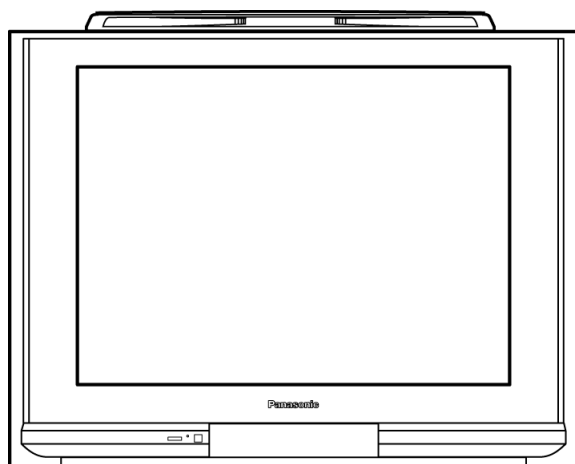


Service Manual

Colour Television



TX-29P180T

MD3N Chassis

Specifications

Power Source	AC Auto 110-240 V, 50/60 Hz	Receiving Channels	Regular TV
Power Consumption	197 W	VHF BAND	2-12 (PAL/SECAM B, K1)
	Standby condition: 11 W		0-12 (PAL B AUST.)
Receiving System			1-9 (PAL B N.Z.)
Function	21 Systems		1-12 (PAL/SECAM D)
Reception of broadcast	PAL B, G, H		1-12 (NTSC M Japan)
transmissions and Playback	PAL I		2-13 (NTSC M U.S.A.)
from Video Cassette Tape	PAL D, K	UHF BAND	21-69 (PAL G,H,I/SECAM G,K,K1)
Recorders	SECAM B, G		28-69 (PAL B AUST.)
	SECAM D, K		13-57 (PAL D,K)
	SECAM K1		13-62 (NTSC M Japan)
	NTSC M (NTSC 3.58/4.5 MHz		14-69 (NTSC M U.S.A.)
Playback from special	NTSC 4.43/5.5 MHz	CATV	S1-S20 (OSCAR)
VCRs	NTSC 4.43/6.0 MHz		1-125 (U.S.A. CATV)
	NTSC 4.43/6.5 MHz		C13-C49 (JAPAN)
	NTSC 3.58/5.5 MHz		S21-S41 (HYPER)
	NTSC 3.58/6.0 MHz		Z1-Z37 (CHINA)
	NTSC 3.58/6.5 MHz)		5A, 9A (AUST.)
	SECAM I	Receiving Stereo System	NICAM I, NICAM B/G, NICAM D, A2
Playback from Special Disc	PAL 60 Hz/5.5 MHz		(German)
Players and Special VCRs	PAL 60 Hz/6.0 MHz	Tuning System	Frequency synthesizer
	PAL 60 Hz/6.5 MHz		Auto Search Tuning
	SECAM 60 Hz/5.5 MHz		POSITION: 100 Position
	SECAM 60 Hz/6.0 MHz		DIRECT: 125 Position
	SECAM 60 Hz/6.5 MHz	High Voltage	31.0 ± 1.0 kV at zero beam current
	NTSC 50 Hz/4.5 MHz	Picture Tube	Overall Picture tube measured

Panasonic®

© 2003 Matsushita Electric Industrial Co., Ltd. All rights reserved. Unauthorized copying and distribution is a violation of law.



	diagonally: 73 cm	Video, Audio L/R terminals	
	Viewable Picture tube measured	AV2 IN (Front): S-Video,	
	diagonally: 68 cm	Video, Audio L/R RGB	
	CRT Deflection: 104°	Terminals	
Audio Output	8W x 2 (Speaker) 14W (Woofer)	AV3 IN (Rear): Video, Audio	
Headphones	3.5 mm Plug	L/R terminals	
Aerial Impedance	75 Ω Unbalanced Coaxial	AV4 IN (Rear): Video or	
Video/Audio/Component		Y/P _B /P _R , Audio L/R	
AV 1, 2, 3, 4		terminals	
	S-Video In Y:1 Vp-p, 75 Ω	RGB Input	High-DENSITY D-sub 15 pin
DVD	C:0:3 Vp-p 75 Ω		31.5 kHz/60 Hz (640 x 480 dot) and
	Y 1.0Vp-p, 75 Ω		31.5 kHz/70 Hz (640 x 400 dot)
	P _B 0.7Vp-p, 75 Ω	Remote Control Transmitter	R6 (AA) Battery x 2
	P _R 0.7Vp-p, 75 Ω		75 Ω coaxial aerial plug
Monitor Out	Video In 1 Vp-p, 75 Ω	Dimensions (W x D x H)	699 mm x 509 mm x 584 mm
	Audio In Approx 0.4 V 47 k Ω	Weight (Mass)	53 kg (Net)
	Video Out 1 Vp-p, 75 Ω		
	Audio Out Approx. 0.4 V 1 k Ω		
AV1 IN (Rear): S-Video,			

Note:

Design and Specifications are subject to change without notice.

Weight and Dimensions shown are approximate.

⚠ WARNING

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

CONTENTS

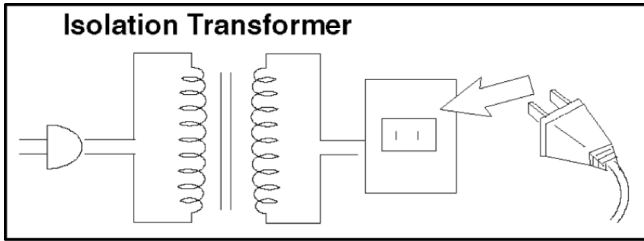
	Page		Page
1 Safety Precautions	4	5.12. GEOMAGNETIC	17
1.1. General Guide	4	5.13. SUB BRIGHT	17
1.2. Leakage Current Cold Check	4	6 DEFLECTION ADJUSTMENT	18
1.3. Leakage Current Hot Check (See Fig. 1)	4	6.1. V-ADJUSTMENT/CONFIRMATION (4:3 MODE)	18
1.4. X-Radiation	5	6.2. H-DEFLECTION CONFIRMATION/ADJUSTMENT (4:3	
2 SERVICE HINTS	6	MODE)	18
2.1. HOW TO REMOVE THE REAR COVER	6	6.3. EW ADJUSTMENT/CONFIRMATION (4:3 MODE)	19
2.2. HOW TO MOVE THE CHASSIS INTO SERVICE		6.4. V LINIALITY ADJUSTMENT / CONFIRMATION (4:3	
POSITION	6	MODE)	20
2.3. HOTEL MODE	6	6.5. DEFLECTION (16:9 MODE) ADJUSTMENT /	
3 SELF CHECK	7	CONFIRMATION	20
4 SERVICE MODE FUNCTION	8	6.6. 525p DEFLECTION ADJUSTMENT / CONFIRMATION - 20	
4.1. HOW TO ENTER SERVICE 1	8	6.7. 625p DEFLECTION ADJUSTMENT	20
4.2. HOW TO ENTER SERVICE 2	8	6.8. VGA480 / 60 Hz DEFLECTION ADJUSTMENT /	
5 ADJUSTMENT PROCEDURE	12	CONFIRMATION	21
5.1. VOLTAGE CONFIRMATION	12	6.9. VGA400 / 70 Hz DEFLECTION ADJUSTMENT /	
5.2. E.H.T CHECK	12	CONFIRMATION	21
5.3. SUB CONTRAST	12	6.10. TABLE 1	22
5.4. SUB TINT	13	7 CONDUCTOR VIEWS	23
5.5. SUB COLOUR	13	7.1. A-Board 1/2	23
5.6. VRS ADJUSTMENT	14	7.2. A-Board 2/2	24
5.7. COLOUR PURITY	15	8 SCHEMATIC DIAGRAMS	25
5.8. CONVERGENCE	15	8.1. SCHEMATIC DIAGRAM NOTES	25
5.9. CUT OFF	16	8.2. G BOARD	27
5.10. WHITE BALANCE	17	8.3. X BOARD	29
5.11. FOCUS	17	8.4. DG BOARD	31

8.5. DG2 BOARD	35	9 PARTS LOCATION	46
8.6. L BOARD	37	10 Replacement Parts List	47
8.7. P BOARD	39	10.1. Replacement Parts List Notes	47
8.8. H BOARD	40	10.2. Replacement Part List	48
8.9. A BOARD	42		

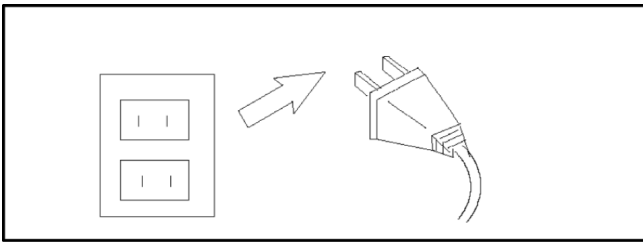
1 Safety Precautions

1.1. General Guide

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



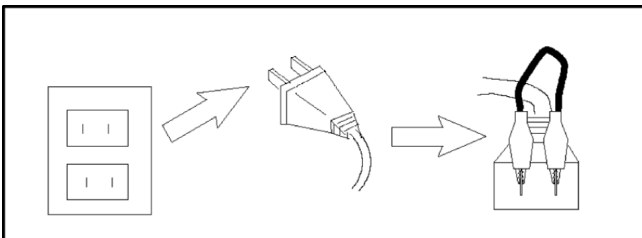
2. When servicing, observe the original lead dress, especially the lead dress in the high voltage circuits. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
3. After servicing, see to it that all the protective devices such as insulation barriers, 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 outlet.



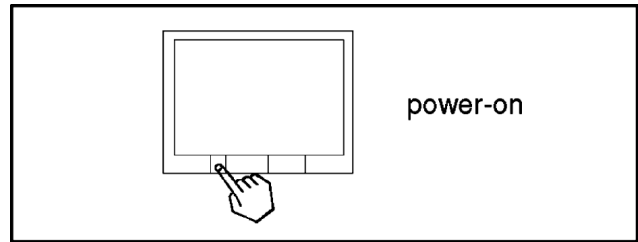
5. Potential, as high as **32.0 kV** is present when this receiver is in operation. Operation of the receiver without the rear cover involves the danger of a shock hazard from the receiver power supply. Servicing should not be attempted by anyone who is not thoroughly familiar with the precautions necessary when working on high voltage equipment. Always discharge the anode of the picture tube to the receiver chassis before handling the tube.
6. 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.



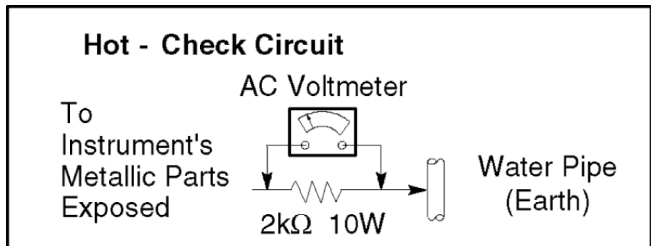
2. Turn on the receiver's power switch.



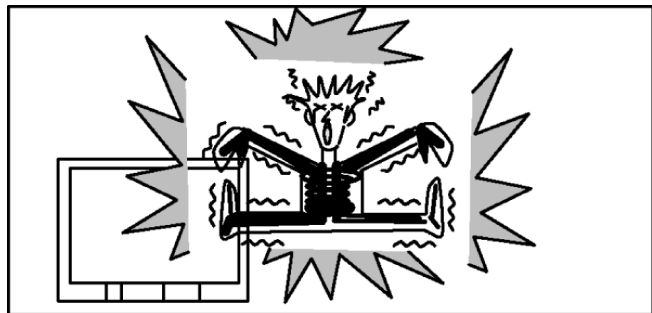
3. Measure the resistance value, with an ohmmeter, between the jumper AC plug and each exposed metallic cabinet part on the receiver, such as screw heads, aerals, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between **4 MΩ and 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 (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 $2\text{k}\Omega$, 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.



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 rechecked before it is returned to the customer.



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 **32.0 kV** without causing X-Radiation.

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

1. Set the brightness to minimum.
2. Measure the High Voltage. The meter reading should indicate **31.0 ± 1 kV**. If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.
3. To prevent the possibility of X-Radiation, it is essential to use the specified picture tube.

2 SERVICE HINTS

2.1. HOW TO REMOVE THE REAR COVER

1. Remove the 9 screws as shown in Fig. 1.

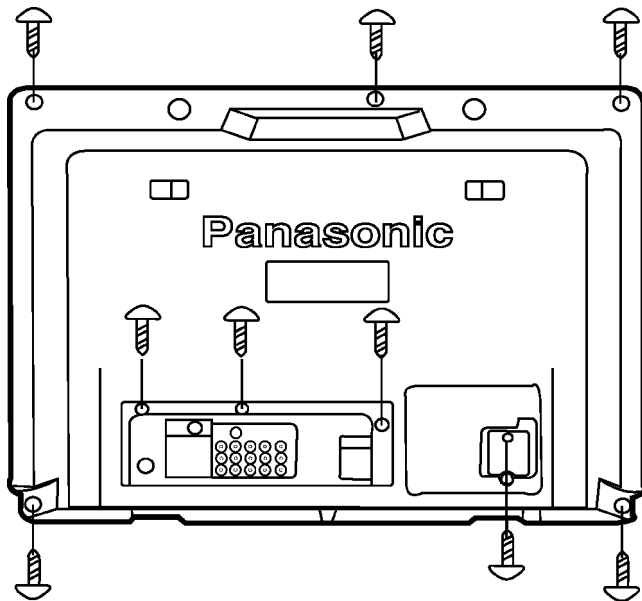
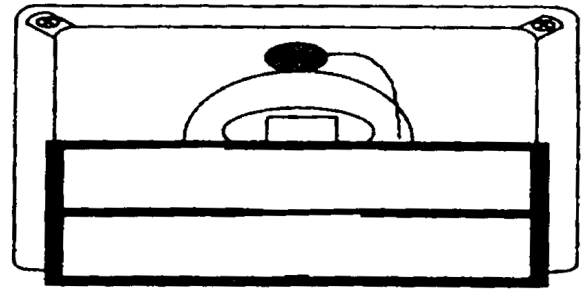
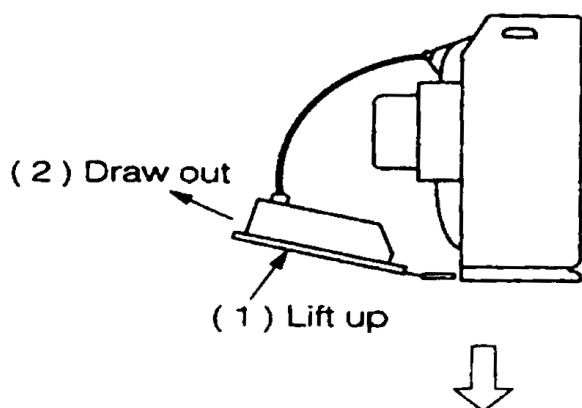


Fig. 1

2.2. HOW TO MOVE THE CHASSIS INTO SERVICE POSITION

1. Hold and lift the rear of the chassis and gently pull the chassis towards you as shown in Fig. 3.
2. Release the respective wiring clips and rotate the chassis vertically through 90° anticlockwise.
3. After servicing replace the bead clamper and ensure all wiring is returned to its original position before returning the receiver to the customer.



2.3. HOTEL MODE

Purpose

1. At Hotels, this Mode prevents the customer from changing the TV preset data such as Channel preset data.

Note: This Mode is useful for Hotels. You should not get into "Hotel mode" with Normal use.

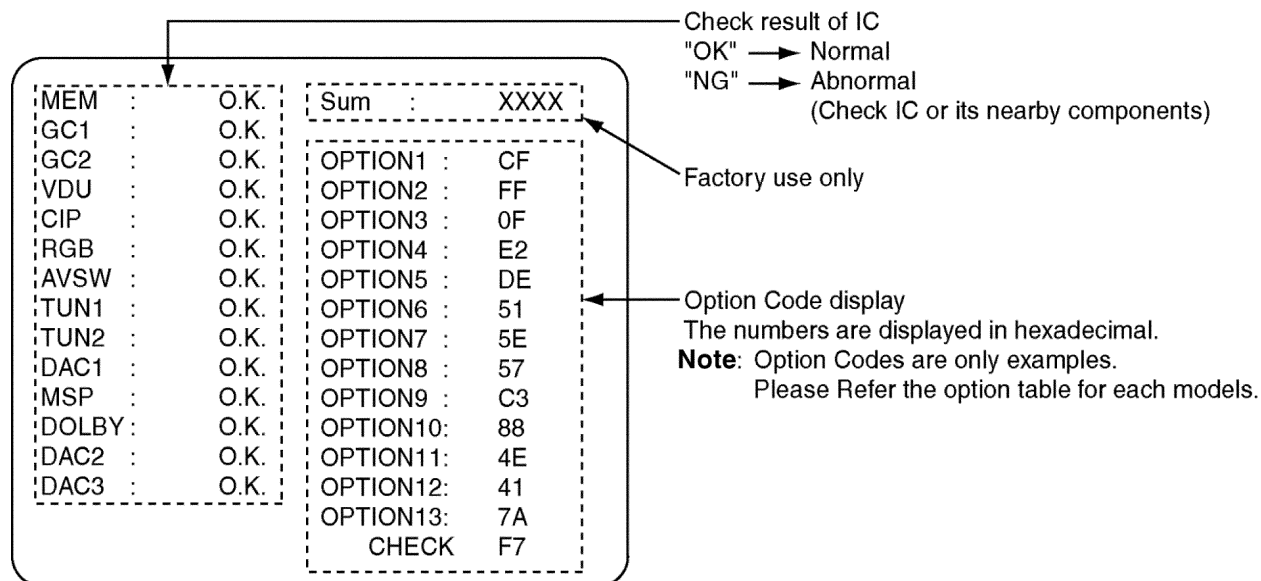
Operation

1. To get into "Hotel Mode", press the remote control "Recall" button and Channel up "[+ / ^]" key on the TV set simultaneously, after setting the "Off-Timer" mode.
2. In this mode, the Channel up and down Function will be enabled as normal and the maximum volume level for this mode is set at the current volume level, i.e. the setting at the level before entering the mode. However, other functions will be disabled.
3. **To exit this mode**, exit "Off-Timer" mode and the "Volume Down [- / v]" key simultaneously.

* This information is informed by Service Manual only.

3 SELF CHECK

1. Self-Check is used to automatically check the bus lines and hexadecimal code of the TV set.
2. To get into the Self-Check mode, press the down n [-/ √] button on the customer controls at the front of the set, at the same time pressing the HELP button on the remote control and the screen will show:



4 SERVICE MODE FUNCTION

MPU controls the functions switching for each IIC through IIC bus in this chassis. The following setting and adjustment can be adjusted by remote control in Service Mode.

4.1. HOW TO ENTER SERVICE 1

1. In sound menu, set BASS to MAX and set TREBLE to MINIMUM.
2. Simultaneously press INDEX button on remote control and VOLUME DOWN button [-] on the TV set.

4.2. HOW TO ENTER SERVICE 2

1. Set the channel to CH99.
2. Press HOLD button on remote control.

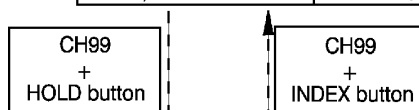
Note:

To exit Service mode, press N or Power button on remote control.

SERVICE 1

Function	Average Data
H-Pos	87
V-Pos	69
H-Amp	80
V-Amp	144
Parabola	42
Trapezoid	123
H-Parallel	7
V-Linear	33
Top-Corner	22
Bottom-Corner	21
V-S-Correct	12
C-Correct	7
DAF-Phase	189
R High (Drive)	158
G High (Drive)	140
B High (Drive)	174
R Low (Cut off)	412
G Low (Cut off)	384
B Low (Cut off)	299
Sub-Bright	83
Sub-Geomagnetic	135
RF AGC 1	23
Sub-Contrast	103
Sub-Colour	38
Sub-NTSC Tint	2
SECAM B-Y	194
SECAM R-Y	69
RF AGC 2	25
Sub-NTSC Tint2	-5
Sub SECAM B-Y	193
Sub SECAM R-Y	68
Video Gain 2	144
SPL Gain	0

- Press the RED/GREEN button to step up/down through the functions.
 - Press the YELLOW/BLUE button to change the function values.
 - Press the STR button after each adjustment has been made to store the required values.
- ① Set the Aspect mode 16:9.
 - a. Receive PAL signal and adjust each item.
 - b. Next, receive NTSC signal and adjust each time
 - ② Set the Aspect mode 4:3.
 - a. Receive PAL signal and confirm the picture.
Adjust each item if necessary.
 - b. Next, receive NTSC signal and confirm the picture.
Adjust each item if necessary.



SERVICE 2

Function	TX-29P180T
OPTION 1	FF
OPTION 2	FF
OPTION 3	00
OPTION 4	DF
OPTION 5	F3
OPTION 6	4D
OPTION 7	FD
OPTION 8	F7
OPTION 9	2C

Options Model		Description		
option1 0E0		00		
	b0	1	Colour system (TV)	PAL(1)
	b1	1		SECAM(1)
	b2	1		NTSC(1)
	b3	1		M.NTSC(1)
	b4	0	Colour system (AV)	PAL(1)
	b5	0		SECAM(1)
	b6	1		NTSC(1)
	b7	1		M.NTSC(1)
option2 0E1		00		
	b0	1	CH Plan	ASIA/M.E/HK/UK/CHINA(1)
	b1	1		NZ/INDNES(1)
	b2	1		AUSTRALIA(1)
	b3	1		E.EUROPE(1)
	b4	1		SPECIAL(1)
	b5	1		AMERICA(1)
	b6	1		CATV(1)
	b7	1		JAPAN(1)
option3 0E2		00		
	b0	1	A2 enable	4.5(1)
	b1	1		5.5(1)
	b2	1		6.0(1)
	b3	1	NICAM enable	6.5(1)
	b4	0		4.5(1)
	b5	0		5.5(1)
	b6	0		6.0(1)
	b7	0		6.5(1)
option4 0E3		00		
	b0	0	A2 select 6.5MHz	5.742MHz(0) 6.742MHz(1)
	b1	1	NICAM priority	ASIA/M.E.(1)
	b2	0		HK/UK(1)
	b3	0		CHINA(1)
	b4	0		NZ/INDONESIA(1)
	b5	1		AUSTRALIA(1)
	b6	1		E.EUROPE(1)
	b7	1		SPECIAL(1)
option5 0E4		00		
	b0	0	Virtual Dolby Surround	enable(1)
	b1	1	NICAM C4 bit	enable(1)
	b2	1	Noise mute	Noise mute enable(1)
	b3	1	Monitor out AV1 mute	Monitor out AV1 mute(1)
	b4	1	SIF	4.5(1)
	b5	1		5.5(1)
	b6	1		6.0(1)
	b7	1		6.5(1)

Options Model		Description	
option6 0E5	00		
	b0	1	Reserved
	b1	0	Geomagnetic Sensor
	b2	0	Geomagnetic Polarity
	b3	0	P.NR.
	b4	1	SASO enable
	b5	0	Search speed
	b6	1	VCR/GAME in search
	b7	0	Tuner
option7 0E6	00		
	b0	0	TEXT
	b1	1	TEXT TOP
	b2	1	TEXT language
	b3	1	
	b4	1	
	b5	0	
	b6	1	
	b7	0	
option8 0E7	00		
	b0	1	VGA
	b1	1	Reserved
	b2	0	Reserved
	b3	0	Australia
	b4	1	OSD language
	b5	0	
	b6	1	
	b7	0	free
option9 0E8	00		
	b0	1	Panasonic LOGO
	b1	1	MPX status
	b2	0	Scan mode AUTO for P-NTSC
	b3	0	free
	b4	0	free
	b5	0	free
	b6	1	X-ray protection
	b7	1	5V detect protection
option10 0E9	00		
	b0	1	free
	b1	1	OSD language
	b2	1	
	b3	1	
	b4	1	free
	b5	1	free
	b6	1	free
	b7	1	Protect 5V detect

Options Model		Description		
option11 0EA		4E		
	b0	0	Shop mode	enable(1)
	b1	1	Full/16.9 display	Reserved
	b2	1	Sub Headphone	enable(1)
	b3	1	Scan mode Blanking	Blanking enable(1)
	b4	0	User aspect 14:9	enable(1)
	b5	0	NICAM C4 bit	enable(1)
	b6	1	ID-1	enable(1)
	b7	0	1080i	enable(1)
option12 0EB		41		
	b0	1	Asia	Asia(1), Europe(0)
	b1	0		
	b2	0	Ireland	not use
	b3	0	UK	not use
	b4	0		
	b5	0		(Reserved for 29 inch etc.)
	b6	1	Large size	52(1) / 42(0) for PTV, 36(1) / 32(0) for wide, 34(1) / 29(0) for 4:3
	b7	0	PTV	PTV (1)
option13 0EC		7A	Temporary	
	b0	0	VDU Version	A21 (0), A12 (1)
	b1	1	GC Version	ES5(0), ES6(1)
	b2	0	UV Swap	Swap(1)
	b3	1	TEXT	Enable(1)
	b4	1	Main GC ES7	ES7(1), ES5/6(0)
	b5	1	Sub GC ES7v	ES7(1), ES5/6(0)
	b6	1		
	b7	0	CIP2	without CIP1(0), with CIP1(1)

5 ADJUSTMENT PROCEDURE

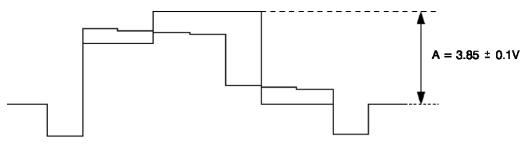
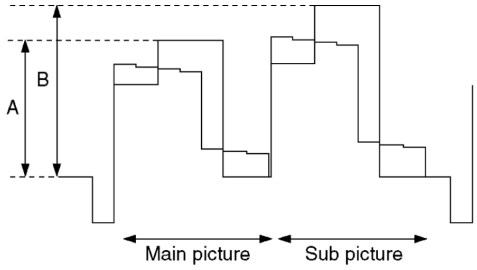
5.1. VOLTAGE CONFIRMATION

Item/Preparation	Adjustment Procedure
1. +B voltage	1. TPA55: $144.8 \pm 1V$ 2. TPA56: $12 \pm 1V$ 3. TPA57: $9 \pm 1V$ 4. TPA: $2.5 \pm 0.25V$

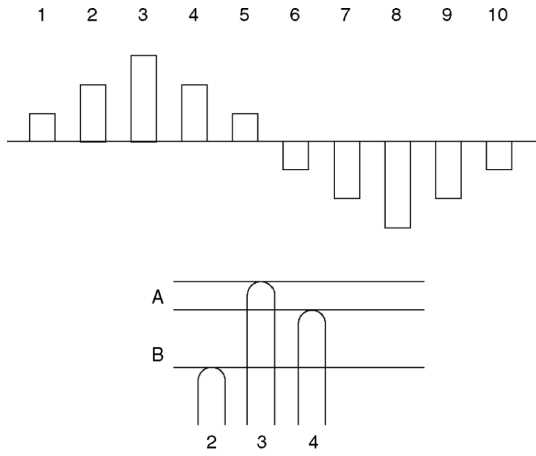
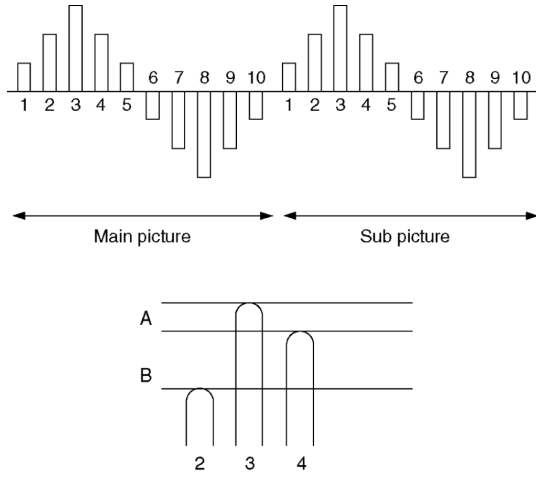
5.2. E.H.T CHECK

Item/Preparation	Adjustment Procedure
1. Receive an RF signal, window or crosshatch pattern. 2. Set the Brightness and Contrast to minimum (0 Beam) 3. Connect the High Voltage Voltmeter to the CRT ANODE CAP. 4. The set should be switched to AV (no input) contrast and brightness minimum.	1. Check the EHT voltage is $(32.0 \pm 1.0) \text{ kV}$. 2. Switch from AV mode to TV. 3. With the Brightness and the contrast controls MAX, check that the high voltage does not drop more than 3.0 kV from the above measurement with R.F. signal.

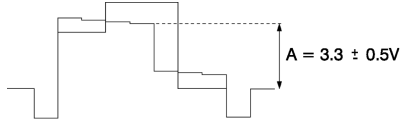
5.3. SUB CONTRAST

Item/Preparation	Adjustment Procedure
1. Receive PAL colour bar pattern 2. Connect oscilloscope to A51 pin 48. 3. Set controls: BRT.....CENTER COLOUR.....CENTER CONTRAST....MAX AI.....OFF	1. Adjust Sub Contrast (Service 1): $A = 3.85 \pm 0.1V$  Fig. 1 2. Adjust Video gain 2 (Service 1) so that Sub picture level B becomes as same as Main picture level A.  Fig. 2

5.4. SUB TINT

Item/Preparation	Adjustment Procedure
1. Receive a 3.58 MHz NTSC rainbow pattern 2. Connect oscilloscope to A51 pin 50. 3. Set controls: BRT.....CENTER COLOUR.....CENTER CONTRAST....MAX NTSC TINT.....CENTER AI.....OFF	1. Adjust Sub NTSC Tint so that the peak of level of waveform is similar to Fig. 3  A:B = 2:3 Fig. 3 2. Receive the Rainbow pattern (3.58 MHz NTSC) on both of Main and Sub pictures. 3. Adjust Sub NTSC Tint 2 so that the peak of level of waveform is similar to Fig. 4.  A:B = 2:3 Fig. 4

5.5. SUB COLOUR

Item/Preparation	Adjustment Procedure
1. Receive a 3.58 MHz NTSC rainbow pattern 2. Connect oscilloscope to A51 pin 48. 3. Set controls: BRT.....CENTER COLOUR.....CENTER CONTRAST....MAX AI.....OFF	1. Adjust Sub Colour: $A = 3.3 \pm 0.5V$  A = 3.3 ± 0.5V Fig. 5

5.6. VRS ADJUSTMENT

1. PREPARATION

- Set DY to CRT not to tilt up and down and left and right deflection. (Fig. 1)
- Set CY to CRT and set CY magnet primarily.
Pur Mg: Set Pur Mg that 2 magnets are vertical position.
VRS Mg: Set VRS Mg that 2 magnets are side position.
- Set geomagnetic correction DAC [0].

2. ADJUSTMENT

- Receive the white balance pattern.
- Adjust V-CENTER.
- Set R,B CUT OFF to minimum (0) and set G CUT OFF to center (511).
- Receive the aging pattern.
- Set 2 magnets of vertical position to up and down equally so that center part of CRT. (Fig. 3)

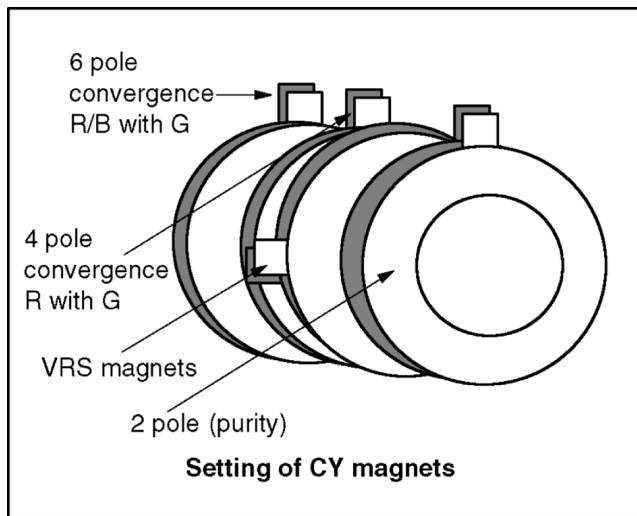


Fig. 1

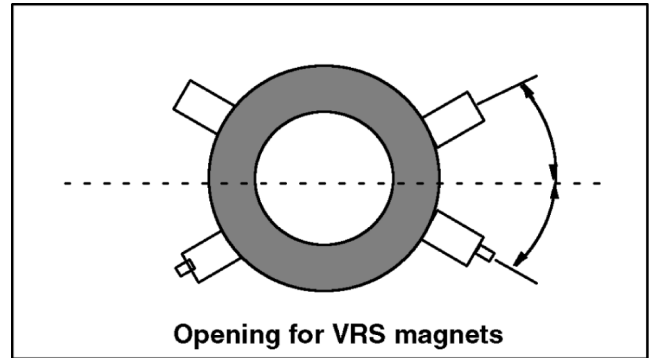


Fig. 2

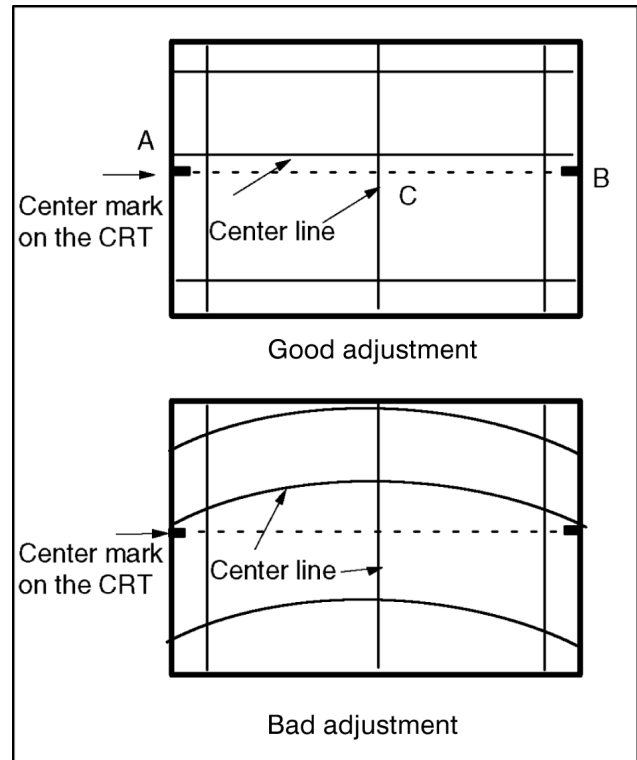
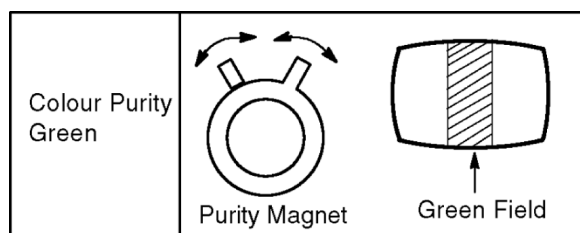


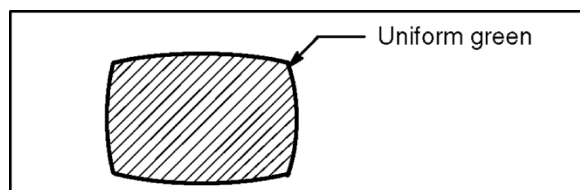
Fig. 3

5.7. COLOUR PURITY

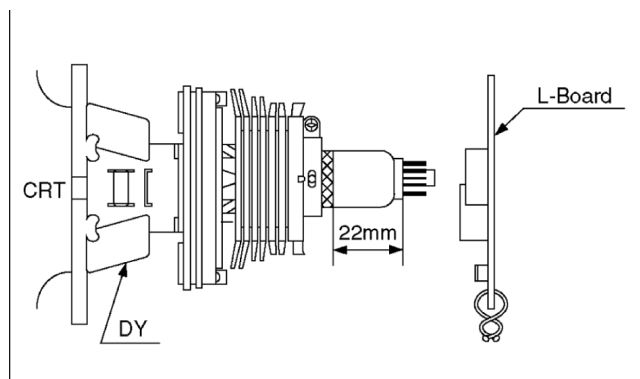
1. Operate the TV set for over 60 minutes.
2. Receive a purity pattern signal. (white pattern)
3. Set Bright and Contrast controls to their maximum positions.
4. Set V-POS to 63 DAC.
5. Adjust roughly the static convergence magnets.
6. Fully degauss the picture tube using an external degaussing coil.
7. Loosen a clamp screw for the deflection yoke and move the deflection yoke as close to the purity magnet as possible.
8. Adjust the purity magnet so that a vertical green field is obtained at the center of the screen.



9. Slowly press the deflection yoke and set it where a uniform green field is obtained.



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



5.8. CONVERGENCE

1. INSTRUMENT

- a. Helmholtz device

2. PREPARATION

- a. Set the Helmholtz device to local magnetic field.
Horizontal: $0 \pm 0.03 \times 10^{-4} \text{ T}$
- b. Receive the cross hatch pattern.
- c. Picture menu: DYNAMIC Normal and adjust BRIGHT DAC until gray portion of cross hatch.

- d. Set DY to CRT not to tilt (up and down and left and right).

3. ADJUSTMENT

a. Static convergence Adjustment

- a. Make sure that magnets are positioned shown in Fig. 1.
- b. Adjust 4-pole magnets (Fig. 1) to align center dots of R and B and adjust 6-pole magnets to align center dots to G.
- c. After adjustment, secure magnets with magnet lock of white lacquer.

*Beams move with rotating when static magnets are turned.

Rotational reduce of beams differs by angle of two magnets.

Therefore, repeat magnet adjustments several times so that all are aligned completely.

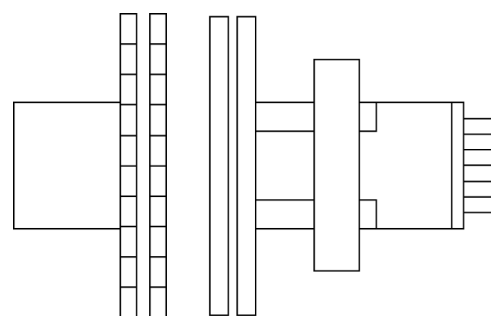


Fig. 1

b. YHC, YV, XV, Adjustment (Fig. 2)

- a. Adjust so that Static and Dynamic convergence is best with YHC, VR, YV and XV coil.

In case of static convergence is tilted, repeat (1) Static convergence Adjustment.

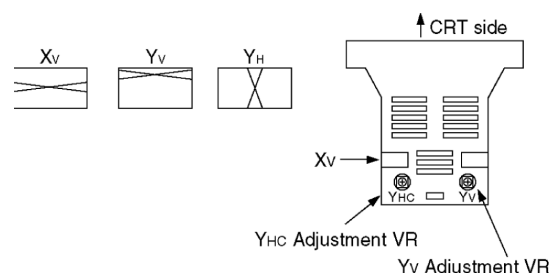


Fig. 2

c. Dynamic convergence Adjustment

- a. When dynamic convergence is bad, fixing permalloy between neck and DY so that dynamic convergence is best.

4. Confirm that left upper side line is straight.

When left upper side line isn't straight, put magnet on DY and adjust the left upper side line to straight.

5.9. CUT OFF

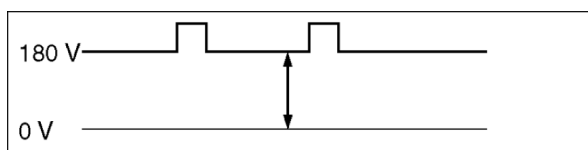
Preparation

1. Receive a colour bar signal with colour "OFF" and operate the TV set more than 15 minutes.
2. Set the picture menu to "DYNAMIC NORMAL" and the AI to off.
3. Connect an oscilloscope to TPL7 with DC mode.
4. Set the TV set to Service Mode 1.
5. Screen VR: Min.
6. Set the data level of SUB BRIGHT, R, G, B-CUTOFF and R, G, B-DRIVE to the table values.

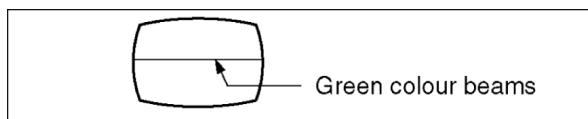
Display	Data Level
R High (R-CUT OFF)	256
G High (G-CUT OFF)	512
B High (B-CUT OFF)	256
R Low (R-DRIVE)	128
G Low (G-DRIVE)	128
B Low (B-DRIVE)	128
SUB BRIGHT	136

Adjustment

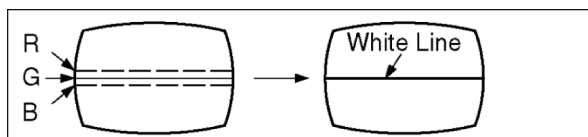
1. Select G-CUTOFF adjustment mode and collapse vertical scan.
2. Adjust G-CUTOFF control to become the DC = 0V to video level at 180V as shown below.



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 that do not adjust the G-CUTOFF setting in the following procedure.



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

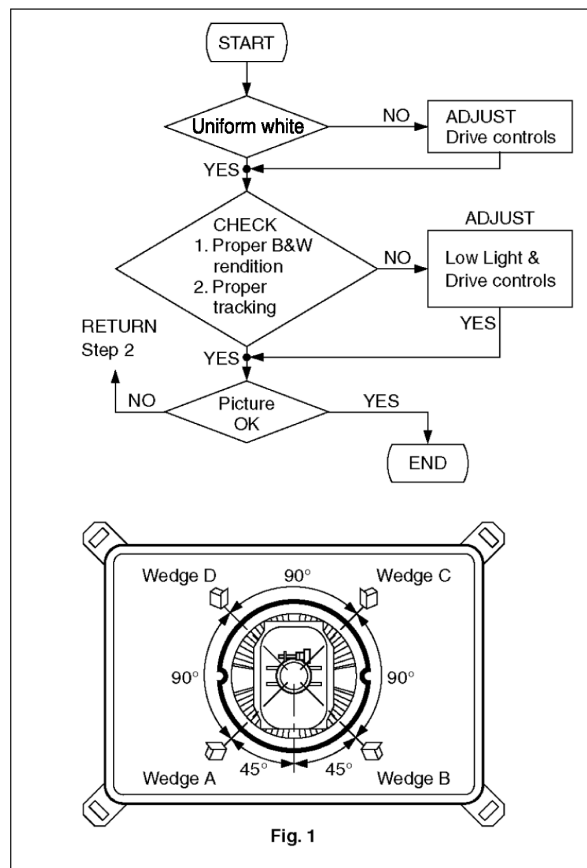


5. Return to full field SCAN by pushing the position 5 key on the remote control.
6. Adjust the R-Drive and B-Drive controls as to obtain uniform white on the white bar of the greyscale pattern.

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.



8. Wedge A shown in Fig. 1 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.

5.10. WHITE BALANCE

Item/Preparation	Adjustment Procedure
1. Select Service Mode 1. 2. Aging should have been performed over 30 minutes 3. Receive the white balance pattern. 4. Picture menu: DYNAMIC NORMAL AI: OFF 5. Degauss the CRT face. 6. Connect the photo sensors of the Colour Analyser to the CRT. Note: CRT cut off adjustment is completed.	1. Adjustment of Low Light - Adjustment SUB BRIGHT, so that "Y" axis indicates 6.5 - Adjustment R-CUT OFF, so that y axis indicates 0.248. - Adjustment B-CUT OFF, so that x axis indicates 0.247. 2. Adjustment of High Light - Adjust SUB BRIGHT, so that "Y" axis indicates 150. - Adjust R-DRIVE, so that y axis indicates 0.264. - Adjust B-DRIVE, so that x axis indicates 0.258.

5.11. FOCUS

Item/Preparation	Adjustment Procedure
1. Receive a cross-hatch pattern signal.	1. Adjust the Focus to thin all the Lines by Focus 1 Control. (Prefer to thin the Vertical Lines than Horizontal Line.) 2. Adjust the Focus to thin the Horizontal Lines by Focus 2 Control.

5.12. GEOMAGNETIC

Item/Preparation	Adjustment Procedure
1. Demagnetize the GM-Board around its perimeter with the Demagnetizer. 2. Set to control: Geomagnetic.....Auto	1. Connect a DC voltage meter to TPGM1-2pin (GM-Board) 2. Adjust the R4863 (GM-Board) so that the Vx Out at TPGM1-2pin becomes 4.9 ± 0.05 V 3. Connect a DC voltage meter to TPGM1-1pin (GM Board). 4. Adjust the R4861 (GM-Board) so that the Vy Out at TPGM1-1pin becomes 4.9 ± 0.05 V

5.13. SUB BRIGHT

Item/Preparation	Adjustment Procedure
1. Receive the sub bright pattern. 2. Picture Menu: BRT.....CENTER COLOUR.....CENTER CONT.....MAX 3. Connect the photo sensor of the Colour Analyser to the center of the CRT.	1. Adjust Sub Bright so that brightness level becomes 1 ± 0.2 cd/m ² .

6 DEFLECTION ADJUSTMENT

6.1. V-ADJUSTMENT/ CONFIRMATION (4:3 MODE)

6.1.1. V-CENTER ADJUSTMENT (4:3 MODE)

6.1.1.1. 100i V-POS ADJUSTMENT

1. Receive PAL monoscope pattern.
2. Set scan mode to 100Hz by remote control key.
3. Adjust V-POS (100i / 4:3) so that the scale of the top and bottom side is equal.

6.1.1.2. 120i V-POS ADJUSTMENT

1. Receive NTSC monoscope pattern.
2. Set scan mode to 100Hz by remote control key.
3. Adjust V-POS (120i / 4:3) so that the scale of the top and bottom side is equal.

6.1.1.3. 50p V-POS ADJUSTMENT

1. Receive PAL monoscope pattern.
2. Set scan mode to progressive by remote control key.
3. Adjust V-POS (50p / 4:3) so that the scale of the top and bottom side is equal.

6.1.1.4. 60p V-POS ADJUSTMENT

1. Receive NTSC monoscope pattern.
2. Set scan mode to progressive by remote control key.
3. Adjust V-POS (60p / 4:3) so that the scale of the top and bottom side is equal.

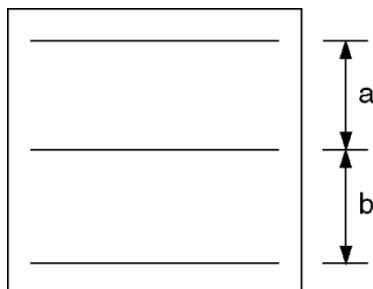


Fig. 1

6.1.2. V-HEIGHT ADJUSTMENT (4:3 MODE)

6.1.2.1. 100i V-AMP ADJUSTMENT

1. Receive PAL monoscope pattern.
2. Set scan mode to 100 Hz by remote control key.
3. Adjust V-AMP (100i / 4:3) so that B, D (Fig. 2) is 2.1 ± 0.1 .

6.1.2.2. 120i V-AMP ADJUSTMENT

1. Receive NTSC monoscope pattern.
2. Set scan mode to 100 Hz by remote control key.
3. Adjust V-AMP (120i / 4:3) so that B, D (Fig. 2) is 2.1 ± 0.1 .

6.1.2.3. 50p V-AMP ADJUSTMENT

1. Receive PAL monoscope pattern.
2. Set scan mode to progressive by remote control key.
3. Adjust V-AMP (50p / 4:3) so that B, D (Fig. 2) is 2.1 ± 0.1 .

6.1.2.4. 60p V-AMP ADJUSTMENT

1. Receive NTSC monoscope pattern.
2. Set scan mode to progressive by remote control key.
3. Adjust V-AMP (60p / 4:3) so that B, D (Fig. 2) is 2.1 ± 0.1 .

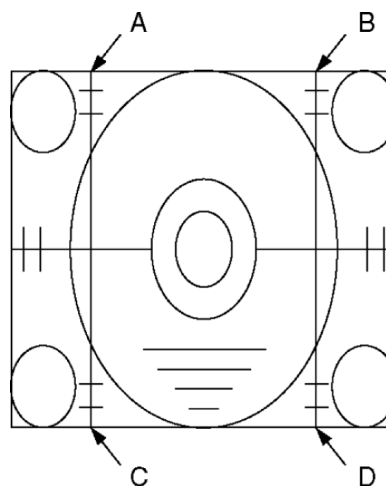


Fig. 2

6.2. H-DEFLECTION CONFIRMATION/ADJUSTMENT (4:3 MODE)

6.2.1. H-CENTER ADJUSTMENT (4:3 MODE)

6.2.1.1. 100i H-POS ADJUSTMENT

1. Receive PAL monoscope pattern.
2. Set scan mode to 100 Hz by remote control key.
3. Adjust H-POS (100i / 4:3) so that the horizontal position is center of CRT.

6.2.1.2. 120i H-POS ADJUSTMENT

1. Receive NTSC monoscope pattern.
2. Set scan mode to 100 Hz by remote control key.
3. Adjust H-POS (120i / 4:3) so that the horizontal position is center of CRT.

6.2.2. H-WIDTH ADJUSTMENT (4:3 MODE)

6.2.2.1. 100i H-AMP ADJUSTMENT

1. Receive PAL monoscope pattern.
2. Set scan mode to 100 Hz by remote control key.
3. Adjust H-AMP (100i / 4:3) so that both of the edges are within A, B = 2.5 ± 0.2 .

6.2.2.2. 120i H-AMP ADJUSTMENT

1. Receive NTSC monoscope pattern.
2. Set scan mode to 100 Hz by remote control key.
3. Adjust H-AMP (120i / 4:3) so that both of the edges are within A, B = 2.5 ± 0.2 .

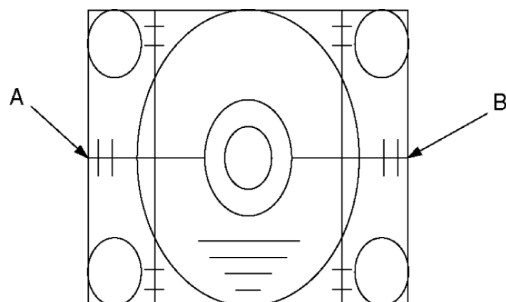


Fig. 3

6.3. EW ADJUSTMENT/CONFIRMATION (4:3 MODE)

6.3.1. 100i SIDE EW ADJUSTMENT (4:3 MODE)

1. Receive PAL cross-hatch pattern.
2. Set scan mode to 100 Hz by remote control key.
3. Adjust the vertical line to straight by Parabola (100i / 4:3).
4. Adjust the vertical line to straight line of both sides vertical line in Fig. 4 by Trapezoid (100i / 4:3).
5. Confirm there is no H-parallel distortion.
If there is distortion, adjust by H-Parallel (100i / 4:3).
In that case, repeat 4 and 5 so that there is no trapezoid / parallel distortion.
6. Confirmation EW of the corner side.
If need, adjust Top-Corner (100i / 4:3) and Bottom Corner (100i / 4:3).
7. Confirm bow level of the both side.
If it is not symmetrical, adjust C-Correct (100i / 4:3).

6.3.2. 120i EW ADJUSTMENT (4:3 MODE)

1. Receive NTSC cross-hatch pattern.
2. Set scan mode to 100 Hz by remote control key.
3. Adjust the vertical line to straight by Parabola (120i / 4:3).
4. Adjust the vertical line to straight line of both sides vertical line in Fig. 4 by Trapezoid (120i / 4:3).
5. Confirm there is no H-parallel distortion.
If there is distortion, adjust by H-Parallel (120i / 4:3).
In that case, repeat 4 and 5 so that there is no trapezoid / parallel distortion.
6. Confirmation EW of the corner side.
If need, adjust Top-Corner (120i / 4:3) and Bottom Corner (120i / 4:3).
7. Confirm bow level of the both side.
If it is not symmetrical, adjust C-Correct (120i / 4:3).

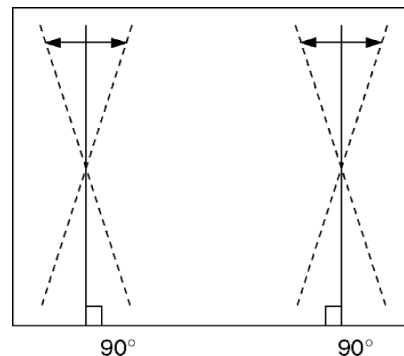


Fig. 4

6.3.3. 50p EW ADJUSTMENT (4:3 MODE)

1. Receive PAL cross-hatch pattern.
2. Set scan mode to progressive by remote control key.
3. Adjust the vertical line to straight by Parabola (50p / 4:3).
4. Adjust the vertical line to straight line of both sides vertical line in Fig. 5 by Trapezoid (50p / 4:3).
5. Confirm there is no H-parallel distortion.
If there is distortion, adjust by H-Parallel (50p / 4:3).
In that case, repeat 4 and 5 so that there is no trapezoid / parallel distortion.
6. Confirmation EW of the corner side.
If need, adjust Top-Corner (50p / 4:3) and Bottom Corner (50p / 4:3).
7. Confirm bow level of the both side.
If it is not symmetrical, adjust C-Correct (50p / 4:3).

6.3.4. 60p SIDE PINCUSSION ADJUSTMENT (4:3 MODE)

1. Receive NTSC cross-hatch pattern.
2. Set scan mode to progressive by remote control key.
3. Adjust the vertical line to straight by Parabola (60p / 4:3).
4. Adjust the vertical line to straight line of both sides vertical line in Fig. 5 by Trapezoid (60p / 4:3).
5. Confirm there is no H-parallel distortion.
If there is distortion, adjust by H-Parallel (60p / 4:3).
In that case, repeat 4 and 5 so that there is no trapezoid / parallel distortion.
6. Confirmation EW of the corner side.
If need, adjust Top-Corner (60p / 4:3) and Bottom Corner (60p / 4:3).
7. Confirm bow level of the both side.
If it is not symmetrical, adjust C-Correct (60p / 4:3).

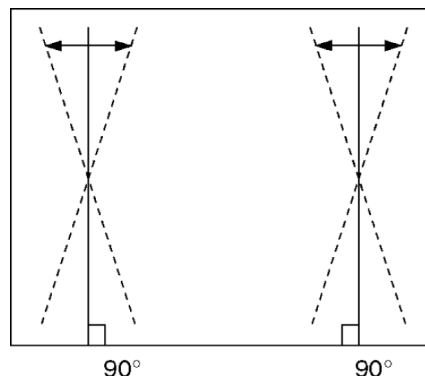


Fig. 5

6.4. V LINIALITY ADJUSTMENT / CONFIRMATION (4:3 MODE)

6.4.1. 100i V-Linear ADJUSTMENT

1. Receive PAL monoscope pattern.
2. Set scan mode to 100 Hz by remote control key.
3. Confirm V-linear (100i / 4:3) as to the balance of circle.
If needed, adjust V-linear (100i / 4:3).

6.4.2. 120i V-Linear ADJUSTMENT

1. Receive NTSC monoscope pattern.
2. Set scan mode to 100 Hz by remote control key.
3. Confirm V-linear (120i / 4:3) as to the balance of circle.
If needed, adjust V-linear (120i / 4:3).

6.4.3. 50p V-Linear ADJUSTMENT

1. Receive PAL monoscope pattern.
2. Set scan mode to progressive by remote control key.
3. Confirm V-linear (50p / 4:3) as to the balance of circle.
If needed, adjust V-linear (50p / 4:3).

6.4.4. 60p V-Linear ADJUSTMENT

1. Receive NTSC monoscope pattern.
2. Set scan mode to progressive by remote control key.
3. Confirm V-linear (60p / 4:3) as to the balance of circle.
If needed, adjust V-linear (60p / 4:3).

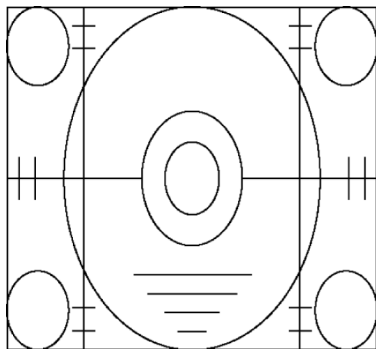


Fig. 6

6.5. DEFLECTION (16:9 MODE) ADJUSTMENT / CONFIRMATION

6.5.1. DATA SETTING (16:9)

1. Copy the adjusted data of 100i / 4:3 mode to 100i / 16:9 in the table 1 (Except H-POS, V-S-Correct).
2. Copy the adjusted data of 120i / 4:3 mode to 120i / 16:9 in the table 1 (Except H-POS, V-S-Correct).
3. Copy the adjusted data of 50p / 4:3 mode to 50p / 16:9 in the table 1 (Except H-POS, H-AMP, V-S-Correct, C-Correct) and copy the data of 100i / 4:3 to 50p / 16:9 about H-AMP and C-Correct.
4. Copy the adjusted data of 60p / 4:3 mode to 60p / 16:9 in the table 1 (Except H-POS, H-AMP, V-S-Correct, C-Correct) and copy the data of 120i / 4:3 to 60p / 16:9 about H-AMP and C-Correct.

6.5.2. V-AMP (16:9) ADJUSTMENT

1. Receive PAL monoscope pattern.
2. Set the aspect to 16:9
3. Set scan mode to 100 Hz
4. Confirm that A, B in Fig. 7 is 5.0 cm $\pm$ 1 cm. If not, adjust V-AMP (100i / 16:9).
5. Set scan mode to progressive.
6. Confirm that A, B in Fig. 7 is 5.0 cm $\pm$ 1 cm. If not, adjust V-AMP (50p / 16:9).
7. Receive NTSC monoscope pattern.
8. Set scan mode to 100 Hz.
9. Confirm that A, B in Fig. 7 is 5.0 cm $\pm$ 1 cm. If not, adjust V-AMP (120i / 16:9).
10. Set scan mode to progressive.
11. Confirm that A, B in Fig. 7 is 5.0 cm $\pm$ 1 cm. If not, adjust V-AMP (60p / 16:9).

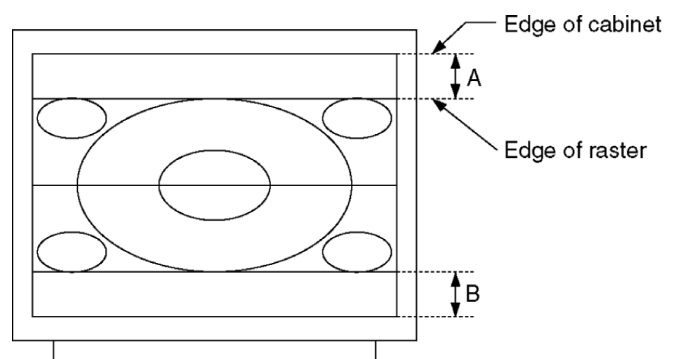


Fig. 7

6.6. 525p DEFLECTION ADJUSTMENT / CONFIRMATION

6.6.1. V, H-HOLD CONFIRMATION

1. Receive 525p signal through Yuv input.
2. Confirm V, H-hold is normal.

6.6.2. H-CENTER (525p) CONFIRMATION / ADJUSTMENT

1. Receive 525p signal.
2. Copy the data of 00h to EEROM ADDRESS [333] (525p / H-POS).
3. Copy the data of F5h to EEROM ADDRESS [332] (525p / H-POS).
4. Confirm H-center and if needed, adjust H-POS (525p).

6.7. 625p DEFLECTION ADJUSTMENT

6.7.1. H-CENTER (625p) ADJUSTMENT

1. Receive 625p signal.
2. Copy the data of EEROM ADDRESS [332] (525p / H-POS) to EEROM ADDRESS [330] (625p / H-POS).
3. Copy the data of EEROM ADDRESS [333] (525p / H-POS) to EEROM ADDRESS [331] (625p / H-POS).

6.8. VGA480 / 60 Hz DEFLECTION ADJUSTMENT / CONFIRMATION

6.8.1. V-CENTER ADJUSTMENT

1. Adjust V-POS (VGA) so that center of the crosshatch pattern is center of the CRT.

6.8.2. V-HEIGHT ADJUSTMENT

1. Adjust V-AMP (VGA) so that $A = B$ in Fig. 8.

6.8.3. H-CENTER ADJUSTMENT

1. Adjust H-POS (VGA) so that horizontal position is center of CRT.

6.8.4. H-WIDTH ADJUSTMENT

1. Adjust H-AMP (VGA) so that $C = D$ in Fig. 8.

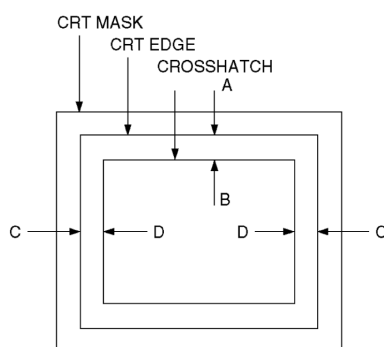


Fig. 8

6.8.5. EW ADJUSTMENT

1. Adjust the vertical line to straight line by Parabola (VGA).
2. Adjust the vertical line to straight line of both side vertical line in Fig. 9 by Trapezoid (VGA).
3. Confirm there is no H-Parallel distortion.
If there is distortion, adjust by H-Parallel (VGA).
In that case, repeat 2 and 3 so that there is no trapezoid / parallel distortion.
4. Confirmation vertical pincushion of the corner side.
If needed, adjust Top-Corner (VGA) and Bottom-Corner (VGA).
5. Confirm bow level of the both side.
If it is not symmetrical, adjust C-Correct (VGA).
6. Set H-SIZE in the user control to NORMAL.
(No need, if SELF CHECK is done before shipping.)

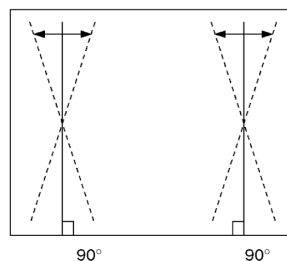


Fig. 9

6.9. VGA400 / 70 Hz DEFLECTION ADJUSTMENT / CONFIRMATION

6.9.1. V-CENTER ADJUSTMENT

1. Adjust V-POS (VGA 400) so that center of the crosshatch pattern is center of the CRT.

6.9.2. V-HEIGHT ADJUSTMENT

1. Adjust V-AMP (VGA 400) so that $A = B$ in Fig. 10.
2. Add 10 dac to the above data and set to EEPROM [336].

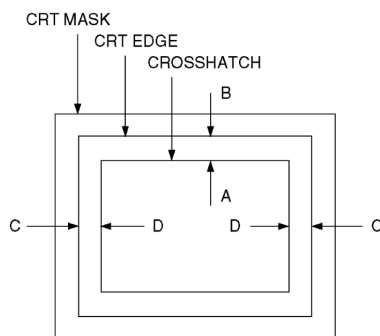


Fig. 10.

6.9.3. V-LINEARITY CONFIRMATION / ADJUSTMENT

1. Confirm V-linear as to the balance of the circle.
If needed, adjust V-linear (VGA 400).

6.9.4. EW ADJUSTMENT

1. Confirm the vertical line is straight line.
If needed, adjust the vertical line to straight line by Parabola (VGA 400).
2. Confirm both sides vertical line in Fig. 1 are straight line.
If needed, adjust the vertical line to straight line of both side vertical line in Fig. 11 by Trapezoid (VGA 400).
3. Set H-SIZE in the user control to NORMAL.
(No need, if SELF CHECK is done before shipping.)

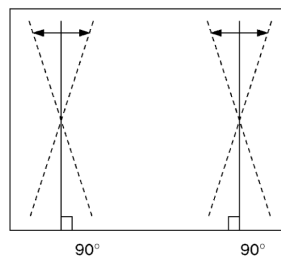


Fig. 11.

6.10. TABLE 1

mode	100i (PAL) (4:3)	100i (PAL) (16:9)	120i (NTSC) (4:3)	120i (NTSC) (16:9)	50p (PAL) (4:3)	50p (PAL) (16:9)	60p (NTSC) (4:3)	60p (NTSC) (16:9)	525p (YUV) 4:3	525p (YUV) 16:9	625p (YUV) 4:3	625p (YUV) 16:9	VGA 480/60Hz	VGA 400/70Hz
H-POS	ADJ D00	- -	- -	- -	- -	- -	- -	- -	ADJ D02	- -	COPY D01	- -	ADJ D03	- -
V-POS	ADJ D10	COPY D10 D14	ADJ D11	COPY D11 D15	ADJ D12	COPY D12 D16	ADJ D13	COPY D13 D17	ADJ D19	- -	ADJ D18	- -	ADJ D1A	- -
H-AMP	ADJ D27	ADJ D2B	COPY D27 D28	COPY D2B D2C	COPY D27 D29	COPY D2B D2D	COPY D27 D2A	COPY D2B D2E	ADJ D30	- -	ADJ D2F	- -	ADJ D31	- -
V-AMP	ADJ D3E	ADJ D42	ADJ D3F	ADJ D43	ADJ D40	ADJ D44	ADJ D41	ADJ D45	ADJ D47	- -	COPY D46	- -	ADJ D48	- -
V-BLK	ADJ D55	ADJ D59	COPY D55 D56	COPY D59 D5A	COPY D55 D57	COPY D59 D5B	COPY D55 D58	COPY D59 D5C	ADJ D5E	- -	ADJ D5D	- -	ADJ D5F	- -
Parabola	ADJ D6C	ADJ D70	COPY D6C D6D	COPY D70 D71	COPY D6C D6E	COPY D70 D72	COPY D6C D6F	COPY D70 D73	ADJ D75	- -	ADJ D74	- -	ADJ D76	- -
Trapezoid	ADJ D83	ADJ D87	ADJ D84	ADJ D88	ADJ D85	ADJ D89	ADJ D86	ADJ D8A	ADJ D8C	- -	COPY D8B	- -	ADJ D8D	- -
V-Linear	ADJ D9A	COPY D9A D9E	ADJ D9B	COPY D9B D9F	ADJ D9C	COPY D9C DA0	ADJ D9D	COPY D9D DA1	ADJ DA3	- -	ADJ DA2	- -	ADJ DA4	- -
Top -Corner	ADJ DB1	ADJ DB5	ADJ DB2	ADJ DB6	ADJ DB3	ADJ DB7	ADJ DB4	ADJ DB8	ADJ DBA	- -	ADJ DB9	- -	ADJ DD2	- -
Bottom -Corner	ADJ DC8	ADJ DCC	ADJ DC9	ADJ DCD	ADJ DCA	ADJ DCE	ADJ DCB	ADJ DCF	ADJ DD1	- -	ADJ DD0	- -	ADJ DD2	- -
V-S -Correct	FIX (2B) DDF	FIX (19) DE3	FIX (22) DE0	FIX (20) DE4	FIX (2C) DE1	FIX (1E) DE5	FIX (31) DE2	FIX (20) DE6	FIX (2E) DE8	- -	FIX (2D) DE7	- -	FIX (20) DE9	- -

[].....EEPOM ADDRESS

8 SCHEMATIC DIAGRAMS

8.1. SCHEMATIC DIAGRAM NOTES

Important Safety Notice

Components identified by $\triangle$ 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 resistor, unless marked as follows:

Unit of resistance is OHM [Ω] (K=1,000, M=1,000,000).

$\bigcirc$	: Nonflammable	$\boxtimes$	: Metal Oxide
$\triangle$	: Solid	$\odot$	: Metal Film
$\boxplus$	: Wire Wound	$\otimes$	: Fuse:

2. Capacitor

All capacitors are ceramic 50V capacitor, unless marked as follows:

Unit of capacitance is μ F, unless otherwise noted.

$\otimes$	: Temperature Compensation	$\overset{+}{\text{H}}\text{---}$	: Electrolytic
$\textcircled{M}$	: Polyester	$\overset{NP}{\text{H}}\text{---}$	: Bipolar
$\textcircled{m}$	: Metalized Polyester	$\textcircled{1}$	: Dipped Tantalum
$\boxtimes$	: Polypropylene	$\textcircled{Z}$	: Z-Type

3. Coil

Unit of inductance is μ H, unless otherwise noted.

4. Test Point

$\bigcirc$: Test Point position

5. Earth Symbol

$\text{---}\text{---}\text{---}$: Chassis Earth (Cold) $\downarrow$: Line Earth (Hot)

6. Voltage Measurement

Voltage is measured by a DC voltmeter.

Conditions of the measurement are the following:

Power Source	AC 110-240V, 50/60 Hz
Receiving Signal	Colour Bar signal (RF)
All customer's controls	Maximum positions

7. Number in red circle indicates waveform number.

(See waveform pattern table.)

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

9. Indicates the major signal flow. $\Rightarrow$: Video $\Rightarrow$: Audio

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

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.

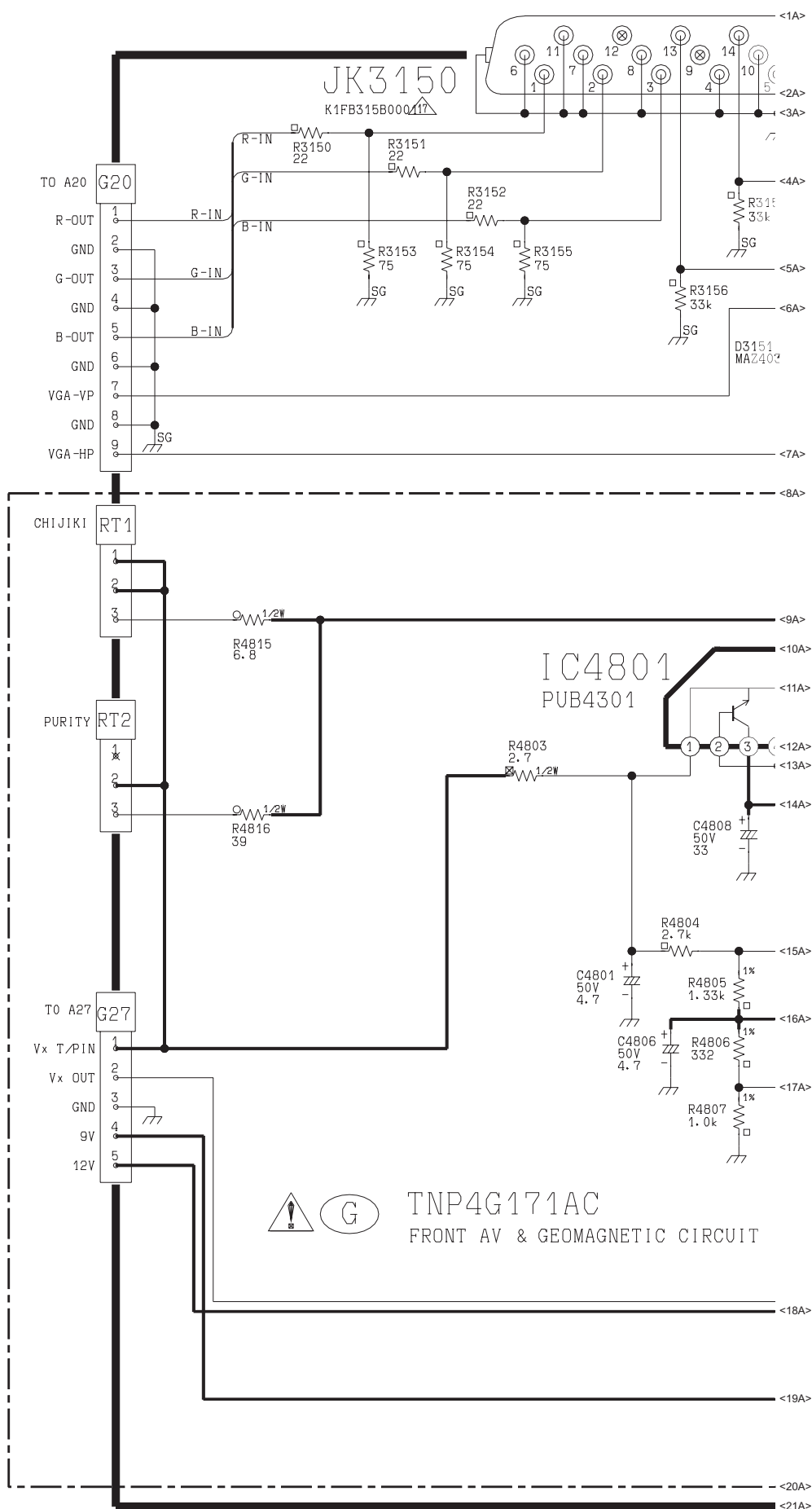
All circuits, except the Power Circuit, are cold.

Precautions

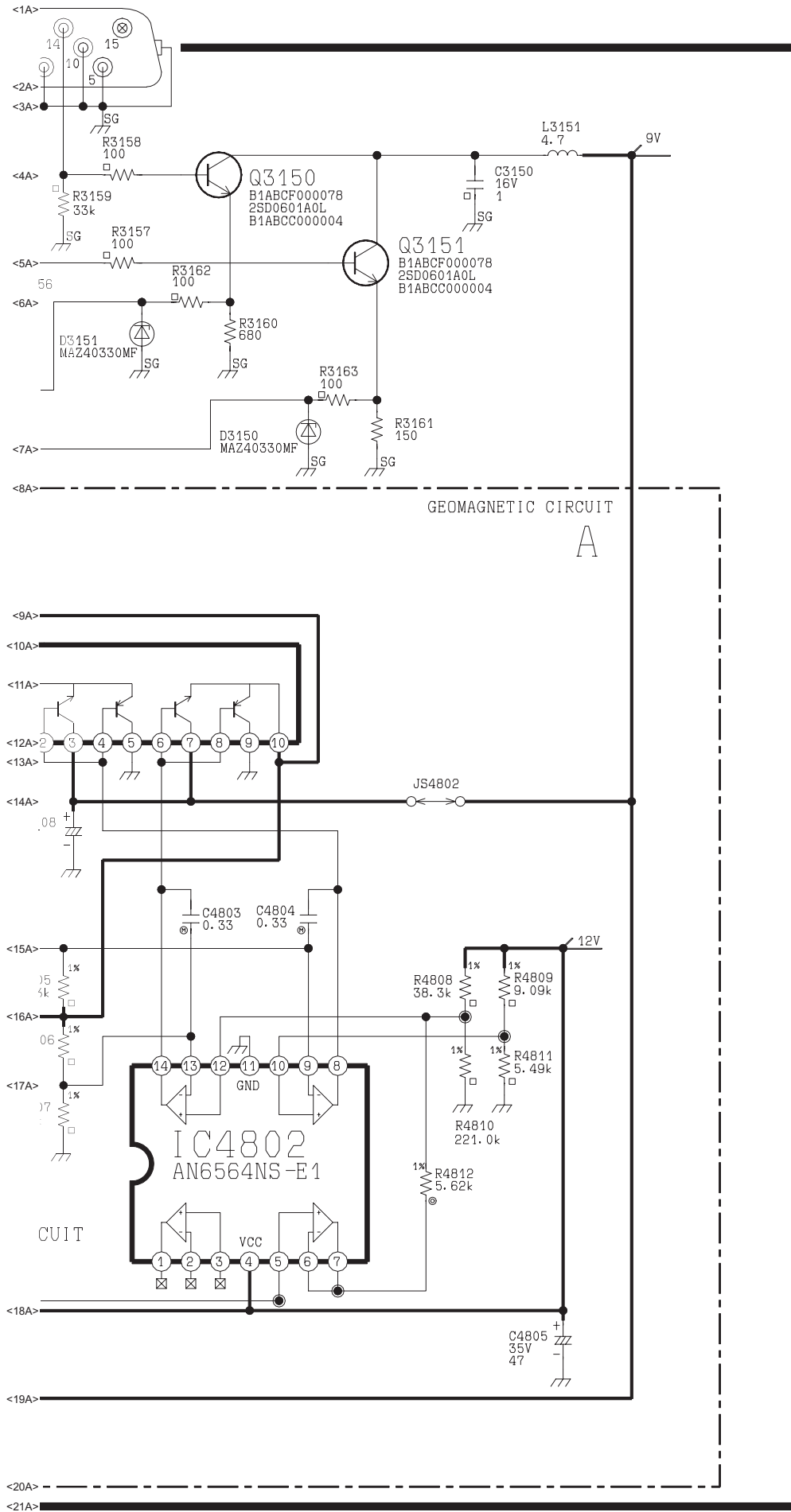
- a. Do not touch the hot part or the hot and cold parts at the same time or you may be shocked.
 - b. Do not short- circuit the hot and cold circuits or a fuse may blow and parts may break.
 - c. Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously or a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

8.2. G BOARD

8.2.1. G BOARD 1/2

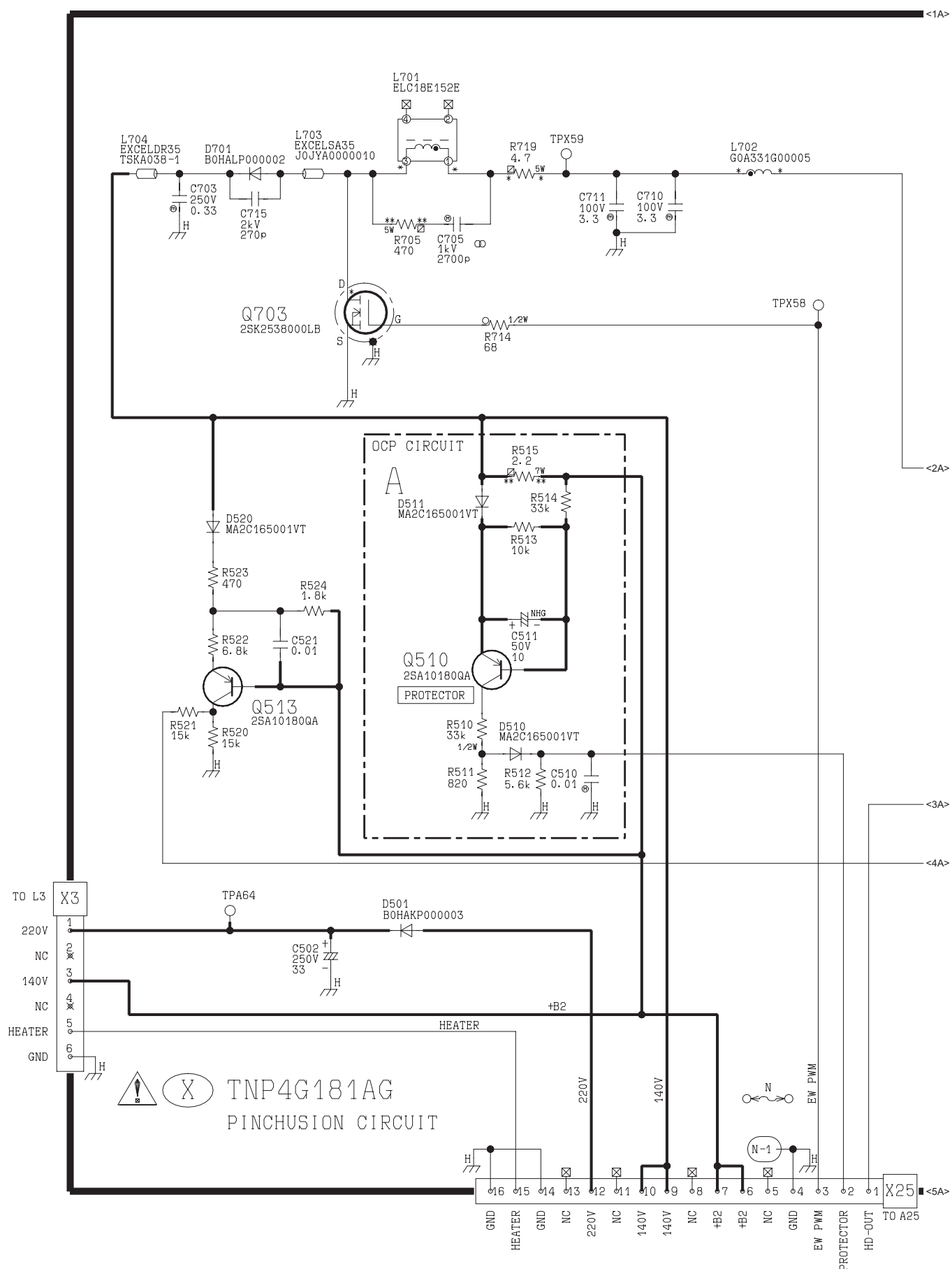


8.2.2. G BOARD 2/2



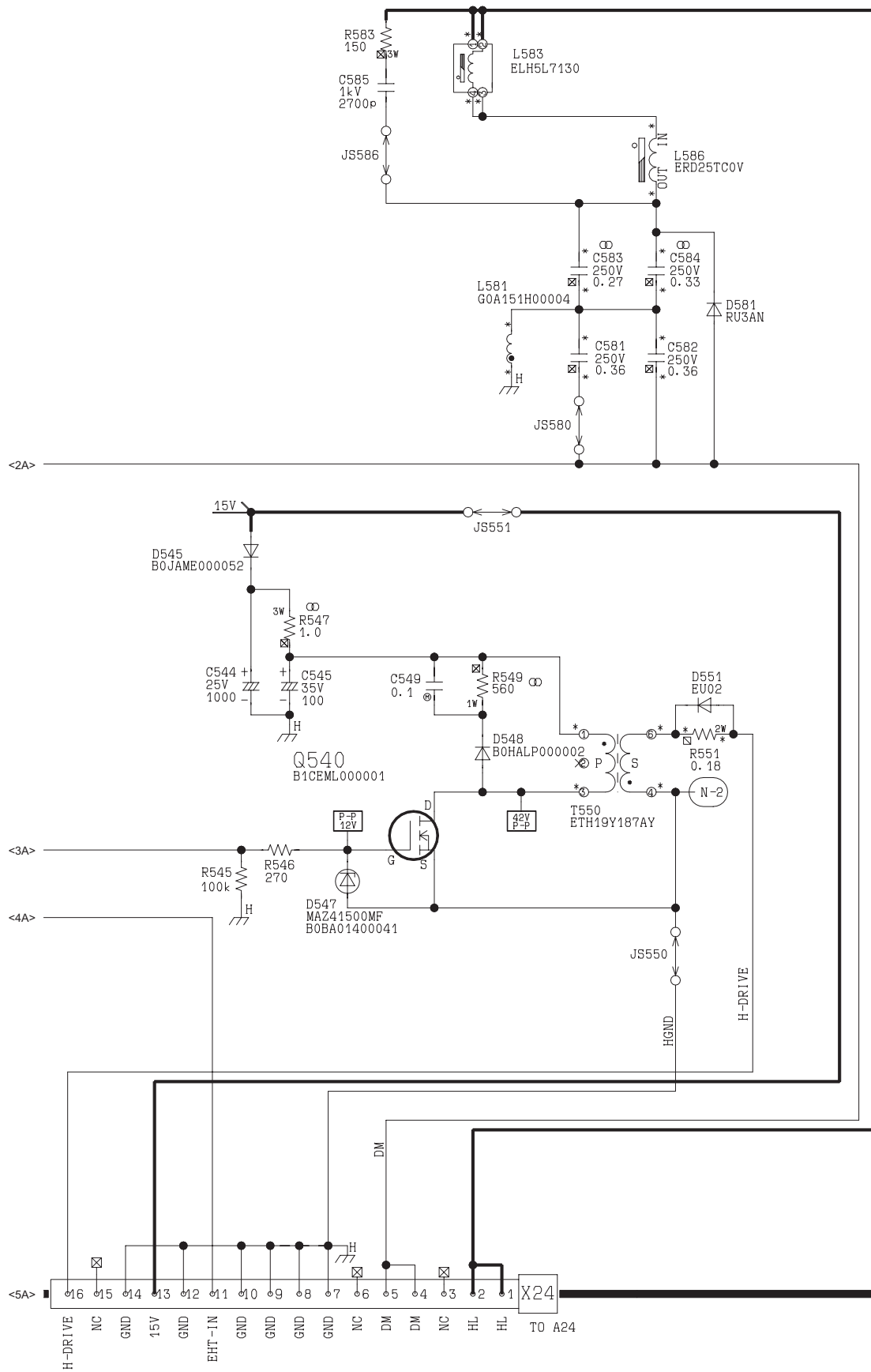
8.3. X BOARD

8.3.1. X BOARD 1/2



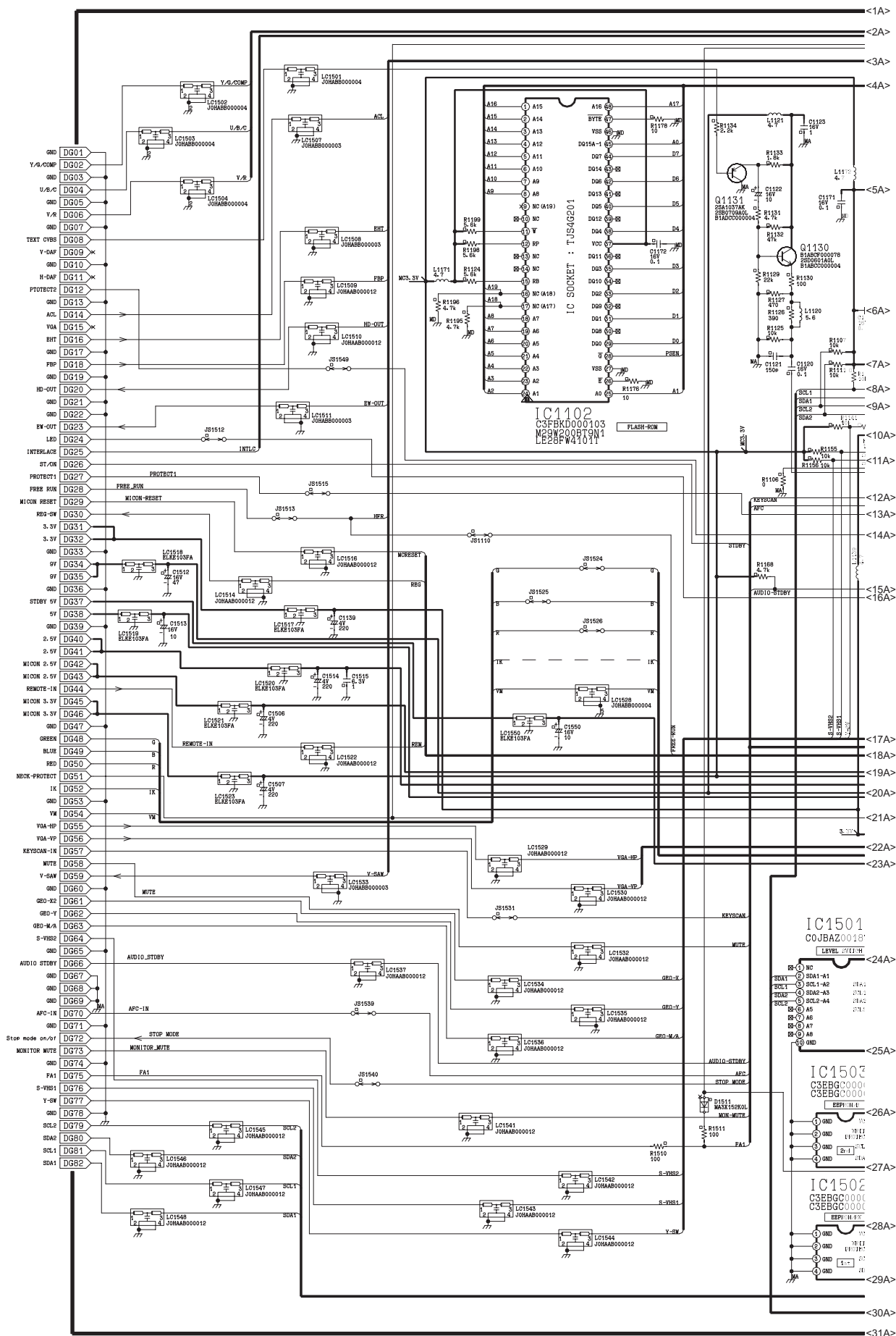
8.3.2. X BOARD 2/2

<1A>

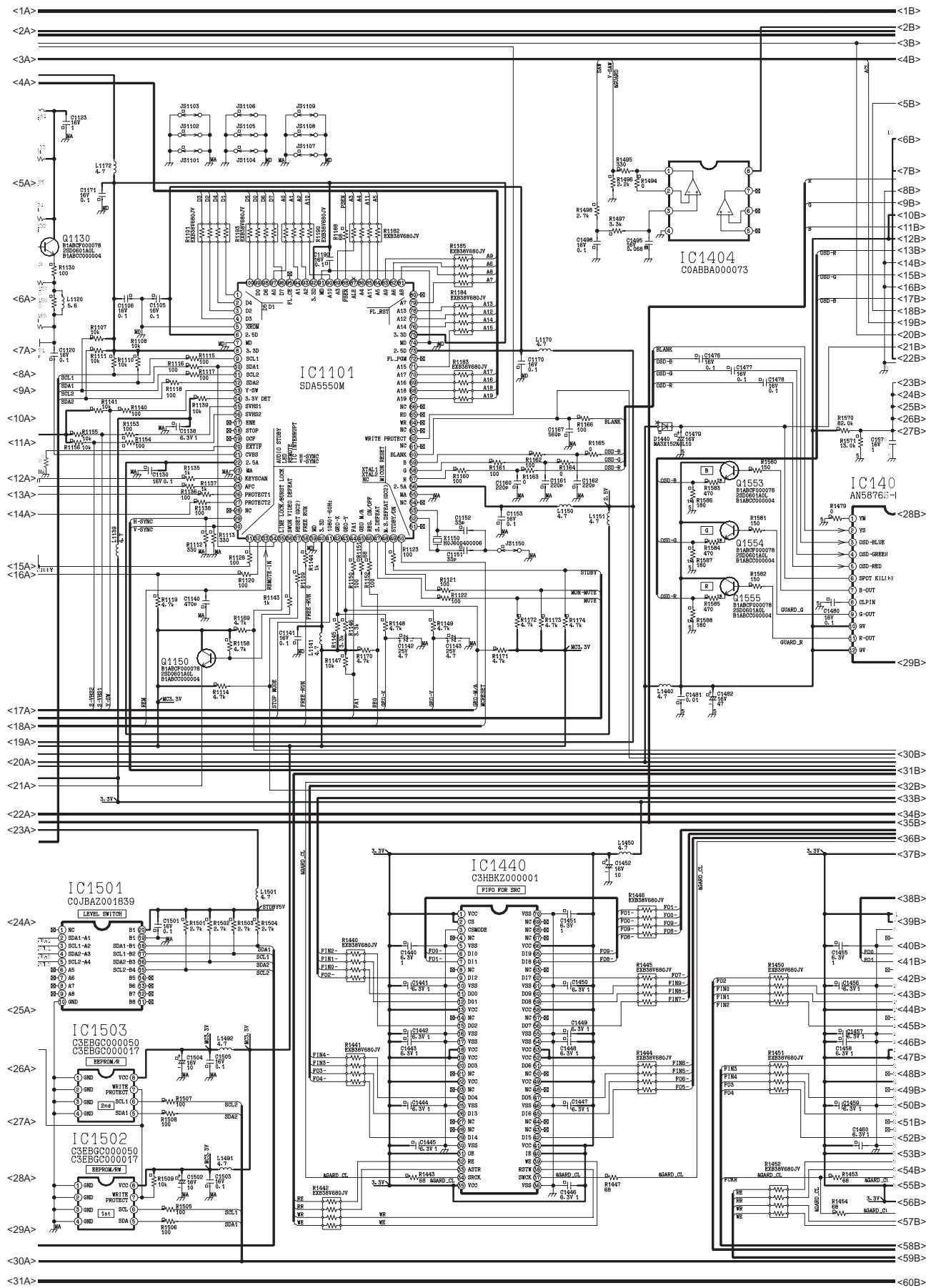


8.4. DG BOARD

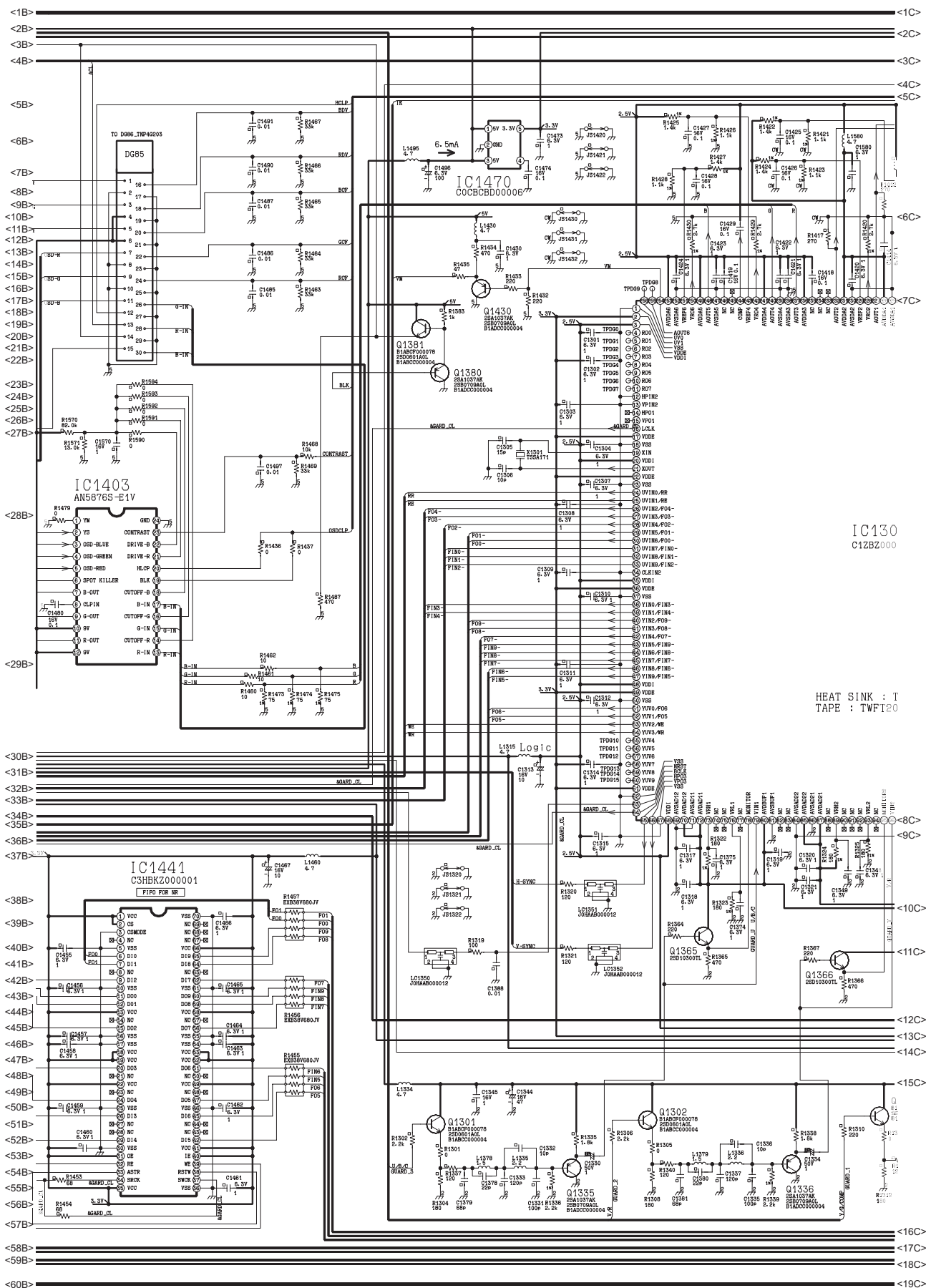
8.4.1. DG BOARD 1/4



8.4.2. DG BOARD 2/4

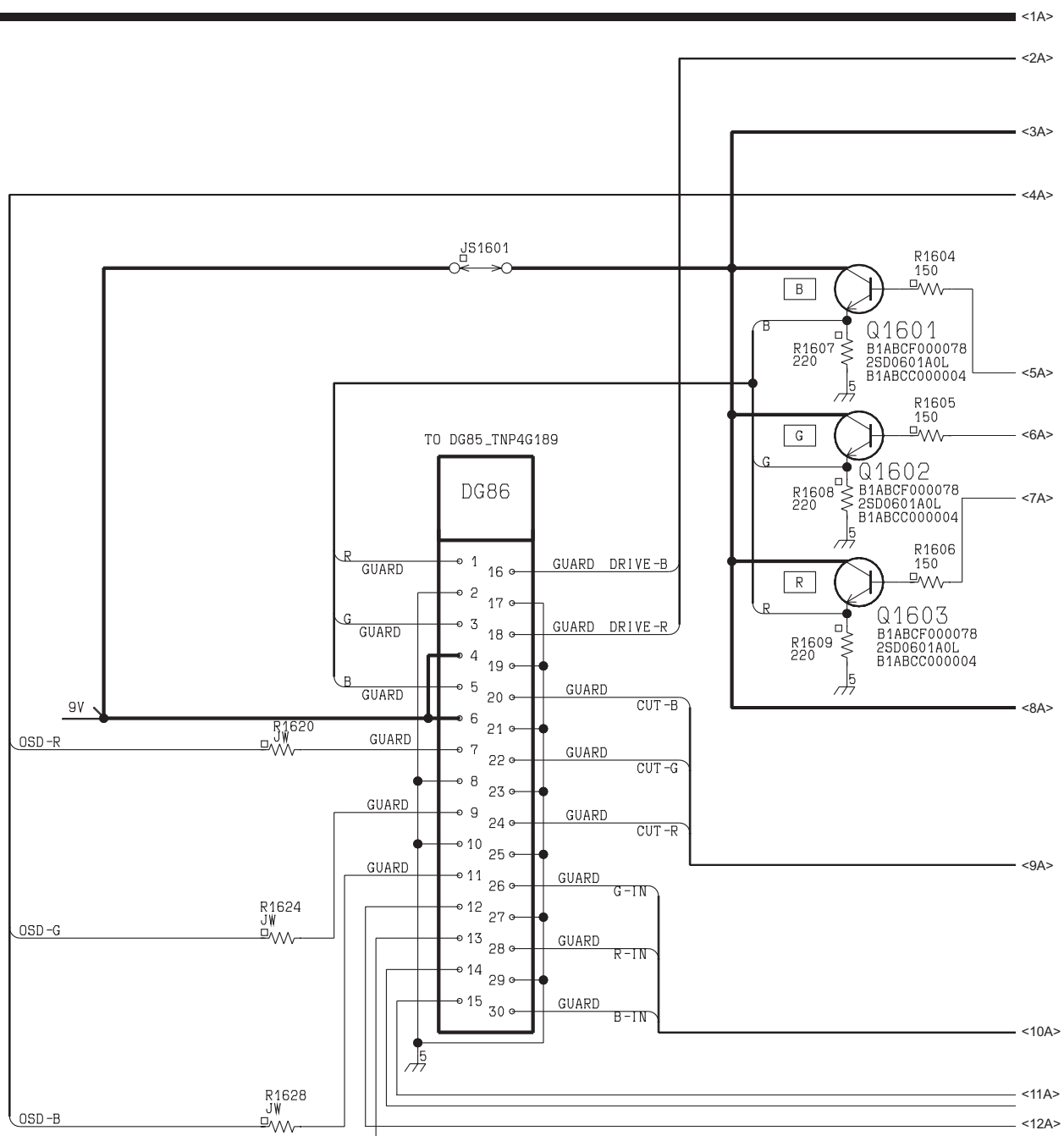


8.4.3. DG BOARD 3/4

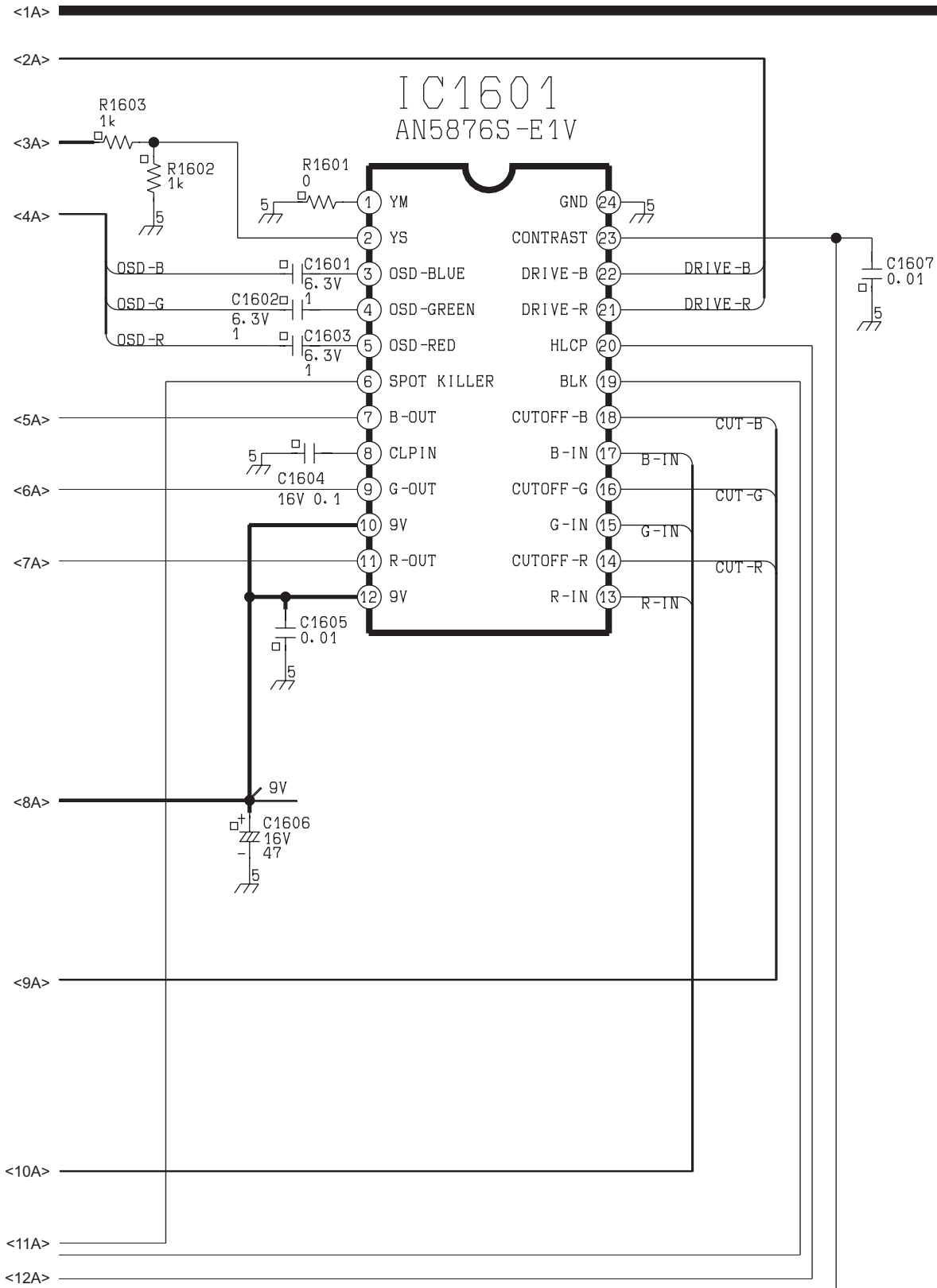


8.5. DG2 BOARD

8.5.1. DG2 BOARD 1/2



8.5.2. DG2 BOARD 2/2



DG2

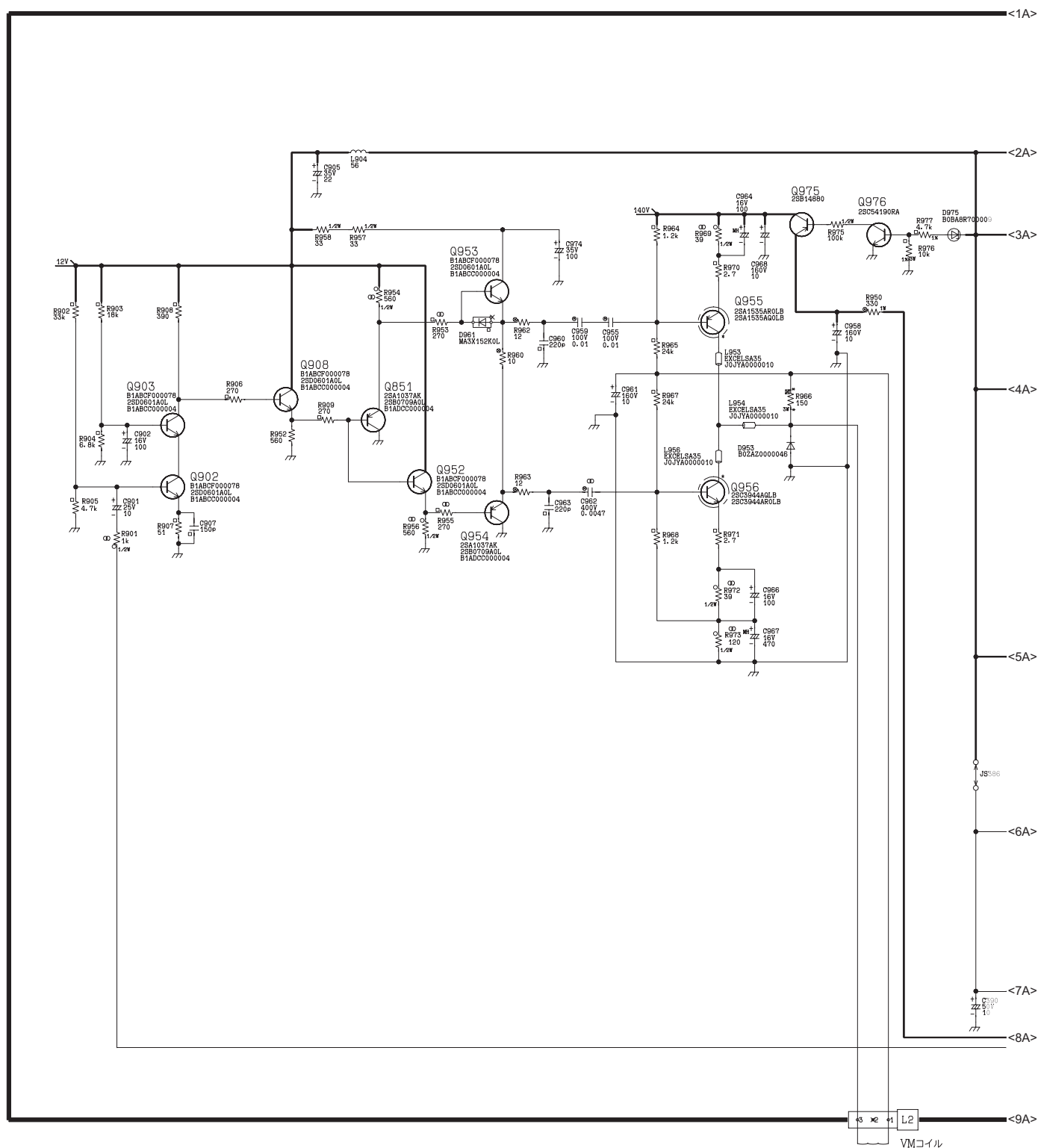
TNP4G203AA

DIGICOMB2 BOARD

<13A>

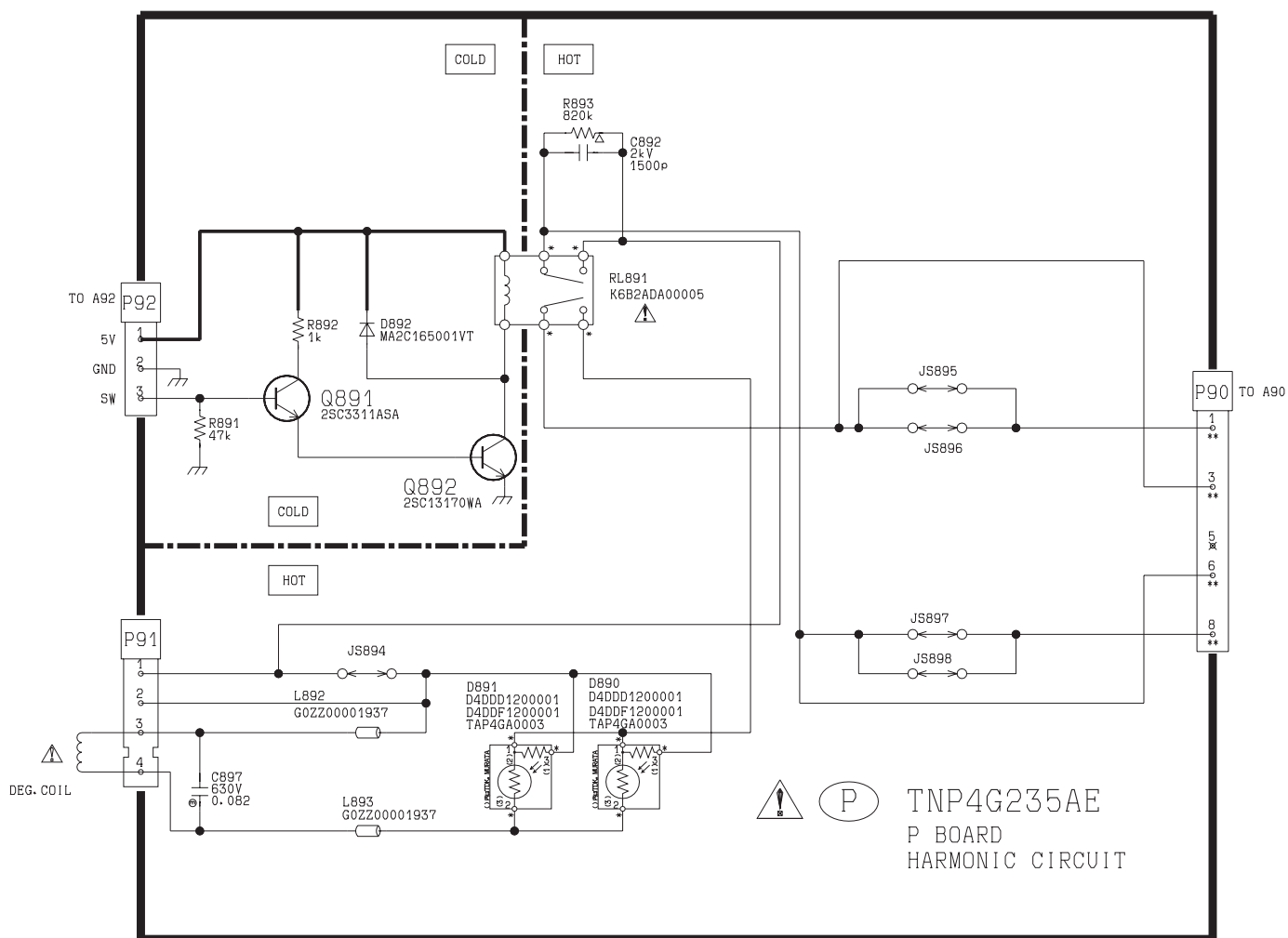
8.6. L BOARD

8.6.1. L BOARD 1/2



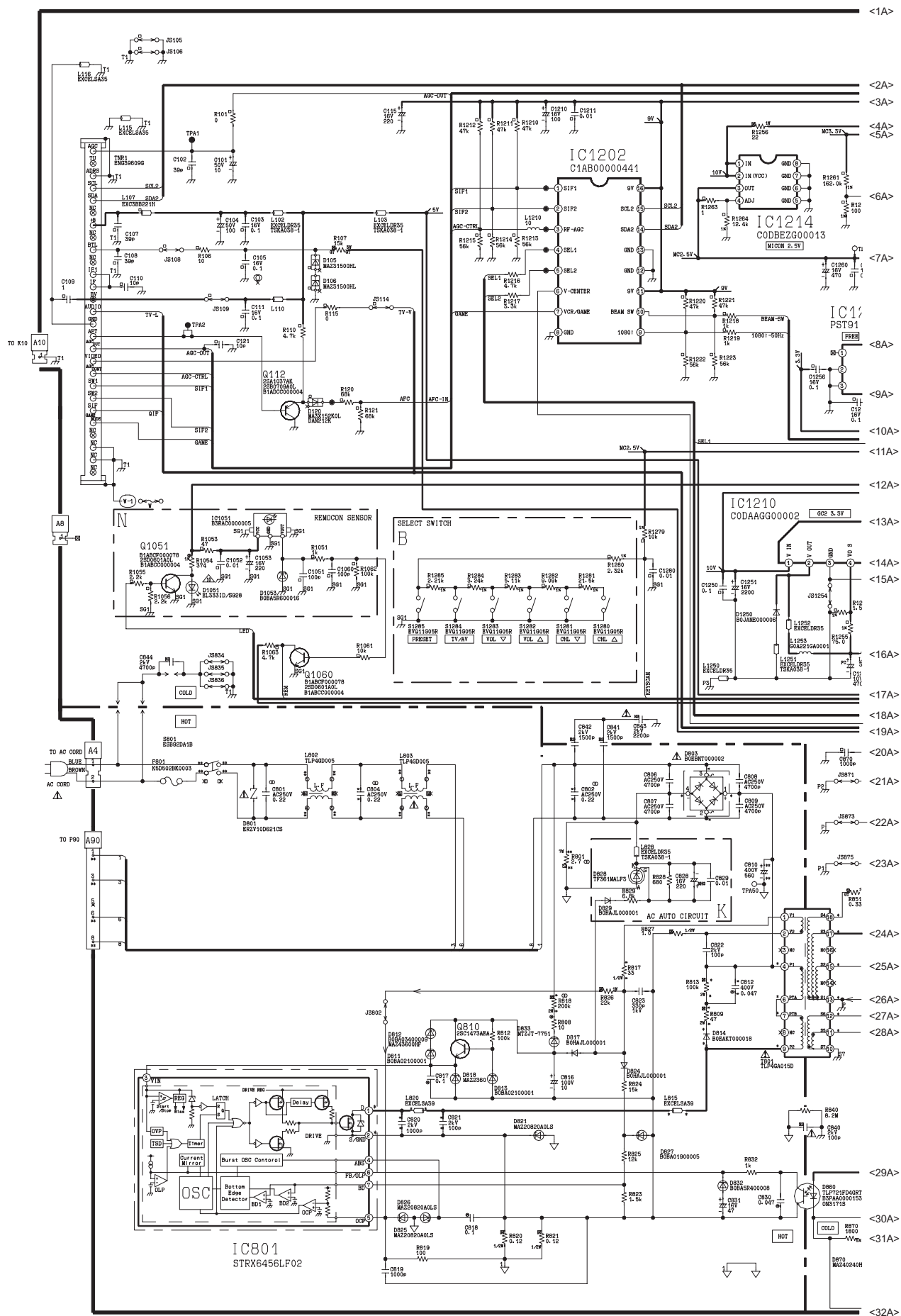
8.7. P BOARD

8.7.1. P BOARD 1/1

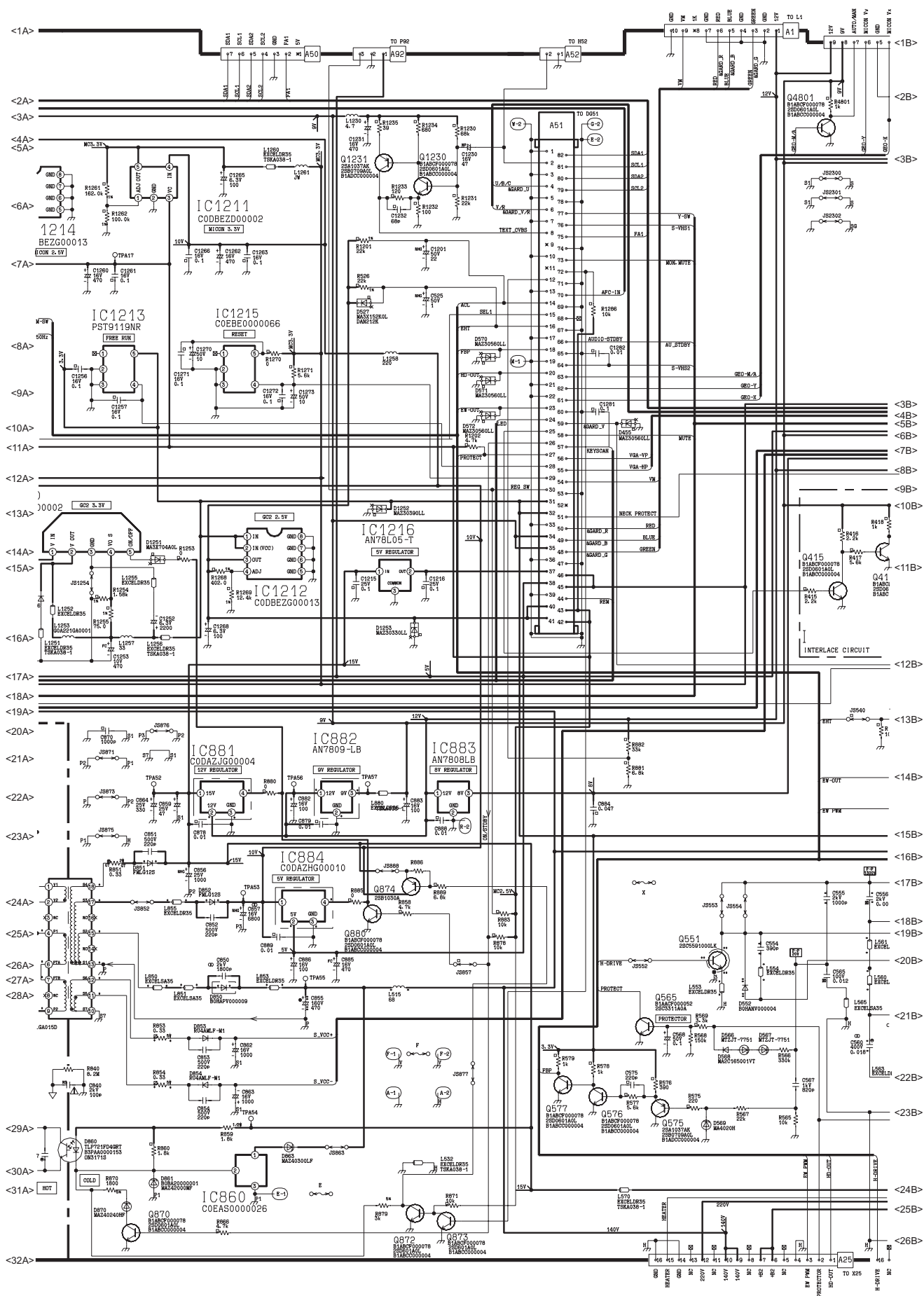


8.9. A BOARD

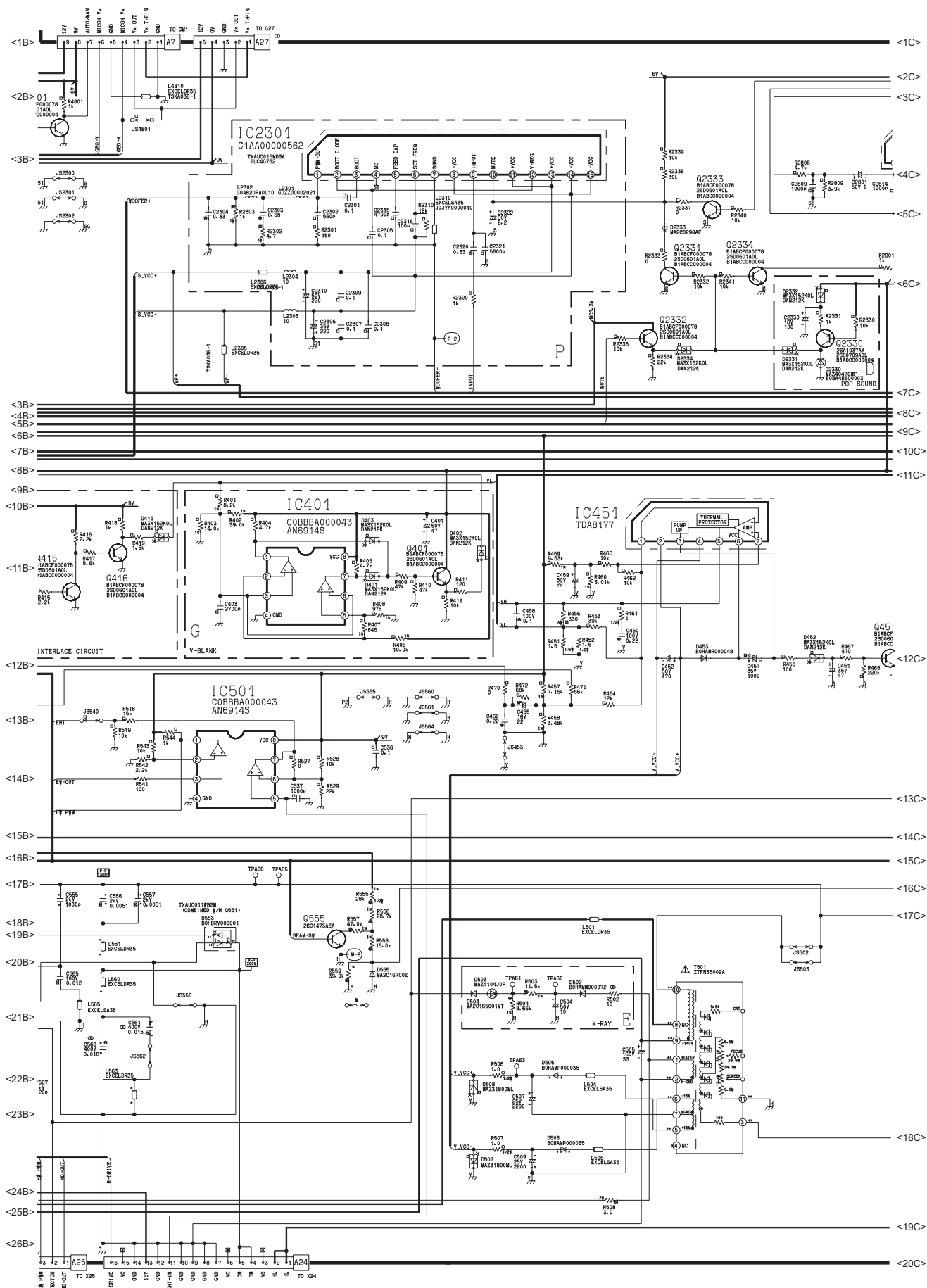
8.9.1. A BOARD 1/4



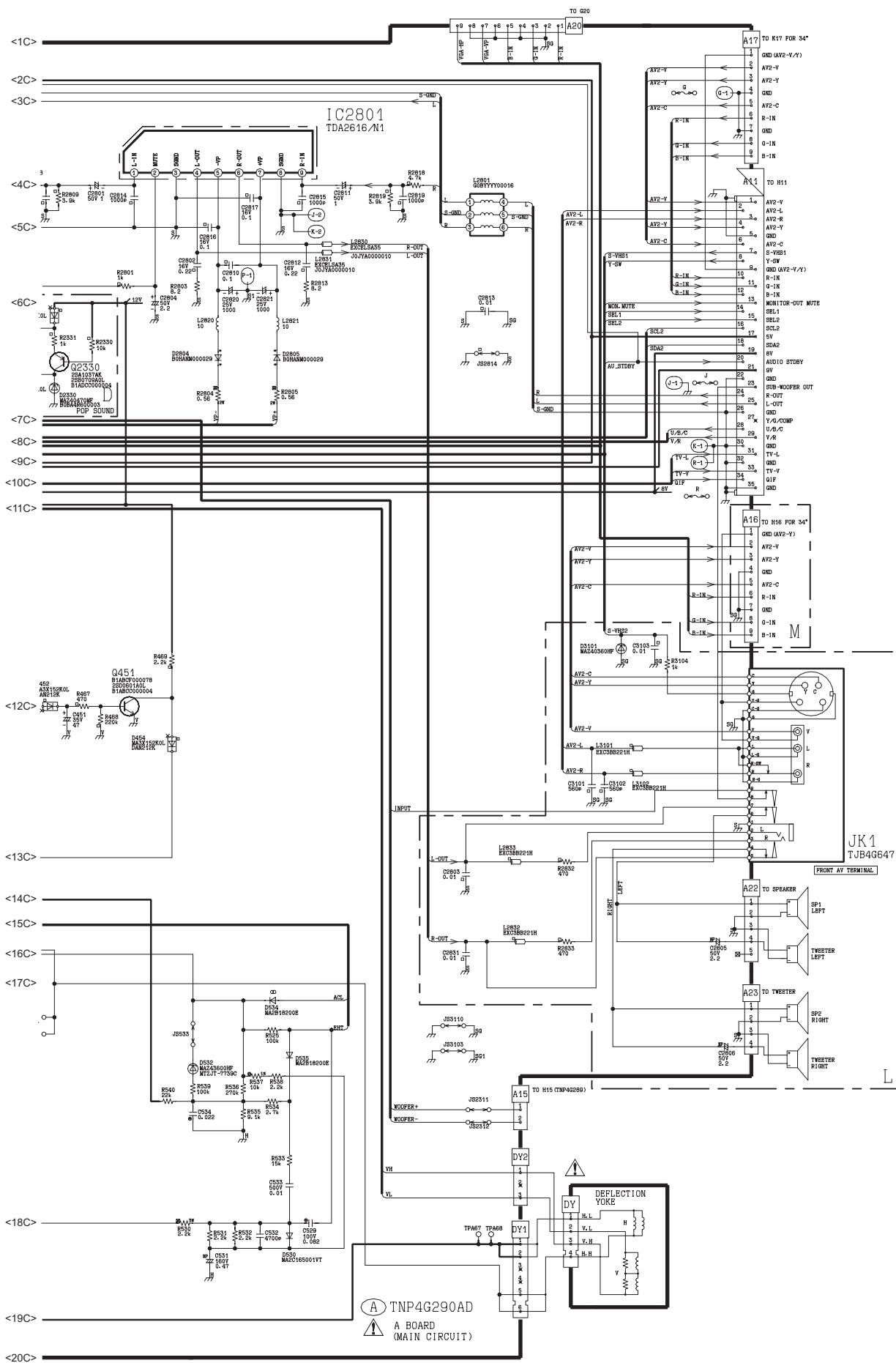
8.9.2. A BOARD 2/4



8.9.3. A BOARD 3/4



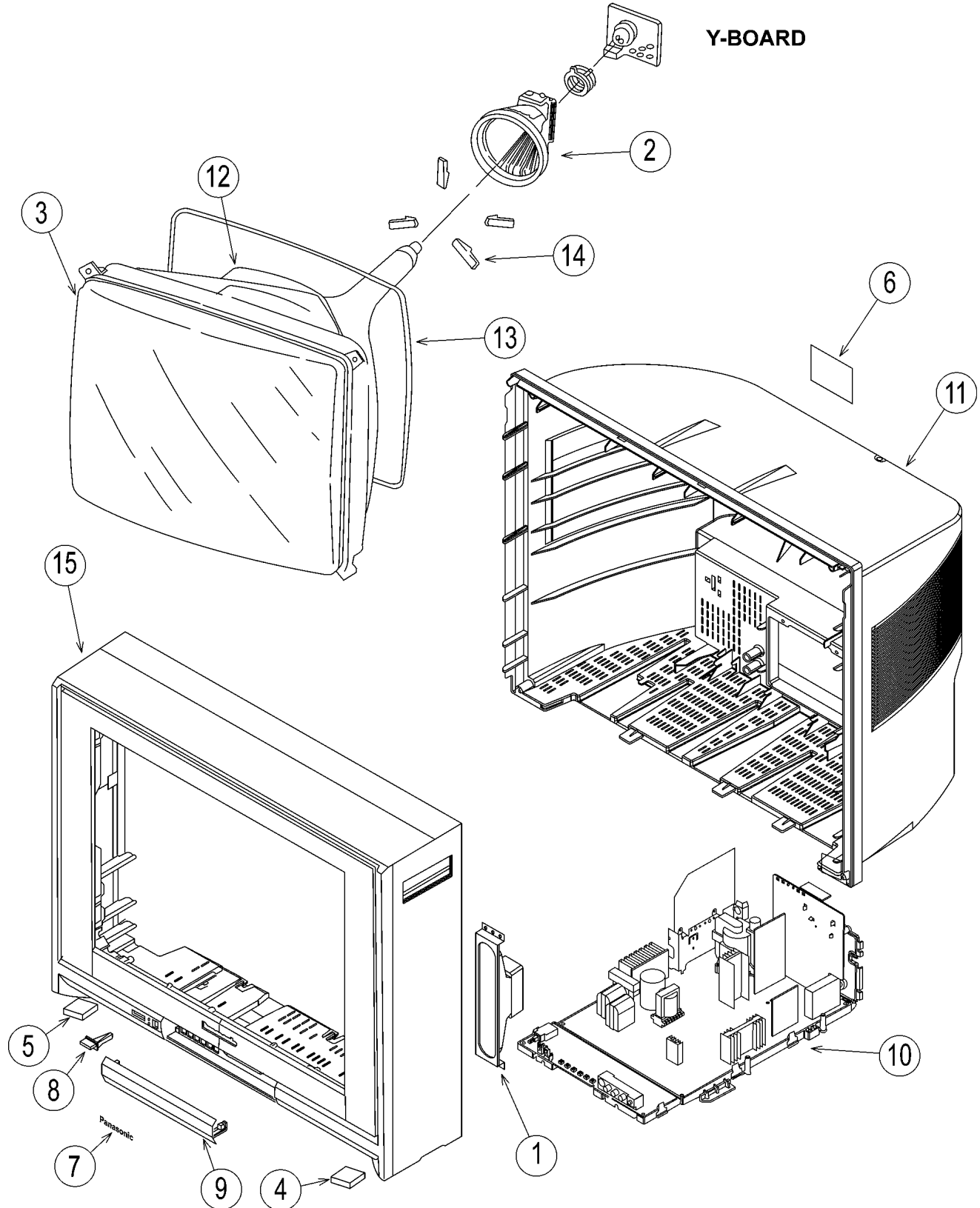
8.9.4. A BOARD 4/4



9 PARTS LOCATION

PARTS LOCATION

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



10 Replacement Parts List

10.1. Replacement Parts List Notes

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 100K Ω , J, 1/4W

Type Allowance

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

2. Capacitor

Example:

ECKF1H103ZF C 0.01UF, Z, 50V

Type Allowance

Type	Allowance
C: Carbon	C: $\pm 0.25\text{pF}$
E: Electrolytic	D: $\pm 0.5\text{pF}$
P: Polyester Polypropylene	F: $\pm 1\text{pF}$ G: $\pm 3\%$
T: Tantalum	J: $\pm 5\%$ K: $\pm 10\%$ L: $\pm 15\%$ M: $\pm 20\%$ P: $+100\% -0\%$ Z: $+80\% -20\%$

Ref. No.	Part No.	Part Name & Description	Remarks
R1125	ERJ3GEYJ103	M 10KOHM, J, 1/16W	
R1126	ERJ3GEYJ391	M 390OHM, J, 1/16W	
R1127	ERJ3GEYJ471	M 470OHM, J, 1/16W	
R1128	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R1129	ERJ3GEYJ223	M 22KOHM, J, 1/16W	
R1130	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R1131	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	
R1132	ERJ3GEYJ473	M 47KOHM, J, 1/16W	
R1133	ERJ3GEYJ182	M 1.8KOHM, J, 1/16W	
R1134	ERJ3GEYJ222	M 2.2KOHM, J, 1/16W	
R1135	ERJ3GEYJ102	M 1KOHM, J, 1/16W	
R1136	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R1137	ERJ3GEYJ102	M 1KOHM, J, 1/16W	
R1138	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R1139	ERJ3GEYJ103	M 10KOHM, J, 1/16W	
R1140	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R1141	ERJ3GEYJ103	M 10KOHM, J, 1/16W	
R1143	ERJ3GEYJ102	M 1KOHM, J, 1/16W	
R1144	ERJ3GEYJ102	M 1KOHM, J, 1/16W	
R1145	ERJ3GEYJ332	M 3.3KOHM, J, 1/16W	
R1146	ERJ3GEYJ332	M 3.3KOHM, J, 1/16W	
R1147	ERJ3GEYJ103	M 10KOHM, J, 1/16W	
R1148	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	
R1149	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	
R1150	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R1151	ERJ3GEYJ680	M 680OHM, J, 1/16W	
R1152	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R1153	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R1154	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R1155	ERJ3GEYJ103	M 10KOHM, J, 1/16W	
R1156	ERJ3GEYJ103	M 10KOHM, J, 1/16W	
R1158	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	
R1160	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R1161	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R1162	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R1163	ERJ3GEY0R00	M 0OHM, J, 1/16W	
R1164	ERJ3GEY0R00	M 0OHM, J, 1/16W	
R1165	ERJ3GEY0R00	M 0OHM, J, 1/16W	
R1166	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R1168	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	
R1169	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	
R1170	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	
R1171	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	
R1172	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	
R1173	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	
R1174	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	
R1176	ERJ3GEYJ100	M 10OHM, J, 1/16W	
R1178	ERJ3GEYJ100	M 10OHM, J, 1/16W	
R1182	EXB38V680J	RESISTOR ARRAY	
R1183	EXB38V680J	RESISTOR ARRAY	
R1184	EXB38V680J	RESISTOR ARRAY	
R1185	EXB38V680J	RESISTOR ARRAY	
R1188	ERJ3GEYJ680	M 680OHM, J, 1/16W	
R1190	EXB38V680J	RESISTOR ARRAY	
R1193	EXB38V680J	RESISTOR ARRAY	
R1195	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	
R1332	ERJ3GEY0R00	M 0OHM, J, 1/16W	
R1333	ERJ3GEY0R00	M 0OHM, J, 1/16W	
R1334	ERJ3GEYJ392	M 3.9KOHM, J, 1/16W	
R1335	ERJ3GEYJ182	M 1.8KOHM, J, 1/16W	
R1336	ERJ3EKF2201	M 2.2KOHM, F, 1/16W	
R1337	ERJ3GEYJ121	M 120OHM, J, 1/16W	
R1338	ERJ3GEYJ182	M 1.8KOHM, J, 1/16W	
R1339	ERJ3EKF2201	M 2.2KOHM, F, 1/16W	
R1340	ERJ3GEYJ121	M 120OHM, J, 1/16W	
R1341	ERJ3GEYJ911	M 910OHM, J, 1/16W	
R1342	ERJ3EKF2201	M 2.2KOHM, F, 1/16W	
R1343	ERJ3EKF1200	M 120OHM, F, 1/16W	
R1345	ERJ3GEYJ220	M 22OHM, J, 1/16W	
R1346	ERJ3GEYJ220	M 22OHM, J, 1/16W	
R1347	ERJ3GEY0R00	M 0OHM, J, 1/16W	
R1348	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R1360	ERJ3GEYJ162	M 1.6KOHM, J, 1/16W	
R1361	ERJ3GEYJ102	M 1KOHM, J, 1/16W	

Ref. No.	Part No.	Part Name & Description	Remarks
R1362	ERJ3GEYJ102	M 1KOHM, J, 1/16W	
R1364	ERJ3GEYJ221	M 220OHM, J, 1/16W	
R1365	ERJ3GEYJ471	M 470OHM, J, 1/16W	
R1366	ERJ3GEYJ471	M 470OHM, J, 1/16W	
R1367	ERJ3GEYJ221	M 220OHM, J, 1/16W	
R1370	ERJ3GEYJ471	M 470OHM, J, 1/16W	
R1371	ERJ3GEYJ471	M 470OHM, J, 1/16W	
R1375	ERJ3GEYJ102	M 1KOHM, J, 1/16W	
R1376	ERJ3GEYJ102	M 1KOHM, J, 1/16W	
R1380	EXB38V103J	RESISTOR ARRAY	
R1383	ERJ3GEYJ102	M 1KOHM, J, 1/16W	
R1384	ERJ3GEYJ103	M 10KOHM, J, 1/16W	
R1385	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R1386	ERJ3GEYJ102	M 1KOHM, J, 1/16W	
R1387	ERJ3EKF1201	M 1.2KOHM, F, 1/16W	
R1388	ERJ3EKF2801	M 2.8KOHM, F, 1/16W	
R1389	ERJ3EKF1201	M 1.2KOHM, F, 1/16W	
R1390	ERJ3GEYJ103	M 10KOHM, J, 1/16W	
R1401	ERJ3GEYJ242	M 2.4KOHM, J, 1/16W	
R1406	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R1409	ERJ3GEYJ102	M 1KOHM, J, 1/16W	
R1410	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R1411	ERJ3EKF2701	M 2.7KOHM, F, 1/16W	
R1412	ERJ3GEYJ271	M 270OHM, J, 1/16W	
R1413	ERJ3GEYJ471	M 470OHM, J, 1/16W	
R1414	ERJ3GEYJ471	M 470OHM, J, 1/16W	
R1416	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R1417	ERJ3GEYJ271	M 270OHM, J, 1/16W	
R1418	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R1419	ERJ3GEYJ102	M 1KOHM, J, 1/16W	
R1420	ERJ3EKF2701	M 2.7KOHM, F, 1/16W	
R1421	ERJ3EKF1101	M 1.1KOHM, 1/16W	
R1422	ERJ3EKF1401	M 1.4KOHM, F, 1/16W	
R1423	ERJ3EKF1101	M 1.1KOHM, 1/16W	
R1424	ERJ3EKF1401	M 1.4KOHM, F, 1/16W	
R1425	ERJ3EKF1401	M 1.4KOHM, F, 1/16W	
R1426	ERJ3EKF1101	M 1.1KOHM, 1/16W	
R1427	ERJ3EKF1401	M 1.4KOHM, F, 1/16W	
R1428	ERJ3EKF1101	M 1.1KOHM, 1/16W	
R1429	ERJ3EKF2701	M 2.7KOHM, F, 1/16W	
R1430	ERJ3EKF2701	M 2.7KOHM, F, 1/16W	
R1432	ERJ3GEYJ221	M 220OHM, J, 1/16W	
R1433	ERJ3GEYJ221	M 220OHM, J, 1/16W	
R1434	ERJ3GEYJ471	M 470OHM, J, 1/16W	
R1435	ERJ3GEYJ470	M 47OHM, J, 1/16W	
R1436	ERJ3GEY0R00	M 0OHM, J, 1/16W	
R1437	ERJ3GEY0R00	M 0OHM, J, 1/16W	
R1440	EXB38V680J	RESISTOR ARRAY	
R1441	EXB38V680J	RESISTOR ARRAY	
R1606	ERJ3GEYJ151	M 150OHM, J, 1/16W	
R1607	ERJ3GEYJ221	M 220OHM, J, 1/16W	
R1608	ERJ3GEYJ221	M 220OHM, J, 1/16W	
R1609	ERJ3GEYJ221	M 220OHM, J, 1/16W	
R1620	ERJ3GEY0R00	M 0OHM, J, 1/16W	
R1624	ERJ3GEY0R00	M 0OHM, J, 1/16W	
R1628	ERJ3GEY0R00	M 0OHM, J, 1/16W	
R2101	ERJ3GEY0R00	M 0OHM, J, 1/16W	
R2102	ERJ3GEY0R00	M 0OHM, J, 1/16W	
R2104	ERJ3GEYJ103	M 10KOHM, J, 1/16W	
R2105	ERJ3GEYJ103	M 10KOHM, J, 1/16W	
R2110	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R2111	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R2112	ERJ3GEYJ222	M 2.2KOHM, J, 1/16W	
R2113	ERJ3GEYJ222	M 2.2KOHM, J, 1/16W	
R2114	ERJ3GEYJ222	M 2.2KOHM, J, 1/16W	
R2115	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R2116	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R2117	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R2119	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	
R2120	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	
R2121	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	
R2130	ERJ3GEYJ471	M 470OHM, J, 1/16W	
R2131	ERJ3GEYJ101	M 100OHM, J, 1/16W	
R2301	ERJ3GEYJ151	M 150OHM, J, 1/16W	

Ref. No.	Part No.	Part Name & Description	Remarks
R2302	ERX3FJS4R7D	M 4.70HM,J, 3W	
R2303	ERG1SJ102P	M 1KOHM,J, 1W	
R2310	ERJ3GEYJ123	M 12KOHM,J,1/16W	
R2320	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R2330	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R2331	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R2332	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R2333	ERJ3GEY0R00	M 0OHM,J,1/16W	
R2334	ERJ3GEYJ223	M 22KOHM,J,1/16W	
R2335	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R2337	ERJ3GEY0R00	M 0OHM,J,1/16W	
R2338	ERJ3GEYJ303	M 30KOHM,J,1/16W	
R2339	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R2340	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R2341	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R2801	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R2803	ERDS2TJ8R2	C 8.2OHM,J, 1/4W	
R2804	ERX2SJR56E	M 0.56OHM,J, 2W	
R2805	ERX2SJR56E	M 0.56OHM,J, 2W	
R2808	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R2809	ERJ3GEYJ392	M 3.9KOHM,J,1/16W	
R2813	ERDS2TJ8R2	C 8.2OHM,J, 1/4W	
R2818	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R2819	ERJ3GEYJ392	M 3.9KOHM,J,1/16W	
R2832	ERJ3GEYJ471	M 470OHM,J,1/16W	
R2833	ERJ3GEYJ471	M 470OHM,J,1/16W	
R3001	ERJ3GEYJ331	M 330OHM,J,1/16W	
R3002	ERJ3GEYJ750	M 750OHM,J,1/16W	
R3003	ERJ3GEYJ184	M 180KOHM,J,1/16W	
R3004	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R3005	ERJ3GEYJ184	M 180KOHM,J,1/16W	
R3006	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R3007	ERJ3GEYJ221	M 220OHM,J,1/16W	
R3009	ERJ3GEYJ331	M 330OHM,J,1/16W	
R3010	ERJ3GEYJ750	M 750OHM,J,1/16W	
R3011	ERJ3GEYJ331	M 330OHM,J,1/16W	
R3012	ERJ3GEYJ750	M 750OHM,J,1/16W	
R3015	ERJ3GEYJ331	M 330OHM,J,1/16W	
R3016	ERJ3GEYJ750	M 750OHM,J,1/16W	
R3017	ERJ3GEYJ184	M 180KOHM,J,1/16W	
R3018	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R3019	ERJ3GEYJ184	M 180KOHM,J,1/16W	
R3315	ERJ3GEYJ750	M 750OHM,J,1/16W	
R3316	ERJ3GEYJ750	M 750OHM,J,1/16W	
R3317	ERJ3GEY0R00	M 0OHM,J,1/16W	
R3320	ERJ3GEYJ331	M 330OHM,J,1/16W	
R3321	ERJ3GEYJ331	M 330OHM,J,1/16W	
R3322	ERJ3GEYJ331	M 330OHM,J,1/16W	
R3330	ERJ3GEY0R00	M 0OHM,J,1/16W	
R3331	ERJ3GEY0R00	M 0OHM,J,1/16W	
R3332	ERJ3GEY0R00	M 0OHM,J,1/16W	
R4801	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R4803	ERX12SJ2R7E	M 2.70HM,J, 1/2W	
R4804	ERJ3GEYJ272	M 2.7KOHM,J,1/16W	
R4805	ERJ3EKF1331	M1.33KOHM,F,1/16W	
R4806	ERJ3EKF3320	M 332OHM,F,1/16W	
R4807	ERJ3EKF1001	M 1KOHM,F,1/16W	
R4808	ERJ3EKF3832	M38.3KOHM,F,1/16W	
R4809	ERJ3EKF9091	M9.09KOHM,F,1/16W	
R4810	ERJ3EKF2213	M 221KOHM,F,1/16W	
R4811	ERJ3EKF5491	M5.49KOHM,F,1/16W	
R4812	EROS2CKF5621	M5.62KOHM,F, 1/4W	
R4815	ERDS1FJ6R8	C 6.8OHM,J, 1/2W	
R4816	ERDS1FJ390	C 39OHM,J, 1/2W	
	CAPACITORS		
C101	ECA1HM100B	E 10UF, 50V	
C102	ECJ1VC1H390J	C 39PF, J, 50V	
C103	ECJ1VF1C104Z	C 0.1UF, Z, 16V	
C104	ECA1HM101B	E 100UF, 50V	
C105	ECJ1VF1C104Z	C 0.1UF, Z, 16V	
C107	ECJ1VC1H390J	C 39PF, J, 50V	
C108	ECJ1VC1H390J	C 39PF, J, 50V	
C109	ECJ2VF1C105Z	C 1UF, Z, 16V	
C110	ECJ1VC1H100C	C 10PF, C, 50V	

Ref. No.	Part No.	Part Name & Description	Remarks
C111	ECJ1VF1C104Z	C 0.1UF, Z, 16V	
C115	ECA1CM221B	E 220UF, 16V	
C121	ECJ1VC1H100C	C 10PF, C, 50V	
C352	ECJ1VB1H103K	C 0.01UF, K, 50V	
C354	ECJ1VB1E223K	C 0.022UF, K, 25V	
C355	ECQE2104KF	P 0.1UF, K,250V	
C356	ECJ1VC1H030D	C 3PF, D, 50V	
C357	ECKR2H561KB5	C 560PF, K,500V	
C359	ECJ1VF1C104Z	C 0.1UF, Z, 16V	
C360	ECA1CM470B	E 47UF, 16V	
C361	ECJ1VB1H103K	C 0.01UF, K, 50V	
C363	ECJ1VB1E223K	C 0.022UF, K, 25V	
C364	ECJ1VC1H090D	C 9PF, D, 50V	
C365	ECQE2104KF	P 0.1UF, K,250V	
C366	ECKR2H561KB5	C 560PF, K,500V	
C371	ECJ1VB1H103K	C 0.01UF, K, 50V	
C373	ECJ1VB1H103K	C 0.01UF, K, 50V	
C374	ECJ1VC1H100D	C 10PF, D, 50V	
C375	ECQE2104KF	P 0.1UF, K,250V	
C376	ECKR2H561KB5	C 560PF, K,500V	
C377	ECA2EM100B	E 10UF, 250V	
C380	ECA1HM101B	E 100UF, 50V	
C383	ECA1CM222B	E 2200UF, 16V	
C388	ECJ1VB1E183K	C 0.018UF, K, 25V	
C390	ECA1HM100B	E 10UF, 50V	
C391	ECKW3D332KBP	C 3300PF, K, 2KV	
C401	ECA1HM470B	E 47UF, 50V	
C403	ECJ1VB1H272K	C 2700PF, K, 50V	
C451	ECA1VM470B	E 47UF, 35V	
C452	ECA1HM471B	E 470UF, 50V	
C455	ECA1CN220U	E 22UF, 16V	
C457	ECA1VHG102	E 1000UF, 35V	
C458	ECQB1104KF	P 0.1UF, K,100V	
C459	ECA1HM220B	E 22UF, 50V	
C460	ECQB1224KF	P 0.22UF, K,100V	
C850	ECKW3D182KBP	C 1800PF, K, 2KV	
C851	ECKR2H221KB5	C 220PF, K,500V	
C852	ECKR2H221KB5	C 220PF, K,500V	
C853	ECKR2H221KB5	C 220PF, K,500V	
C854	ECKR2H221KB5	C 220PF, K,500V	
C855	ECOS2CA471BB	E 470UF, 160V	
C856	ECA1EHG102	E 1000UF, 25V	
C857	ECA1CHG682E	E 6800UF, 16V	
C859	F2A1E470A149	E 47UF, 25V	
C862	ECA1CM102B	E 1000UF, 16V	
C863	ECA1CM102B	E 1000UF, 16V	
C864	ECA1EM331B	E 330UF, 25V	
C870	ECJ1VB1H102K	C 1000PF, K, 50V	
C878	ECJ1VF1H103Z	C 0.01UF, Z, 50V	
C879	ECJ1VF1H103Z	C 0.01UF, Z, 50V	
C882	ECA1CM101B	E 100UF, 16V	
C883	ECA1CM101B	E 100UF, 16V	
C884	ECJ1VF1H473Z	C 0.047UF, Z, 50V	
C885	EEUF1C471LB	E 470UF, 16V	
C886	ECA1CM101B	E 100UF, 16V	
C888	ECJ1VF1H103Z	C 0.01UF, Z, 50V	
C889	ECJ1VF1H103Z	C 0.01UF, Z, 50V	
C892	ECKW3D152KBP	C 1500PF, K, 2KV	
C897	ECQE6823KF	P 0.082UF, K,630V	
C901	EEANA1E100B	E 10UF, 25V	
C902	ECA1CM101B	E 100UF, 16V	
C905	ECA1VM220B	E 22UF, 35V	
C907	ECJ1VC1H151J	C 150PF, J, 50V	
C955	ECQB1103JF	P 0.01UF, J,100V	
C958	ECA2CM100B	E 10UF, 160V	
C959	ECQB1103JF	P 0.01UF, J,100V	
C960	ECJ1VC1H221J	C 220PF, J, 50V	
C961	ECA2CM100B	E 10UF, 160V	
C962	ECQM4472RJZ	P 4700PF, J,400V	
C963	ECJ1VC1H221J	C 220PF, J, 50V	
C964	ECA1CMH101	E 100UF, 16V	
C966	ECA1CM101B	E 100UF, 16V	
C967	ECA1CHG471	E 470UF, 16V	
C968	ECA2CM100B	E 10UF, 160V	

Ref. No.	Part No.	Part Name & Description	Remarks
C974	ECA1VM101B	E 100UF, 35V	
C1051	ECJ1VC1H101J	C 100PF, J, 50V	
C1052	ECJ1VF1H103Z	C 0.01UF, Z, 50V	
C1053	ECA1CM221B	E 220UF, 16V	
C1060	ECJ1VC1H101J	C 100PF, J, 50V	
C1105	ECJ1VB1C104K	C 0.1UF, K, 16V	
C1106	ECJ1VB1C104K	C 0.1UF, K, 16V	
C1120	ECJ1VB1C104K	C 0.1UF, K, 16V	
C1121	ECJ1VC1H151J	C 150PF, J, 50V	
C1122	EEVHB1C100R	E 10UF, 16V	
C1123	ECJ2VF1C105Z	C 1UF, Z, 16V	
C1130	ECJ1VB1C104K	C 0.1UF, K, 16V	
C1138	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1139	EEVHB0G221P	E 220UF, 4V	
C1140	ECJ1VC1H471J	C 470PF, J, 50V	
C1141	ECJ1VB1C104K	C 0.1UF, K, 16V	
C1142	EEVHB1E4R7R	E 4.7UF, 25V	
C1143	EEVHB1E4R7R	E 4.7UF, 25V	
C1151	ECJ1VC1H330J	C 33PF, J, 50V	
C1152	ECJ1VC1H330J	C 33PF, J, 50V	
C1153	ECJ1VB1C104K	C 0.1UF, K, 16V	
C1160	ECJ1VC1H221J	C 220PF, J, 50V	
C1161	ECJ1VC1H221J	C 220PF, J, 50V	
C1162	ECJ1VC1H221J	C 220PF, J, 50V	
C1167	ECJ1VC1H561J	C 560PF, J, 50V	
C1170	ECJ1VB1C104K	C 0.1UF, K, 16V	
C1171	ECJ1VB1C104K	C 0.1UF, K, 16V	
C1172	ECJ1VB1C104K	C 0.1UF, K, 16V	
C1341	ECJ1VC1H100D	C 10PF, D, 50V	
C1342	ECJ1VC1H220J	C 22PF, J, 50V	
C1343	ECJ1VC1H680J	C 68PF, J, 50V	
C1344	EEVHB1C470P	E 47UF, 16V	
C1345	ECJ2VF1C105Z	C 1UF, Z, 16V	
C1346	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1347	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1348	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1349	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1350	ECJ1VB1C104K	C 0.1UF, K, 16V	
C1351	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1353	EEVHB1C100R	E 10UF, 16V	
C1354	EEVHB0G221P	E 220UF, 4V	
C1355	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1356	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1357	EEVHB0G221P	E 220UF, 4V	
C1358	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1359	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1360	EEVHB0G221P	E 220UF, 4V	
C1361	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1362	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1363	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1364	EEVHB1C470P	E 47UF, 16V	
C1365	EEVHB1C100R	E 10UF, 16V	
C1366	ECJ1VC1H681J	C 680PF, J, 50V	
C1367	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1368	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1370	ECJ1VC1H330J	C 33PF, J, 50V	
C1371	ECJ1VC1H680J	C 68PF, J, 50V	
C1372	ECJ1VB1H103K	C 0.01UF, K, 50V	
C1373	EEVHB0J101P	E 100UF, 6.3V	
C1374	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1375	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1376	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1377	ECJ1VC1H221J	C 220PF, J, 50V	
C1378	ECJ1VC1H220J	C 22PF, J, 50V	
C1379	ECJ1VC1H680J	C 68PF, J, 50V	
C1380	ECJ1VC1H220J	C 22PF, J, 50V	
C1381	ECJ1VC1H680J	C 68PF, J, 50V	
C1382	ECJ1VC1H101J	C 100PF, J, 50V	
C1383	ECJ1VC1H101J	C 100PF, J, 50V	
C1384	EEVHB1C100R	E 10UF, 16V	
C1385	EEVHB1C470P	E 47UF, 16V	
C1386	ECJ1VB1C104K	C 0.1UF, K, 16V	
C1387	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1388	ECJ1VB1H103K	C 0.01UF, K, 50V	

Ref. No.	Part No.	Part Name & Description	Remarks
C1392	ECJ1VB1C223K	C 0.022UF, K, 16V	
C1394	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1401	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1402	ECJ3YB0J335M	C 3.3UF, M, 6.3V	
C1403	ECJ1VB1H123K	C 0.012UF, K, 50V	
C1404	EEVHB0G221P	E 220UF, 4V	
C1405	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1406	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1410	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1411	ECJ1VB1C104K	C 0.1UF, K, 16V	
C1412	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1414	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1415	ECJ1VC1H680J	C 68PF, J, 50V	
C1416	ECJ1VC1H330J	C 33PF, J, 50V	
C1417	ECJ1VB1H103K	C 0.01UF, K, 50V	
C1418	ECJ1VB1C104K	C 0.1UF, K, 16V	
C1419	ECJ1VB1C104K	C 0.1UF, K, 16V	
C1420	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1421	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1422	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1423	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1602	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1603	ECJ1VB0J105K	C 1UF, K, 6.3V	
C1604	ECJ1VB1C104K	C 0.1UF, K, 16V	
C1605	ECJ1VB1H103K	C 0.01UF, K, 50V	
C1606	EEVHB1C470P	E 47UF, 16V	
C1607	ECJ1VB1H103K	C 0.01UF, K, 50V	
C2101	ECA1CM101B	E 100UF, 16V	
C2102	ECJ1VF1C104Z	C 0.1UF, Z, 16V	
C2103	ECJ1VC1H101J	C 100PF, J, 50V	
C2110	ECJ1VB1H332K	C 3300PF, K, 50V	
C2111	ECJ1VB1H332K	C 3300PF, K, 50V	
C2112	ECJ1VC1H102J	C 1000PF, J, 50V	
C2113	ECA1HM100B	E 10UF, 50V	
C2114	ECJ1VF1C104Z	C 0.1UF, Z, 16V	
C2115	ECA1HM100B	E 10UF, 50V	
C2116	ECA1CM101B	E 100UF, 16V	
C2117	ECJ1VF1H103Z	C 0.01UF, Z, 50V	
C2118	ECJ1VF1H103Z	C 0.01UF, Z, 50V	
C2119	ECJ1VF1H102Z	C 1000PF, Z, 50V	
C2120	ECA1HM3R3B	E 3.3UF, 50V	
C2121	ECJ1VF1C104Z	C 0.1UF, Z, 16V	
C2122	ECJ1VF1H102Z	C 1000PF, Z, 50V	
C2123	ECJ1VF1H102Z	C 1000PF, Z, 50V	
C2124	ECA1HM100B	E 10UF, 50V	
C2125	ECJ1VF1C104Z	C 0.1UF, Z, 16V	
C2127	ECJ1VF1C104Z	C 0.1UF, Z, 16V	
C2128	ECA1CM101B	E 100UF, 16V	
C2129	ECQV1H334JM	P 0.33UF, J, 50V	
C2130	ECQV1H334JM	P 0.33UF, J, 50V	
C2131	ECJ1VF1C104Z	C 0.1UF, Z, 16V	
C2133	ECJ1VC1H070D	C 7PF, D, 50V	
C2134	ECJ1VC1H470J	C 47PF, J, 50V	
C2135	ECJ1VC1H560J	C 56PF, J, 50V	
C2136	ECJ1VC1H560J	C 56PF, J, 50V	
C2138	ECJ1VC1H470J	C 47PF, J, 50V	
C2139	ECJ1VC1H010C	C 1PF, C, 50V	
C2140	ECJ1VC1H010C	C 1PF, C, 50V	
C2301	ECJ1VF1H104Z	C 0.1UF, Z, 50V	
C2302	ECJ1VC1H561K	C 560PF, K, 50V	
C2303	ECQV1H684JM	P 0.68UF, J, 50V	
C2304	ECQV1H334JM	P 0.33UF, J, 50V	
C2305	ECJ1VF1H104Z	C 0.1UF, Z, 50V	
C2306	ECA1VM221B	E 220UF, 35V	
C2307	ECJ1VF1H104Z	C 0.1UF, Z, 50V	
C2308	ECJ1VF1H104Z	C 0.1UF, Z, 50V	
C2309	ECJ1VF1H104Z	C 0.1UF, Z, 50V	
C2310	ECA1HM221B	E 220UF, 50V	
C2315	ECJ1VB1H472K	C 4700PF, K, 50V	
C2316	ECJ1VC1H101J	C 100PF, J, 50V	
C2320	ECQV1H334JM	P 0.33UF, J, 50V	
C2321	ECJ1VB1H562K	C 5600PF, K, 50V	
C2322	ECA1HM2R2B	E 2.2UF, 50V	
C2330	ECA1CM101B	E 100UF, 16V	

Ref. No.	Part No.	Part Name & Description	Remarks
C2801	ECA1HM010B	E 1UF, 50V	
C2802	ECJ1VF1C224Z	C 0.22UF, Z, 16V	
C2803	ECJ1VF1H103Z	C 0.01UF, Z, 50V	
C2804	ECA1HM2R2B	E 2.2UF, 50V	
C2805	ECEA1HN2R2U	E 2.2UF, 50V	
C2806	ECEA1HN2R2U	E 2.2UF, 50V	
C2809	ECJ1VF1H102Z	C 1000PF, Z, 50V	
C2810	ECJ1VF1H104Z	C 0.1UF, Z, 50V	
C2811	ECA1HM010B	E 1UF, 50V	
C2812	ECJ1VF1C224Z	C 0.22UF, Z, 16V	
C2813	ECJ1VB1H103K	C 0.01UF, K, 50V	
C2814	ECJ1VF1H102Z	C 1000PF, Z, 50V	
C2815	ECJ1VF1H102Z	C 1000PF, Z, 50V	
C2816	ECJ1VF1C104Z	C 0.1UF, Z, 16V	
C3312	ECJ2VF1C105Z	C 1UF, Z, 16V	
C3313	ECJ2VF1C105Z	C 1UF, Z, 16V	
C3314	ECJ1VF1C104Z	C 0.1UF, Z, 16V	
C3315	ECJ2VF1C105Z	C 1UF, Z, 16V	
C3316	ECJ2VF1C105Z	C 1UF, Z, 16V	
C3317	ECJ2VF1C105Z	C 1UF, Z, 16V	
C3318	ECA1CM221B	E 220UF, 16V	
C3320	ECJ2VF1C105Z	C 1UF, Z, 16V	
C3321	ECJ2VF1C105Z	C 1UF, Z, 16V	
C3322	ECJ2VF1C105Z	C 1UF, Z, 16V	
C4801	ECA1HM4R7B	E 4.7UF, 50V	
C4803	ECQV1H334JM	P 0.33UF, J, 50V	
C4804	ECQV1H334JM	P 0.33UF, J, 50V	
C4805	ECA1VM470B	E 47UF, 35V	
C4806	ECA1HM4R7B	E 4.7UF, 50V	
C4808	ECA1HM330B	E 33UF, 50V	
	COILS		
L102	EXCELDR35V	CORE	
L103	EXCELDR35V	CORE	
L107	EXC3BB221H	CHIP BEAD CORE	
L110	EXCELSA35T	BEAD CORE	
L115	EXCELSA35T	BEAD CORE	
L116	EXCELSA35T	BEAD CORE	
L351	EXCELSA24T	BEAD CORE	
L352	EXCELDR35V	CORE	
L381	TLTACT6R8J	PEAKING COIL	
L382	TLTACT6R8J	PEAKING COIL	
L383	TLTACT150J	PEAKING COIL	
L387	EXCELDR35V	CORE	
L388	EXCELSA39V	BEAD CORE	
L501	EXCELDR35V	CORE	
L504	EXCELSA35T	BEAD CORE	
L506	EXCELSA35T	BEAD CORE	
L515	TALL08T680KA	INDUCTION COIL	
L532	EXCELDR35V	CORE	
L553	EXCELDR35C	BEAD CORE	
L554	EXCELDR35C	BEAD CORE	
L560	EXCELDR35C	BEAD CORE	
L561	EXCELDR35C	BEAD CORE	
L563	EXCELDR35C	BEAD CORE	
L565	EXCELSA35T	BEAD CORE	
L570	EXCELDR35V	CORE	
L581	G0A151H00004	CHOKE COIL	
L583	ELH5L7130	LINEARITY COIL	
L586	ERD25TC0	C 00HM, 1/4W	
L701	ELC18E152	CHOKE COIL	
L702	G0A331G00005	CHOKE COIL	
L703	EXCELSA35T	BEAD CORE	
L704	EXCELDR35V	CORE	
L802	TLP4GD005	LINE FILTER	
L803	TLP4GD005	LINE FILTER	
L815	EXCELSA39E	BEAD CHOKE	
L820	EXCELSA39E	BEAD CHOKE	
L828	EXCELDR35V	CORE	
L850	EXCELSA35B	BEAD CORE	
L851	EXCELSA35B	BEAD CORE	
L853	EXCELDR35C	BEAD CORE	
L855	EXCELDR35C	BEAD CORE	
L880	EXCELDR35V	CORE	
L892	EXCELDR25V	CORE	

Ref. No.	Part No.	Part Name & Description	Remarks
L893	EXCELDR25V	CORE	
L904	TLTACT560J	PEAKING COIL	
L953	EXCELSA35T	BEAD CORE	
L954	EXCELSA35T	BEAD CORE	
L956	EXCELSA35T	BEAD CORE	
L1120	ELJFA5R6JF	CHIP INDUCTOR	
L1121	TALC325T4R7M	CHIP INDUCTOR COIL	
L3003	EXC3BB221H	CHIP BEAD CORE	
L3004	EXC3BB221H	CHIP BEAD CORE	
L3030	TLTACT100J	PEAKING COIL	
L3031	EXC3BB221H	CHIP BEAD CORE	
L3032	EXC3BB221H	CHIP BEAD CORE	
L3050	TLTACT100J	PEAKING COIL	
L3051	EXC3BB221H	CHIP BEAD CORE	
L3052	EXC3BB221H	CHIP BEAD CORE	
L3101	EXC3BB221H	CHIP BEAD CORE	
L3102	EXC3BB221H	CHIP BEAD CORE	
L3151	TLTACT4R7J	PEAKING COIL	
L3301	TLTACT100J	PEAKING COIL	
L3311	TLTACT100J	PEAKING COIL	
L4810	EXCELDR35V	CORE	
LC1345	JOHAAB000012	EMI FILTER	
LC1346	JOHAAB000012	EMI FILTER	
LC1350	JOHAAB000012	EMI FILTER	
LC1351	JOHAAB000012	EMI FILTER	
LC1352	JOHAAB000012	EMI FILTER	
LC1501	JOHABB000004	EMI FILTER	
LC1502	JOHABB000004	EMI FILTER	
LC1503	JOHABB000004	EMI FILTER	
LC1504	JOHABB000004	EMI FILTER	
LC1507	JOHABB000003	EMI FILTER	
LC1508	JOHABB000003	EMI FILTER	
LC1509	JOHAAB000012	EMI FILTER	
LC1510	JOHAAB000012	EMI FILTER	
LC1511	JOHABB000003	EMI FILTER	
LC1514	JOHAAB000012	EMI FILTER	
LC1516	JOHAAB000012	EMI FILTER	
LC1517	ELKE103FA	NOISE FILTER	
LC1518	ELKE103FA	NOISE FILTER	
LC1519	ELKE103FA	NOISE FILTER	
LC1520	ELKE103FA	NOISE FILTER	
LC1521	ELKE103FA	NOISE FILTER	
LC1522	JOHAAB000012	EMI FILTER	
LC1523	ELKE103FA	NOISE FILTER	
LC1528	JOHABB000004	EMI FILTER	
LC1529	JOHAAB000012	EMI FILTER	
LC1530	JOHAAB000012	EMI FILTER	
LC1532	JOHAAB000012	EMI FILTER	
LC1533	JOHABB000003	EMI FILTER	
LC1534	JOHAAB000012	EMI FILTER	
LC1535	JOHAAB000012	EMI FILTER	
LC1536	JOHAAB000012	EMI FILTER	
LC1537	JOHAAB000012	EMI FILTER	
LC1541	JOHAAB000012	EMI FILTER	
LC1542	JOHAAB000012	EMI FILTER	
LC1543	JOHAAB000012	EMI FILTER	
LC1544	JOHAAB000012	EMI FILTER	
LC1545	JOHAAB000012	EMI FILTER	
LC1546	JOHAAB000012	EMI FILTER	
LC1547	JOHAAB000012	EMI FILTER	
LC1548	JOHAAB000012	EMI FILTER	
LC1550	ELKE103FA	NOISE FILTER	
	TRANSFORMERS		
T501	ZTFN35002A	FLYBACK TRANS	△
T550	ETH19Y187AY	H DRIVE TRANS	△
T801	TLP4GA015D	SWITCHING TRANS	△
	DIODES		
D105	MA3150HTX	ZENER DIODE	
D106	MA3150HTX	ZENER DIODE	
D120	MA152KTX	DIODE	
D351	D1NL40V70	DIODE	
D352	D1NL40V70	DIODE	
D353	MA3110LTX	ZENER DIODE	
D355	D1NL40V70	DIODE	

Ref. No.	Part No.	Part Name & Description	Remarks
D832	MTZJ5.6A	ZENER DIODE	
D833	MTZJ51	ZENER DIODE	
D850	FMGG2CSLF665	DIODE	
D851	FMLG12SLF116	DIODE	
D852	FMLG12SLF116	DIODE	
D853	RU4AMLF-M1	DIODE	
D854	RU4AMLF-M1	DIODE	
D860	TLP721FD4GR	PHOTO COUPLER	△
D861	MTZJ20D	ZENER DIODE	
D863	MA4030L	DIODE	
D870	MAZ40240HF	ZENER DIODE	
D890	D4DDD1200001	POSISTOR	△
D891	D4DDD1200001	POSISTOR	△
D892	MA165	DIODE	
D953	SR2KNLFA1	DIODE	
D961	MA152KTX	DIODE	
D975	B0BA8R700009	ZENER DIODE	
D1051	LNH201RGRF5	LED	
D1053	MTZJ5.6B	ZENER DIODE	
D1250	RK34LFC4	DIODE	
D1251	MA704ATX	DIODE	
D1252	MAZ30390LL	ZENER DIODE	
D1253	MAZ30330LL	ZENER DIODE	
D1440	MA152KTX	DIODE	
D1511	MA152KTX	DIODE	
D2101	MTZJ5.6A	ZENER DIODE	
D2102	MTZJ5.6A	ZENER DIODE	
D2330	MA4047M	DIODE	
D2331	MA152KTX	DIODE	
D2332	MA152KTX	DIODE	
D2333	MA29Q-A	DIODE	
D2334	MA152KTX	DIODE	
D2804	RN2ZLFA1	DIODE	
D2805	RN2ZLFA1	DIODE	
D3001	MA3091LTX	ZENER DIODE	
D3002	MA4036H	DIODE	
D3050	MA4100H	DIODE	
D3080	MA3091LTX	ZENER DIODE	
D3101	MA4036H	DIODE	
D3150	MA4033M	DIODE	
D3151	MA4033M	DIODE	
	INTEGRATED CIRCUITS		
IC351	TDA6111Q	IC	
IC352	TDA6111Q	IC	
IC353	TDA6111Q	IC	
IC401	NJM2903M	LINEAR IC	
IC451	TDA8177	IC	
IC501	NJM2903M	LINEAR IC	
IC801	STRX6456LF02	IC	
IC860	C0EAS0000026	IC	
IC881	PQ12RD1B	LINEAR IC	
IC882	AN7809	LINEAR IC	
IC883	AN7808	LINEAR IC	
IC884	PQ05RD1B	LINEAR IC	
IC1051	B3RAC00000005	REMOTE CONTROL RE	
IC1101	SDA5550M	IC	
IC1102	TVR4G6-2	FLASH MEMORY IC	
IC1202	CXA1315M	LINEAR IC	
IC1210	C0DAAGG000002	IC	
IC1211	C0DBEZD000002	IC	
IC1212	SI-3025KS-TL	IC	
IC1213	PST9119NR	IC, LOGIC	
IC1214	SI-3025KS-TL	IC	
IC1215	PST9128NR	IC, LOGIC	
IC1216	AN78L05	LINEAR IC	
IC1301	C1ZBZ0001989	IC	
IC1302	PQ1X251M2ZP	IC	
Q1336	2SA1037AKT	TRANSISTOR	
Q1337	2SA1037AKT	TRANSISTOR	
Q1365	2SD10300TL	TRANSISTOR	
Q1366	2SD10300TL	TRANSISTOR	
Q1375	2SA1037AKT	TRANSISTOR	
Q1376	2SA1037AKT	TRANSISTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
Q1380	2SA1037AKT	TRANSISTOR	
Q1381	B1ABCF0000078	TRANSISTOR	
Q1390	B1ABCF0000078	TRANSISTOR	
Q1430	2SA1037AKT	TRANSISTOR	
Q1490	B1ABCF0000078	TRANSISTOR	
Q1553	B1ABCF0000078	TRANSISTOR	
Q1554	B1ABCF0000078	TRANSISTOR	
Q1555	B1ABCF0000078	TRANSISTOR	
Q1601	B1ABCF0000078	TRANSISTOR	
Q1602	B1ABCF0000078	TRANSISTOR	
Q1603	B1ABCF0000078	TRANSISTOR	
Q2101	B1ABCF0000078	TRANSISTOR	
Q2110	2SA1037AKT	TRANSISTOR	
Q2111	2SA1037AKT	TRANSISTOR	
Q2112	2SA1037AKT	TRANSISTOR	
Q2330	2SA1037AKT	TRANSISTOR	
Q2331	B1ABCF0000078	TRANSISTOR	
Q2332	B1ABCF0000078	TRANSISTOR	
Q2333	B1ABCF0000078	TRANSISTOR	
Q2334	B1ABCF0000078	TRANSISTOR	
Q3030	B1ABCF0000078	TRANSISTOR	
Q3031	B1ABCF0000078	TRANSISTOR	
Q3032	B1ABCF0000078	TRANSISTOR	
Q3033	B1ABCF0000078	TRANSISTOR	
Q3150	B1ABCF0000078	TRANSISTOR	
Q3151	B1ABCF0000078	TRANSISTOR	
Q3303	ERJ3GEY0R00	M 00HM,J,1/16W	
Q3304	ERJ3GEY0R00	M 00HM,J,1/16W	
Q3305	ERJ3GEY0R00	M 00HM,J,1/16W	
Q4801	B1ABCF0000078	TRANSISTOR	
	OTHERS		
A1	TJS3A9900	10P CONNECTOR	
A7	TJS3A9890	9P CONNECTOR	
A11	K1KB35B000001	CONNECTOR	
A15	TJS118590	2P CONNECTOR	
A16	TJS3A9890	9P CONNECTOR	
A17	TJS3A9890	9P CONNECTOR	
A20	TJS4G411	CONNECTOR	
A22	TJS3A9660	CONNECTOR	
A23	TJS3A9650	4P CONNECTOR	
A24	TJS4G8020	16P CONNECTOR	
A25	TJS4G8020	16P CONNECTOR	
A27	TJS4G413	CONNECTOR	
A50	TJSF29207	CONNECTOR	
A51	K1MM82A000001	CONNECTOR	
A52	TJS118590	2P CONNECTOR	
A90	K1KA05A00164	CONNECTOR	
A92	TJS3A9640	3P CONNECTOR	
DG85	TJS4G415	CONNECTOR	
DG86	TJS4G416	CONNECTOR	
DY2	TJS3A9640	3P CONNECTOR	
F801	XBA2C50TR0	FUSE	△
G20	TJS4G412	CONNECTOR	
G27	TJS4G414	CONNECTOR	
H11	K1KA35B000003	CONNECTOR	
H12	TJS1A8090	PHONO PIN	
H15	K1KA02B00044	2P CONNECTOR	
H52	TJS118590	2P CONNECTOR	
JA1	ERJ3GEY0R00	M 00HM,J,1/16W	
JA5	ERJ3GEY0R00	M 00HM,J,1/16W	
JA6	ERJ3GEY0R00	M 00HM,J,1/16W	
RL891	K6B2ADA000005	RELAY	△
RT1	TJS3A9640	3P CONNECTOR	
RT2	TJS3A9640	3P CONNECTOR	
S801	ESB92DA1B	SWITCH	△
S1280	EVQ11G05R	SWITCH	
S1281	EVQ11G05R	SWITCH	
S1282	EVQ11G05R	SWITCH	
S1283	EVQ11G05R	SWITCH	
S1284	EVQ11G05R	SWITCH	
S1285	EVQ11G05R	SWITCH	
TNR1	ENG39609G	TUNER	△
X3	TJS3A9670	6P CONNECTOR	
X24	TJS4G8010	16P CONNECTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
X25	TJS4G8010	16P CONNECTOR	
X1150	H0J600400006	CRYSTAL OSCILATOR	
X1301	TSSA171	CRYSTAL OSCILATOR	
X2130	TSSA128	CRYSTAL OSCILATOR	
R372	ERJ3EKF1401	M 1.4KOHM,F,1/16W	
R373	ERG3FJ823H	M 82KOHM,J, 3W	
R374	ERJ3GEY0R00	M 0OHM,J,1/16W	
R375	ERJ3GEYJ822	M 8.2KOHM,J,1/16W	
R376	ERC12GK561	S 560OHM,K, 1/2W	
R381	ERG3FJ470H	M 47OHM,J, 3W	
R382	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R385	ERJ3GEYJ184	M 180KOHM,J,1/16W	
R387	ERDS1TJ471	C 470OHM,J, 1/2W	
R389	ERJ3EKF1620	M 162OHM,F,1/16W	
R401	ERJ3EKF8201	M 8.2KOHM,F,1/16W	
R402	ERJ3EKF3902	M 39KOHM,F,1/16W	
R403	ERJ3EKF1402	M 14KOHM,F,1/16W	
R404	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R405	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R406	ERJ3EKF1002	M 10KOHM,F,1/16W	
R407	ERJ3EKF8450	M 845OHM,F,1/16W	
R408	ERJ3EKF9760	M 976OHM,F,1/16W	
R409	ERJ3GEYJ473	M 47KOHM,J,1/16W	
R410	ERJ3GEYJ473	M 47KOHM,J,1/16W	
R411	ERJ3GEYJ121	M 120OHM,F,1/16W	
R412	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R415	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R416	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R417	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R418	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R419	ERJ3GEYJ152	M 1.5KOHM,J,1/16W	
R451	ERDS1TJ1R5	C 1.5OHM,J, 1/2W	
R452	ERDS1TJ1R5	C 1.5OHM,J, 1/2W	
R453	ERJ3GEYJ393	M 39KOHM,J,1/16W	
R454	ERJ3GEYJ123	M 12KOHM,J,1/16W	
R455	ERJ3GEYJ101	M 100OHM,J,1/16W	
R456	ERG3FJ331H	M 330OHM,J, 3W	
R457	ERJ3EKF7151	M7.15KOHM,F,1/16W	
R458	ERJ3EKF3481	M3.48KOHM,F,1/16W	
R459	ERJ3EKF9531	M9.53KOHM,F,1/16W	
R460	ERJ3EKF3011	M3.01KOHM,F,1/16W	
R461	ERDS1FJ1R0	C 1OHM,J, 1/2W	
R462	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R465	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R467	ERJ3GEYJ471	M 470OHM,J,1/16W	
R468	ERJ3GEYJ224	M 220KOHM,J,1/16W	
R469	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R470	ERJ3GEY0R00	M 0OHM,J,1/16W	
R471	ERJ3GEYJ563	M 56KOHM,J,1/16W	
R472	ERJ3GEYJ683	M 68KOHM,J,1/16W	
R502	ERQ14AJ100	F 10OHM,J, 1/4W	
R503	EROS2CKF1152	M11.5KOHM,F, 1/4W	
R504	EROS2CHF8661	M8.66KOHM,F, 1/4W	
R506	ERDS1FJ1R0	C 1OHM,J, 1/2W	
R507	ERDS1FJ1R0	C 1OHM,J, 1/2W	
R508	ERQ2CJP3R0S	F 3OHM,J, 2W	
R510	ERDS1TJ333	C 33KOHM,J, 1/2W	
R511	ERDS2TJ821	C 820OHM,J, 1/4W	
R512	ERDS2TJ562	C 5.6KOHM,J, 1/4W	
R513	ERDS2TJ103	C 10KOHM,J, 1/4W	
R514	ERDS2TJ333	C 33KOHM,J, 1/4W	
R515	ERF7ZK2R2	W 2.2OHM, 7W	
R518	ERJ3GEYJ153	M 15KOHM,J,1/16W	
R519	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R520	ERDS2TJ153	C 15KOHM,J, 1/4W	
R521	ERDS2TJ153	C 15KOHM,J, 1/4W	
R522	ERDS2TJ682	C 6.8KOHM,J, 1/4W	
R523	ERDS2TJ471	C 470OHM,J, 1/4W	
R524	ERDS2TJ182	C 1.8KOHM,J, 1/4W	
R525	ERDS2TJ104	C 100KOHM,J, 1/4W	
R859	ERDS1TJ182	C 1.8OHM,J, 1/2W	
R860	ERJ3GEYJ182	M 1.8KOHM,J,1/16W	
R866	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R870	ERDS2TJ182	C 1.8KOHM,J, 1/4W	

Ref. No.	Part No.	Part Name & Description	Remarks
R871	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R878	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R879	DOAE302JA046	C 3KOHM,J, 1/4W	
R880	ERJ3GEY0R00	M 0OHM,J,1/16W	
R881	ERJ3GEYJ682	M 6.8KOHM,J,1/16W	
R882	ERJ3GEYJ333	M 33KOHM,J,1/16W	
R883	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R885	ERJ3GEY0R00	M 0OHM,J,1/16W	
R886	ERDS2TJ473	C 47KOHM,J, 1/4W	
R889	ERJ3GEYJ682	M 6.8KOHM,J,1/16W	
R891	ERDS2TJ473	C 47KOHM,J, 1/4W	
R892	ERDS2TJ102	C 1KOHM,J, 1/4W	
R893	ERC14GK824	S 820KOHM,K, 1/4W	
R901	ERDS1FJ102	C 1KOHM,J, 1/2W	
R902	ERJ3GEYJ333	M 33KOHM,J,1/16W	
R903	ERJ3GEYJ183	M 18KOHM,J,1/16W	
R904	ERJ3GEYJ682	M 6.8KOHM,J,1/16W	
R905	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R906	ERJ3GEYJ271	M 270OHM,J,1/16W	
R907	ERJ3GEYJ510	M 51OHM,J,1/16W	
R908	ERJ3GEYJ391	M 390OHM,J,1/16W	
R909	ERJ3GEYJ271	M 270OHM,J,1/16W	
R950	ERQ1CJP331S	F 330OHM,J, 1W	
R952	ERDS2TJ561	C 560OHM,J, 1/4W	
R953	ERJ3GEYJ271	M 270OHM,J,1/16W	
R954	ERDS1FJ561	C 560OHM,J, 1/2W	
R955	ERJ3GEYJ271	M 270OHM,J,1/16W	
R956	ERDS1FJ561	C 560OHM,J, 1/2W	
R957	ERDS1TJ330	C 33OHM,J, 1/2W	
R958	ERDS1TJ330	C 33OHM,J, 1/2W	
R960	ERQ14AJ100E	F 10OHM,J, 1/4W	
R962	ERQ14AJ120E	F 12OHM,J, 1/4W	
R963	ERQ14AJ120E	F 12OHM,J, 1/4W	
R964	ERJ3GEYJ122	M 1.2KOHM,J,1/16W	
R965	ERJ3GEYJ243	M 24KOHM,J,1/16W	
R966	ERG3FJ151H	M 150OHM,J, 3W	
R967	ERJ3GEYJ243	M 24KOHM,J,1/16W	
R968	ERJ3GEYJ122	M 1.2KOHM,J,1/16W	
R969	ERDS1FJ390	C 39OHM,J, 1/2W	
R970	ERJ3GEYJ2R7	M 2.7OHM,J,1/16W	
R971	ERJ3GEYJ2R7	M 2.7OHM,J,1/16W	
R972	ERDS1FJ390	C 39OHM,J, 1/2W	
R973	ERDS1FJ121	C 120OHM,J, 1/2W	
R975	ERDS1TJ104	C 100KOHM,J, 1/2W	
R976	ERJ3EKF1002	M 10KOHM,F,1/16W	
R977	ERJ3EKF4701	M 4.7KOHM,F,1/16W	
R1051	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R1053	ERJ3GEYJ470	M 47OHM,J,1/16W	
R1054	EROS2CHF3740	M 374OHM,F, 1/4W	
R1055	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R1056	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R1061	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R1062	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1063	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1101	EXB38V680J	RESISTOR ARRAY	
R1106	ERJ3GEY0R00	M 0OHM,J,1/16W	
R1107	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R1108	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R1109	ERJ3GEY0R00	M 0OHM,J,1/16W	
R1110	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R1111	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R1112	ERJ3GEYJ331	M 330OHM,J,1/16W	
R1113	ERJ3GEYJ331	M 330OHM,J,1/16W	
R1196	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1198	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1199	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1201	ERJ3EKF2202	M 22KOHM,F,1/16W	
R1202	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1210	ERJ3GEYJ473	M 47KOHM,J,1/16W	
R1211	ERJ3GEYJ473	M 47KOHM,J,1/16W	
R1212	ERJ3GEYJ473	M 47KOHM,J,1/16W	
R1213	ERJ3GEYJ563	M 56KOHM,J,1/16W	
R1214	ERJ3GEYJ563	M 56KOHM,J,1/16W	
R1215	ERJ3GEYJ563	M 56KOHM,J,1/16W	

Ref. No.	Part No.	Part Name & Description	Remarks
C3083	ECA1HM2R2B	E 2.2UF, 50V	
C3084	ECJ1VB1H682K	C 6800PF, K, 50V	
C3085	ECJ2VF1C105Z	C 1UF, Z, 16V	
C3086	ECJ1VF1C474Z	C 0.47UF, Z, 16V	
C3087	ECJ1VF1H104Z	C 0.1UF, Z, 50V	
C3101	ECJ1VC1H561K	C 560PF, K, 50V	
C3102	ECJ1VC1H561K	C 560PF, K, 50V	
C3103	ECJ1VF1H103Z	C 0.01UF, Z, 50V	
C3150	ECJ1VB0J105K	C 1UF, K, 6.3V	
C3301	ECJ2VF1C105Z	C 1UF, Z, 16V	
C3302	ECJ1VF1C474Z	C 0.47UF, Z, 16V	
C3304	ECJ1VF1C104Z	C 0.1UF, Z, 16V	
C3308	ECA1CM221B	E 220UF, 16V	
C3311	ECJ2VF1C105Z	C 1UF, Z, 16V	
L1139	TALC325T4R7M	CHIP INDUCTOR COIL	
L1141	TALC325T4R7M	CHIP INDUCTOR COIL	
L1150	TALC325T4R7M	CHIP INDUCTOR COIL	
L1151	TALC325T4R7M	CHIP INDUCTOR COIL	
L1170	TALC325T4R7M	CHIP INDUCTOR COIL	
L1171	TALC325T4R7M	CHIP INDUCTOR COIL	
L1172	TALC325T4R7M	CHIP INDUCTOR COIL	
L1210	TLTACT100K	PEAKING COIL 10U	
L1230	TLTACT4R7J	PEAKING COIL	
L1250	EXCELD35V	CORE	
L1251	EXCELD35V	CORE	
L1252	EXCELD35V	CORE	
L1253	TLPF095	CHOKE COIL	
L1255	EXCELD35V	CORE	
L1256	EXCELD35V	CORE	
L1257	TALL08T330KA	INDUCTION COIL	
L1258	G0A221GA0013	COIL	
L1260	EXCELD35V	CORE	
L1261	ERDS2TC0	C 00HM, 1/4W	
L1315	TALC325T4R7M	CHIP INDUCTOR COIL	
L1334	TALC325T4R7M	CHIP INDUCTOR COIL	
L1335	G1C2R2K00006	COIL	
L1336	G1C2R2K00006	COIL	
L1337	G1C2R2K00006	COIL	
L1338	G1C1R5K00004	COIL	
L1350	TALC325T4R7M	CHIP INDUCTOR COIL	
L1352	TALC325T4R7M	CHIP INDUCTOR COIL	
L1360	TALC325T4R7M	CHIP INDUCTOR COIL	
L1361	TALC325T4R7M	CHIP INDUCTOR COIL	
L1375	TALC325T4R7M	CHIP INDUCTOR COIL	
L1378	G1C1R5K00004	COIL	
L1379	G1C1R5K00004	COIL	
L1384	TALC325T4R7M	CHIP INDUCTOR COIL	
L1385	TALC325T4R7M	CHIP INDUCTOR COIL	
L1390	TALC325T4R7M	CHIP INDUCTOR COIL	
L1401	TALC325T4R7M	CHIP INDUCTOR COIL	
L1402	TALC325T4R7M	CHIP INDUCTOR COIL	
L1403	TALC325T4R7M	CHIP INDUCTOR COIL	
L1430	TALC325T4R7M	CHIP INDUCTOR COIL	
L1440	TALC325T4R7M	CHIP INDUCTOR COIL	
L1450	TALC325T4R7M	CHIP INDUCTOR COIL	
L1460	TALC325T4R7M	CHIP INDUCTOR COIL	
L1491	TALC325T4R7M	CHIP INDUCTOR COIL	
L1492	TALC325T4R7M	CHIP INDUCTOR COIL	
L1495	TALC325T4R7M	CHIP INDUCTOR COIL	
L1501	TALC325T4R7M	CHIP INDUCTOR COIL	
L1580	TALC325T4R7M	CHIP INDUCTOR COIL	
L2101	TLTACT100K	PEAKING COIL 10U	
L2130	EXCELSA35T	BEAD CORE	
L2132	G0C6R8KA0004	PEAKING COIL	
L2133	TLTACT100K	PEAKING COIL 10U	
L2301	G0ZZ00002021	COIL	
L2302	G0A820FA0010	COIL	
L2303	TLTACT100K	PEAKING COIL 10U	
L2304	TLTACT100K	PEAKING COIL 10U	
L2305	EXCELD35V	CORE	
L2306	EXCELD35V	CORE	
L2310	EXCELSA35T	BEAD CORE	
L2801	G0BYYYY00016	COIL	
L2820	TLTACT100K	PEAKING COIL 10U	

Ref. No.	Part No.	Part Name & Description	Remarks
L2821	TLTACT100K	PEAKING COIL 10U	
L2830	EXCELSA35T	BEAD CORE	
L2831	EXCELSA35T	BEAD CORE	
L2832	EXC3BB221H	CHIP BEAD CORE	
L2833	EXC3BB221H	CHIP BEAD CORE	
L3001	EXC3BB221H	CHIP BEAD CORE	
L3002	EXC3BB221H	CHIP BEAD CORE	
D356	D1NL40V70	DIODE	
D358	MA151KTX	DIODE	
D360	D1NL20UV70	DIODE	
D361	MA151KTX	DIODE	
D362	MA151KTX	DIODE	
D363	MA151KTX	DIODE	
D364	MA3130MTX	ZENER DIODE	
D365	MA3130MTX	ZENER DIODE	
D366	MA3130MTX	ZENER DIODE	
D383	D1NL40V70	DIODE	
D385	ERA22-04	DIODE	
D389	D1NL40V70	DIODE	
D401	MA152KTX	DIODE	
D402	MA152KTX	DIODE	
D403	MA152KTX	DIODE	
D415	MA152KTX	DIODE	
D452	MA152KTX	DIODE	
D453	EU02AV1	DIODE	
D454	MA152KTX	DIODE	
D455	MAZ30560LL	ZENER DIODE	
D501	AU02	DIODE	
D502	D1NL20UV70	DIODE	
D503	MA4104J	DIODE	
D504	MA165	DIODE	
D505	RU2MLFA1	DIODE	
D506	RU2MLFA1	DIODE	
D507	MA3180MTX	DIODE	
D508	MA3180MTX	DIODE	
D510	MA165	DIODE	
D511	MA165	DIODE	
D520	MA165	DIODE	
D527	MA152KTX	DIODE	
D530	MA165	DIODE	
D532	MA4360H	DIODE	
D534	MA182	DIODE	
D535	MA182	DIODE	
D545	B0JAME000052	DIODE	
D547	MA4150M	DIODE	
D548	D1NL40V70	DIODE	
D551	EU02	DIODE	
D552	RH3GLF102	DIODE	
D553	FMV-3GULF730	DIODE	
D555	MA167	DIODE	
D566	MTZJ51	ZENER DIODE	
D567	MTZJ51	ZENER DIODE	
D568	MA165	DIODE	
D569	MA4020H	DIODE	
D570	MAZ30560LL	ZENER DIODE	
D571	MAZ30560LL	ZENER DIODE	
D572	MAZ30560LL	ZENER DIODE	
D581	RU3ANLFA1	DIODE	
D701	D1NL40V70	DIODE	
D801	ERZV10D621CS	VARISTOR	△
D803	D4SB80	DIODE	
D811	B0BA02100001	ZENER DIODE	
D812	MTZJ36D	ZENER DIODE	
D813	B0BA02100001	ZENER DIODE	
D814	B0EAKT000018	DIODE	
D817	AG01Z	DIODE	
D818	MAZ2360	DIODE	
D821	MAZ20820A0LS	DIODE	
D824	AG01Z	DIODE	
D825	MAZ20820A0LS	DIODE	
D826	MAZ20820A0LS	DIODE	
D827	MTZJ20B	ZENER DIODE	
D828	TF361MA	THYRISTOR	△
D829	AG01Z	DIODE	

Ref. No.	Part No.	Part Name & Description	Remarks
IC1303	NJM2904M	LINEAR IC	
IC1305	PQ1X251M2ZP	IC	
IC1354	C0DBZFC00048	IC	
IC1403	AN5876S	IC	
IC1404	NJM2904M	LINEAR IC	
IC1440	C3HBKZ000001	IC	
IC1441	C3HBKZ000001	IC	
IC1470	C0CBCBD00006	IC	
IC1501	TC7MBD3245KL	IC	
IC1502	TVR4GAS217	EEPROM IC	
IC1503	TVR4GAS219	EEPROM IC	
IC1601	AN5876S	IC	
IC2101	MSP3461GAB83	SOUND CONTROL IC	
IC2301	TDA7481	LINEAR IC	
IC2801	TDA2616/N1	IC	
IC3001	MM1492AF	IC	
IC3301	TDA8601T/C1	IC	
IC3302	TDA8601T/C1	IC	
IC4801	PUB4301	TRANSISTOR ARRAY	
IC4802	AN6564NS	LINEAR IC	
	TRANSISTORS		
Q112	2SA1037AKT	TRANSISTOR	
Q369	2SA1037AKT	TRANSISTOR	
Q401	B1ABCF000078	TRANSISTOR	
Q415	B1ABCF000078	TRANSISTOR	
Q416	B1ABCF000078	TRANSISTOR	
Q451	B1ABCF000078	TRANSISTOR	
Q510	2SA1018Q	TRANSISTOR	
Q513	2SA1018Q	TRANSISTOR	
Q540	2SK2962	TRANSISTOR	
Q551	2SC5591000LK	TRANSISTOR	
Q555	2SC1473A	TRANSISTOR	
Q565	2SC3311A	TRANSISTOR	
Q575	2SA1037AKT	TRANSISTOR	
Q576	B1ABCF000078	TRANSISTOR	
Q577	B1ABCF000078	TRANSISTOR	
Q703	2SK2538000	TRANSISTOR	
Q810	2SC1473A	TRANSISTOR	
Q851	2SA1037AKT	TRANSISTOR	
Q870	B1ABCF000078	TRANSISTOR	
Q872	B1ABCF000078	TRANSISTOR	
Q873	B1ABCF000078	TRANSISTOR	
Q874	2SB1030A	TRANSISTOR	
Q880	B1ABCF000078	TRANSISTOR	
Q891	2SC3311AS	TRANSISTOR	
Q892	2SC1317	TRANSISTOR	
Q902	B1ABCF000078	TRANSISTOR	
Q903	B1ABCF000078	TRANSISTOR	
Q908	B1ABCF000078	TRANSISTOR	
Q952	B1ABCF000078	TRANSISTOR	
Q953	B1ABCF000078	TRANSISTOR	
Q954	2SA1037AKT	TRANSISTOR	
Q955	2SA1535ARLB	TRANSISTOR	
Q956	2SC3944ARLB	TRANSISTOR	
Q975	2SB14880QA	TRANSISTOR	
Q976	2SC54190RA	TRANSISTOR	
Q1051	B1ABCF000078	TRANSISTOR	
Q1060	B1ABCF000078	TRANSISTOR	
Q1130	B1ABCF000078	TRANSISTOR	
Q1131	2SA1037AKT	TRANSISTOR	
Q1150	B1ABCF000078	TRANSISTOR	
Q1230	B1ABCF000078	TRANSISTOR	
Q1231	2SA1037AKT	TRANSISTOR	
Q1301	B1ABCF000078	TRANSISTOR	
Q1302	B1ABCF000078	TRANSISTOR	
Q1303	B1ABCF000078	TRANSISTOR	
Q1335	2SA1037AKT	TRANSISTOR	
JK1	TJB4G647	FRONT AV TERMINAL	
JK351	K3B10CA00040	CRT SOCKET	△
JK3001	K4BK40A00003	REAR AV TERMINAL	
JK3150	TJSF26815	15P CONNECTOR	
JS105	ERJ3GEY0R00	M 00HM,J,1/16W	
JS106	ERJ3GEY0R00	M 00HM,J,1/16W	
JS108	ERJ3GEY0R00	M 00HM,J,1/16W	

Ref. No.	Part No.	Part Name & Description	Remarks
JS109	ERJ3GEY0R00	M 00HM,J,1/16W	
JS114	ERJ3GEY0R00	M 00HM,J,1/16W	
JS540	ERJ3GEY0R00	M 00HM,J,1/16W	
JS857	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1101	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1102	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1103	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1104	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1105	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1106	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1107	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1108	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1109	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1110	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1150	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1320	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1321	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1322	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1338	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1360	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1361	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1362	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1370	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1371	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1372	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1386	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1387	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1401	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1402	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1403	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1420	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1421	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1422	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1430	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1431	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1432	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1512	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1513	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1515	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1524	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1525	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1526	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1531	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1539	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1540	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1549	ERJ3GEY0R00	M 00HM,J,1/16W	
JS1601	ERJ3GEY0R00	M 00HM,J,1/16W	
JS2150	ERJ3GEY0R00	M 00HM,J,1/16W	
JS2814	ERJ3GEY0R00	M 00HM,J,1/16W	
JS3011	ERJ3GEY0R00	M 00HM,J,1/16W	
JS3012	ERJ3GEY0R00	M 00HM,J,1/16W	
JS3013	ERJ3GEY0R00	M 00HM,J,1/16W	
JS3014	ERJ3GEY0R00	M 00HM,J,1/16W	
JS3015	ERJ3GEY0R00	M 00HM,J,1/16W	
JS4801	ERJ3GEY0R00	M 00HM,J,1/16W	
L1	TJS3A9900	10P CONNECTOR	
L2	TJS3A9640	3P CONNECTOR	
L3	TJS3A9670	6P CONNECTOR	
P90	K1KA05A00164	CONNECTOR	
P92	TJS3A9640	3P CONNECTOR	