

Service Manual

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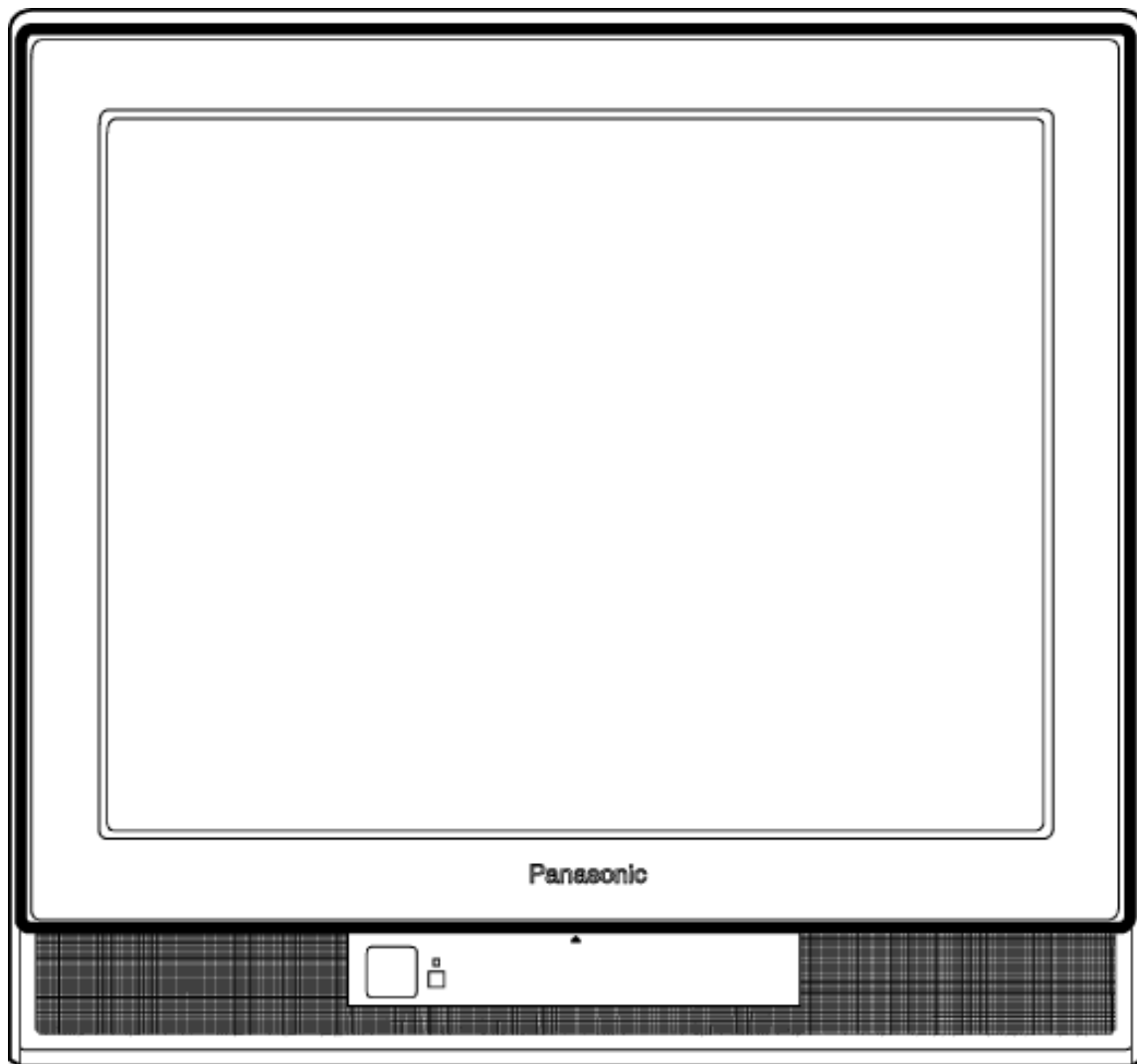
ORDER NO. MTV0207188C3

Service Manual

Colour Television

- TC-15PM11RQ - C.I.S.

MX-7Z Chassis



Specifications

Power Source : AC AUTO 110-240V, 50/60 Hz

Power Consumption :	65W
Aerial Impedance :	75 Ω unbalanced
	Coaxial type
Receiving System :	17 Systems
Receiving Channels :	
VHF	2-12 (PAL/SECAM B, K1)
	0-12 (PAL B AUST.)
	1-9 (PAL B N.Z.)
	1-12 (PAL/SECAM D)
	1-12 (NTSC M JAPAN)
	2-13 (NTSC M U.S.A.)
UHF	21-69 (PAL G, H, I/SECAM G, K, K1)
	28-69 (PAL B AUST.)
	13-57 (PAL D, K)
	13-62 (NTSC M JAPAN)
	14-69 (NTSC M U.S.A.)
CATV	S1-S41 (OSCAR)
	1-125 (U.S.A. CATV)
	C13-C41 (JAPAN)
	S21-S41 (HYPER)
	Z1-Z37 (CHINA)

Intermediate Frequency :

Video	38.0 MHz
Sound	31.5 MHz (D, K)
	32.5 MHz (B, G)
	32.0 MHz (I)
	33.5 MHz (M)
Colour	33.57 MHz (PAL)
	33.6 MHz (SECAM)
	32.75 MHz (SECAM)
	34.42 MHz (NTSC)

Video/ Audio Terminals :

FAV In	Video In 1 Vp-p 75 Ω
	Audio In Approx. 400mVrms
RAV In	Video In 1 Vp-p 75 Ω
	Audio In Approx. 400mVrms
Monitor Out	Video Out 1 Vp-p 75 Ω
	Audio Out Approx. 400mVrms

High Voltage :	27.5kV (± 1.5)
	at zero beam current

Picture Tube :	A36LTN194X
	36cm (15 inches)
	Measured diagonally,
	90° deflection

Audio Output :	3.5W
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Dimensions :

Height : 373.5 mm

Width : 485.0 mm

Depth : 380.0 mm

Mass :

12.5 kg (Net Wt.)

Specifications are subject to change without notice.

Mass and dimensions shown are approximate.

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 WARNING

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

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1.1 General Guide Lines

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1. It is advisable to insert an isolation transformer in the AC supply before servicing this hot chassis.
2. When servicing, observe the original lead dress, especially the lead dress in the high voltage circuits. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
3. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers, shields and isolation R-C combinations, are properly installed.
4. When the receiver is not to be used for a long period of time, unplug the power cord from the AC cord outlet.
5. Potential, as high as **29.0kV** is present when this receiver is in operation. Operation of the receiver without the rear cover involves the danger of a shock hazard from the receiver power supply. Servicing should not be attempted by anyone who is not thoroughly familiar with the precautions necessary when working on high voltage equipment. Always discharge the anode of the picture tube to the receiver chassis before handling the tube. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazards.

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1.2 Leakage Current Cold Check

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1. Unplug the AC cord and connect a jumper between the two prongs on the plug.

2. Turn on the receiver's power switch.

Measure the resistance value, with an ohmmeter, between the jumper AC plug and each exposed metallic cabinet part on the receiver, such as screw heads, aerials, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 4 M Ω and 20 M Ω . When the exposed metal does not have a return path to the chassis, the reading must be infinite.

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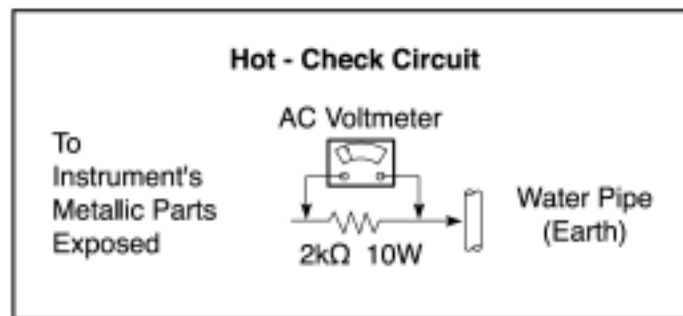
1.3 Leakage Current Hot Check (Fig. 1)

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

The current from any point should not exceed 0.7 mA peak AC or 2 mA DC. In the case of a measurement being outside of these limits specified, there is a possibility of a shock hazard and the receiver should be repaired and rechecked before it is returned to the customer.

Fig. 1



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1.4 X-Radiation

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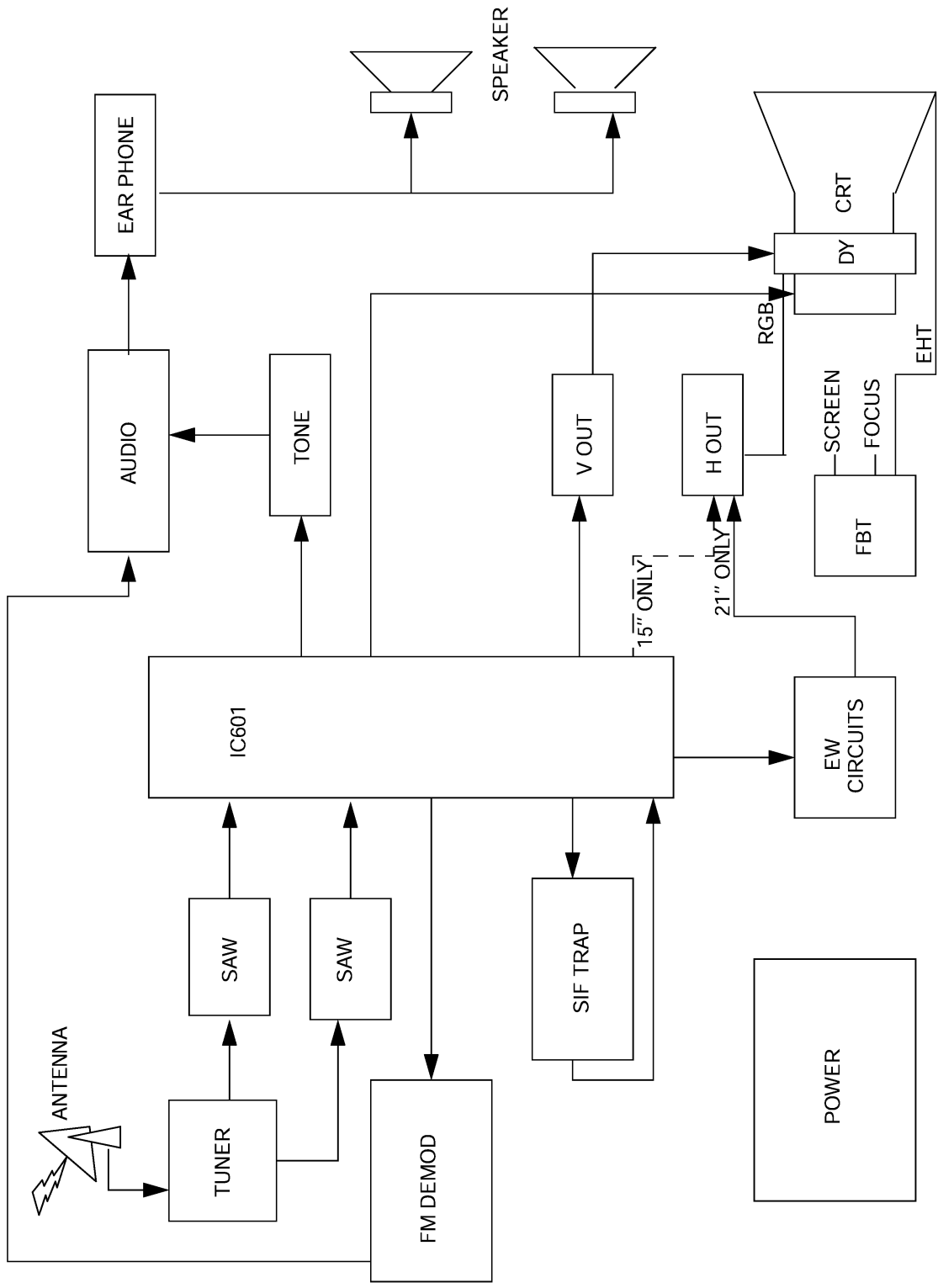
Warning:

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

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

1. Set the brightness to minimum.
2. Use the remocon to get into Service Mode.
3. Measure the EHT. The meter reading should indicate **27.5(±1.5)kV** . If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.
4. To prevent the possibility X-Radiation, it is essential to use the specified picture tube, if service replacement becomes necessary.

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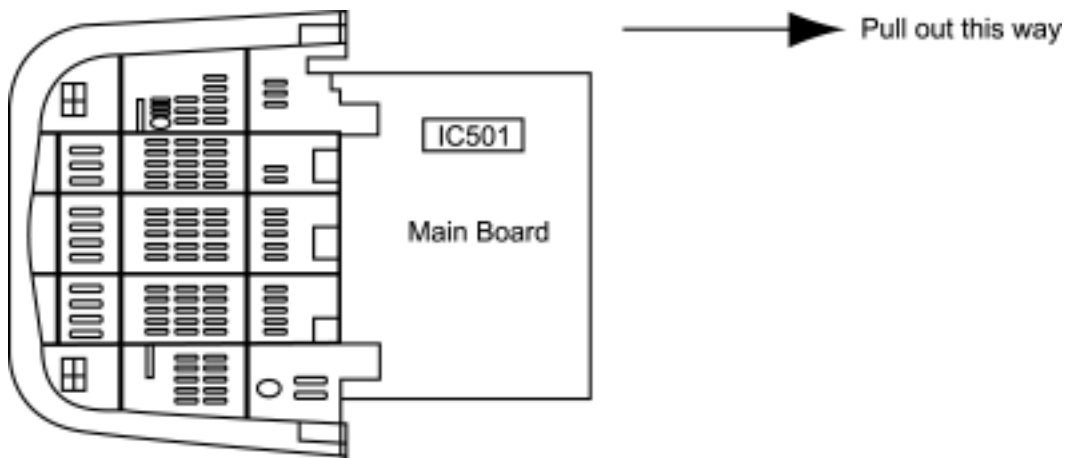


2.1 Service Position for E-Board

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

Fig. 2



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2.2 Factory Mode Adjustment

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- How to set :

To set the Factory mode, press Volume 0 dac on the TV and Timer Setting 30 min on the remote control and press Volume (-) Down button on the TV together press recall on the remote control. CHK should appear on right of TV screen.

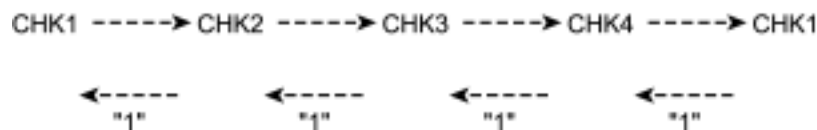
To move from CHK1 to CHK2 mode, etc. please follow below rotation :

-

- To Set Self-Check :

Press the Volume Down button on TV then press the Off Timer button on remote control.

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2.3 Adjustment for White Balance

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Preparation:

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

Adjustment of Low Light.

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

Adjustment of High Light

1. Adjustment Sub Bright, so that $Y = 390$ nit.
2. Adjustment R-Drive, so that $X = 0.259 \pm 0.010$ nit.
3. Adjustment B-Drive, so that $Y = 0.259 \pm 0.010$ nit.

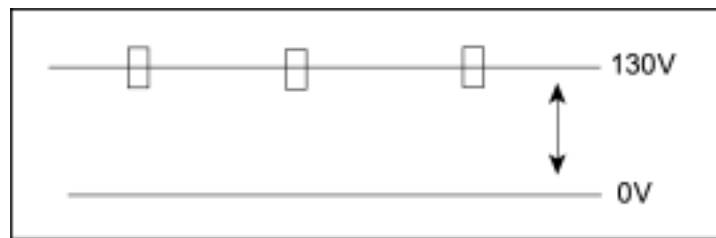
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2.4 Adjustment for CRT CUT OFF

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Preparation:

1. Connect the oscilloscope probe to TPL7.
2. Screen VR min.
3. Set the data Sub Bright, Bright.
4. In service Mode at “Bright” dac press [5] in factory mode to enter vertical line and adjust by Volume Down or Up button.
5. Adjust “Screen VR” until 1-H Line appears.



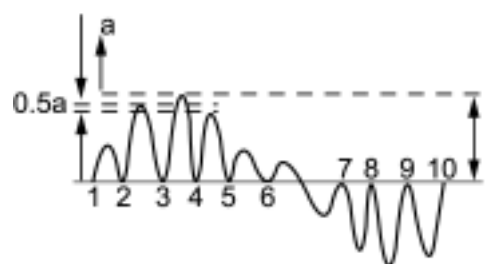
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2.5 Adjustment Procedure

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Item / Preparation			Adjustment Procedure		
+B Voltage			Confirm the DC voltage at the indicated test points, as follows :		
1.	Operate the TV set.			TPA 12 : 140.5 ± 1.5V	
2.	Set control as follows :			TPA 11 : 8 ± 1V	
	Brightnessminimum			TPA 10 : 5 ± 1V	
	Contrast minimum			TPA 21 : 215 ± 15V	
RF AGC					
1.	Receive a colour bar signal at an RF level of 74 ± 1-2 dBU with 75 Ω loaded.		1.	Select “RF AGC” indication in CHK2, on Screen by remote control at factory mode.	
2.	Connect digital multimeter to RF AGC at Tuner.		2.	Set RF AGC by using remote control Volume (+) or Volume (-) button until voltage AGC at Tuner reaches 2.7 ± 0.1V at TPA 15 (Tuner point).	
			3.	Increase RF signal strength by 2dB, confirm AGC at Tuner voltage drop.	
High Voltage					
1.	Receive the crosshatch pattern.		1.	Connect a DC voltage meter to TPA 20 and confirm the +B voltage is 140.5 ± 1.5V.	
2.	Set to 0 Beam.				
	Screen VR minimum		2.	Connect a high frequency voltmeter to heater and confirm that voltage reads 6.0 ± 0.24 (VRMS).	
	Contrast minimum				
			3.	Normalize the brightness and contrast.	
Item / Preparation			Adjustment Procedure		
NTSC TINT COLOUR					
	Connect a short jumper between TPA 10 and TPA 20. Press Main Menu and set system to use AV-NTSC (3.58 MHz). DYNAMIC Normal ChannelCLR Set STD		1.	Adjust Sub-Tint so that No. 2, 3 and 4 becomes level waveform is similar to Fig. 3.	
			2.	Confirm phase at Tint is changes more than ± 30 by Tint control.	
			3.	Confirm that colour level is maximum when colour DAC is adjusted to maximum position.	
				Note: Use remote control only when adjusting user mode to Sub-Tint.	

Fig. 3



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2.6 PAL Colour

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1. Receive the PAL B/G studio colour bar pattern and adjust local frequency at the best tuned position.
2. Pic Menu: Dynamic Normal, Confirm Contrast - 63, Sub Contrast - 21.
3. Channel colour set ----- STD.
4. “CHK2” and press digit key “5” (AKB OFF) also confirm OSD become blue colour.
5. Connect TPA 10 to TPA 20.
6. Set (A) to $2.3 \pm 0.2V$ by BRT (CHK2) at measurement point TPL 2 Fig. 4.

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2.7 Adjustment

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1. Connect oscilloscope probe to TPL 2 (G OUT) with 10k Ω series resistor and adjust Contrast so that (B) as in Fig. 4 is $2.6 \pm 0.1V$.
2. Adjust "Sub Colour" so that waveform as in Fig. 4 (1) $2.5 \pm 0.1V$.
3. Connect oscilloscope probe to TPL 1 (R OUT) with 10k Ω series resistor and confirm waveform as in Fig. 5 is (2) $2.7 \pm 0.4V$.
4. Take out jumper TPA 10 and TPA 20.
5. Press digit key "5" (AKB ON) and confirm the OSD become white colour.

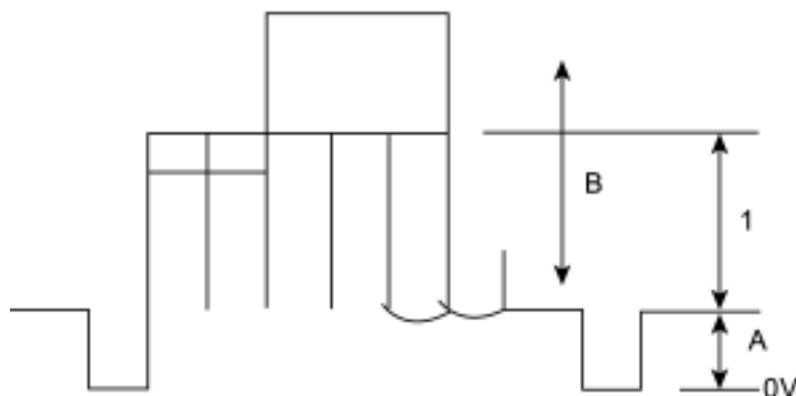


Fig. 4

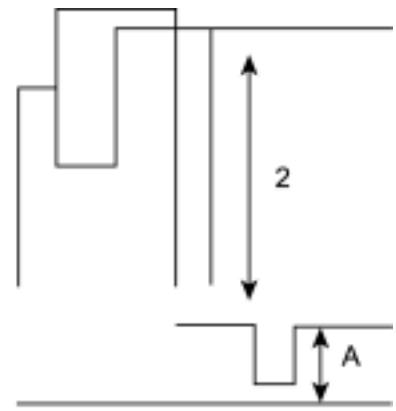


Fig. 5

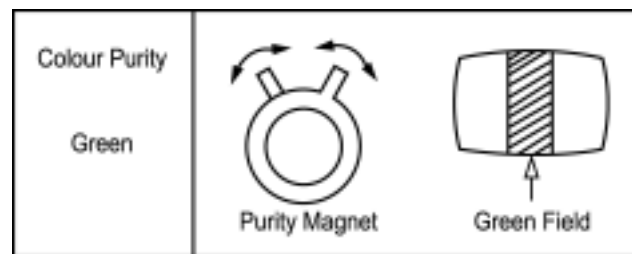
Before Colour Purity, Convergence and White Balance adjustment are attempted, V. Height, H. Centre and Focus adjustments must be completed.

Colour Purity

1. Set the Brightness and Contrast controls to their maximum positions.
2. Operate the TV set for 60 minutes.
3. Fully degauss the picture tube by using an external degaussing coil.
4. Apply a crosshatch pattern signal and adjust the static convergence magnets to the approximately correct position.

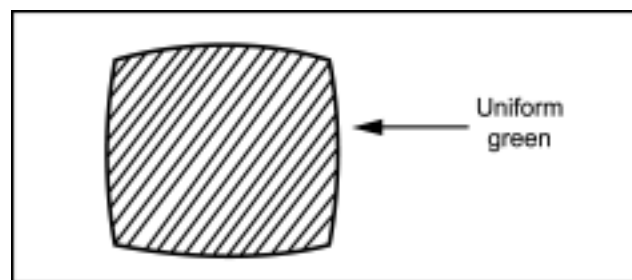
5. Receive a black and white signal.
6. Set the control as follows:
 Red.....minimum
 Green.....minimum
 Blue.....minimum
 Press the Shipping button on the remote control twice to select CRT Adjustment Mode to select low light.
7. Loosen the clamp screw for the Deflection Yoke A in Fig. 10 and move the Deflection Yoke as close to the purity magnet as possible.
8. Adjust the purity magnetic rings so that a vertical green field is obtained at the centre of the screen.

Fig. 6



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

Fig. 7

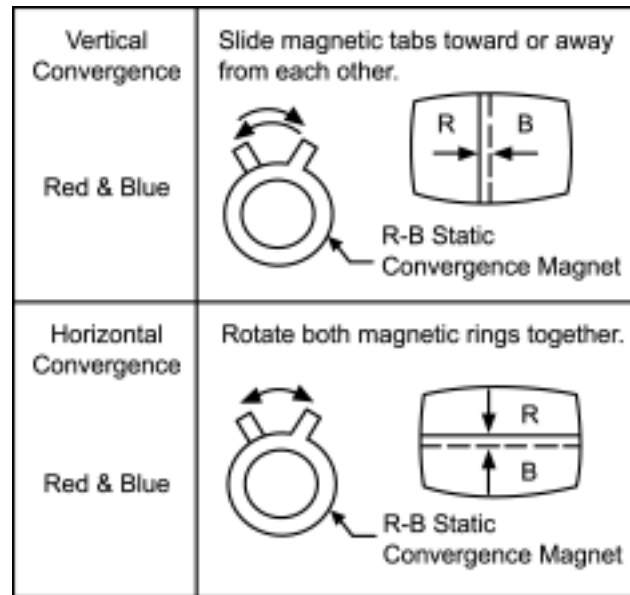


10. Re-adjust the Low Light controls to their correct settings and make sure that a uniform white field is obtained.
11. Tighten the clamp screw A in Fig. 10.

Convergence

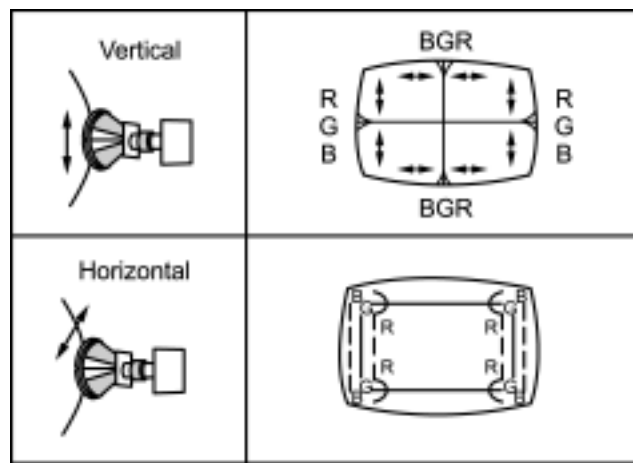
1. Apply a crosshatch pattern signal and Normalize Contrast control to the maximum positions.
2. Adjust Brightness until the grey position of the crosshatch pattern just becomes black.
3. Adjust the Red and Blue line at the centre of the screen by rotating the R-B static.

Fig. 8



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

Fig. 9



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

Fig. 10

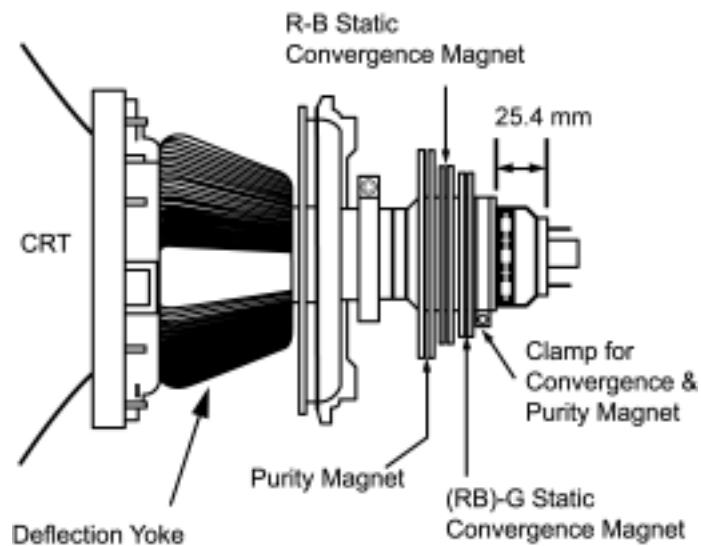
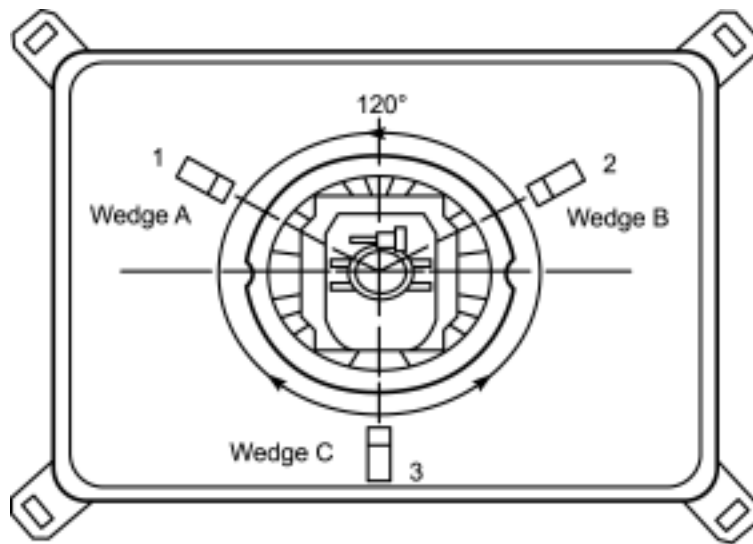


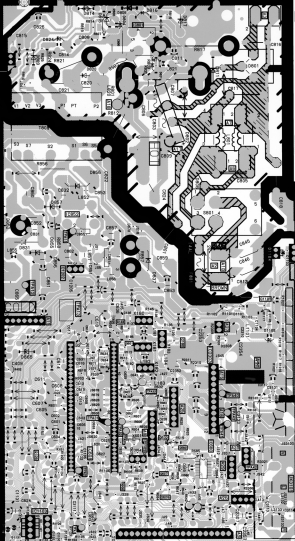
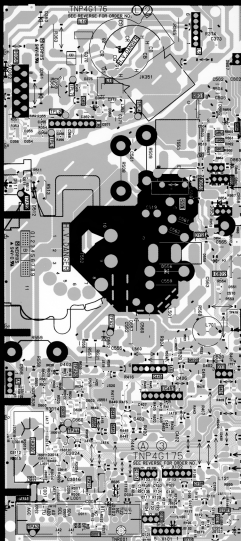
Fig. 11



Notes:

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

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4 Schematic Diagram

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Important Safety Notice

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

Notes :

1. Resistor

All resistors are carbon 1/4W resistors unless marked as follows :

Unit of resistance is OHM (Ω) (K = 1 000 M = 1 000 000)

	Nonflammable		Metal Oxide
	Solid		Metal Film
	Wire Wound		Fuse

2. Capacitor

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

Unit of capacitance is μ F unless otherwise noted.

	Temperature Compensation		Electrolytic
	Polyester		Bipolar
	Metalized Polyester		Dipped Tantalum
	Polypropylene		Z-Type

3. Coil

Unit of inductance is μ H, unless otherwise noted.

4. Test Point

 : Test Point position

5. Earth Symbol

 : Chassis Earth (Cold)  : Line Earth (Hot)

6. Voltage Measurement

Voltage is measured using DC voltmeter.

Conditions of the measurement are the following :

Power Source..... AC AUTO 110-240V, 50/60 Hz

Receiving Signal.....Colour Bar signal (RF)

All customer's controls.....Maximum positions

7. Number in red circle indicates waveform number.

(See waveform pattern table.)

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

9. ➡ : Indicates the major signal flow.

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

Remarks :

The Power Circuit contains a circuit area which uses a 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 be blown.

Connect the earth of instruments to the earth connection of the circuit being measured.

d. Make sure to disconnect the power plug before removing the chassis.

[4.1 L BOARD](#)

[4.1.1 L BOARD \(1/2\)](#)

[4.1.2 L BOARD \(2/2\)](#)

[4.2 Z5 BOARD](#)

[4.2.1 Z5 BOARD \(1/2\)](#)

[4.2.2 Z5 BOARD \(2/2\)](#)

[4.3 A BOARD](#)

[4.3.1 A BOARD \(1/3\)](#)

[4.3.2 A BOARD \(2/3\)](#)

[4.3.3 A BOARD \(3/3\)](#)

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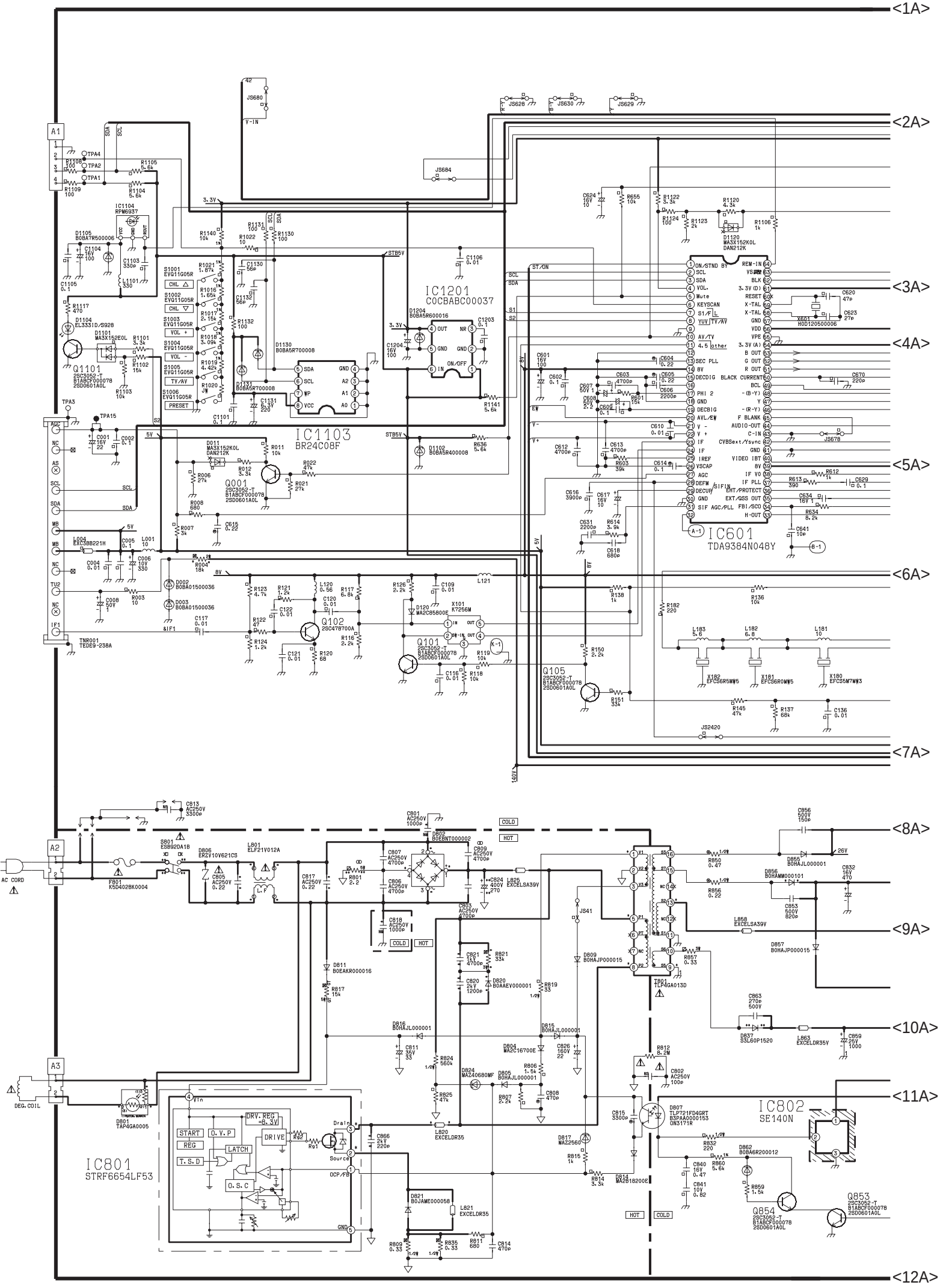
4.1 L BOARD

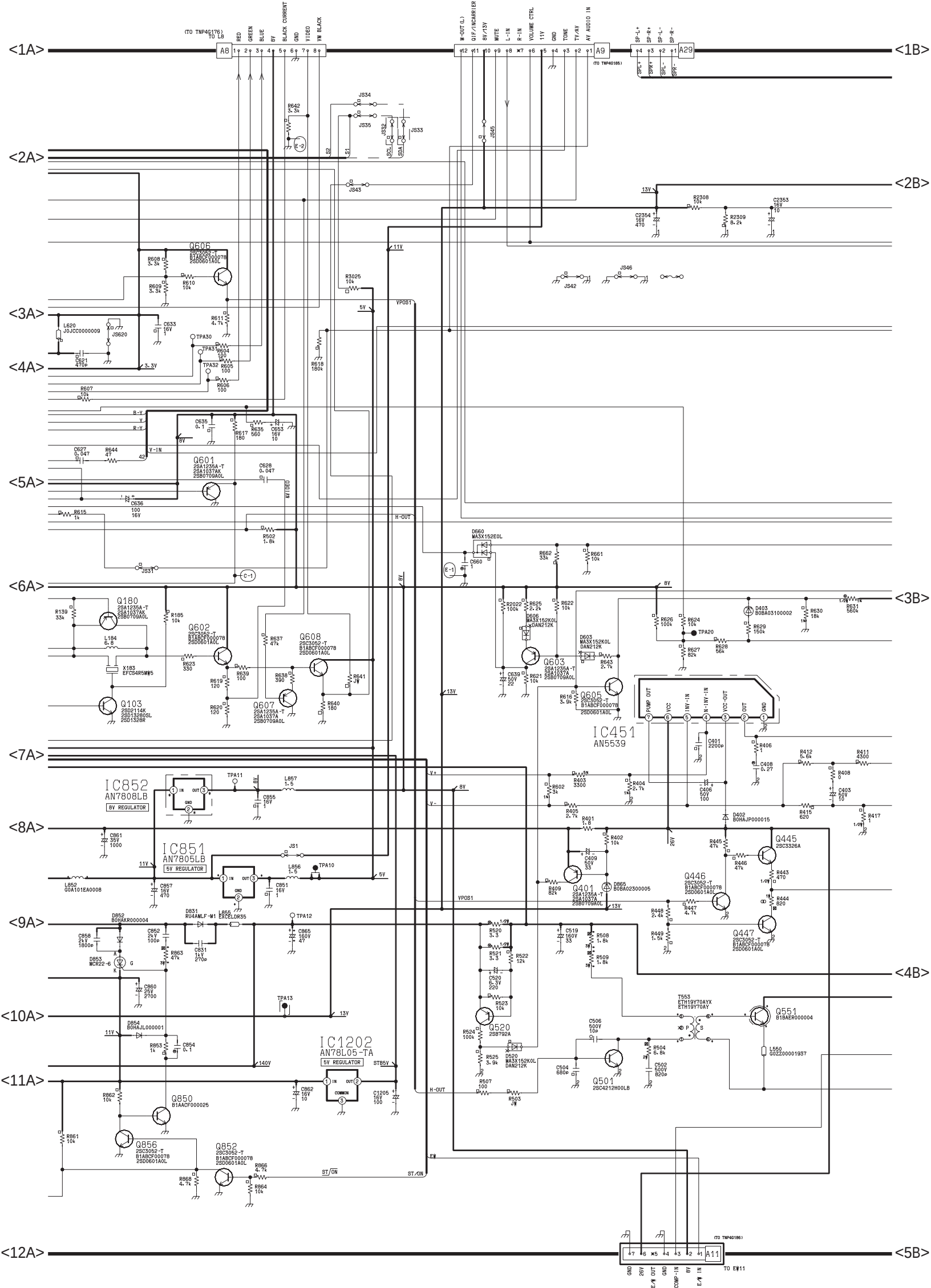
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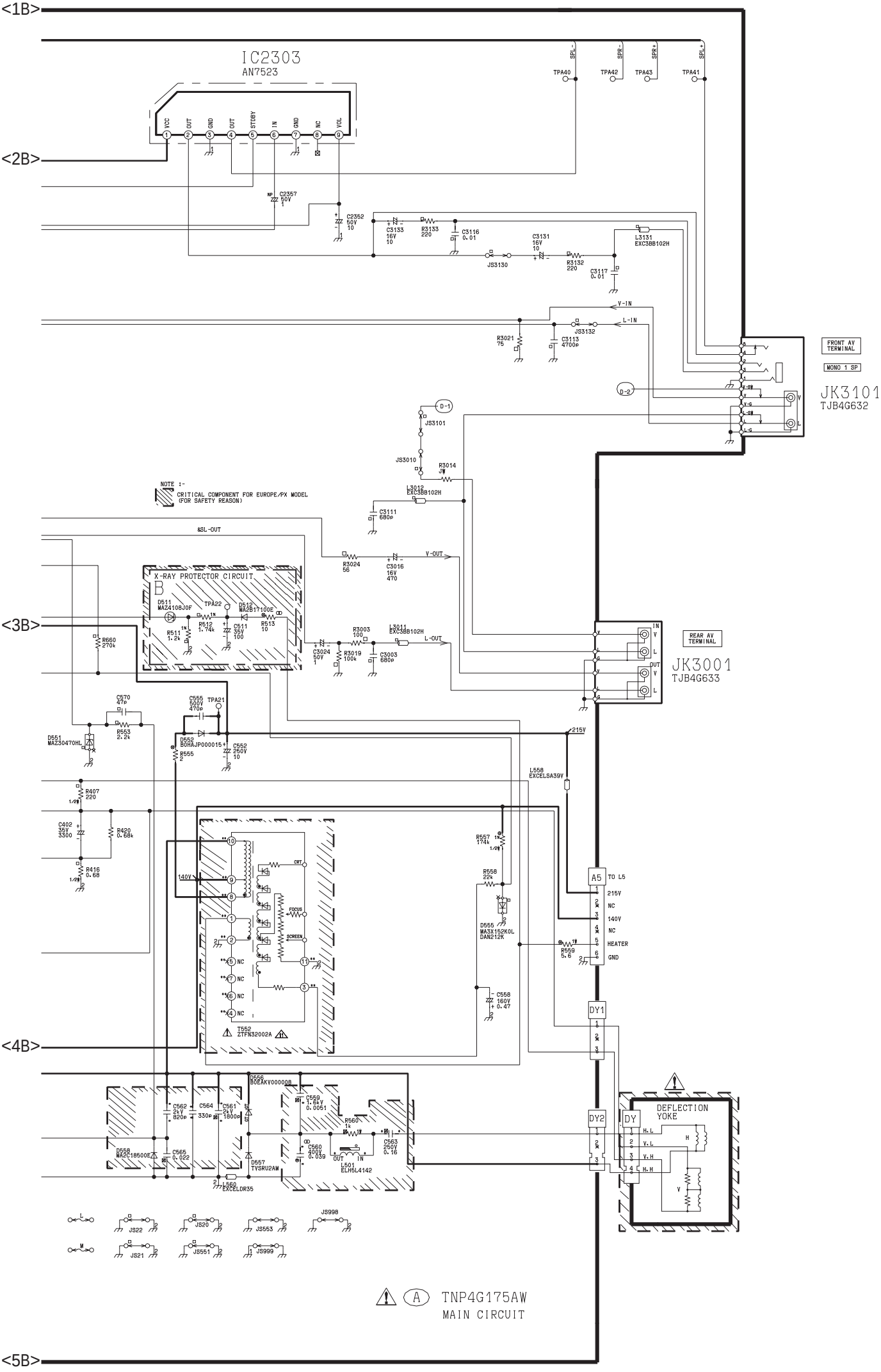
[4.1.1 L BOARD \(1/2\)](#)

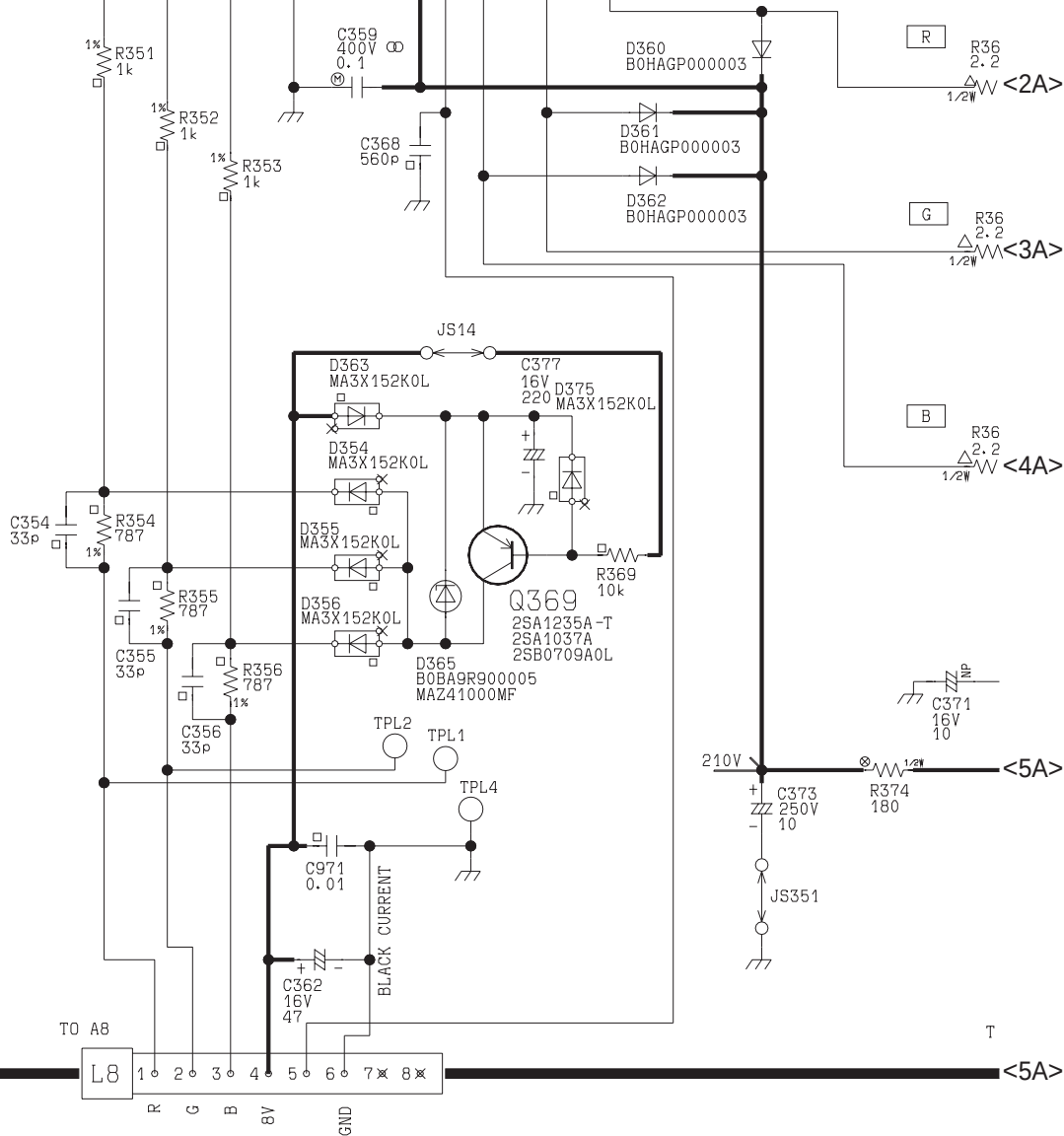
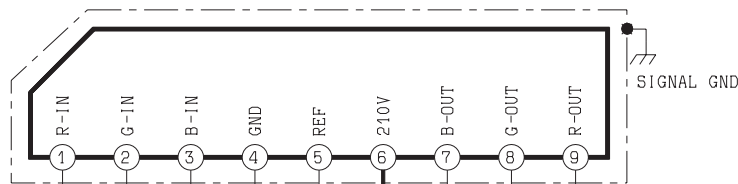
[4.1.2 L BOARD \(2/2\)](#)

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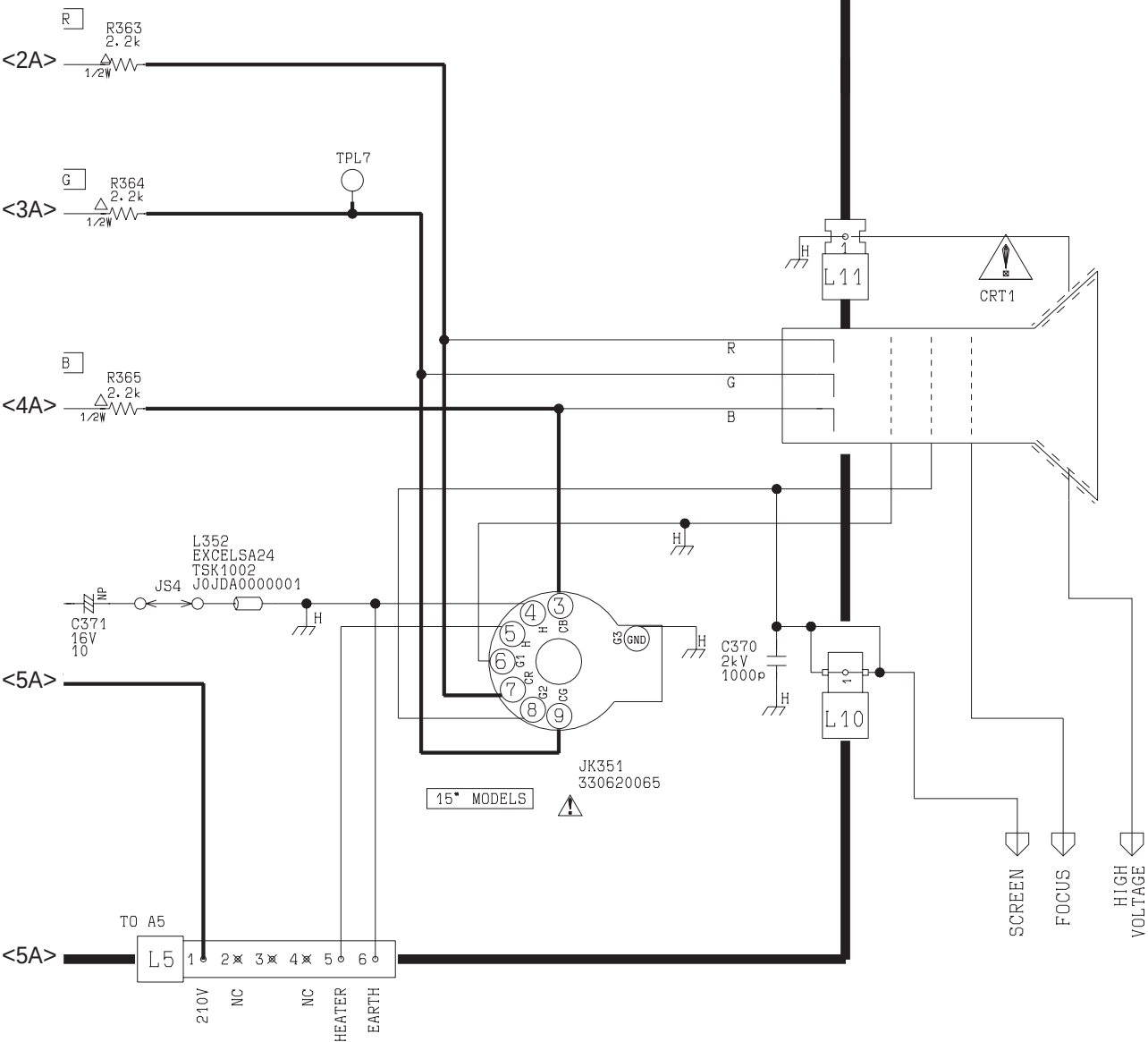




$$\frac{1}{Q/N^2}$$


L

TNP4G176AH
CRT CIRCUIT





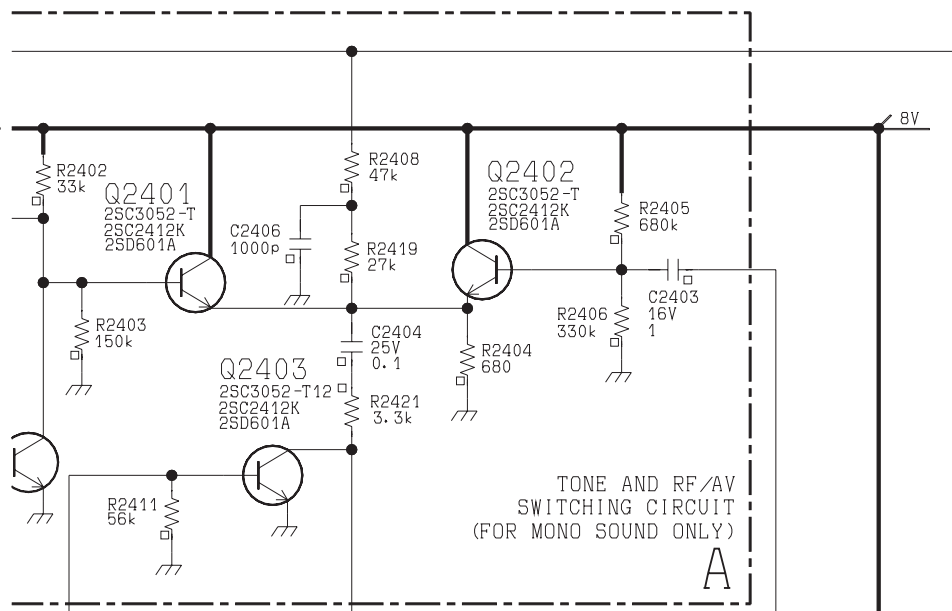
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TNP4G185AD
AV MONO CIRCUIT

M-OUT (L)
 CARRIER
 8V/13V
 MUTE

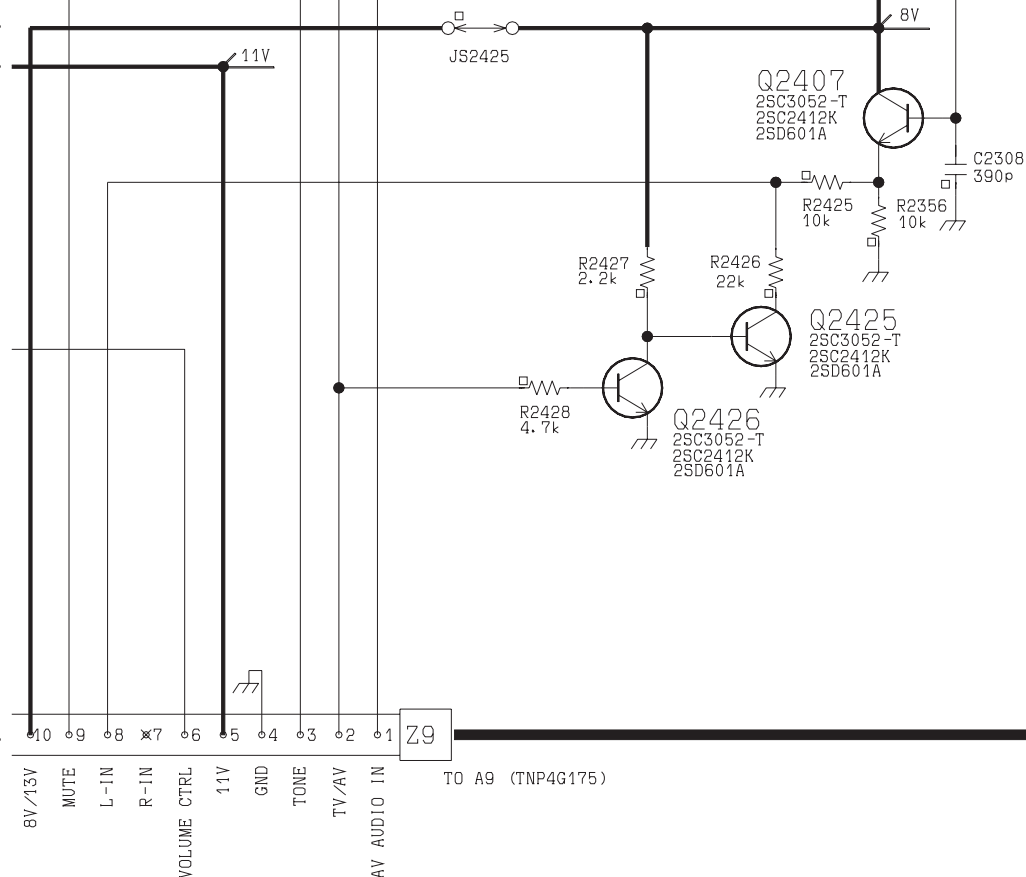
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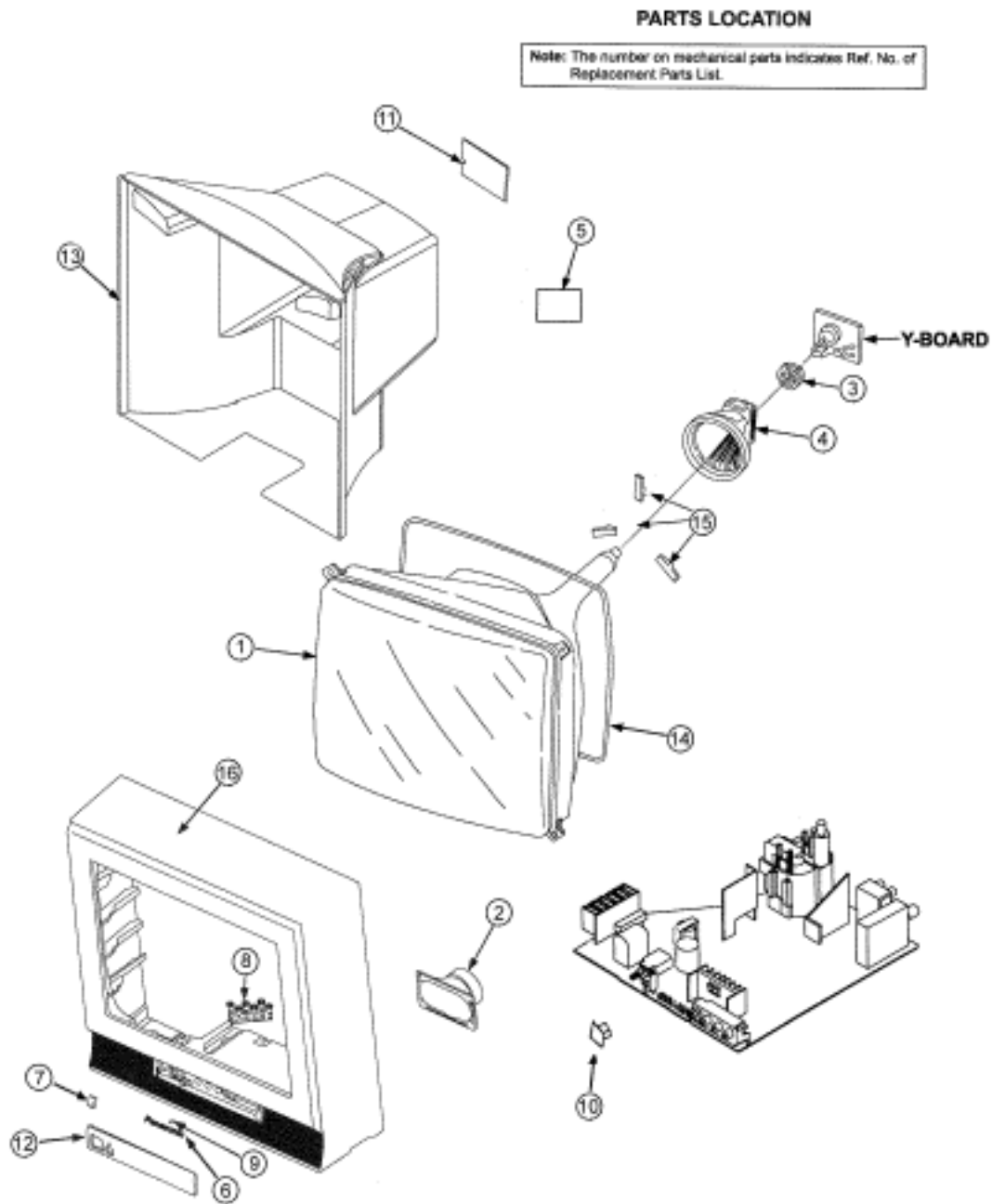
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5 Parts Location

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6 Replacement Parts List

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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** 0.01 μ F, **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 : $\pm 100\%$, -0% Z : $\pm 80\%$, -20%

6.1 Replacement Parts List

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6.1 Replacement Parts List

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Ref. No.	Part No.	Part Name & Description	Remarks
1	A36LWT194X	PICTURE TUBE	
2	EASG9D541F2	SPEAKER	
3	JH225U-013	CONVERGENCE YOKE	
4	KDY3HWE10F	DEFLECTION YOKE	
5	TBM4G0859	MODEL NAME PLATE	
6	TBM4G3008	PANASONIC BADGE	
7	TBX4G86420	POWER BUTTON	
8	TBX4G86500A	6 KEY BUTTON	
9	TEK4G902	DOOR CATCHER	
	TES4G206	COIL SPRING	
	THT4G1003R	CRT SCREW	
	TJB1725100	75-300OHM ADAPTOR	
10	TKK4G8540	POWER SWITCH SHAFT	
11	TKP4G11910	AC CORD BRACKET	
12	TKP4G12751-1	DOOR	
13	TKU4G8310-1	BACK COVER	
14	TLK4G9038A	DEGAUSSING COIL	
15	TMM4G503	RUBBER WEDGE	
NLA	TNP4G175AW	A BOARD	
NLA	TNP4G176AH	L BOARD	
NLA	TNP4G185AD	Z5 BOARD	
	TNQ4G0401	REMOTE CONTROL	
	TPC4G44926	CARTON	
	TPD4G1070	CUSHION (TOP)	
	TPE4G14007	SET COVER	
	TPE4G14026	SET COVER	
	TQB4G3190	FAN BAG	
	TSM10032-3	MAGNET	

	TSN63115-4	PURITY MAGNET	
	TSX4G169H	AC POWER CORD	
<u>16</u>	TXFKY01XB4V	CABINET ASSY	
	TXFPD02QE2S	CUSHION (BOTTOM)	
	TXFSA01AA2S	DIPOLE ANTENNA	
	RESISTORS		
R003	ERJ3GEYJ100	M 10OHM,J,1/16W	
R004	ERG2SJ183E	M 18KOHM,J, 2W	
R006	ERJ3GEYJ273	M 27KOHM,J,1/16W	
R007	ERJ3GEYJ302	M 3KOHM,J,1/16W	
R008	ERJ3GEYJ681	M 680OHM,J,1/16W	
R011	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R012	ERJ3GEYJ332	M 3.3KOHM,J,1/16W	
R021	ERJ3GEYJ273	M 27KOHM,J,1/16W	
R022	ERJ3GEYJ473	M 47KOHM,J,1/16W	
R116	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R117	ERJ3GEYJ682	M 6.8KOHM,J,1/16W	
R118	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R119	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R120	ERJ3GEYJ680	M 68OHM,J,1/16W	
R121	ERJ3GEYJ122	M 1.2KOHM,J,1/16W	
R122	ERJ3GEYJ470	M 47OHM,J,1/16W	
R123	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R124	ERJ3GEYJ122	M 1.2KOHM,J,1/16W	
R126	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R136	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R137	ERJ3GEYJ683	M 68KOHM,J,1/16W	
R138	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R139	ERJ3GEYJ333	M 33KOHM,J,1/16W	
R145	ERJ3GEYJ473	M 47KOHM,J,1/16W	
R150	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R151	ERJ3GEYJ333	M 33KOHM,J,1/16W	
R182	ERJ3GEYJ221	M 220OHM,J,1/16W	
R185	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R351	ERJ3EKF1001	M 1KOHM,F,1/16W	
R611	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	

R612	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R613	ERJ3GEYJ391	M 390OHM,J,1/16W	
R614	ERJ3GEYJ392	M 3.9KOHM,J,1/16W	
R615	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R616	ERJ3GEYJ392	M 3.9KOHM,J,1/16W	
R617	ERJ6GEYJ181	M 180OHM,J,1/10W	
R618	ERJ3GEYJ184	M 180KOHM,J,1/16W	
R619	ERJ3GEYJ121	M 120OHM,J,1/16W	
R620	ERJ3GEYJ121	M 120OHM,J,1/16W	
R621	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R622	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R623	ERJ3GEYJ331	M 330OHM,J,1/16W	
R624	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R625	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R626	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R627	ERJ3GEYJ823	M 82KOHM,J,1/16W	
R628	ERJ3GEYJ563	M 56KOHM,J,1/16W	
R629	ERJ3GEYJ154	M 150KOHM,J,1/16W	
R630	ERJ3EKF1802	M 18KOHM,F,1/16W	
R631	ER050CKF5603	M 560KOHM,F, 1/2W	
R634	ERJ3GEYJ822	M 8.2KOHM,J,1/16W	
R635	ERJ3GEYJ561	M 560OHM,J,1/16W	
R636	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R637	ERJ3GEYJ473	M 47KOHM,J,1/16W	
R638	ERJ3GEYJ391	M 390OHM,J,1/16W	
R639	ERJ3GEYJ101	M 100OHM,J,1/16W	
R640	ERJ3GEYJ181	M 180OHM,J,1/16W	
R641	ERJ3GEY0R00	M 0OHM,J,1/16W	
R642	ERJ3GEYJ332	M 3.3KOHM,J,1/16W	
R643	ERJ3GEYJ272	M 2.7KOHM,J,1/16W	
R644	ERDS2TJ470	C 47OHM,J, 1/4W	
R655	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R660	ERJ3GEYJ274	M 270KOHM,J,1/16W	
R661	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R662	ERJ3GEYJ333	M 33KOHM,J,1/16W	
R801	ERF5ZK2R2	W 2.2OHM,K, 5W	

R806	ERJ3GEYJ152	M 1.5KOHM,J,1/16W	
R807	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R809	ERX12SJR33E	M 0.33OHM,J, 1/2W	
R811	ERJ3GEYJ681	M 680OHM,J,1/16W	
R812	ERD75TAJ825	C 8.2MOHM,J, 3/4W	
R814	ERJ3GEYJ332	M 3.3KOHM,J,1/16W	
R815	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R817	ERG5FJ153	M 15KOHM,J, 5W	
R819	ERJ12YJ330U	M 33OHM,J, 1/2W	
R821	ERG3FJ333H	M 33KOHM,J, 3W	
R824	ERDS1TJ564	C 560KOHM,J, 1/2W	
R825	ERJ3GEYJ473	M 47KOHM,J,1/16W	
R832	ERJ12YJ221U	M 220OHM,J, 1/2W	
R835	ERX12SJR33E	M 0.33OHM,J, 1/2W	
R850	ERQ12HKR47P	F 0.47OHM,K, 1/2W	
R853	ERJ14YJ102U	M 1KOHM,J, 1/4W	
R856	ERQ12HKR22P	F 0.22OHM,K, 1/2W	
R857	ERF3EXKR33V	W 0.33OHM,K, 3W	
R859	ERJ3GEYJ152	M 1.5KOHM,J,1/16W	
R860	ERJ3EKF5601	M 5.6KOHM,F,1/16W	
R861	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R862	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R863	ERG3FJ473H	M 47KOHM,J, 3W	
R864	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R866	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R868	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1016	ERJ3EKF1651	M1.65KOHM,F,1/16W	
C001	ECEA1CKA220	E 22UF, 16V	
C002	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C004	ECJ2VB1H103J	C 0.01UF, 50V	
C005	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C006	ECA1AM331B	E 330UF, 10V	
C008	ECEA1HKA010	E 1UF, 50V	
C109	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C116	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C117	ECJ2VB1H103J	C 0.01UF, 50V	

C120	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C121	F1B1H103A013	C 0.01UF, 50V	
C122	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C136	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C354	ECUX1H330JCX	C 33PF, J, 50V	
C355	ECUX1H330JCX	C 33PF, J, 50V	
C356	ECUX1H330JCX	C 33PF, J, 50V	
C359	ECQM4104KZ	P 0.1UF, K,400V	
C362	ECA1CM470B	E 47UF, 16V	
C368	ECJ2VC1H561J	C 560PF, J, 50V	
C370	ECKW3D102KBP	C 1000PF, K, 2KV	
C371	ECEA1CN100U	E 10UF, 16V	
C373	ECA2EM100B	E 10UF, 250V	
C377	ECA1CM221B	E 220UF, 16V	
C401	ECJ2VC1H222J	C 2200PF, J, 50V	
C402	ECA1VM332E	E 3300UF, 35V	
C403	ECA1HM100B	E 10UF, 50V	
C406	ECA1HM101B	E 100UF, 50V	
C408	ECQV1H274JL	P 0.27UF, J, 50V	
C409	ECA1HM330B	E 33UF, 50V	
C502	ECKR2H821KB5	C 820PF, K,500V	
C504	ECJ2VB1H681K	C 680PF, K, 50V	
C506	L5SL4B100D	C 10PF, 500V	
C511	ECA1VM101B	E 100UF, 35V	
C519	ECA2CM330B	E 33UF, 160V	
C520	ECA0JM221B	E 220UF, 6.3V	
C552	ECA2EM100B	E 10UF, 250V	
C555	ECKR2H471KB5	C 470PF, K,500V	
C558	ECA2CMR47B	E 0.47UF, 160V	
C559	ECWH16512JVB	P 5100PF,J,1.6KV	
C560	ECQM4393JZ	P 0.039UF, J,400V	
C561	ECWH16182JVB	P 1800PF,J,1.6KV	
C562	ECKW3D821JBN	C 820PF, J, 2KV	
C563	TACDX2E164J	E 0.16UF, J,250V	
C564	ECKW3D331JBR	C 330PF, J, 2KV	
C565	ECQP1H223JZ	P 0.022UF, J, 50V	

C570	ECJ2VC1H470J	C 47PF, J, 50V	
C601	ECEA1CKA101	E 100UF, 16V	
C602	ECUX1H104KBX	C 0.1UF, K, 50V	
C603	ECJ2VB1H472K	C 4700PF, K, 50V	
C604	ECQV1H224JL	P 0.22UF, J, 50V	
C605	ECQV1H224JL	P 0.22UF, J, 50V	
C606	ECJ2VC1H222J	C 2200PF, J, 50V	
C607	ECEA1HKA010	E 1UF, 50V	
C608	ECEA1HKA2R2	E 2.2UF, 50V	
C609	ECUX1H104KBX	C 0.1UF, K, 50V	
C610	ECJ2VB1H103J	C 0.01UF, 50V	
C612	ECJ2VB1H472K	C 4700PF, K, 50V	
C613	ECJ2VB1H472K	C 4700PF, K, 50V	
C614	ECQV1H104JL	P 0.1UF, J, 50V	
C615	ECQV1H224JL	P 0.22UF, J, 50V	
C616	ECJ2VB1H392K	C 3900PF, K, 50V	
C617	ECEA1CKA100	E 10UF, 16V	
C618	ECKR1H681KB5	C 680PF, K, 50V	
C620	ECJ2VC1H470J	C 47PF, J, 50V	
C2308	ECJ2VC1H391J	C 390PF, J, 50V	
C2352	ECA1HM100B	E 10UF, 50V	
C2353	ECA1CM100B	E 10UF, 16V	
C2354	ECA1CM471B	E 470UF, 16V	
C2357	ECEA1HKN010	E 1UF, 50V	
C2380	ECA1CM101B	E 100UF, 16V	
C2401	ECJ2VB1H682K	C 6800PF, K, 50V	
C2402	ECJ2ZF1C105Z	C 1UF, Z, 16V	
C2403	ECJ2ZF1C105Z	C 1UF, Z, 16V	
C2404	ECJ2VB1E104K	C 0.1UF, K, 25V	
C2405	ECEA1HKAR33	E 0.33UF, 50V	
C2406	ECJ2VB1H102J	C 1000PF, 50V	
C2425	ECJ1VF1C104Z	C 0.1UF, Z, 16V	
C3003	ECJ2VC1H681K	C 680PF, J, 50V	
C3016	ECA1CM471B	E 470UF, 16V	
C3024	ECA1HM010B	E 1UF, 50V	
C3111	ECJ2VC1H681K	C 680PF, J, 50V	

C3113	ECJ2VB1H472K	C 4700PF, K, 50V	
C3116	ECJ2VB1H103J	C 0.01UF, 50V	
C3117	ECJ2VB1H103J	C 0.01UF, 50V	
C3131	ECA1CM100B	E 10UF, 16V	
C3133	ECA1CM100B	E 10UF, 16V	
	COILS		
L10	K1ZZ00001205	CONNECTOR	
L001	TLTACT100K	PEAKING COIL 10U	
L004	EXC3BB221H	CHIP BEAD CORE	
L120	TLTACTR56K	PEAKING COIL	
L121	TALV35VB8R2K	PEAKING COIL	
L181	TLTACT100K	PEAKING COIL 10U	
L182	TALV35VB6R8K	PEAKING COIL	
L183	TALV35VB5R6K	PEAKING COIL	
L184	TALV35VB6R8K	PEAKING COIL	
L352	EXCELSA24T	BEAD CORE	
L501	ELH5L4142	LINEARITY COIL	
L550	EXCELDR25V	CORE	
L558	EXCELSA39V	BEAD CORE	
L560	EXCELDR35V	CORE	
L620	TSK1045	BEAD CORE	
L801	ELF21V012A	LINE FILTER	
L820	EXCELDR35C	BEAD CORE	
L821	EXCELDR35V	CORE	
L825	EXCELSA39V	BEAD CORE	
L852	G0A101EA0008	PEAKING COIL	
L855	EXCELDR35V	CORE	
L856	TLTACT1R5K	PEAKING COIL	
L857	TLTACT1R5K	PEAKING COIL	
L858	EXCELSA39V	BEAD CORE	
L863	EXCELDR35V	CORE	
L1101	TALV35VB331K	PEAKING COIL	
L3011	EXC3BB102H	CHIP BEAD CORE	
L3012	EXC3BB102H	CHIP BEAD CORE	
L3131	EXC3BB102H	CHIP BEAD CORE	
	TRANSFORMERS		

T552	ZTFN32002A	FLYBACK TRANS	
T553	ETH19Y70AY	H DRIVE TRANS	
T801	TLP4GA013D	SWITCHING TRANS	
	DIODES		
D002	MTZJ16A	ZENER DIODE	
D003	MTZJ16A	ZENER DIODE	
D011	MA152KTX	DIODE	
D120	MA858	DIODE	
D354	MA152KTX	DIODE	
D355	MA152KTX	DIODE	
D356	MA152KTX	DIODE	
IC1104	RPM6937	REMOTE CONTROL R	
IC1201	PQ1R33	LINEAR IC	
IC1202	AN78L05	LINEAR IC	
IC2303	AN7523	IC	
IC2425	AN78L08	LINEAR IC	
	TRANSISTORS		
Q001	2SC2412KT	TRANSISTOR	
Q101	2SC2412KT	TRANSISTOR	
Q102	2SC4787	TRANSISTOR	
Q103	2SD2114KT	TRANSISTOR	
Q105	2SC2412KT	TRANSISTOR	
Q180	2SB709ATX	TRANSISTOR	
Q369	2SB709ATX	TRANSISTOR	
Q401	2SB709ATX	TRANSISTOR	
Q445	2SC3326ATX	TRANSISTOR	
Q446	2SC2412KT	TRANSISTOR	
Q447	2SC2412KT	TRANSISTOR	
Q501	2SC4212H	TRANSISTOR	
Q520	2SB792ATX	TRANSISTOR	
Q551	2SD2539	TRANSISTOR	
Q601	2SB709ATX	TRANSISTOR	
Q602	2SC2412KT	TRANSISTOR	
Q603	2SB709ATX	TRANSISTOR	
Q605	2SC2412KT	TRANSISTOR	

Q606	2SC2412KT	TRANSISTOR	
Q607	2SB709ATX	TRANSISTOR	
Q608	2SC2412KT	TRANSISTOR	
Q850	2SC1815	TRANSISTOR	
Q852	2SC2412KT	TRANSISTOR	
Q853	2SC2412KT	TRANSISTOR	
Q854	2SC2412KT	TRANSISTOR	
Q856	2SC2412KT	TRANSISTOR	
Q1101	2SC2412KT	TRANSISTOR	
Q2380	DTD113ZKT	TRANSISTOR	
Q2381	2SB709ATX	TRANSISTOR	
Q2401	2SC2412KT	TRANSISTOR	
Q2402	2SC2412KT	TRANSISTOR	
Q2403	2SC2412KT	TRANSISTOR	
Q2404	2SC2412KT	TRANSISTOR	
Q2405	2SC2412KT	TRANSISTOR	
Q2406	2SC2412KT	TRANSISTOR	
Q2407	2SC2412KT	TRANSISTOR	
Q2425	2SC2412KT	TRANSISTOR	
Q2426	2SC2412KT	TRANSISTOR	
	OTHERS		
A1	TJSF29204	CONNECTOR	
A5	TJS3A9670	6P CONNECTOR	
A8	TJS3A9880	8P CONNECTOR	
A9	TJS4G8130	CONNECTOR	
A29	TJS3A9650	4P CONNECTOR	
DY1	TJS3A9640	3P CONNECTOR	
F801	XBA2C40TR0	FUSE 250V 4A	
JA1	ERJ3GEY0R00	M 00HM,J,1/16W	
JA2	ERJ3GEY0R00	M 00HM,J,1/16W	
JA3	ERJ3GEY0R00	M 00HM,J,1/16W	
JA4	ERJ3GEY0R00	M 00HM,J,1/16W	
JA5	ERJ3GEY0R00	M 00HM,J,1/16W	
JA6	ERJ3GEY0R00	M 00HM,J,1/16W	
JA7	ERJ3GEY0R00	M 00HM,J,1/16W	
JA8	ERJ3GEY0R00	M 00HM,J,1/16W	

JA9	ERJ3GEY0R00	M 00HM,J,1/16W	
JA10	ERJ3GEY0R00	M 00HM,J,1/16W	
JA11	ERJ3GEY0R00	M 00HM,J,1/16W	
JA12	ERJ3GEY0R00	M 00HM,J,1/16W	
R352	ERJ3EKF1001	M 1KOHM,F,1/16W	
R353	ERJ3EKF1001	M 1KOHM,F,1/16W	
R354	ERJ3EKF7870	M 787OHM,F,1/16W	
R355	ERJ3EKF7870	M 787OHM,F,1/16W	
R356	ERJ3EKF7870	M 787OHM,F,1/16W	
R363	ERC12GK222	S 2.2KOHM,K, 1/2W	
R364	ERC12GK222	S 2.2KOHM,K, 1/2W	
R365	ERC12GK222	S 2.2KOHM,K, 1/2W	
R369	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R374	ERQ12AJ181E	F 180OHM,J, 1/2W	
R401	ERDS2TJ1R8	C 1.8OHM,J, 1/4W	
R402	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R403	ERJ3GEYJ332	M 3.3KOHM,J,1/16W	
R404	ERJ3EKF2701	M 2.7KOHM,F,1/16W	
R405	ERJ3GEYJ272	M 2.7KOHM,J,1/16W	
R406	ERJ3GEYJ1R0	M 1OHM,J,1/16W	
R407	ERJ12YJ221U	M 220OHM,J, 1/2W	
R408	ERJ3GEY0R00	M 00HM,J,1/16W	
R409	ERJ3GEYJ823	M 82KOHM,J,1/16W	
R411	ERJ3GEYJ432	M 4.3KOHM,J,1/16W	
R412	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R415	ERJ3GEYJ621	M 620OHM,J,1/16W	
R416	ERJ12RQJR68U	M 0.68OHM,J, 1/2W	
R417	ERJ12YJ1R0U	M 1OHM,J, 1/2W	
R420	ERDS2TJ681	C 680OHM,J, 1/4W	
R443	ERJ12YJ471U	M 470OHM,J, 1/2W	
R444	ERG1SJ821E	M 820OHM,J, 1W	
R445	ERJ3GEYJ473	M 47KOHM,J,1/16W	
R446	ERJ3GEYJ473	M 47KOHM,J,1/16W	
R447	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R448	ERJ3GEYJ242	M 2.4KOHM,J,1/16W	
R449	ERJ3GEYJ152	M 1.5KOHM,J,1/16W	

R502	ERJ3GEYJ182	M 1.8KOHM,J,1/16W	
R503	ERJ3GEY0R00	M 0OHM,J,1/16W	
R504	ERG2SJ682E	M 6.8KOHM,J, 2W	
R507	ERJ3GEYJ101	M 100OHM,J,1/16W	
R508	ERG3FJ182H	M 1.8KOHM,J, 3W	
R509	ERG3FJ182H	M 1.8KOHM,J, 3W	
R511	ERJ6ENF1201	M 1.2KOHM, 1/10W	
R512	ERJ6ENF1741	M1.74KOHM, 1/10W	
R513	ERQ14AJ100P	F 10OHM,J, 1/4W	
R520	ERQ12AJ3R3E	F 3.3OHM,J, 1/2W	
R521	ERQ12AJ3R3E	F 3.3OHM,J, 1/2W	
R522	ERJ3GEYJ123	M 12KOHM,J,1/16W	
R523	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R524	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R525	ERJ3GEYJ392	M 3.9KOHM,J,1/16W	
R553	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R555	ERQ14AJ2R0E	F 2.0OHM,J, 1/4W	
R557	ER050CKF1743	M 174KOHM,F, 1/2W	
R558	ERDS2TJ223	C 22KOHM,J, 1/4W	
R559	ERQ1CJP5R6S	F 5.6OHM,J, 1W	
R560	ERG1SJ102E	M 1KOHM,J, 1W	
R601	ERJ3GEYJ153	M 15KOHM,J,1/16W	
R602	ERJ3EKF3001	M 3KOHM,F,1/16W	
R603	ERJ3GEYJ393	M 39KOHM,J,1/16W	
R604	ERJ3GEYJ101	M 100OHM,J,1/16W	
R605	ERJ3GEYJ101	M 100OHM,J,1/16W	
R606	ERJ3GEYJ101	M 100OHM,J,1/16W	
R607	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R608	ERJ3GEYJ332	M 3.3KOHM,J,1/16W	
R609	ERJ3GEYJ332	M 3.3KOHM,J,1/16W	
R610	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R1017	ERJ3EKF2151	M2.15KOHM,F,1/16W	
R1018	ERJ3EKF3091	M3.09KOHM,F,1/16W	
R1019	ERJ3EKF4421	M4.42KOHM,F,1/16W	
R1020	ERJ3EKF7501	M 7.5KOHM,F,1/16W	
R1021	ERJ3EKF1871	M1.87KOHM,F,1/16W	

R1022	ERJ3GEYJ100	M 10OHM,J,1/16W	
R1101	ERJ3GEYJ332	M 3.3KOHM,J,1/16W	
R1102	ERJ3GEYJ153	M 15KOHM,J,1/16W	
R1103	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R1104	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1105	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1106	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R1108	ERJ3GEYJ101	M 100OHM,J,1/16W	
R1109	ERJ3GEYJ101	M 100OHM,J,1/16W	
R1117	ERJ3GEYJ471	M 470OHM,J,1/16W	
R1120	ERJ3GEYJ432	M 4.3KOHM,J,1/16W	
R1122	ERJ3GEYJ332	M 3.3KOHM,J,1/16W	
R1123	ERJ3GEYJ202	M 2KOHM,J,1/16W	
R1124	ERJ3GEYJ101	M 100OHM,J,1/16W	
R1130	ERJ3GEYJ101	M 100OHM,J,1/16W	
R1131	ERJ3GEYJ101	M 100OHM,J,1/16W	
R1132	ERJ3GEYJ101	M 100OHM,J,1/16W	
R1140	ERJ3EKF1002	M 10KOHM,F,1/16W	
R1141	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R2022	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R2308	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R2309	ERJ3GEYJ822	M 8.2KOHM,J,1/16W	
R2356	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R2380	ERJ3GEYJ151	M 150OHM,J,1/16W	
R2381	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R2382	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R2401	ERJ3GEYJ822	M 8.2KOHM,J,1/16W	
R2402	ERJ3GEYJ333	M 33KOHM,J,1/16W	
R2403	ERJ3GEYJ154	M 150KOHM,J,1/16W	
R2404	ERJ3GEYJ681	M 680OHM,J,1/16W	
R2405	ERJ3GEYJ684	M 680KOHM,J,1/16W	
R2406	ERJ3GEYJ334	M 330KOHM,J,1/16W	
R2407	ERJ3GEYJ333	M 33KOHM,J,1/16W	
R2408	ERJ3GEYJ473	M 47KOHM,J,1/16W	
R2410	ERJ3GEYJ473	M 47KOHM,J,1/16W	
R2411	ERJ3GEYJ563	M 56KOHM,J,1/16W	

R2412	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R2413	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R2414	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R2415	ERJ3GEYJ821	M 820OHM,J,1/16W	
R2416	ERJ3GEYJ821	M 820OHM,J,1/16W	
R2417	ERJ3GEYJ273	M 27KOHM,J,1/16W	
R2418	ERJ3GEYJ821	M 820OHM,J,1/16W	
R2419	ERJ3GEYJ273	M 27KOHM,J,1/16W	
R2420	ERJ3GEYJ272	M 2.7KOHM,J,1/16W	
R2421	ERJ3GEYJ332	M 3.3KOHM,J,1/16W	
R2425	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R2426	ERJ3GEYJ223	M 22KOHM,J,1/16W	
R2427	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R2428	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R3003	ERJ3GEYJ101	M 100OHM,J,1/16W	
R3014	ERD25V0R00T	C 0OHM, 1/4W	
R3019	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R3021	ERJ3GEYJ750	M 75OHM,J,1/16W	
R3024	ERJ3GEYJ560	M 56OHM,J,1/16W	
R3025	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R3132	ERJ3GEYJ221	M 220OHM,J,1/16W	
R3133	ERJ3GEYJ221	M 220OHM,J,1/16W	
	CAPACITORS		
C621	ECJ2VB1H471K	C 470PF, K, 50V	
C623	ECJ2VC1H270J	C 27PF, J, 50V	
C624	ECEA1CKA100	E 10UF, 16V	
C627	ECJ2YB1H473K	C 0.047UF, K, 50V	
C628	ECJ2YB1H473K	C 0.047UF, K, 50V	
C629	ECUX1H104KBX	C 0.1UF, K, 50V	
C631	ECJ2VC1H222J	C 2200PF, J, 50V	
C633	ECJ2ZF1C105Z	C 1UF, Z, 16V	
C634	ECJ2ZF1C105Z	C 1UF, Z, 16V	
C635	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C636	ECEA1CKA101	E 100UF, 16V	
C639	ECA1HM220B	E 22UF, 50V	
C641	ECJ2VC1H100C	C 10PF, C, 50V	

C653	ECEA1CKA100	E 10UF, 16V	
C660	ECQV1H105JM	P 1UF, J, 50V	
C801	ECKCNA102MB7	C 1000PF, M,	
C802	ECKCNA101MB7	C 100PF, M,	
C803	ECKWAE472ZE	C 4700PF, Z,	
C805	ECQU2A224BN9	P 0.22UF, 250V	
C806	ECKWAE472ZE	C 4700PF, Z,	
C807	ECKWAE472ZE	C 4700PF, Z,	
C808	ECQB1H471JF	P 470PF, J, 50V	
C809	ECKWAE472ZE	C 4700PF, Z,	
C811	F2A1V330A085	E 33UF, 35V	
C813	ECKCNA332MEB	C 3300PF, M,	
C814	ECKR1H471KB5	C 470PF, K, 50V	
C815	ECQB1H332JM	P 3300PF, J, 50V	
C817	ECQU2A224BN9	P 0.22UF, 250V	
C818	ECKCNA102MB7	C 1000PF, M,	
C820	ECKW3D122KBP	C 1200PF, K, 2KV	
C821	ECKD3A472KBP	C 4700PF, K, 1KV	
C824	F2B2G271A012	E 270UF, 400V	
C826	ECA2CM220B	E 22UF, 160V	
C831	ECKR3A271KBP	C 270PF, K, 1KV	
C832	F2A1C471A116	E 470UF, 16V	
C840	ECJ2YB1C474K	C 0.47UF, K, 16V	
C841	ECJ2YB1A824K	C 0.82UF, K,	
C851	ECJ2ZF1C105Z	C 1UF, Z, 16V	
C852	ECKW3D101KBP	C 100PF, K, 2KV	
C853	ECKR2H821KB5	C 820PF, K,500V	
C854	ECQB1H104JF	P 0.1UF, 50V	
C855	ECJ2ZF1C105Z	C 1UF, Z, 16V	
C856	ECKR2H151KB5	C 150PF, K,500V	
C857	ECA1CM471B	E 470UF, 16V	
C858	ECKW3D182KBR	C 1800PF, K, 2KV	
C859	F2A1E102A100	E 1000UF, 25V	
C860	F2A1E2720011	E 2700UF, 25V	
C861	ECA1VM102B	E 1000UF, 35V	

C862	ECEA1CKA100	E 10UF, 16V	
C863	ECKR2H271KB5	C 270PF, K,500V	
C865	F2A2C470A021	E 47UF, 160V	
C866	ECKW3D221JBP	C 220PF, J, 2KV	
C971	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C1101	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C1103	ECJ2VC1H331J	C 330PF, J, 50V	
C1104	ECA1CM101B	E 100UF, 16V	
C1105	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C1106	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C1130	ECJ2VC1H560J	C 56PF, J, 50V	
C1131	ECA0JM221B	E 220UF, 6.3V	
C1132	ECJ2VC1H560J	C 56PF, J, 50V	
C1203	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C1204	ECEA1CKA101	E 100UF, 16V	
C1205	ECA1CM101B	E 100UF, 16V	
D360	ERA22-04	DIODE	
D361	ERA22-04	DIODE	
D362	ERA22-04	DIODE	
D363	MA152KTX	DIODE	
D365	MTZJ10C	ZENER DIODE	
D375	MA152KTX	DIODE	
D402	B0HAJP000015	DIODE	
D403	MTZJ33B	ZENER DIODE	
D511	MA4108J	DIODE	
D512	MA171	DIODE	
D520	MA152KTX	DIODE	
D551	MA3047HTX	DIODE	
D552	B0HAJP000015	DIODE	
D555	MA152KTX	DIODE	
D556	ERB06-15	DIODE	
D557	TVSRU2AM	DIODE	
D558	MA185	DIODE	
D603	MA152KTX	DIODE	
D606	MA152KTX	DIODE	
D660	MA3X152E0L	DIODE	

D801	TAP4GA0005	POSISTOR	
D802	D4SB80	DIODE	
D804	MA167	DIODE	
D805	AG01Z	DIODE	
D806	ERZV10V621CS	VARISTOR	
D807	TLP721FD4GR	PHOTO COUPLER	
D809	B0HAJP000015	DIODE	
D811	AM01A	DIODE	
D814	MA182	DIODE	
D815	AG01Z	DIODE	
D816	AG01Z	DIODE	
D817	MA2560	DIODE	
D820	ERA22-10	DIODE	
D821	AK04	DIODE	
D824	MA4068M	DIODE	
D831	RU4AMLF-M1	DIODE	
D837	S3L60P1520	DIODE	
D852	AU02A	DIODE	
D853	MCR22-6RLRP	THYRISTOR	
D854	AG01Z	DIODE	
D855	AG01Z	DIODE	
D856	RN1ZLF-A1	DIODE	
D857	B0HAJP000015	DIODE	
D862	MTZJ6.2C	ZENER DIODE	
D865	MTZJ24B	ZENER DIODE	
D1101	MA3X152E0L	DIODE	
D1102	MTZJ5.6A	ZENER DIODE	
D1104	LNH201RGRF5	LED	
D1105	MTZJ7.5C	ZENER DIODE	
D1120	MA152KTX	DIODE	
D1130	MTZJ5.6C	ZENER DIODE	
D1131	MTZJ5.6C	ZENER DIODE	
D1204	MTZJ5.6B	ZENER DIODE	
D2380	MA152KTX	DIODE	
D2381	MA152KTX	DIODE	

	INTEGRATED CIRCUITS		
IC351	TDA6107Q/N2	LINEAR IC	
IC451	AN5539	IC	
IC601	TDA9384N048Y	IC	
IC801	STRF6654LF53	IC	
IC802	SE140N	LINEAR IC	
IC851	AN7805	LINEAR IC	
IC852	AN7808	LINEAR IC	
IC1103	TVR4GAS154	IC (EEPROM)	
JA13	ERJ3GEY0R00	M 0OHM,J,1/16W	
JA14	ERJ3GEY0R00	M 0OHM,J,1/16W	
JA15	ERJ3GEY0R00	M 0OHM,J,1/16W	
JA17	ERJ3GEY0R00	M 0OHM,J,1/16W	
JA18	ERJ3GEY0R00	M 0OHM,J,1/16W	
JA19	ERJ3GEY0R00	M 0OHM,J,1/16W	
JA21	ERJ3GEY0R00	M 0OHM,J,1/16W	
JA22	ERJ3GEY0R00	M 0OHM,J,1/16W	
JA23	ERJ3GEY0R00	M 0OHM,J,1/16W	
JA27	ERJ3GEY0R00	M 0OHM,J,1/16W	
JA30	ERJ3GEY0R00	M 0OHM,J,1/16W	
JA33	ERJ3GEY0R00	M 0OHM,J,1/16W	
JA34	ERJ3GEY0R00	M 0OHM,J,1/16W	
JA35	ERJ3GEY0R00	M 0OHM,J,1/16W	
JA40	ERJ3GEY0R00	M 0OHM,J,1/16W	
JA42	ERJ3GEY0R00	M 0OHM,J,1/16W	
JK351	330620065	CRT SOCKET	
JK3001	TJB4G633	REAR AV TERMINAL	
JK3101	TJB4G632	FRONT AV TERMINAL	
JS1	ERJ3GEY0R00	M 0OHM,J,1/16W	
JS20	ERJ3GEY0R00	M 0OHM,J,1/16W	
JS21	ERJ3GEY0R00	M 0OHM,J,1/16W	
JS22	ERJ3GEY0R00	M 0OHM,J,1/16W	
JS31	ERJ3GEY0R00	M 0OHM,J,1/16W	
JS34	ERJ3GEY0R00	M 0OHM,J,1/16W	
JS35	ERJ3GEY0R00	M 0OHM,J,1/16W	
JS41	ERJ6GEY0R00	M 0OHM,J,1/10W	

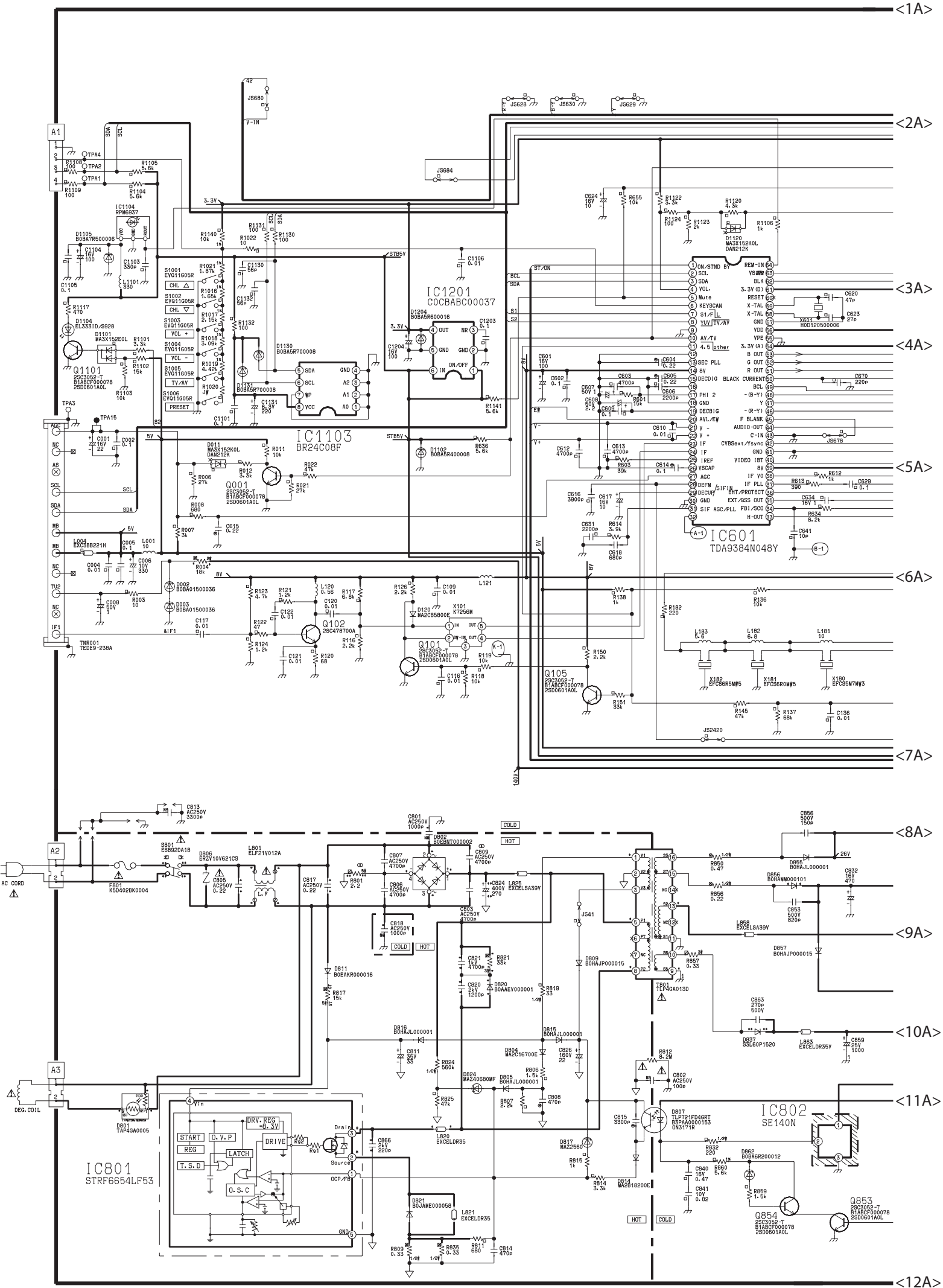
JS42	ERJ3GEY0R00	M 00HM,J,1/16W	
JS43	ERJ3GEY0R00	M 00HM,J,1/16W	
JS45	ERJ3GEY0R00	M 00HM,J,1/16W	
JS46	ERJ3GEY0R00	M 00HM,J,1/16W	
JS551	ERJ3GEY0R00	M 00HM,J,1/16W	
JS620	ERJ3GEY0R00	M 00HM,J,1/16W	
JS628	ERJ3GEY0R00	M 00HM,J,1/16W	
JS629	ERJ3GEY0R00	M 00HM,J,1/16W	
JS630	ERJ3GEY0R00	M 00HM,J,1/16W	
JS678	ERJ3GEY0R00	M 00HM,J,1/16W	
JS680	ERJ3GEY0R00	M 00HM,J,1/16W	
JS684	ERJ3GEY0R00	M 00HM,J,1/16W	
JS2420	ERJ3GEY0R00	M 00HM,J,1/16W	
JS3010	ERJ3GEY0R00	M 00HM,J,1/16W	
JS3101	ERJ3GEY0R00	M 00HM,J,1/16W	
JS3130	ERJ3GEY0R00	M 00HM,J,1/16W	
JS3132	ERJ3GEY0R00	M 00HM,J,1/16W	
L5	TJS3A9670	6P CONNECTOR	
L8	TJS3A9880	8P CONNECTOR	
S801	ESB92DA1B	SWITCH	
S1001	EVQ11G05R	SWITCH	
S1002	EVQ11G05R	SWITCH	
S1003	EVQ11G05R	SWITCH	
S1004	EVQ11G05R	SWITCH	
S1005	EVQ11G05R	SWITCH	
S1006	EVQ11G05R	SWITCH	
TNR001	TEDE9-238A	TUNER	
X101	K7256M	SAW FILTER	
X180	EFCS5M7MW3	CERAMIC FILTER	
X181	EFCS6R0MW5	CERAMIC FILTER	
X182	EFCS6R5MW5	CERAMIC FILTER	
X183	EFCS4R5MW5	CERAMIC FILTER	
X601	H0D120500006	CRYSTAL OSCILLATOR	
Z9	TJS4G8120	CONNECTOR	

7 Schematic Diagram printing with A4 size.

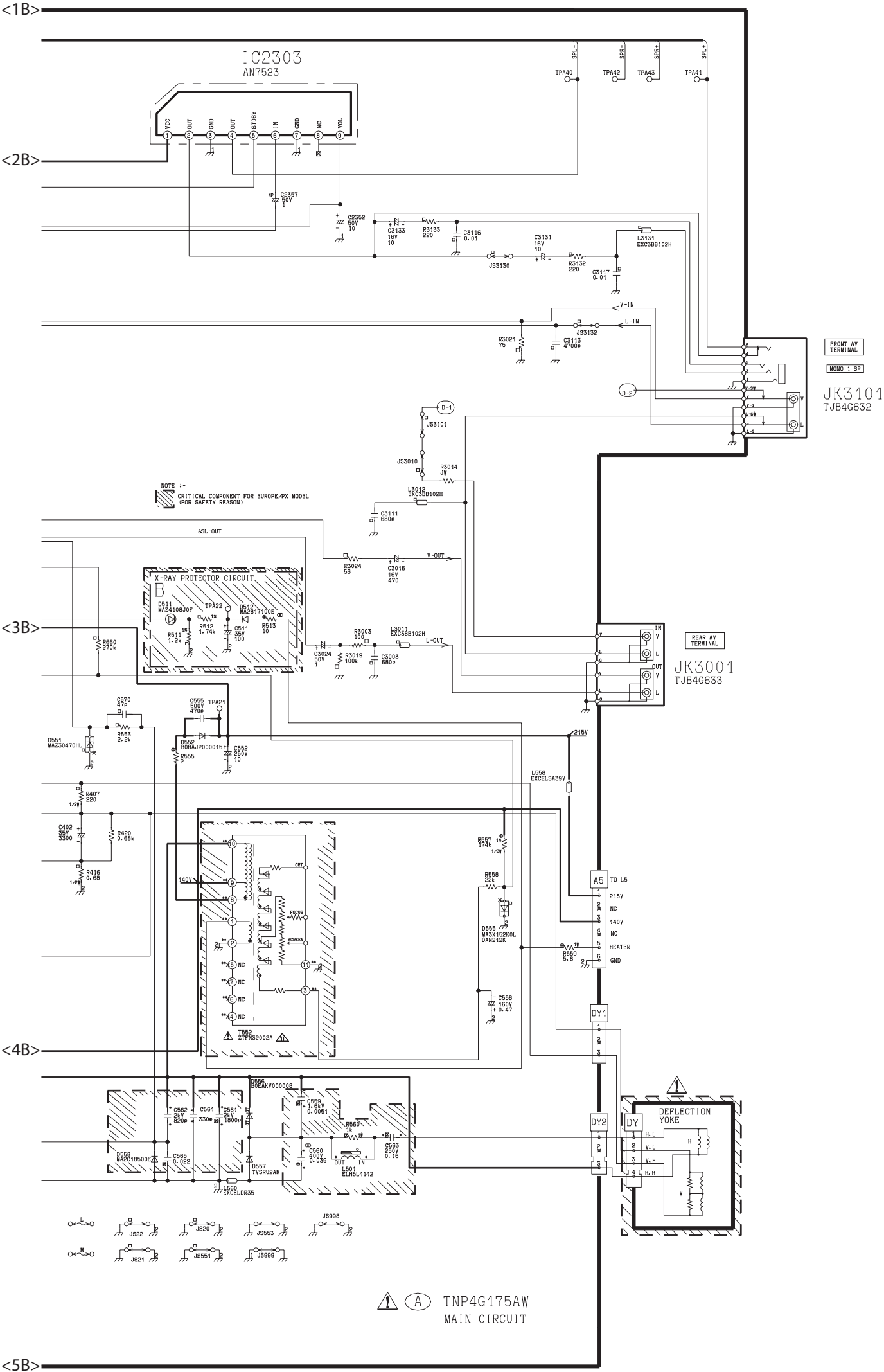
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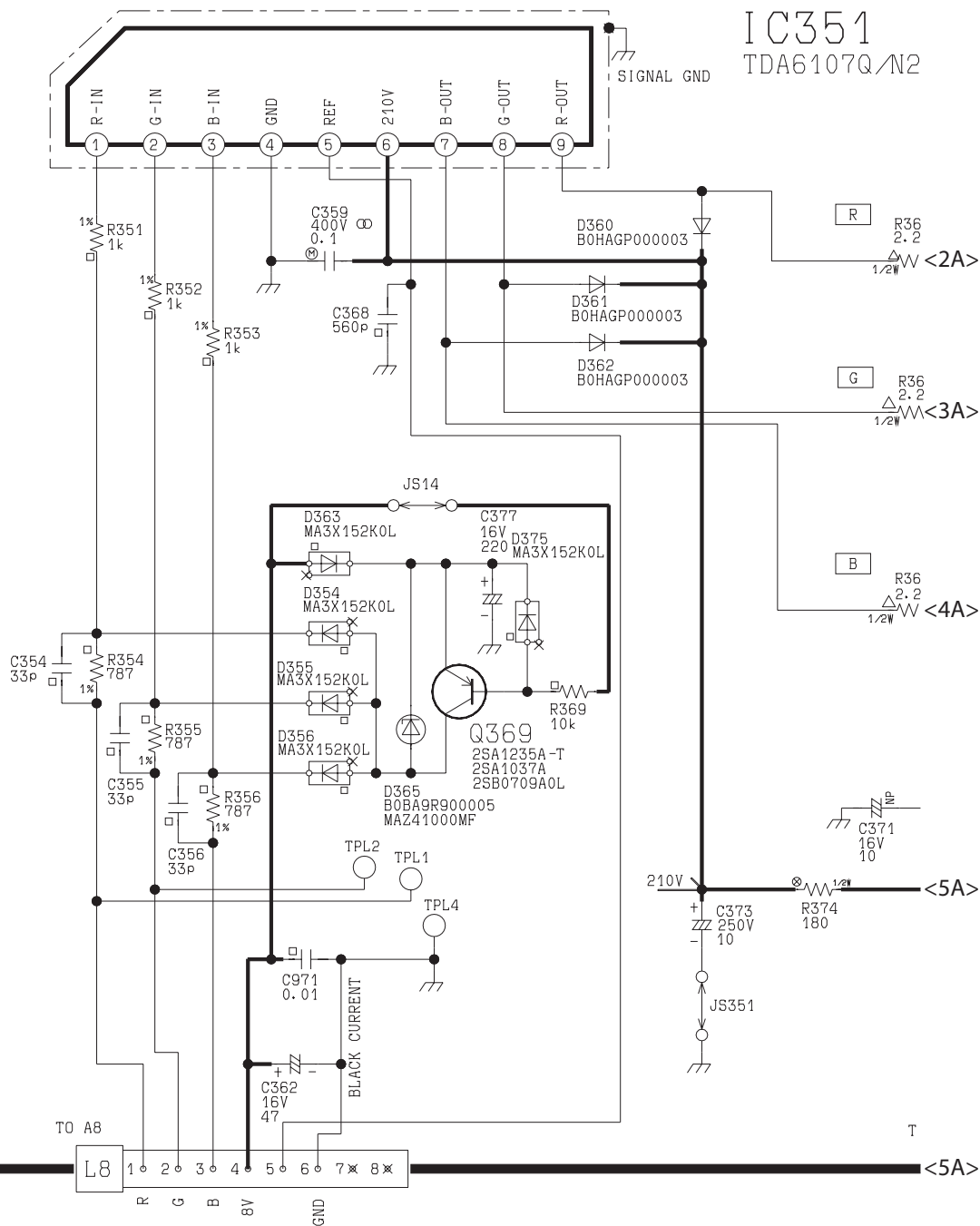
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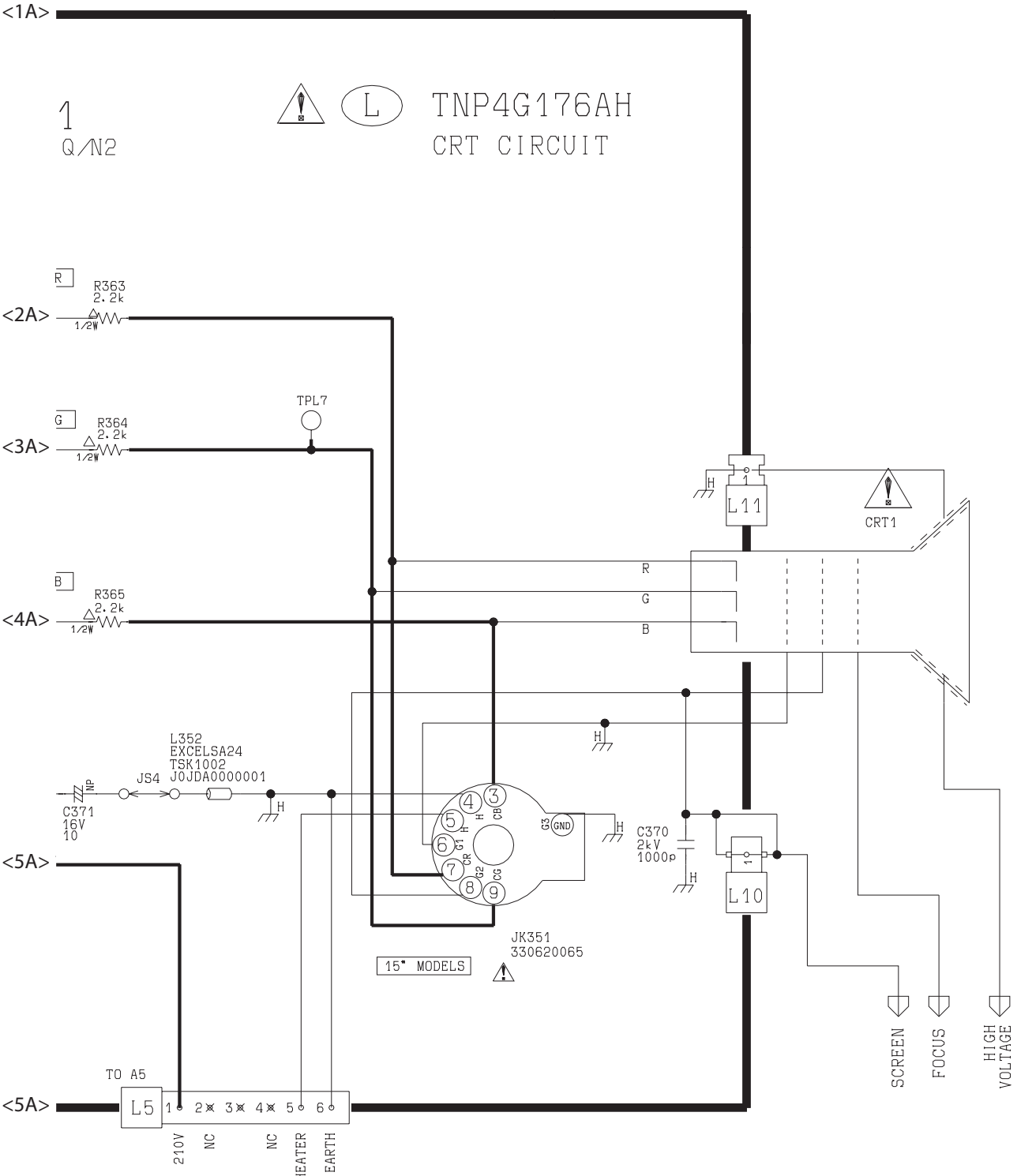


A Board TC-15PM11RQ (CIS Model) Schematic Diagram (1 of 3)

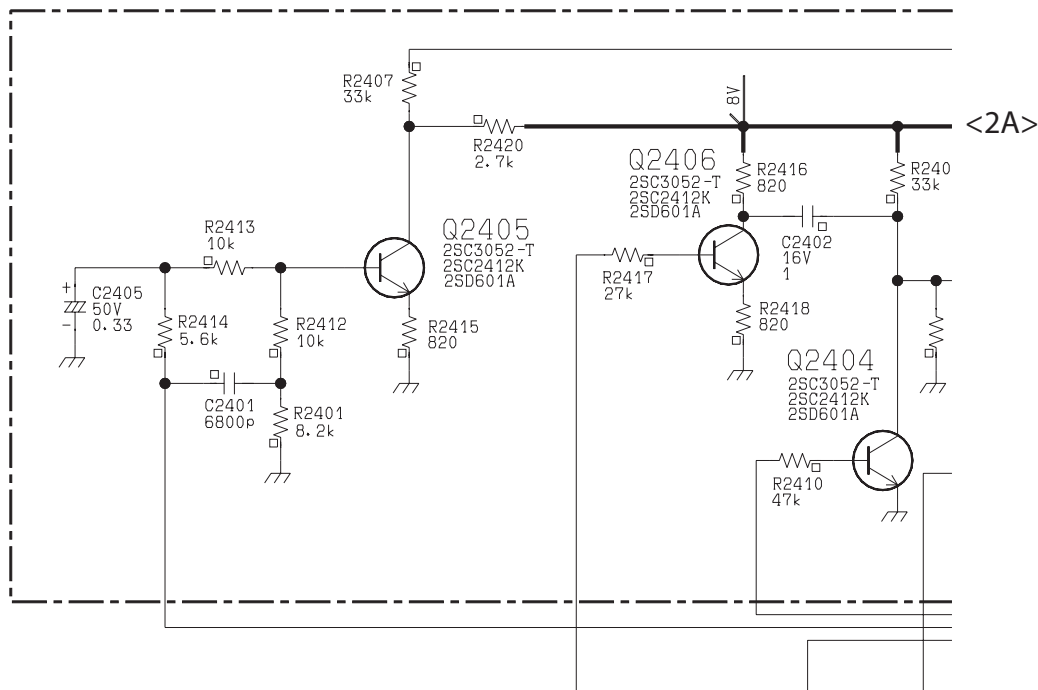


IC351
TDA6107Q/N2





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Z5

TNP4G185AD

AV MONO CIRCUIT

B

POP SOUND

M-OUT (L.)

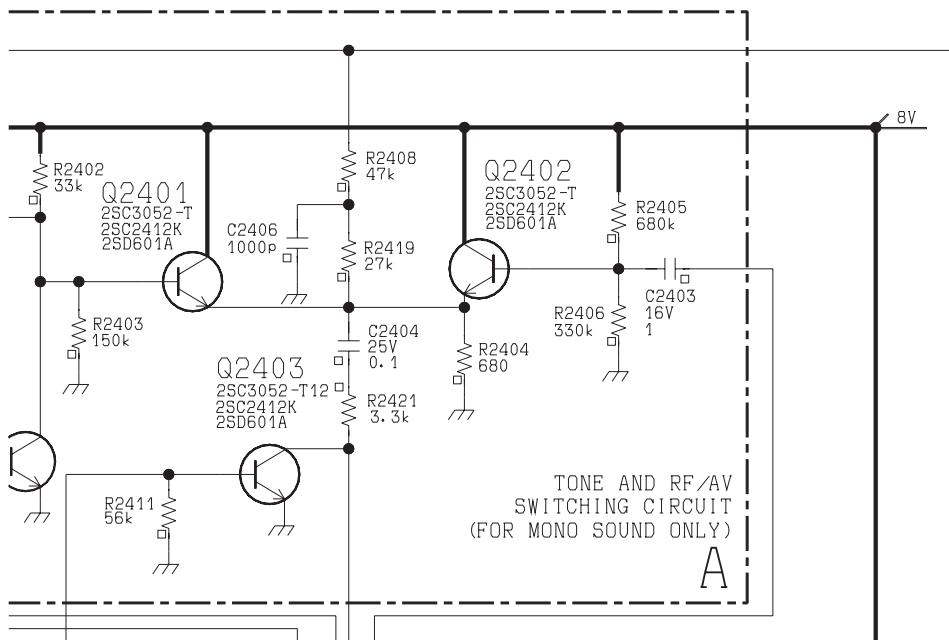
GIF/INCARRIER

8V/13V

MUTE

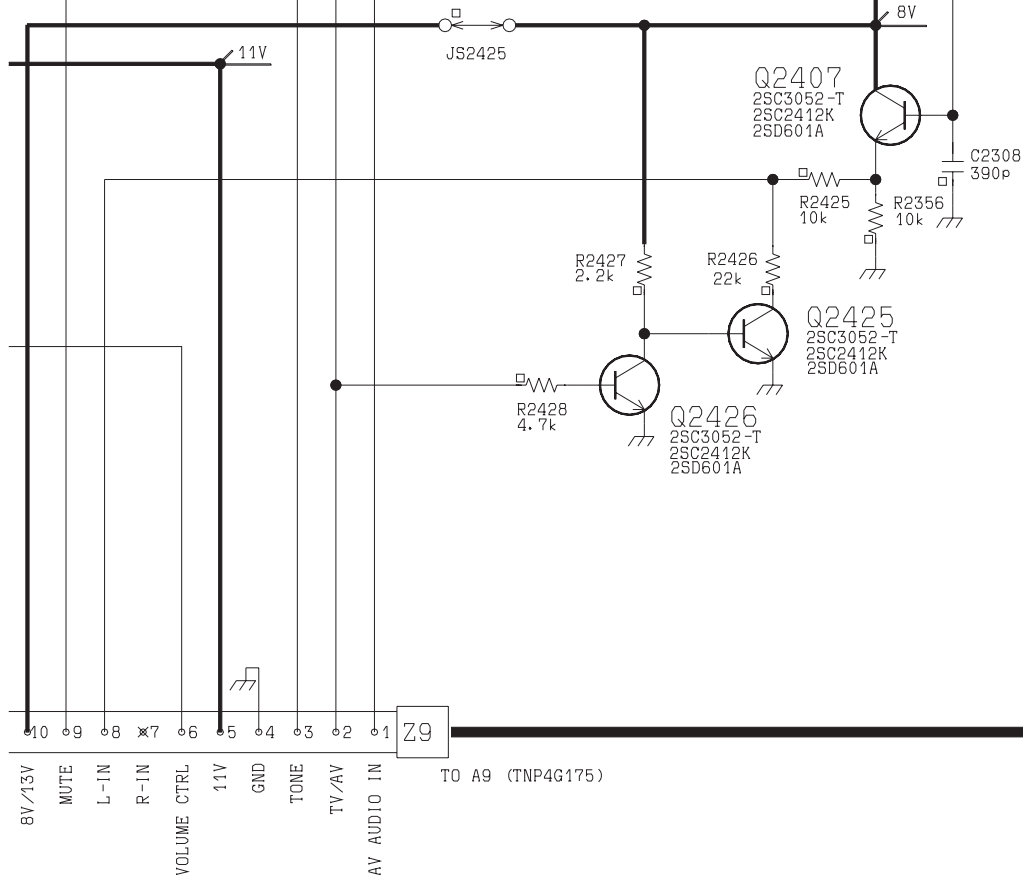
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Z9

TO A9 (TNP4G175)