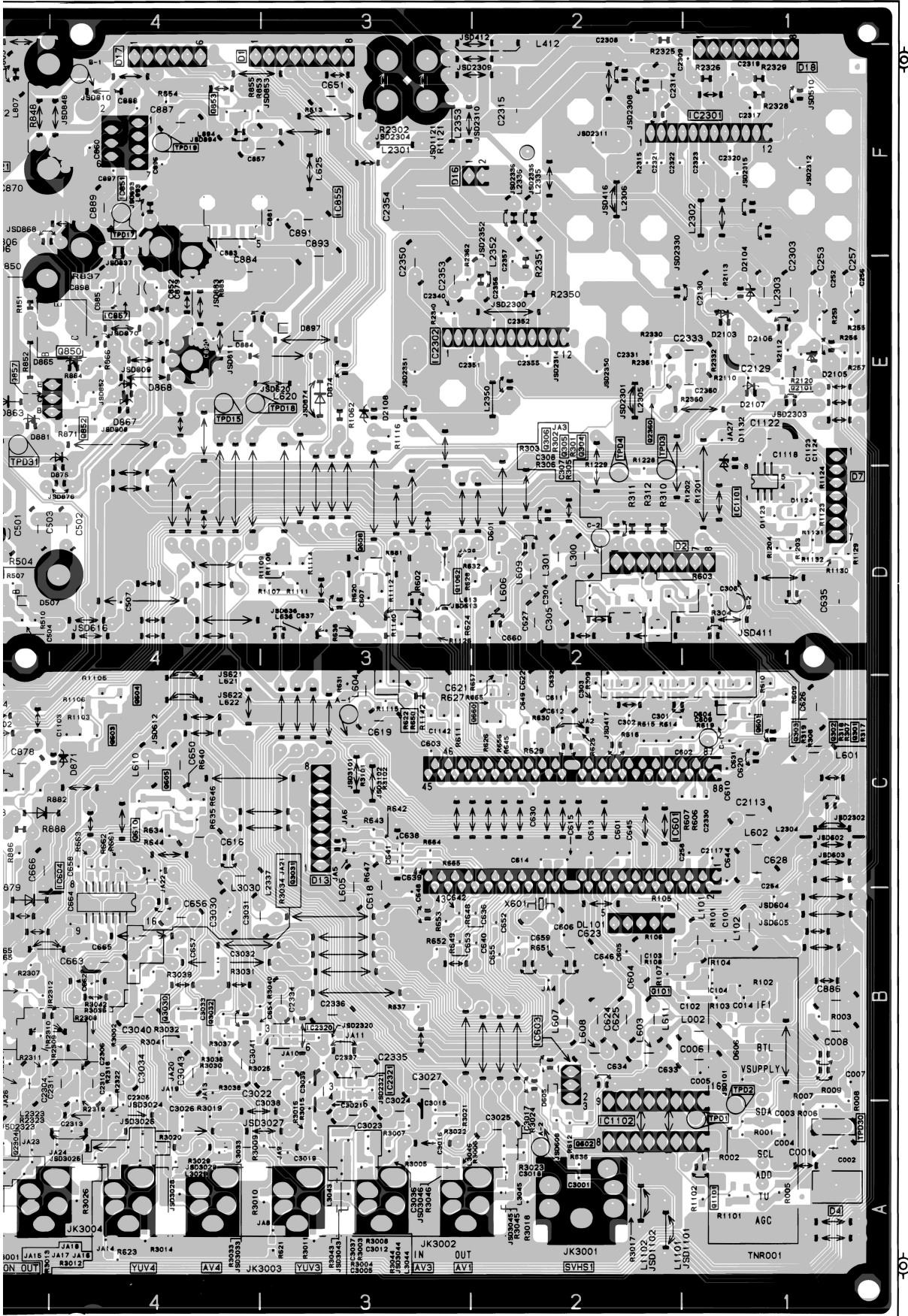
FIG 4

5 Conductor Views

5.1. D-Board 1/2



5.2. D-Board 2/2



Remarks:

1. The Power Circuit contains a circuit area which uses a separate power supply to isolate the earth connection.

The circuit is defined by HOT and COLD indications in the schematic diagram. Take the following precautions.

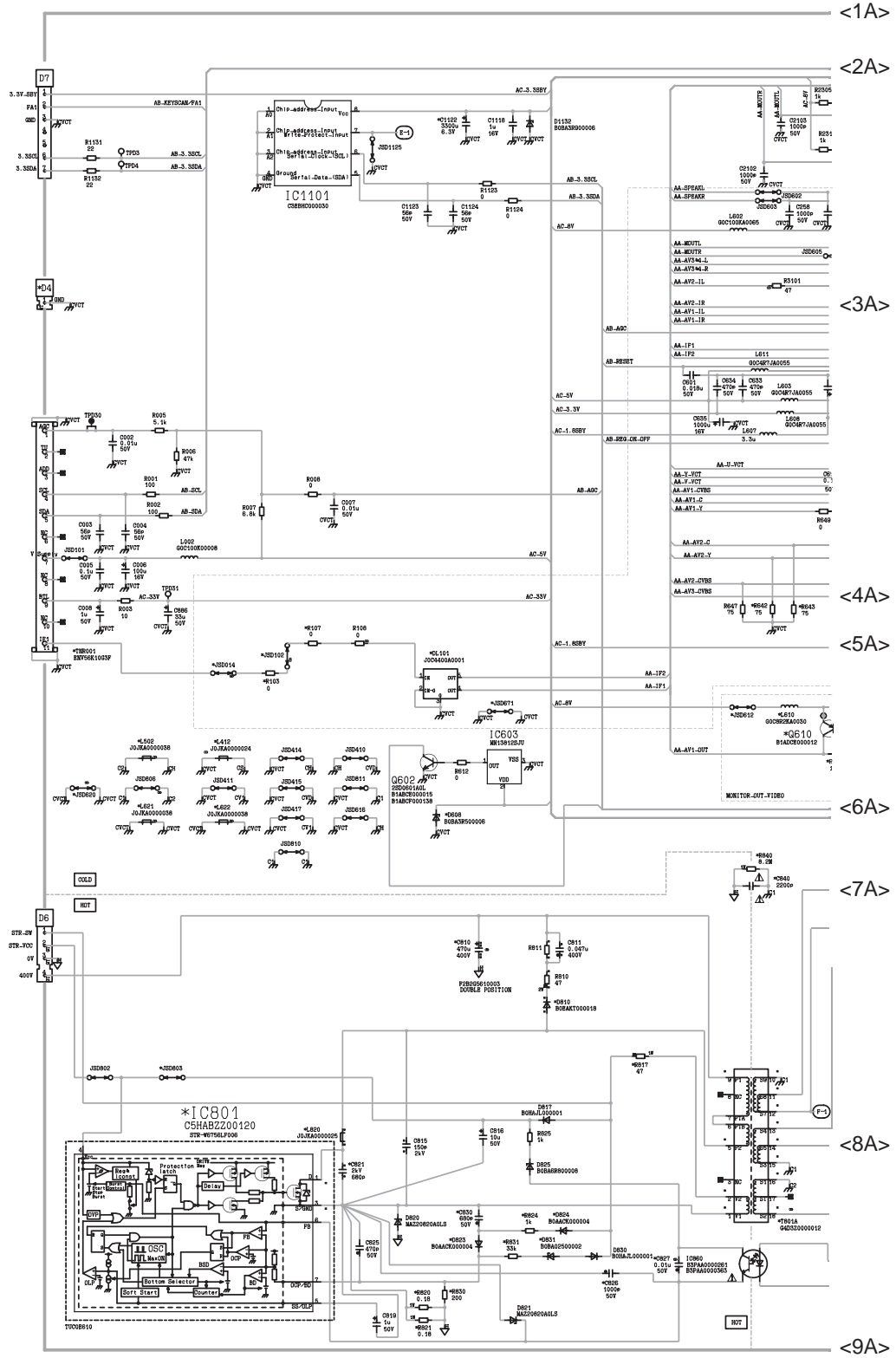
All circuits, except the Power Circuit, are cold.

Precautions

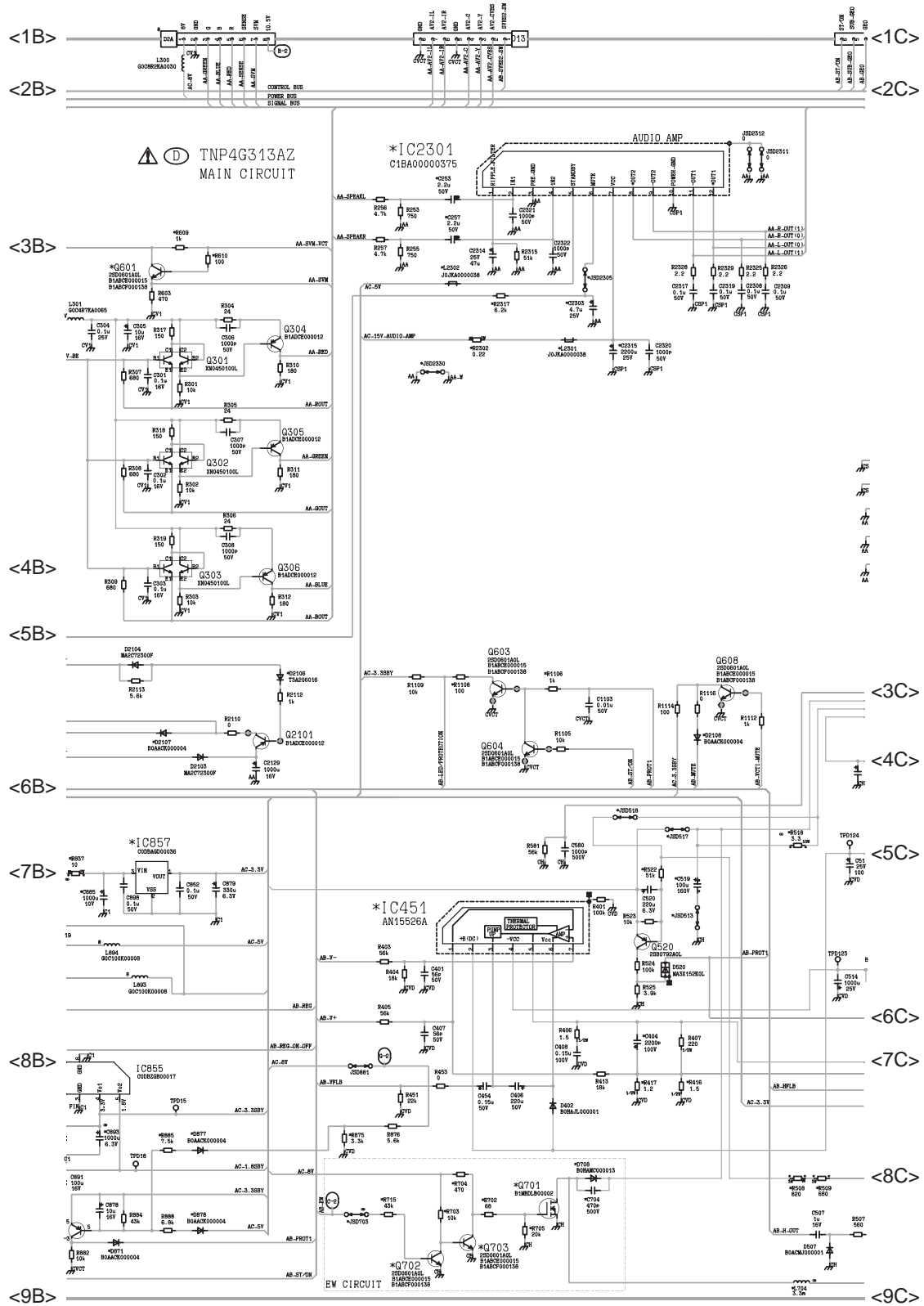
- a. Do not touch the hot part or the hot and cold parts at the same time or you may be shocked.
 - b. Do not short- circuit the hot and cold circuits or a fuse may blow and parts may break.
 - c. Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously or a fuse may blow.
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.
2. Following diodes are interchangeable.
MA150- MA162 (Replacement part)

6.2. D Board

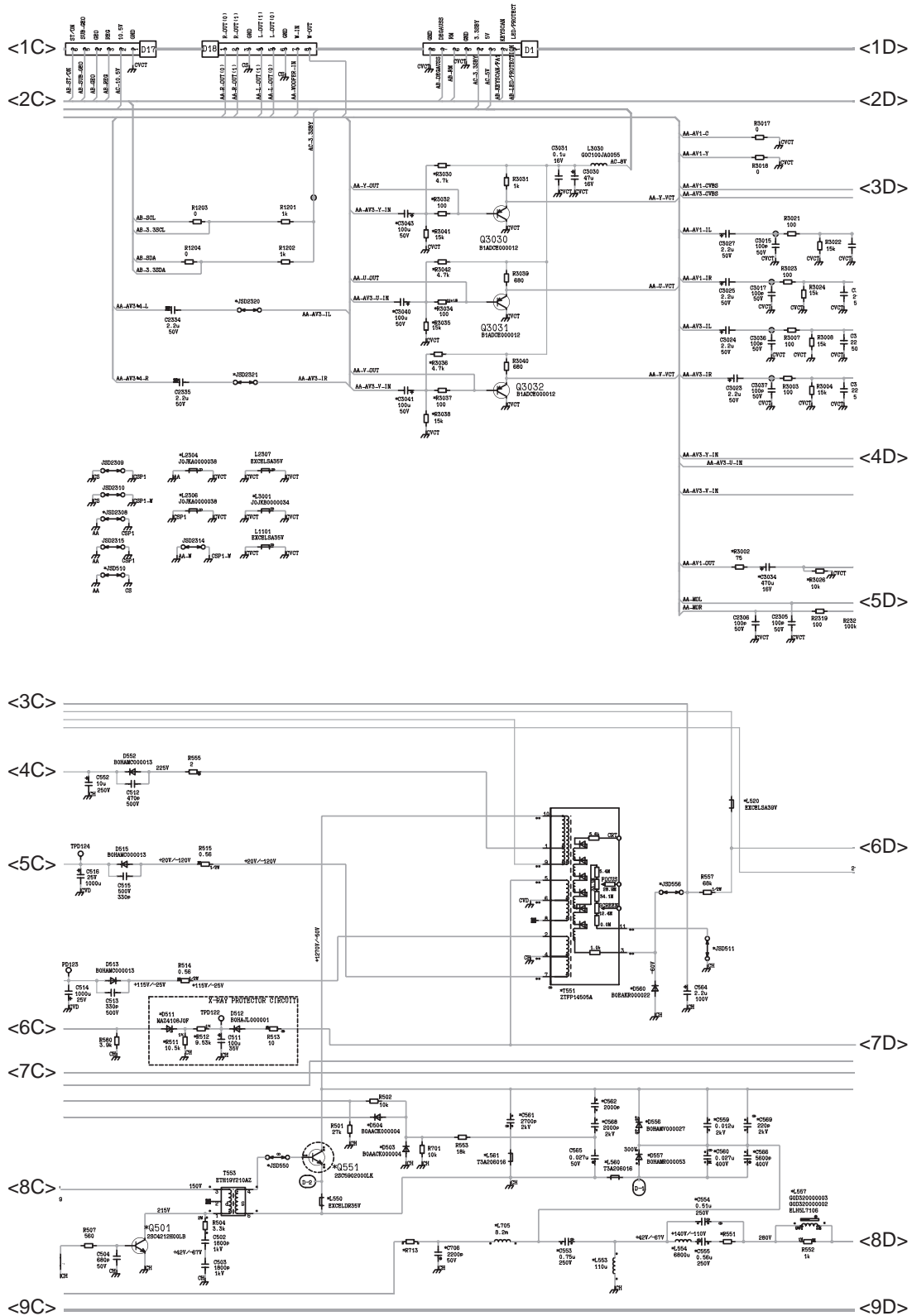
6.2.1. D Board (1/5)



6.2.3. D Board (3/5)

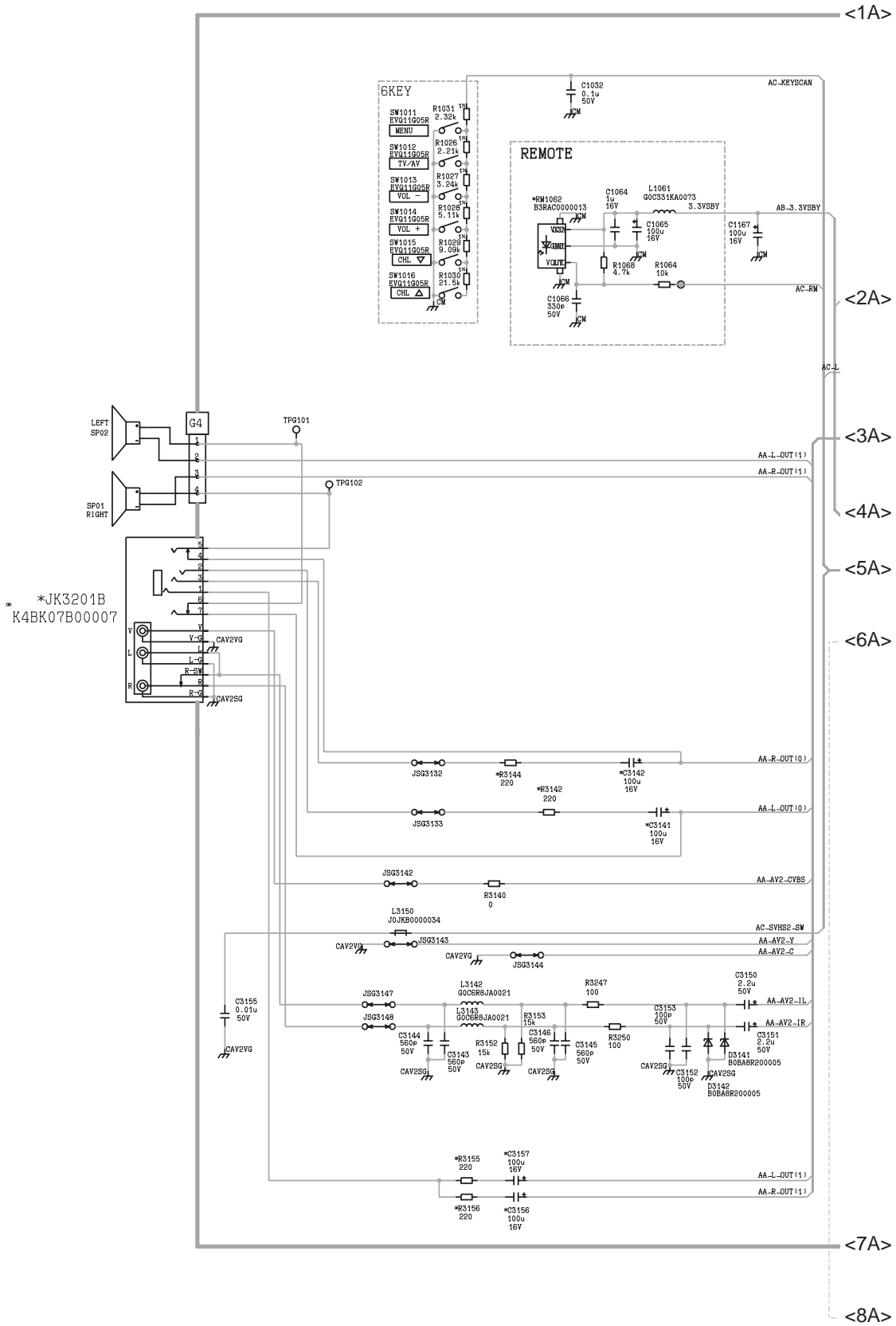


6.2.4. D Board (4/5)

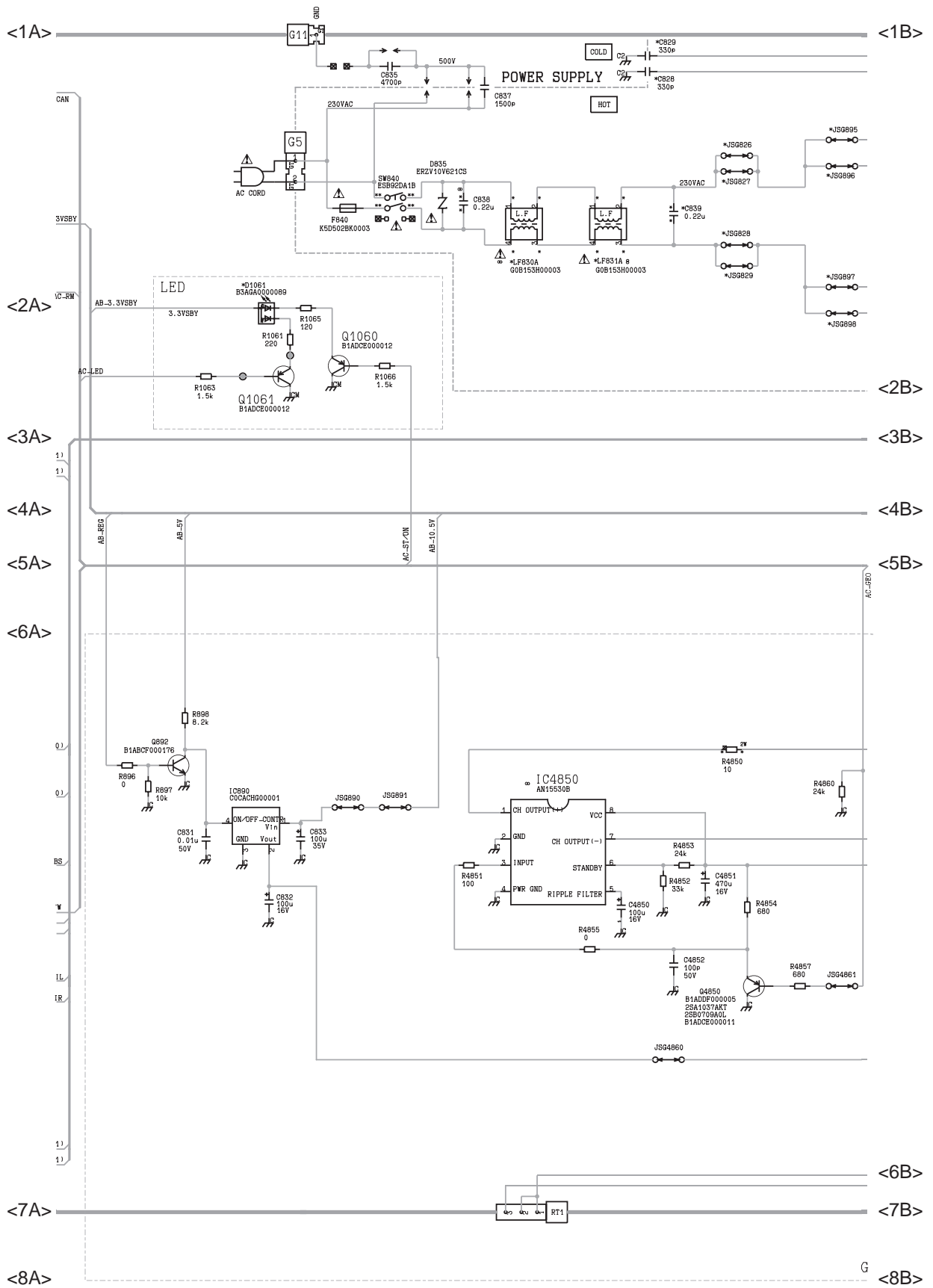


6.3. G Board

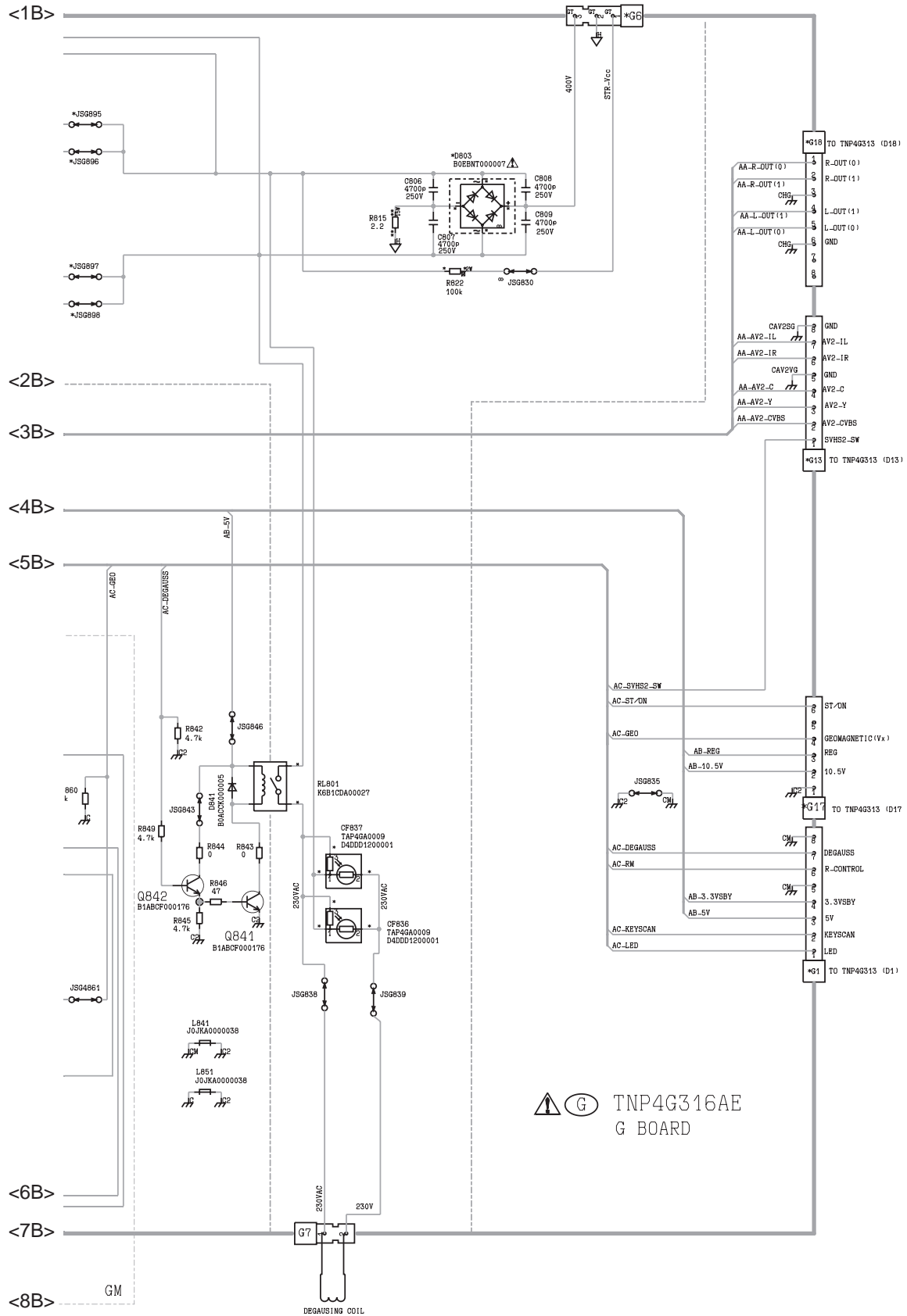
6.3.1. G Board (1/3)



6.3.2. G Board (2/3)

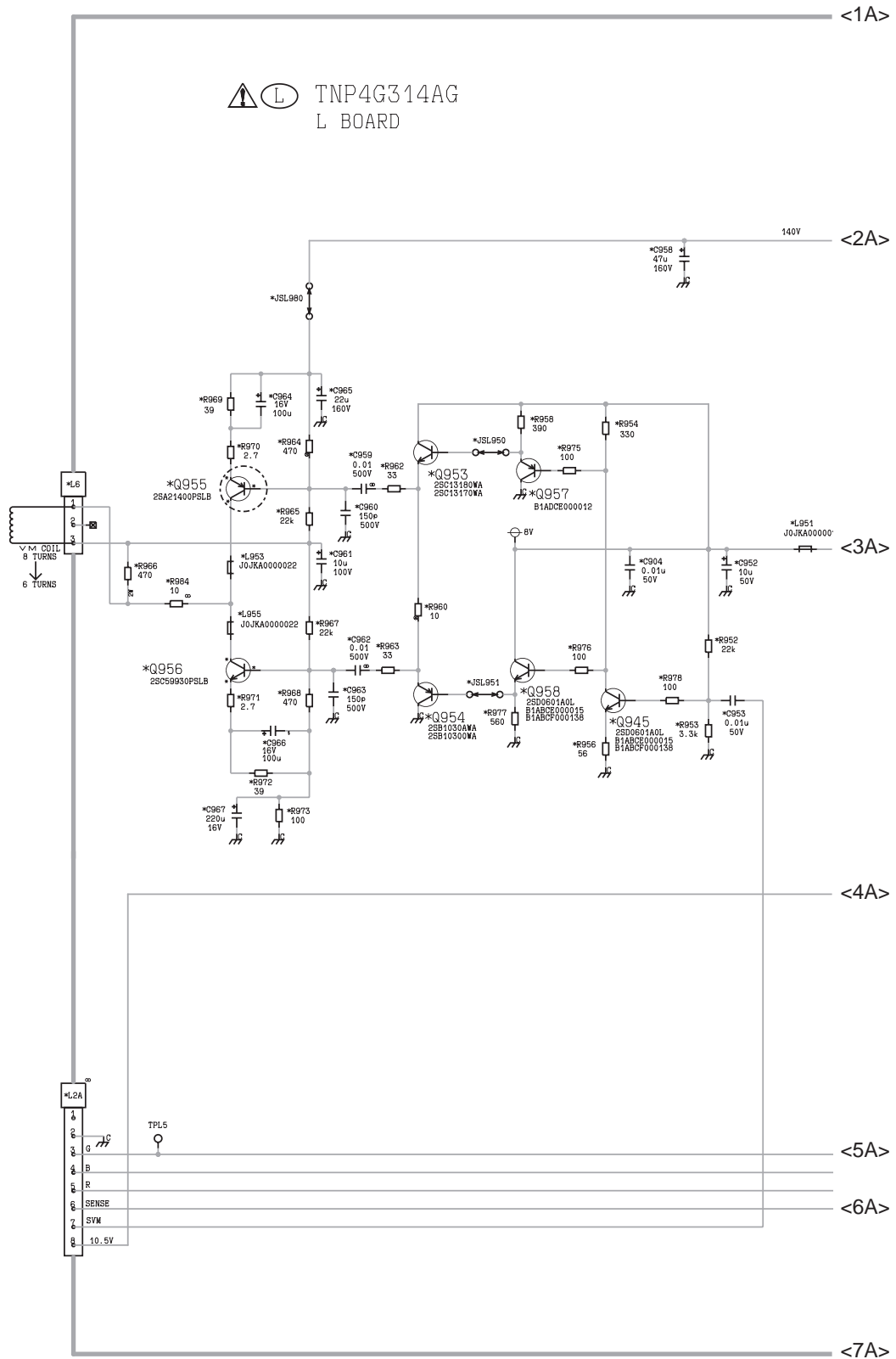


6.3.3. G Board (3/3)

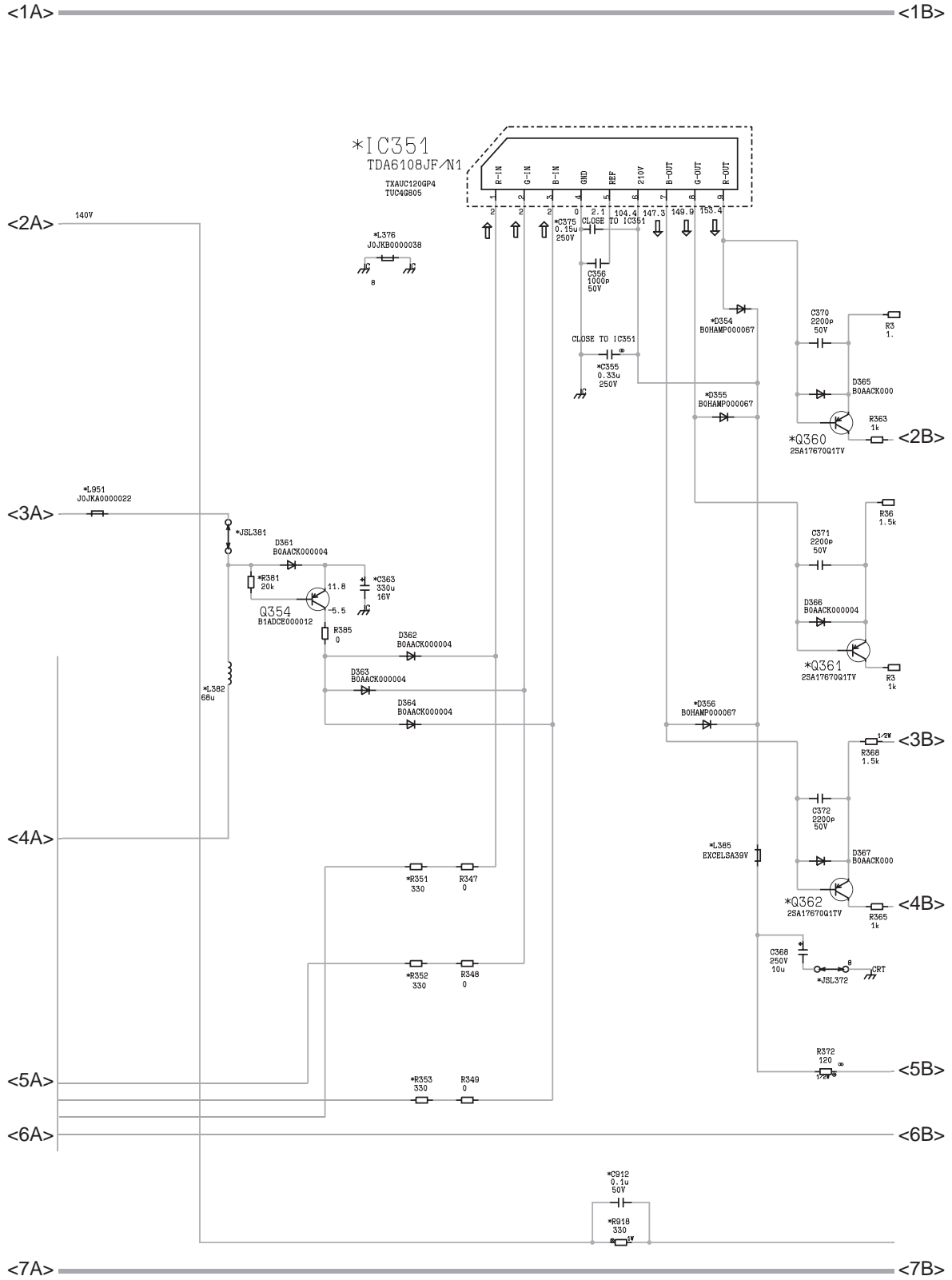


6.4. L Board

6.4.1. L Board (1/3)



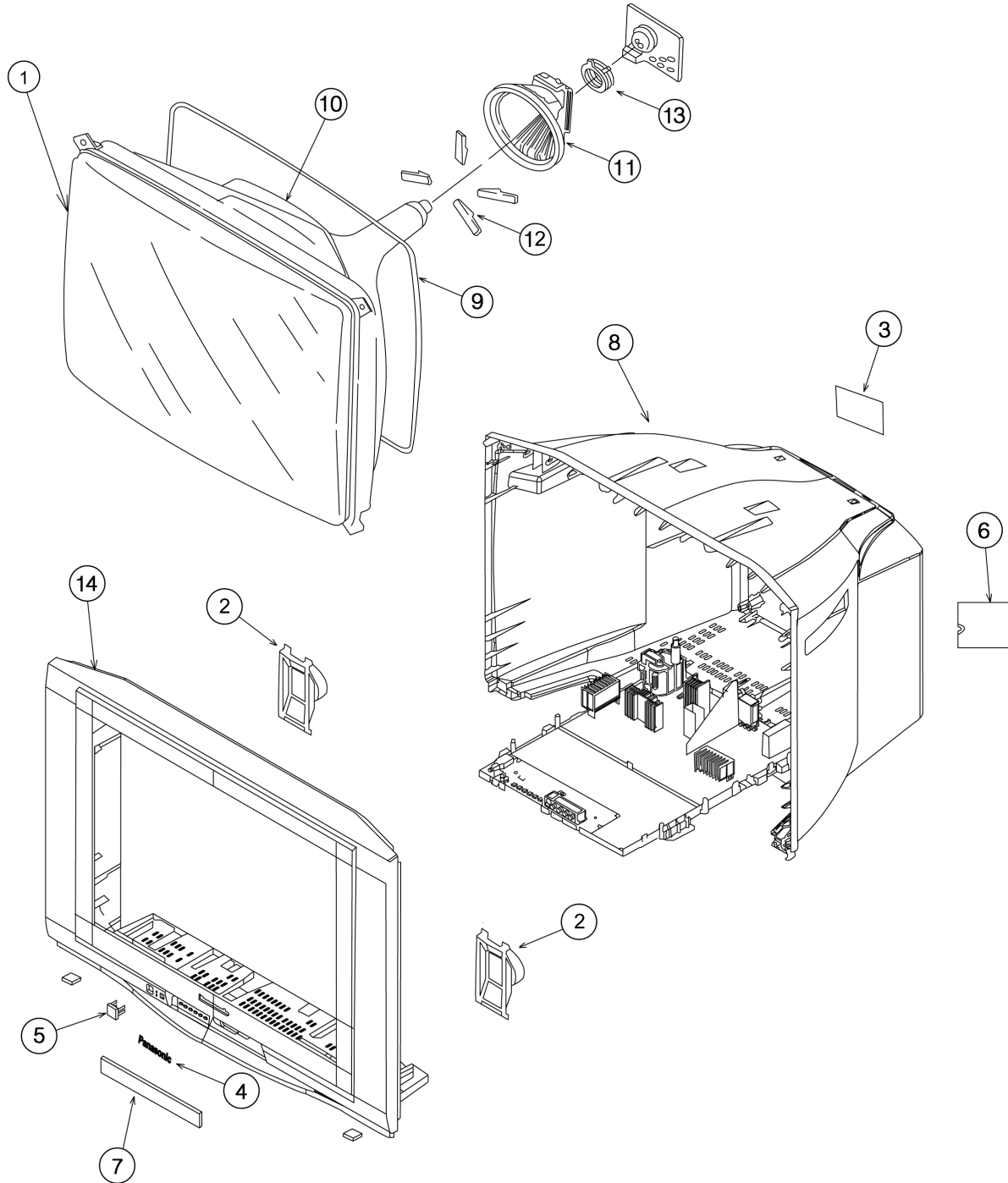
6.4.2. L Board (2/3)



7 Parts Locations

PARTS LOCATION

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



8.2. Replacement Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
1	A59QDF891X	PICTURE TUBE	△
2	EASG15S02H2	SPEAKER	
	EUR7717010	REMOTE CONTROL	
	K2JZ2B000021	ANTENNA PLUG	
3	TBM4G1196	MODEL NAME PLATE	△
4	TBM4G3013	PANASONIC BADGE	
5	TBX4G90401	POWER BUTTON	
	TES4G214	SPRING (POWER BUTTON)	
	TES4G406	COIL SPRING	
	TKK4G8603	SPEAKER BRACKET	
6	TKP4G11744	AC CORD BRACKET	
7	TKP4G13291	DOOR	
8	TKU4GA1240	BACK COVER	
9	TLK4G9075X	DEGAUSSING COIL	△
10	TLK4G9083X	ROTATION COIL	
11	TLY4G329S	DEFLECTION YOKE	△
12	TMM4G503	RUBBER WEDGE	
	TMM4G507	RUBBER DAMPER	
	TMM4G902-3	RUBBER WASHER	
NLA	TNP4G313AZ	D BOARD	△
NLA	TNP4G314AG	L BOARD	△
NLA	TNP4G316AE	G BOARD	△
13	TP-13000PX2	CONVERGENCE YOKE	
	TPE4G14003	LAMI BAG	
	TPE4G14023	SET COVER	
	TQB4G3907	FAN BAG	
	T SMA011	MAGNET	
	TSN63115-4	PURITY MAGNET	
	TSX4G196L	AC POWER CORD	△
14	TXFKY02CQ07	CABINET ASSY	
	TXFPC01CQ07	CARTON	
	TXFPD05CG09	CUSHION (TOP)	
	TXFPD06CG09	CUSHION (BOTTOM)	
		CAPACITORS	
C002	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C003	ECJ2VC1H560J	C 56PF, J, 50V	
C004	ECJ2VC1H560J	C 56PF, J, 50V	
C005	F1J1H104A578	C 0.1UF, 50V	
C006	ECA1CM101B	E 100UF, 16V	
C007	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C008	ECA1HM010B	E 1UF, 50V	
C1032	F1J1H104A578	C 0.1UF, 50V	
C1064	ECJ2VF1C105Z	C 1UF, Z, 16V	
C1065	ECA1CM101B	E 100UF, 16V	
C1066	ECJ2VC1H331J	C 330PF, J, 50V	
C1103	ECJ2VB1H103K	C 0.01UF, K, 50V	
C1118	ECJ2VF1C105Z	C 1UF, Z, 16V	
C1122	F2A0J3320023	C 0.1UF, 50V	
C1123	ECJ2VC1H560J	C 56PF, J, 50V	
C1124	ECJ2VC1H560J	C 56PF, J, 50V	
C1142	F1J1H104A578	C 0.1UF, 50V	
C1167	ECA1CM101B	E 100UF, 16V	
C2102	ECJ2VC1H102J	C 1000PF, J, 50V	
C2103	ECJ2VC1H102J	C 1000PF, J, 50V	
C2113	ECA1HM3R3B	E 3.3UF, 50V	
C2117	F1J1H104A578	C 0.1UF, 50V	
C2129	ECA1CM102B	E 1000UF, 16V	
C2302	ECA1CM100B	E 10UF, 16V	
C2303	ECEA1EKS4R7	E 4.7UF, 25V	
C2304	ECA1CM100B	E 10UF, 16V	
C2305	ECUX1H101JCX	C 100PF, J, 50V	
C2306	ECUX1H101JCX	C 100PF, J, 50V	
C2307	ECJ2VF1C105Z	C 1UF, Z, 16V	
C2308	F1J1H104A578	C 0.1UF, 50V	
C2309	F1J1H104A578	C 0.1UF, 50V	
C2310	ECA1CM470B	E 47UF, 16V	
C2311	ECA1CM470B	E 47UF, 16V	
C2314	ECA1EM470B	E 47UF, 25V	
C2315	ECA1EM222E	E 2200UF, 25V	
C2317	F1J1H104A578	C 0.1UF, 50V	
C2319	F1J1H104A578	C 0.1UF, 50V	

Ref. No.	Part No.	Part Name & Description	Remarks
C2320	ECJ2VC1H102J	C 1000PF, J, 50V	
C2321	ECJ2VC1H102J	C 1000PF, J, 50V	
C2322	ECJ2VC1H102J	C 1000PF, J, 50V	
C2334	ECEA1HN2R2U	E 2.2UF, 50V	
C2335	ECEA1HN2R2U	E 2.2UF, 50V	
C253	ECEA1HN2R2U	E 2.2UF, 50V	
C254	ECJ2VB1H102J	C 1000PF, 50V	
C257	ECEA1HN2R2U	E 2.2UF, 50V	
C258	ECJ2VB1H102J	C 1000PF, 50V	
C3001	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C3005	F1J1H222A721	C 2200PF, 50V	
C301	ECJ2VB1C104K	C 0.1UF, K, 16V	
C3012	F1J1H222A721	C 2200PF, 50V	
C3015	ECUX1H101JCX	C 100PF, J, 50V	
C3016	F1J1H222A721	C 2200PF, 50V	
C3017	ECUX1H101JCX	C 100PF, J, 50V	
C3018	F1J1H222A721	C 2200PF, 50V	
C302	ECJ2VB1C104K	C 0.1UF, K, 16V	
C3023	F2A1H2R2A118	E 2.2UF, 50V	
C3024	F2A1H2R2A118	E 2.2UF, 50V	
C3025	F2A1H2R2A118	E 2.2UF, 50V	
C3027	F2A1H2R2A118	E 2.2UF, 50V	
C303	ECJ2VB1C104K	C 0.1UF, K, 16V	
C3030	ECA1CM470B	E 47UF, 16V	
C3031	ECJ2VF1C104Z	C 0.1UF, Z, 16V	
C3034	F2A1C4710045	E 470UF, 16V	
C3036	ECUX1H101JCX	C 100PF, J, 50V	
C3037	ECUX1H101JCX	C 100PF, J, 50V	
C304	ECJ2VF1E104Z	C 0.1UF, Z, 25V	
C3040	ECA1HM101B	E 100UF, 50V	
C3041	ECA1HM101B	E 100UF, 50V	
C3043	ECA1HM101B	E 100UF, 50V	
C305	ECA1CM100B	E 10UF, 16V	
C306	ECJ2VC1H102J	C 1000PF, J, 50V	
C307	ECJ2VC1H102J	C 1000PF, J, 50V	
C308	ECJ2VC1H102J	C 1000PF, J, 50V	
C3141	ECA1CM101B	E 100UF, 16V	
C3142	ECA1CM101B	E 100UF, 16V	
C3143	ECJ2VC1H561J	C 560PF, J, 50V	
C3144	ECJ2VC1H561J	C 560PF, J, 50V	
C3145	ECJ2VC1H561J	C 560PF, J, 50V	
C3146	ECJ2VC1H561J	C 560PF, J, 50V	
C3150	F2A1H2R2A118	E 2.2UF, 50V	
C3151	F2A1H2R2A118	E 2.2UF, 50V	
C3152	ECUX1H101JCX	C 100PF, J, 50V	
C3153	ECUX1H101JCX	C 100PF, J, 50V	
C3155	ECJ2VB1H103K	C 0.01UF, K, 50V	
C3156	ECA1CM101B	E 100UF, 16V	
C3157	ECA1CM101B	E 100UF, 16V	
C355	ECWF2334JSR	P 0.22UF, 250V	
C356	ECJ2VC1H102J	C 1000PF, J, 50V	
C360	ECKW3D102KBP	C 1000PF, K, 2KV	
C362	ECEA1CN100U	E 10UF, 16V	
C363	ECA1CM331B	E 330UF, 16V	
C368	ECA2EM100B	E 10UF, 250V	
C370	ECJ2VF1H222Z	C 2200PF, Z, 50V	
C371	ECJ2VF1H222Z	C 2200PF, Z, 50V	
C372	ECJ2VF1H222Z	C 2200PF, Z, 50V	
C375	ECWF2154JSR	P 0.22UF, 250V	
C401	ECJ2VC1H560J	C 56PF, J, 50V	
C404	ECQB1222JF	P 2200PF, 100V	
C406	ECA1HHG221	E 220UF, 50V	
C407	ECJ2VC1H560J	C 56PF, J, 50V	
C408	ECQB1154JF	P 0.22UF, 250V	
C454	ECQV1H154JM	P 0.15UF, J, 50V	
C4850	ECA1CM101B	E 100UF, 16V	
C4851	ECA1CM471B	E 470UF, 16V	
C4852	ECUX1H101JCX	C 100PF, J, 50V	
C502	ECKR3A182KBP	C 1800PF, K, 1KV	
C503	ECKR3A182KBP	C 1800PF, K, 1KV	
C504	ECJ2VB1H681K	C 680PF, K, 50V	

Ref. No.	Part No.	Part Name & Description	Remarks
C507	ECJ2VF1C105Z	C 1UF, Z, 16V	
C511	ECA1VM101B	E 100UF, 35V	
C512	F1B2H471A025	C 470PF, 500V	
C513	F1B2H331A025	C 330PF, 500V	
C514	F2A1E102A151	E 100UF, 25V	
C515	F1B2H331A025	C 330PF, 500V	
C516	F2A1E102A151	E 100UF, 25V	
C519	F2A2C1010016	E 220UF, 160V	
C520	ECA0JM221B	E 220UF, 6.3V	
C552	F2A2E100A025	E 10UF, 250V	
C553	FOC2E754A040	P 0.75UF, 250V	
C554	FOC2E514A063	P 0.51UF, 250V	
C555	ECWF2564JSB	P 0.56UF, 250V	
C559	ECWH20123JVB	P 0.012UF, J, 2KV	
C560	ECQF4273JZH	P 0.027UF, 400V	
C561	ECWH20272JVY	P 2700PF, J, 2KV	
C562	ECWH20202JVY	P 2000PF, 2kV	
C564	F2A2A2R2A042	E 2.2UF, 100V	
C565	ECQB1H273JF	P 0.027UF, J, 50V	
C566	ECQM4562JZ	P 5600PF, J, 400V	
C568	ECWH20202JVY	P 2000PF, 2kV	
C569	ECKW3D221JBR	C 220PF, J, 2KV	
C580	F1B2H102A022	C 1000PF, 500V	
C601	ECJ2VB1H183K	C 0.018UF, K, 50V	
C602	ECJ2VB1H222K	C 2200PF, K, 50V	
C603	FLJ1H104A578	C 0.1UF, 50V	
C604	ECA1CM101B	E 100UF, 16V	
C605	FLJ1H104A578	C 0.1UF, 50V	
C606	FLJ1H104A578	C 0.1UF, 50V	
C607	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C610	FLJ1H104A578	C 0.1UF, 50V	
C611	FLJ1H104A578	C 0.1UF, 50V	
C612	FLJ1H104A578	C 0.1UF, 50V	
C613	FLJ1H104A578	C 0.1UF, 50V	
C614	ECJ2VC1H080C	C 8PF, 50V	
C615	ECJ2VC1H080C	C 8PF, 50V	
C616	ECA1CM101B	E 100UF, 16V	
C618	ECA1CM101B	E 100UF, 16V	
C619	ECA1CM101B	E 100UF, 16V	
C620	ECJ2VF1H683Z	C 0.068UF, Z, 50V	
C621	ECA1CM100B	E 10UF, 16V	
C622	ECA1CM101B	E 100UF, 16V	
C623	ECA1CM101B	E 100UF, 16V	
C626	ECA1CM102B	E 1000UF, 16V	
C627	ECA1CM101B	E 100UF, 16V	
C628	ECA1CM101B	E 100UF, 16V	
C630	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C631	ECJ2VF1H683Z	C 0.068UF, Z, 50V	
C632	ECA1HM4R7B	E 4.7UF, 50V	
C633	ECJ2VC1H471J	C 470PF, J, 50V	
C634	ECJ2VC1H471J	C 470PF, J, 50V	
C635	ECA1CM102B	E 1000UF, 16V	
C637	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C638	FLJ1H104A578	C 0.1UF, 50V	
C639	FLJ1H104A578	C 0.1UF, 50V	
C640	FLJ1H104A578	C 0.1UF, 50V	
C641	FLJ1H104A578	C 0.1UF, 50V	
C642	FLJ1H104A578	C 0.1UF, 50V	
C644	FLJ1H104A578	C 0.1UF, 50V	
C645	FLJ1H104A578	C 0.1UF, 50V	
C646	FLJ1H104A578	C 0.1UF, 50V	
C648	FLJ1H104A578	C 0.1UF, 50V	
C649	FLJ1H104A578	C 0.1UF, 50V	
C650	F2A1C101A159	E 100UF, 16V	
C652	FLJ1H104A578	C 0.1UF, 50V	
C654	FLJ1H104A578	C 0.1UF, 50V	
C655	FLJ1H104A578	C 0.1UF, 50V	
C660	ECJ2VF1E104Z	C 0.1UF, Z, 25V	
C704	F1B2H471A025	C 470PF, 500V	
C706	ECQB1H222JF	P 2200PF, J, 50V	
C806	ECKWAE472ZED	C 4700PF, Z, 500V	△
C807	ECKWAE472ZED	C 4700PF, Z, 500V	△
C808	ECKWAE472ZED	C 4700PF, Z, 500V	△

Ref. No.	Part No.	Part Name & Description	Remarks
C809	ECKWAE472ZED	C 4700PF, Z, 500V	△
C810	ECOS2GB471EB	E 470UF, 400V	
C811	ECQM4473JZ	P 0.047UF, J, 400V	
C815	ECKW3D151KBR	C 150PF, 2kV	
C816	ECA1HHG100	E 10UF, 50V	
C819	ECA1HM101B	E 1UF, 50V	
C821	ECKW3D681KBP	C 680PF, K, 2KV	
C825	ECQB1H471JF	P 470PF, J, 50V	
C826	ECQB1H102JF	P 1000PF, 50V	
C827	ECQB1H103JF	P 0.01UF, 50V	
C828	ECKCNA331MB7	C 330PF, M,	
C829	ECKCNA331MB7	C 330PF, M,	
C830	ECQB1H681KF	P 680pF, 50V	
C831	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C832	ECA1CM101B	E 100UF, 16V	
C833	ECA1VM101B	E 100UF, 35V	
C835	ECKCNA472ME7	C 4700PF, M,	
C837	ECKCNA152ME7	C 1500PF, M,	
C838	ECQU2A224BN9	P 0.22UF, 250V	
C839	ECQU2A224BN9	P 0.22UF, 250V	
C840	ECKCNA222ME7	C 2200PF, M,	
C843	F2A1E222A224	E 2200UF, 25V	
C849	F1B2H471A025	C 470PF, 500V	
C852	ECUX1H104KBX	C 0.1UF, K, 50V	
C860	ECUX1H104KBX	C 0.1UF, K, 50V	
C866	ECKW3D821KBP	C 820PF, K, 2KV	
C867	F2A2C2210013	E 220UF, 160V	
C869	ECJ2VB1H183K	C 0.018UF, K, 50V	
C870	F2A1C682A260	E 6800UF, 16V	
C871	F1B2H471A025	C 470PF, 500V	
C872	F2A1C471A251	E 470UF, 16V	
C873	F1B2H471A025	C 470PF, 500V	
C878	ECA1CM100B	E 10UF, 16V	
C879	ECEA0JKA331	E 330UF, 6.3V	
C881	FLJ1H104A717	C 0.1UF, 50V	
C883	ECUX1H104KBX	C 0.1UF, K, 50V	
C884	F2A1C472A241	E 4700UF, 16V	
C885	F2A1A102A224	E 1000UF, 10V	
C886	ECA1HM330B	E 33UF, 50V	
C887	ECA1CM102B	E 1000UF, 16V	
C888	ECUX1H104KBX	C 0.1UF, K, 50V	
C889	F2A1A102A224	E 1000UF, 10V	
C891	ECA1CM101B	E 100UF, 16V	
C893	F2A0J1020040	E 1000UF, 6.3V	
C898	ECUX1H104KBX	C 0.1UF, K, 50V	
C904	F1B1H103A013	C 0.01UF, 50V	
C912	FLJ1H104A578	C 0.10UF, 50V	
C952	ECA1HHG100	E 10UF, 50V	
C953	F1B1H103A013	C 0.01UF, 50V	
C958	ECA2CM470B	E 47UF, 160V	
C959	F1B2H1030028	C 0.01UF, 500V	
C960	F1A2H151A035	C 150PF, 500V	
C961	F2A2A1000016	C 10UF, 100V	
C962	F1B2H1030028	C 0.01UF, 500V	
C963	F1A2H151A035	C 150PF, 500V	
C964	ECA1CHG101	E 100UF, 16V	
C965	ECA2CM220B	E 22UF, 160V	
C966	ECA1CHG101	E 100UF, 16V	
C967	ECA1CM221B	E 220UF, 16V	
		DIODES	
D1061	B3AGA0000089	DIODE	
D1132	MTZJ3.9A	ZENER DIODE	
D2103	MA723	DIODE	
D2104	MA723	DIODE	
D2107	BOAACK000004	DIODE	
D2108	BOAACK000004	DIODE	
D3141	MTZJ8.2C	ZENER DIODE	
D3142	MTZJ8.2C	ZENER DIODE	
D354	BOHAMP000067	DIODE	
D355	BOHAMP000067	DIODE	
D356	BOHAMP000067	DIODE	
D361	BOAACK000004	DIODE	
D362	BOAACK000004	DIODE	

Ref. No.	Part No.	Part Name & Description	Remarks
D363	B0AACK000004	DIODE	
D364	B0AACK000004	DIODE	
D365	B0AACK000004	DIODE	
D366	B0AACK000004	DIODE	
D367	B0AACK000004	DIODE	
D402	B0HAJL000001	DIODE	
D503	B0AACK000004	DIODE	
D504	B0AACK000004	DIODE	
D507	B0ACMJ000001	DIODE	
D511	MA4108J	DIODE	
D512	B0HAJL000001	DIODE	
D513	EU02	DIODE	
D515	EU02	DIODE	
D520	MA152KTX	DIODE	
D552	EU02	DIODE	
D556	B0HAMV000027	DIODE	
D557	B0HAMR000053	DIODE	
D560	B0EAKR000022	DIODE	
D601	B0ADCJ000015	DIODE	
D608	MTZJ3.6A	ZENER DIODE	
D610	MAZ80560HL	DIODE	
D708	EU02	DIODE	
D803	B0EBNT000007	DIODE	
D810	B0EAKT000018	DIODE	
D817	B0HAJL000001	DIODE	
D820	MAZ20820A0LS	DIODE	
D821	MAZ20820A0LS	DIODE	
D823	B0AACK000004	DIODE	
D824	B0AACK000004	DIODE	
D825	MTZJ6.8C	ZENER DIODE	
D830	B0HAJL000001	DIODE	
D831	B0BA02500002	DIODE	
D835	ERZV10V621CS	VARISTOR	△
D841	B0ACCK000005	DIODE	
D848	FMLG12S	DIODE	
D862	MTZJ4.7A	ZENER DIODE	
D863	B0HAJL000001	DIODE	
D865	MTZJ3.6A	ZENER DIODE	
D866	FMG2CCLF665	DIODE	
D867	B0AACK000004	DIODE	
D868	B0AACK000004	DIODE	
D871	B0AACK000004	DIODE	
D872	B0JAPK000011	DIODE	
D876	B0AACK000004	DIODE	
D877	B0AACK000004	DIODE	
D878	B0AACK000004	DIODE	
D881	MTZJ16A	ZENER DIODE	
D882	MTZJ16A	ZENER DIODE	
D883	B0JAPK000013	DIODE	
	INTEGRATED CIRCUITS		
IC1101	TVR4GAS408	EEPROM IC	
IC2301	C1BA00000375	IC	
IC351	TDA6108JF/N1	IC	
IC451	AN15526A	IC	
IC4850	AN15530B	IC	
IC601	TVR4G15-1	FLASH MEMORY IC	
IC603	MN13812SJU	IC	
IC801	C5HABZZ00120	IC, POWER SUPPLY	△
IC802	COEAS0000026	IC	
IC851	C0DAAHF00005	IC, POWER SUPPLY	
IC855	C0DBZGB00017	IC, POWER SUPPLY	
IC857	C0DBAGD00036	IC, POWER SUPPLY	
IC860	B3PAA0000261	PHOTO COUPLER	△
IC890	C0CACHG00001	IC, POWER SUPPLY	
	COILS		
L002	G0C100K00008	COIL	
L1061	G0C331KA0073	PEAKING COIL	
L1101	EXCELSA35V	COIL	
L2301	J0JKA0000038	BEAD CORE	
L2302	J0JKA0000038	BEAD CORE	
L2304	J0JKA0000038	BEAD CORE	
L2306	J0JKA0000038	BEAD CORE	

Ref. No.	Part No.	Part Name & Description	Remarks
L2307	EXCELSA35V	COIL	
L2323	J0JKA0000038	BEAD CORE	
L2324	J0JKA0000038	BEAD CORE	
L300	TALV35VB8R2K	PEAKING COIL	
L3001	J0JKB0000034	EMI FILTER	
L301	G0C4R7KA0065	PEAKING COIL	
L3030	G0C100JA0055	PEAKING COIL	
L3142	G0C6R8JA0021	COIL	
L3143	G0C6R8JA0021	COIL	
L3150	J0JKB0000034	EMI FILTER	
L351	J0JKA0000022	BEAD CORE	
L376	J0JKB0000038	COIL	
L382	TALL08T680KA	INDUCTION COIL	
L385	EXCELSA39V	BEAD CORE	
L412	J0JKA0000024	EMI FILTER	
L502	J0JKA0000038	BEAD CORE	
L520	EXCELSA39V	BEAD CORE	
L550	EXCELDR35V	CORE	
L553	G0B111F00001	CHOKE COIL	
L554	ELC08D682E	CHOKE COIL	
L557	G0D320000003	LINEARITY COIL	
L601	G0C4R7JA0055	PEAKING COIL	
L602	G0C100KA0065	PEAKING COIL	
L603	G0C4R7JA0055	PEAKING COIL	
L604	G0C100KA0065	PEAKING COIL	
L605	TALV35VB5R6K	PEAKING COIL	
L606	G0C100KA0065	PEAKING COIL	
L607	G0A3R3HA0011	CHOKE COIL	
L608	G0C4R7JA0055	PEAKING COIL	
L609	G0C100KA0065	PEAKING COIL	
L610	TALV35VB8R2K	PEAKING COIL	
L611	G0C4R7JA0055	PEAKING COIL	
L621	J0JKA0000038	BEAD CORE	
L622	J0JKA0000038	BEAD CORE	
L704	G0A332C00003	CHOKE COIL	
L705	ELC10D822E	CHOKE COIL	
L820	J0JKA0000025	BEAD CORE	
L841	J0JKA0000038	BEAD CORE	
L851	J0JKA0000038	BEAD CORE	
L865	J0JKA0000025	BEAD CORE	
L866	EXCELSA39E	BEAD CHOKE	
L867	TALL08T680KA	INDUCTION COIL	
L893	G0C100K00008	COIL	
L894	G0C100K00008	COIL	
L951	J0JKA0000022	BEAD CORE	
L953	J0JKA0000022	BEAD CORE	
L955	J0JKA0000022	BEAD CORE	
	TRANSISTORS		
Q1060	B1ADCE000012	TRANSISTOR	
Q1061	B1ADCE000012	TRANSISTOR	
Q1062	2SD0601A0L	TRANSISTOR	
Q2101	B1ADCE000012	TRANSISTOR	
Q2301	2SD0601A0L	TRANSISTOR	
Q2302	B1ADCE000012	TRANSISTOR	
Q2303	2SD0601A0L	TRANSISTOR	
Q2304	B1ADCE000012	TRANSISTOR	
Q2305	B1ADCE000012	TRANSISTOR	
Q301	XN0450100L	TRANSISTOR	
Q302	XN0450100L	TRANSISTOR	
Q303	XN0450100L	TRANSISTOR	
Q3030	B1ADCE000012	TRANSISTOR	
Q3031	B1ADCE000012	TRANSISTOR	
Q3032	B1ADCE000012	TRANSISTOR	
Q304	B1ADCE000012	TRANSISTOR	
Q305	B1ADCE000012	TRANSISTOR	
Q306	B1ADCE000012	TRANSISTOR	
Q354	B1ADCE000012	TRANSISTOR	
Q360	2SA17670Q	TRANSISTOR	
Q361	2SA17670Q	TRANSISTOR	
Q362	2SA17670Q	TRANSISTOR	
Q4850	B1ADDF000005	TRANSISTOR	
Q501	2SC4212H	TRANSISTOR	
Q520	2SB0792A0L	TRANSISTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
Q551	2SC5902000LK	TRANSISTOR	
Q601	2SD0601A0L	TRANSISTOR	
Q602	2SD0601A0L	TRANSISTOR	
Q603	2SD0601A0L	TRANSISTOR	
Q604	2SD0601A0L	TRANSISTOR	
Q605	2SD0601A0L	TRANSISTOR	
Q608	2SD0601A0L	TRANSISTOR	
Q610	BIADCE000012	TRANSISTOR	
Q660	XN0450100L	TRANSISTOR	
Q701	B1MBDLB00002	TRANSISTOR	
Q702	2SD0601A0L	TRANSISTOR	
Q703	2SD0601A0L	TRANSISTOR	
Q841	B1ABCF000176	TRANSISTOR	
Q842	B1ABCF000176	TRANSISTOR	
Q850	B1BCCM000002	TRANSISTOR	
Q853	2SD0601A0L	TRANSISTOR	
Q857	2SC54190QA	TRANSISTOR	
Q871	BIADCE000012	TRANSISTOR	
Q892	B1ABCF000176	TRANSISTOR	
Q945	2SD0601A0L	TRANSISTOR	
Q953	2SC1318	TRANSISTOR	
Q954	2SB1030A	TRANSISTOR	
Q955	2SA21400PSLB	TRANSISTOR	
Q956	2SC59930PSLB	TRANSISTOR	
Q957	BIADCE000012	TRANSISTOR	
Q958	2SD0601A0L	TRANSISTOR	
	RESISTORS		
R001	ERJ6GEYJ101	M 100OHM,J,1/10W	
R002	ERJ6GEYJ101	M 100OHM,J,1/10W	
R003	ERJ6GEYJ100	M 100OHM,J,1/10W	
R005	ERJ6GEYJ512	M 5.1KOHM,J,1/10W	
R006	ERJ6GEYJ473	M 47KOHM,J,1/10W	
R007	ERJ6GEYJ682	M 6.8KOHM,J,1/10W	
R008	ERJ6GEYOR00	M 0OHM,J,1/10W	
R1026	ERJ6ENF2211	F 2.2KOHM, 1/10W	
R1027	ERJ6ENF3241	M3.24KOHM, 1/10W	
R1028	ERJ6ENF5111	F 5.11KOHM, 1/10W	
R1029	ERJ6ENF9091	M9.09KOHM, 1/10W	
R103	ERJ6GEYOR00	M 0OHM,J,1/10W	
R1030	ERJ6ENF2152	M21.5KOHM, 1/10W	
R1031	ERJ6ENF2321	F 2.32KOHM, 1/10W	
R1061	ERJ6GEYJ221	M 220OHM,J,1/10W	
R1062	ERDS2TJ102	C 1KOHM,J, 1/4W	
R1063	ERJ6GEYJ152	M 1.5KOHM,J,1/10W	
R1064	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R1065	ERJ6GEYJ121	M 120OHM,J,1/10W	
R1066	ERJ6GEYJ152	M 1.5KOHM,J,1/10W	
R1068	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	
R107	ERJ6GEYOR00	M 0OHM,J,1/10W	
R108	ERJ6GEYOR00	M 0OHM,J,1/10W	
R1105	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R1106	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R1108	ERJ6GEYJ101	M 100OHM,J,1/10W	
R1109	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R1112	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R1114	ERJ6GEYJ101	M 100OHM,J,1/10W	
R1115	ERJ6GEYJ101	M 100OHM,J,1/10W	
R1116	ERJ6GEYOR00	M 0OHM,J,1/10W	
R1123	ERJ6GEYOR00	M 0OHM,J,1/10W	
R1124	ERJ6GEYOR00	M 0OHM,J,1/10W	
R1126	ERDS2TJ101	C 100OHM,J, 1/4W	
R1131	ERJ6GEYJ220	M 220OHM,J,1/10W	
R1132	ERJ6GEYJ220	M 220OHM,J,1/10W	
R1140	ERJ6ENF1002	M 10KOHM, 1/10W	
R1142	ERJ6GEYJ561	M 560OHM,J,1/10W	
R1201	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R1202	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R1203	ERJ6GEYOR00	M 0OHM,J,1/10W	
R1204	ERJ6GEYOR00	M 0OHM,J,1/10W	
R1228	ERJ6GEYJ220	M 220OHM,J,1/10W	
R1229	ERJ6GEYJ220	M 220OHM,J,1/10W	
R2110	ERJ6GEYOR00	M 0OHM,J,1/10W	
R2112	ERJ6GEYJ102	M 1KOHM,J,1/10W	

Ref. No.	Part No.	Part Name & Description	Remarks
R2113	ERJ6GEYJ562	M 5.6KOHM,J,1/10W	
R2302	ERX2FJSR22E	M 0.22OHM,J, 2W	
R2304	ERJ6GEYJ471	M 470OHM,J,1/10W	
R2305	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R2306	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R2307	ERJ6GEYJ272	M 2.7KOHM,J,1/10W	
R2308	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R2309	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R2310	ERJ6GEYJ471	M 470OHM,J,1/10W	
R2311	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R2312	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R2315	ERJ6GEYJ513	M 51KOHM,J,1/10W	
R2317	ERJ6GEYJ622	M 6.2KOHM,J,1/10W	
R2318	ERJ6GEYJ101	M 100OHM,J,1/10W	
R2319	ERJ6GEYJ101	M 100OHM,J,1/10W	
R2321	ERJ6GEYJ104	M 100KOHM,J,1/10W	
R2322	ERJ6GEYJ104	M 100KOHM,J,1/10W	
R2325	ERDS2TJ2R2	C 2.2OHM,J, 1/4W	
R2326	ERDS2TJ2R2	C 2.2OHM,J, 1/4W	
R2328	ERDS2TJ2R2	C 2.2OHM,J, 1/4W	
R2329	ERDS2TJ2R2	C 2.2OHM,J, 1/4W	
R2334	ERJ6GEYOR00	M 0OHM,J,1/10W	
R253	ERJ6GEYJ751	M 750OHM,J,1/10W	
R255	ERJ6GEYJ751	M 750OHM,J,1/10W	
R256	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	
R257	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	
R3002	ERJ6GEYJ750	M 750OHM, 1/10W	
R3003	ERJ6GEYJ101	M 100OHM,J,1/10W	
R3004	ERJ6GEYJ153	M 15KOHM,J,1/10W	
R3005	ERJ6GEYJ750	M 750OHM, 1/10W	
R3006	ERJ6GEYJ750	M 750OHM, 1/10W	
R3007	ERJ6GEYJ101	M 100OHM,J,1/10W	
R3008	ERJ6GEYJ153	M 15KOHM,J,1/10W	
R3009	ERJ6GEYJ750	M 750OHM, 1/10W	
R301	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R3010	ERJ6GEYJ750	M 750OHM, 1/10W	
R3011	ERJ6GEYJ750	M 750OHM, 1/10W	
R3017	ERJ6GEYOR00	M 0OHM,J,1/10W	
R3018	ERJ6GEYOR00	M 0OHM,J,1/10W	
R302	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R3021	ERJ6GEYJ101	M 100OHM,J,1/10W	
R3022	ERJ6GEYJ153	M 15KOHM,J,1/10W	
R3023	ERJ6GEYJ101	M 100OHM,J,1/10W	
R3024	ERJ6GEYJ153	M 15KOHM,J,1/10W	
R3026	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R303	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R3030	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	
R3031	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R3032	ERJ6GEYJ101	M 100OHM,J,1/10W	
R3034	ERJ6GEYJ101	M 100OHM,J,1/10W	
R3035	ERJ6GEYJ153	M 15KOHM,J,1/10W	
R3036	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	
R3037	ERJ6GEYJ101	M 100OHM,J,1/10W	
R3038	ERJ6GEYJ153	M 15KOHM,J,1/10W	
R3039	ERJ6GEYJ681	M 680OHM,J,1/10W	
R304	ERJ6GEYJ240	F 240OHM,J,1/10W	
R3040	ERJ6GEYJ681	M 680OHM,J,1/10W	
R3041	ERJ6GEYJ153	M 15KOHM,J,1/10W	
R3042	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	
R305	ERJ6GEYJ240	F 240OHM,J,1/10W	
R306	ERJ6GEYJ240	F 240OHM,J,1/10W	
R307	ERJ6GEYJ681	M 680OHM,J,1/10W	
R308	ERJ6GEYJ681	M 680OHM,J,1/10W	
R309	ERJ6GEYJ681	M 680OHM,J,1/10W	
R310	DOAE181JA046	C 180OHM,J,1/4W	
R3101	ERDS2TJ470	C 47OHM,J, 1/4W	
R3102	ERDS2TJ470	C 47OHM,J, 1/4W	
R311	DOAE181JA046	C 180OHM,J,1/4W	
R312	DOAE181JA046	C 180OHM,J,1/4W	
R3140	ERJ6GEYOR00	M 0OHM,J,1/10W	
R3142	ERJ6GEYJ221	M 220OHM,J,1/10W	
R3144	ERJ6GEYJ221	M 220OHM,J,1/10W	
R3152	ERJ6GEYJ153	M 15KOHM,J,1/10W	

Ref. No.	Part No.	Part Name & Description	Remarks
R3153	ERJ6GEYJ153	M 15KOHM,J,1/10W	
R3155	ERJ6GEYJ221	M 220OHM,J,1/10W	
R3156	ERJ6GEYJ221	M 220OHM,J,1/10W	
R317	ERJ6GEYJ151	M 150OHM,J,1/10W	
R318	ERJ6GEYJ151	M 150OHM,J,1/10W	
R319	ERJ6GEYJ151	M 150OHM,J,1/10W	
R3247	ERJ6GEYJ101	M 100OHM,J,1/10W	
R3250	ERJ6GEYJ101	M 100OHM,J,1/10W	
R347	ERJ6GEY0R00	M 0OHM,J,1/10W	
R348	ERJ6GEY0R00	M 0OHM,J,1/10W	
R349	ERJ6GEY0R00	M 0OHM,J,1/10W	
R351	ERJ6GEYJ331	M 330OHM,J,1/10W	
R352	ERJ6GEYJ331	M 330OHM,J,1/10W	
R353	ERJ6GEYJ331	M 330OHM,J,1/10W	
R363	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R364	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R365	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R366	ERDS1TJ152	C 1.5KOHM,J, 1/2W	
R367	ERDS1TJ152	C 1.5KOHM,J, 1/2W	
R368	ERDS1TJ152	C 1.5KOHM,J, 1/2W	
R369	ERJ6GEY0R00	M 0OHM,J,1/10W	
R372	ERQ12AJ121P	F 120OHM,J,1/2W	
R381	ERJ6GEYJ203	M 20KOHM,J,1/10W	
R385	ERJ6GEY0R00	M 0OHM,J,1/10W	
R401	ERDS2TJ104	C 100KOHM,J, 1/4W	
R403	ERJ6GEYJ563	M 56KOHM,J,1/10W	
R404	ERJ6GEYJ183	M 18KOHM,J,1/10W	
R405	ERJ6GEYJ563	M 56KOHM,J,1/10W	
R406	ERDS1TJ1R5	C 1.5OHM,J, 1/2W	
R407	ERDS1TJ221	C 220OHM,J, 1/2W	
R413	ERJ6GEYJ183	M 18KOHM,J,1/10W	
R416	ERDS1TJ1R5	C 1.5OHM,J, 1/2W	
R417	ERDS1TJ1R2	C 1.2OHM,J, 1/2W	
R451	ERJ6GEYJ223	M 22KOHM,J,1/10W	
R453	ERJ6GEY0R00	M 0OHM,J,1/10W	
R4850	ERG2FJ100H	M 10OHM,J, 2W	
R4851	ERJ6GEYJ101	M 100OHM,J,1/10W	
R4852	ERJ6GEYJ333	M 33KOHM,J,1/10W	
R4853	ERJ6GEYJ243	M 24KOHM,J,1/10W	
R4854	ERJ6GEYJ681	M 680OHM,J,1/10W	
R4855	ERJ6GEY0R00	M 0OHM,J,1/10W	
R4857	ERJ6GEYJ681	M 680OHM,J,1/10W	
R4860	ERJ6GEYJ243	M 24KOHM,J,1/10W	
R501	ERJ6GEYJ273	M 27KOHM,J,1/10W	
R502	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R504	ERG2SJS332H	M 3.3KOHM,J, 2W	
R507	ERJ6GEYJ561	M 560OHM,J,1/10W	
R508	ERG3FJ821H	M 820OHM,J, 3W	
R509	ERG3FJ681H	M 820OHM,J, 3W	
R511	ERJ6ENF1052	M11.5KOHM, 1/10W	
R512	ERJ6ENF9531	M9.53KOHM, 1/10W	
R513	ERQ14AJ100P	F 10OHM,J, 1/4W	
R514	ERX12SJR56P	M 0.56OHM, 1/2W	
R515	ERX12SJR56P	M 0.56OHM, 1/2W	
R518	D0DK3R3J0002	W 3.3OHM,J, 10W	
R522	ERJ6GEYJ513	M 51KOHM,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	
R551	ERGLFJ101P	M 1KOHM,J, 1W	
R552	ERGLSJ102P	M 1KOHM,J, 1W	
R553	ERJ6GEYJ183	M 18KOHM,J,1/10W	
R555	ERQ14AJ2R0E	F 2.0OHM,J, 1/4W	
R557	ER050CHF6802	M 68KOHM,J, 1/2W	
R559	ERQ1CJP1R2S	F 1.2OHM,J, 1W	
R580	ERJ6GEYJ392	M 3.9KOHM,J,1/10W	
R581	ERJ6GEYJ563	M 56KOHM,J,1/10W	
R602	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R603	ERJ6GEYJ471	M 470OHM,J,1/10W	
R606	ERJ6GEYJ752	M 7.5KOHM,J,1/10W	
R607	ERJ6GEYJ752	M 7.5KOHM,J,1/10W	
R609	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R610	ERJ6GEYJ101	M 100OHM,J,1/10W	

Ref. No.	Part No.	Part Name & Description	Remarks
R611	ERJ6GEYJ101	M 100OHM,J,1/10W	
R612	ERJ6GEY0R00	M 0OHM,J,1/10W	
R614	ERJ6GEYJ221	M 220OHM,J,1/10W	
R615	ERJ6GEYJ122	M 1.2KOHM,J,1/10W	
R616	ERJ6GEYJ563	M 56KOHM,J,1/10W	
R619	ERJ6GEYJ332	M 3.3KOHM,J,1/10W	
R620	ERJ6ENF1002	M 10KOHM, 1/10W	
R621	ERJ6ENF2002	M 20KOHM, 1/10W	
R622	ERJ6GEYJ821	M 820OHM,J,1/10W	
R624	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R625	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R626	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R627	ERDS2TJ511	C 510KOHM,J,1/10W	
R628	ERJ6GEYJ823	M 82KOHM,J,1/10W	
R629	ERJ6GEY0R00	M 0OHM,J,1/10W	
R631	ERJ6GEYJ152	M 1.5KOHM,J,1/10W	
R632	ERJ6GEYJ562	M 5.6KOHM,J,1/10W	
R633	ERJ6GEYJ471	M 470OHM,J,1/10W	
R634	ERJ6GEYJ151	M 150OHM,J,1/10W	
R635	ERJ6GEYJ151	M 150OHM,J,1/10W	
R637	ERJ6ENF1052	F 10.5KOHM,J,1/10W	
R638	ERJ6ENF1002	M 10KOHM, 1/10W	
R639	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R640	ERJ6GEYJ471	M 470OHM,J,1/10W	
R642	ERJ6GEYJ750	M 75OHM, 1/10W	
R643	ERJ6GEYJ750	M 75OHM, 1/10W	
R644	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R645	ERJ6GEYJ122	M 1.2KOHM,J,1/10W	
R646	ERJ6GEYJ183	M 18KOHM,J,1/10W	
R647	ERJ6GEYJ750	M 75OHM, 1/10W	
R648	ERJ6GEY0R00	M 0OHM,J,1/10W	
R649	ERJ6GEY0R00	M 0OHM,J,1/10W	
R650	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	
R655	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R656	ERJ6GEYJ561	M 560OHM,J,1/10W	
R657	ERJ6GEYJ272	M 2.7KOHM,J,1/10W	
R658	ERJ6GEYJ392	M 3.9KOHM,J,1/10W	
R664	ERJ6GEYJ470	M 47OHM,J,1/10W	
R665	ERJ6GEYJ470	M 47OHM,J,1/10W	
R701	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R702	ERJ6GEYJ680	M 68OHM,J,1/10W	
R703	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R704	ERJ6GEYJ471	M 470OHM,J,1/10W	
R705	ERJ6GEYJ203	M 20KOHM,J,1/10W	
R713	ERG3SJS120H	M 12KOHM,J, 3W	
R715	ERDS2TJ433	C 43KOHM,J, 1/4W	
R810	ERG2FJ470H	M 47OHM,J, 2W	△
R811	ERG2SJS104H	M 100KOHM,J, 2W	
R815	D0DM2R2KA001	W 2.2OHM,K, 15W	
R817	ERGLSJ470P	M 47OHM,J, 1W	
R820	ERX1SZJR18E	M 0.18OHM,J, 1W	
R821	ERX1SZJR18E	M 0.18OHM,J, 1W	
R822	ERG2FJ104H	M 100KOHM,J,2W	
R824	ERDS2TJ102	C 1KOHM,J, 1/4W	
R825	ERDS2TJ102	C 1KOHM,J, 1/4W	
R830	ERDS2TJ201	C 200OHM,J, 1/2W	
R831	ERDS2TJ333	C 33KOHM,J, 1/4W	
R837	ERG2FJ100H	M 10OHM,J, 2W	
R840	ERD75TAJ825	C 8.2MOHM,J, 3/4W	
R842	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	
R843	ERJ6GEY0R00	M 0OHM,J,1/10W	
R844	ERJ6GEY0R00	M 0OHM,J,1/10W	
R845	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	
R846	ERJ6GEYJ470	M 47OHM,J,1/10W	
R849	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	
R850	ERG3SJS470H	M 470OHM, J, 3W	
R851	ERDS2TJ104	C 100KOHM,J, 1/4W	
R852	ERDS2TJ472	C 4.7KOHM,J, 1/4W	
R853	ERJ6GEYJ101	M 100OHM,J,1/10W	
R854	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R862	ERDS2TJ182	C 1.8KOHM,J, 1/4W	
R863	ERDS2TJ221	C 220OHM,J, 1/4W	
R864	ERJ6GEYJ103	M 10KOHM,J,1/10W	

Ref. No.	Part No.	Part Name & Description	Remarks
R866	ERJ6GEYJ392	M 3.9KOHM,J,1/10W	
R867	ERDS1TJ471	C 470OHM,J, 1/2W	
R868	ERDS1TJ221	C 220OHM,J, 1/2W	
R875	ERJ6GEYJ332	M 3.3KOHM,J,1/10W	
R876	ERJ6GEYJ562	M 5.6KOHM,J,1/10W	
R882	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R883	ERX3FJ4R7H	M 4.7OHM,J, 3W	
R884	ERJ6GEYJ433	M 43KOHM,J,1/10W	
R885	ERJ6GEYJ752	M 7.5KOHM,J,1/10W	
R887	ERGLSJ273P	M 27KOHM,J, 1W	
R888	ERDS2TJ682	C 6.8KOHM,J, 1/4W	
R896	ERJ6GEY0R00	M 0OHM,J,1/10W	
R897	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R898	ERJ6GEYJ822	M 8.2KOHM,J,1/10W	
R918	ERQ1CJP331S	F 330OHM,J, 1W	
R952	ERJ6GEYJ223	M 22KOHM,J,1/10W	
R953	ERJ6GEYJ322	M 3.3KOHM,J,1/10W	
R954	ERJ6GEYJ331	M 330OHM,J,1/10W	
R956	ERJ6GEYJ560	M 560OHM,J,1/10W	
R958	ERJ6GEYJ391	M 390OHM,J,1/10W	
R960	ERQ14AJ100E	F 100OHM,J, 1/4W	
R962	ERJ6GEYJ330	M 330OHM,J,1/10W	
R963	ERDS2TJ330	C 330OHM,J, 1/4W	
R964	ERQ14AJ471E	F 470OHM,J, 1/4W	
R965	ERJ6GEYJ223	M 22KOHM,J,1/10W	
R966	ERG2SJ471E	M 470OHM,J, 2W	
R967	ERDS2TJ223	C 22KOHM,J, 1/4W	
R968	ERDS2TJ471	C 470OHM,J, 1/4W	
R969	ERDS2TJ390	C 390OHM,J, 1/4W	
R970	ERDS2TJ2R7	C 2.7OHM,J, 1/4W	
R971	ERDS2TJ2R7	C 2.7OHM,J, 1/4W	
R972	ERDS2TJ390	C 390OHM,J, 1/4W	
R973	ERDS2TJ101	C 100OHM,J, 1/4W	
R975	ERJ6GEYJ101	M 100OHM,J,1/10W	
R976	ERJ6GEYJ101	M 100OHM,J,1/10W	
R977	ERJ6GEYJ561	M 560OHM,J,1/10W	
R978	ERJ6GEYJ101	M 100OHM,J,1/10W	
R984	ERC14GK100	SOLID RESISTOR	
	TRANSFORMERS		
T551	ZTFP14505A	FLYBACK TRANS	△
T553	ETH19Y210AZ	H DRIVE TRANS	△
T801	G4D3Z0000012	SWITCHING TRANS	△
	OTHERS		
CF836	TAP4GA0009	POSISTOR	△
CF837	TAP4GA0009	POSISTOR	△
D1	K1KA13A00140	CONNECTOR	
D2	K1KA13A00140	CONNECTOR	
D5	K1KA13A00138	CONNECTOR	
D7	K1KA07AA0093	CONNECTOR	
D13	K1KA13A00140	CONNECTOR	
D17	K1KA13A00138	CONNECTOR	
D18	K1KA13A00140	CONNECTOR	
DL101	J0C4400A0001	DELAY LINE	△
F840	K5D502BK0003	FUSE	△
G1	K1KA13A00140	CONNECTOR	
G4	K1KA04AA0190	CONNECTOR	
G13	K1KA13A00140	CONNECTOR	
G17	K1KA13A00138	CONNECTOR	
G18	K1KA13A00140	CONNECTOR	
JA10	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA11	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA13	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA14	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA15	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA16	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA17	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA18	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA19	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA2	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA20	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA21	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA22	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA23	ERJ6GEY0R00	M 0OHM,J,1/10W	

Ref. No.	Part No.	Part Name & Description	Remarks
JA24	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA25	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA26	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA27	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA28	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA3	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	
JK3002	K4BK10B00003	REAR AV TERMINAL	
JK3003	K4BK10B00004	REAR AV TERMINAL	
JK3201	K4BK07B00007	FRONT AV TERMINAL	
JSD014	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSD101	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSD102	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSD1125	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSD2311	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSD2312	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSD2314	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSD2315	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSD2320	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSD2321	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSD3043	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSD3044	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSD3045	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSD3046	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSD604	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSD605	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSD612	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSD671	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSD852	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSD869	EXCELDR35V	CORE	
JSG3132	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSG3133	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSG3142	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSG3143	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSG3144	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSG3147	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSG3148	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSG4860	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSG4861	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSG835	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSG843	ERJ6GEY0R00	M 0OHM,J,1/10W	
JSG846	ERJ6GEY0R00	M 0OHM,J,1/10W	
L2	K1KA13A00140	CONNECTOR	
L3	K1KA13A00138	CONNECTOR	
L5	K1ZZ00001301	CONNECTOR	
L6	K1KA03AA0190	CONNECTOR	
LF830	G0B153H00003	CHOKE COIL	
LF831	G0B153H00003	CHOKE COIL	
RL801	K6B1CDA00027	RELAY	△
RM1062	B3RAC0000013	REMOCON RECEIVER	
RT1	K1KA03AA0190	CONNECTOR	
SC351	K3B122A00001	CRT SOCKET	△
SW1011	EVQ11G05R	SWITCH	
SW1012	EVQ11G05R	SWITCH	
SW1013	EVQ11G05R	SWITCH	
SW1014	EVQ11G05R	SWITCH	
SW1015	EVQ11G05R	SWITCH	
SW1016	EVQ11G05R	SWITCH	
SW840	ESB92DA1B	SWITCH	△
TNR001	ENV56K10G3F	TUNER	△
X601	HOD202500002	CRYSTAL OSC	