

Service Manual

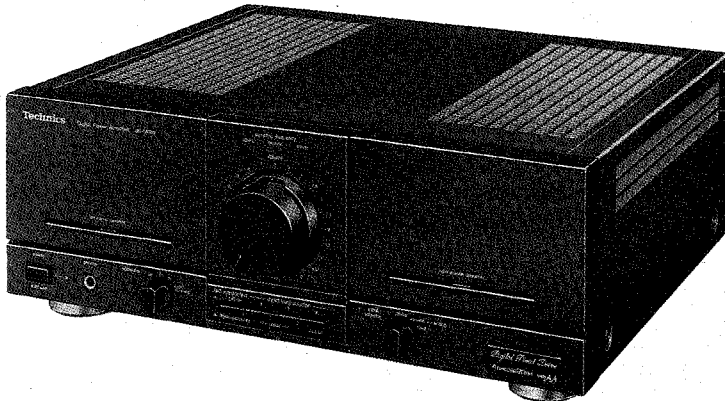
Digital Power Amplifier

Amplifier

SE-M100

Color

(K) Black Type



Area

Country Code	Area	Color
(E), (E5)	Continental Europe	(K)
(EB)	Great Britain	(K)
(G)	Third Region	(K)
(GL)	Australia	(K)

SPECIFICATIONS

(DIN 45 500)

■ MAIN AMP. SECTION

20 Hz~20 kHz continuous power output both channels driven	2 × 115 W (8 Ω) 2 × 160 W (4 Ω)
1 kHz continuous power output (DIN) both channels driven	2 × 125 W (8 Ω) 2 × 180 W (4 Ω)
Total harmonic distortion rated power at 20 Hz~20 kHz	0.005 % (8 Ω) 0.007 % (4 Ω)
rated power at 1 kHz	0.0007 % (8 Ω)
half power at 20 Hz~20 kHz	0.003 % (8 Ω)
half power at 1 kHz	0.0007 % (8 Ω)
-26 dB power at 1 kHz	0.001 % (4 Ω)
50 mW power at 1 kHz	0.003 % (4 Ω)
Intermodulation distortion rated power at 50 Hz: 7 kHz = 4:1, SMPTE, 8 Ω	0.005 % 0.3 mV
Residual hum and noise	0.3 mV
Damping factor	110 (8 Ω), 55 (4 Ω)
Headphones output level and impedance	720 mV/330 Ω
Load impedance	
A or B, BI-wiring	4 Ω~16 Ω
A and B	8 Ω~16 Ω
Input sensitivity and impedance	
Fixed	1 V/18 kΩ
Variable	1 V/18 kΩ
S/N	
rated power (4 Ω)	
Fixed	105 dB (IHF' 66: 120 dB)
Variable	105 dB (IHF' 66: 120 dB)

Frequency response

Fixed, Variable 0.8 Hz~120 kHz (-3 dB)
+0 dB, -0.2 dB (20 Hz~20 kHz)

Channel balance, 250 Hz~6,300 Hz ±1 dB

Channel separation, 1 kHz 70 dB

■ DIGITAL SECTION

Total harmonic distortion (1 kHz)	0.005 % (EIAJ)
S/N	112 dB (EIAJ)
Dynamic range	100 dB (EIAJ)
Frequency response	2 Hz~20 kHz +0.3 dB, -0.3 dB

■ GENERAL

Power consumption	920 W
Power supply	
For Great Britain and Australia	AC 50 Hz/60 Hz, 240 V
For Continental Europe	AC 50 Hz/60 Hz, 220 V
For others	AC 50 Hz/60 Hz, 110 V/127 V/220 V/240 V
Dimensions (W × H × D)	430 × 161 × 403 mm (16-15/16" × 6-11/32" × 15-7/8")
Weight	16.5 kg (36.3 lb.)

Notes:

- Specifications are subject to change without notice.
Weight and dimensions are approximate.
- Total harmonic distortion is measured by the digital spectrum analyzer.

Technics

Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan

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■ BEFORE REPAIR

- (1) Turn off the power supply. Using a 10Ω, 5W resistor connect both ends of power supply capacitors (C501~C504 10000 μF, C505, C506 4700 μF) in order to discharge the voltage.
- (2) Before turning the power supply on, after completion of repair, slowly apply the primary voltage by using a power supply voltage controller to make sure that the consumed current at 50Hz/60Hz in NO SIGNAL mode should be shown below with respect to supply voltage 110V/127V/220V/240V.

Power supply voltage	AC 110 V	AC 127 V	AC 220 V	AC 240 V
Consumed current 50 Hz	600~1000 mA	500~950 mA	250~550 mA	250~550 mA
Consumed current 60 Hz	500~950 mA	400~800 mA	200~500 mA	200~500 mA

■ PROTECTION CIRCUITRY

The protection circuitry may have operated if either of the following conditions is noticed:

- * No sound is heard when the power is switched ON.
- * Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of this unit are used.

If this occurs, follow the procedure outlined below:

1. Switch OFF the power.
2. Determine the cause of the problem and correct it.
3. Switch ON the power once again.

Note:

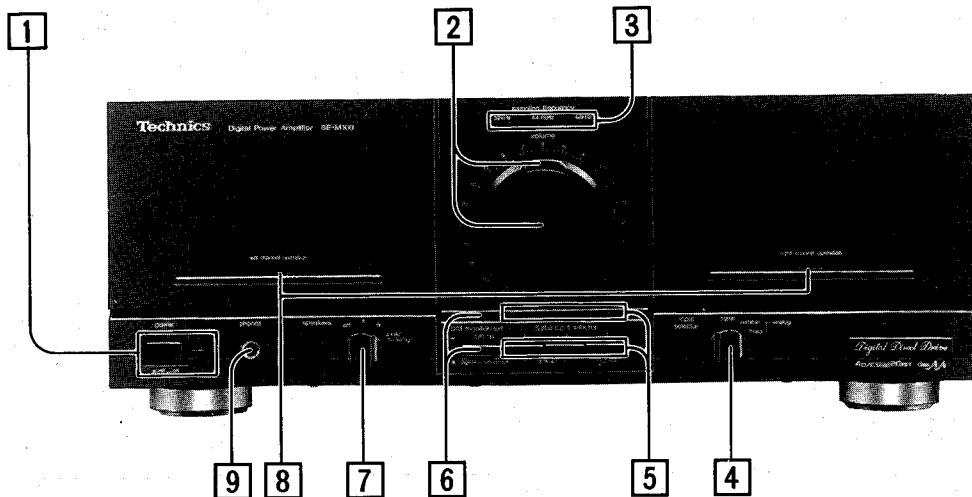
When the protection circuitry functions, the unit will not operate unless the power is first switched OFF and then ON again.

■ ACCESSORIES

- Stereo pin cord (SJPD18) 1
- AC plug adaptor (SJP9215) 1 for <G> area only.
- AC power cord (SFDAC05E03) 1 for <E/E5> area only.

■ LOCATION OF CONTROLS

● Front panel



1 Power switch/indicator

2 Volume control/indicator

3 Sampling frequency indicators

32 kHz: For digital signals with the 32-kHz mode sampling frequency

44.1 kHz: CD and others

48 kHz: For digital signals with the 48-kHz mode sampling frequency

4 Input selector

digital: Set to this position to select a digital component connected to one of the "DIGITAL INPUT" terminals (and then select which component by pressing one of the digital input selectors).

variable: Set to this position to select the compact disc player connected to the "VARIABLE" terminals.

fixed: Set to this position to select the analog component connected to a control amplifier, etc.

5 Digital input selectors/indicators

6 DAT monitor switch/indicator

7 Speaker selector (speakers)

off: No sound will be heard from the speaker systems.

A: Sound can be heard from the speaker systems connected to the "A" terminals.

B: Sound can be heard from the speaker systems connected to the "B" terminals.

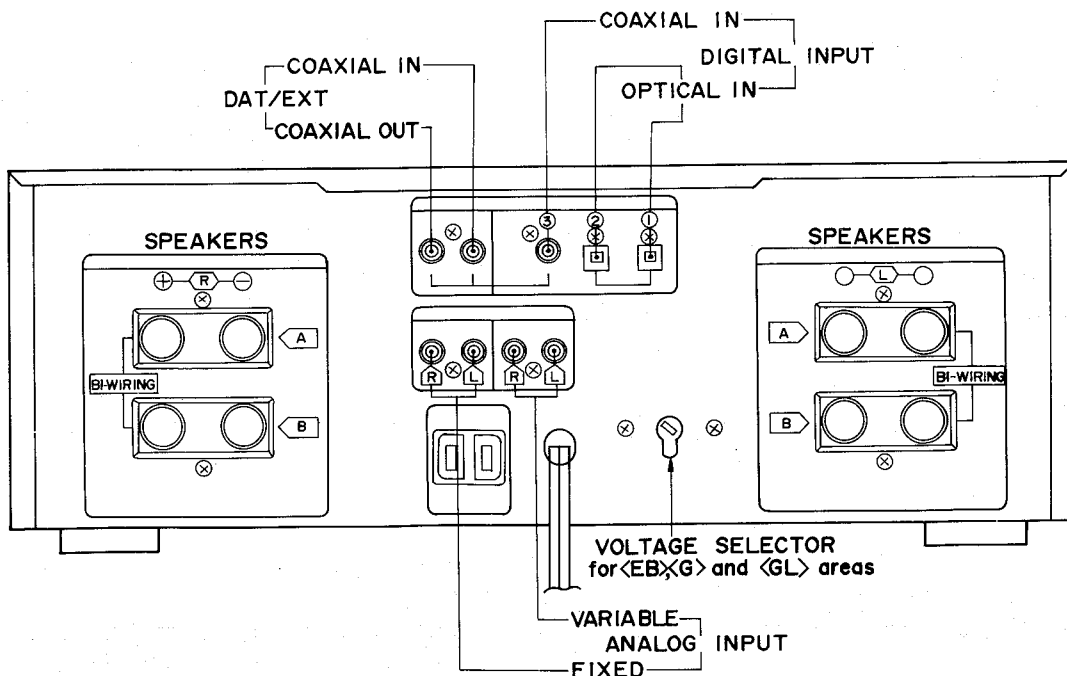
A+B/bi-wiring: Sound can be heard simultaneously from the speaker systems connected to the "A" terminals and the "B" terminals.

Or, if bi-wired speaker systems are connected, sound can be heard from them.

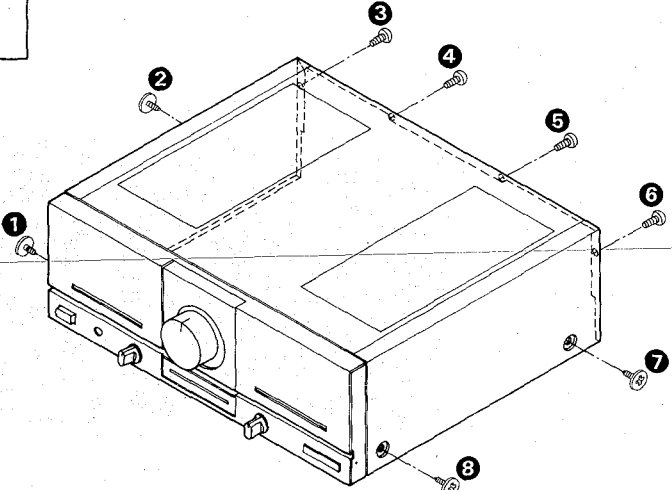
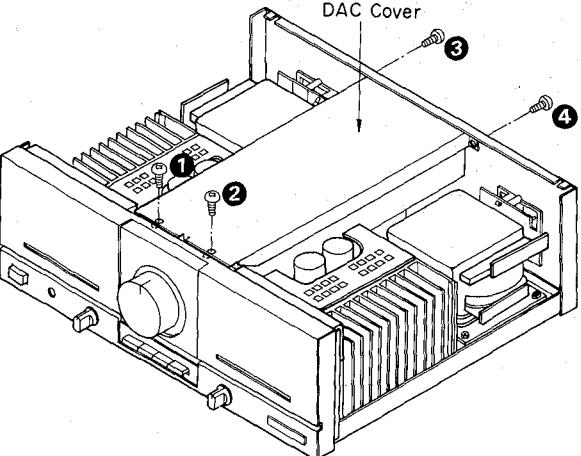
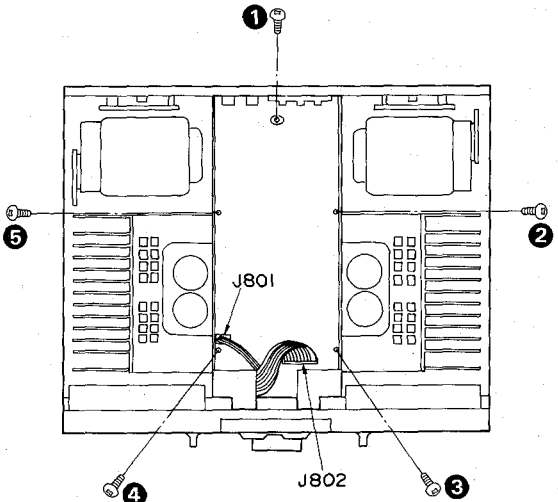
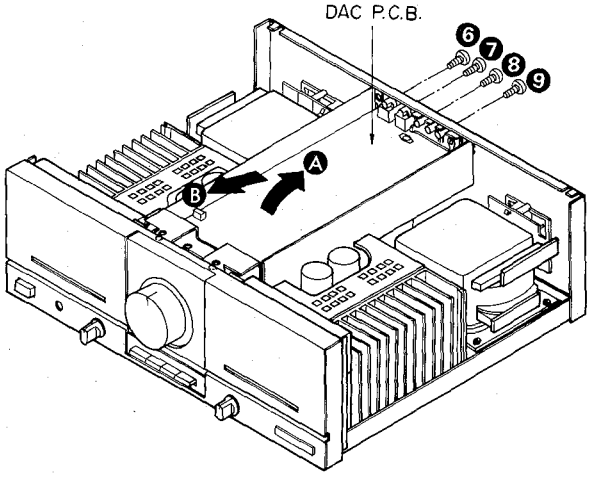
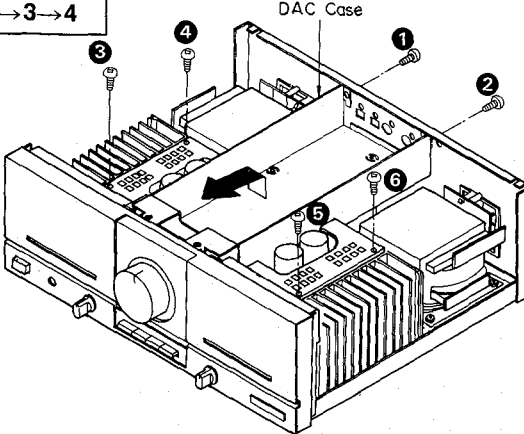
8 Operation indicators

9 Headphones jack

● Rear panel

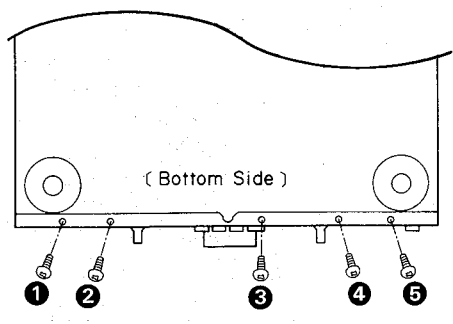


DISASSEMBLY INSTRUCTIONS

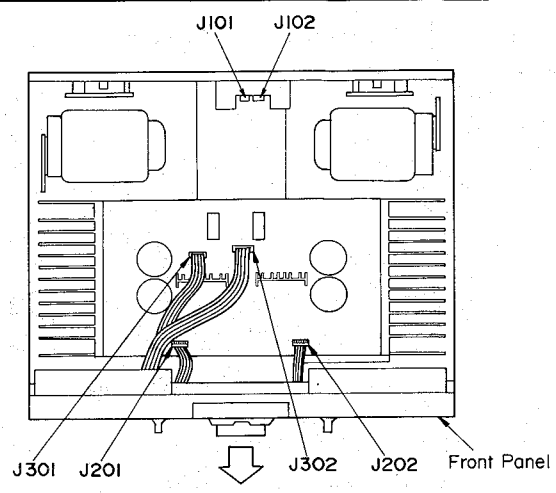
<p>Ref. No. 1</p>	<p>Removal of the cabinet</p>		
<p>Procedure 1</p>	<p>•Remove the 8 screws (1~8).</p>		
<p>Ref. No. 2</p>	<p>Removal of the DAC cover</p>	<p>Ref. No. 3</p>	<p>Removal of the DAC P.C.B.</p>
<p>Procedure 1→2</p>	 <p>•Remove the 4 screws (1~4).</p>	<p>Procedure 1→2→3</p>	
<p>Ref. No. 4</p>		<p>Removal of the DAC case</p>	 <p>1. Pull out the 2 connectors (J801, J802). 2. Remove the 9 screws (1~9). 3. Lift the DAC P.C.B. in the direction of the arrow A, and remove it in the direction of the arrow B.</p>
<p>Procedure 1→2→3→4</p>	 <p>1. Remove the 4 screws (1~4). 2. Lift the lower DAC case slightly, and remove it in the direction of the arrow.</p>		

Ref. No. 5 **Removal of the front panel**

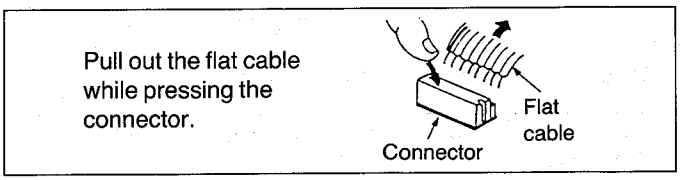
Procedure
1→2→3→4→5



1. Remove the 5 screws (①~⑤).
2. Pull out the 2 connectors (J101, J102).
3. Pull out the 4 flat cables (J201, J202, J301, J302).
4. Remove the front panel in the direction of the arrow.

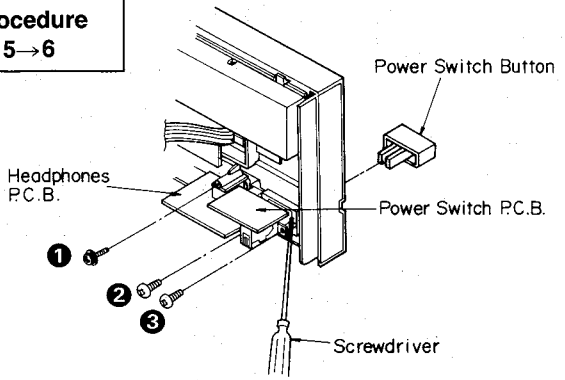


Removal of the flat cable



Ref. No. 6 **Removal of the headphones P.C.B. and power switch P.C.B.**

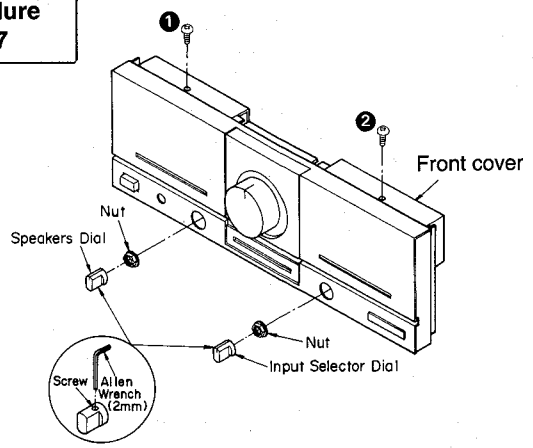
Procedure
5→6



- Headphones P.C.B.
- 1. Remove the screw (①).
- Power switch P.C.B.
- 2. Push the power switch button from the back of the front cover by using a screwdriver and remove it.
- 3. Remove the 2 screws (②, ③).

Ref. No. 7 **Removal of the operation P.C.B.**

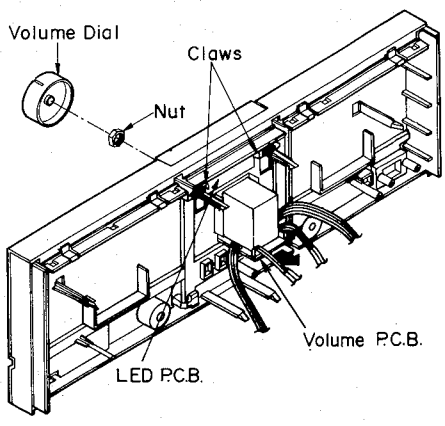
Procedure
5→7



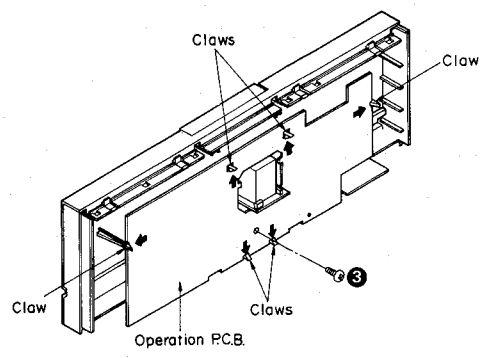
1. Remove the screws of the speaker selector knob and the input selector knob, using the 2 mm allen wrench.
2. Remove the 2 nuts.
3. Remove the 2 screws (①, ②) and remove the front cover.
4. Remove the screw (③).
5. Remove the operation P.C.B. by releasing the 6 claws in the direction of the arrows.

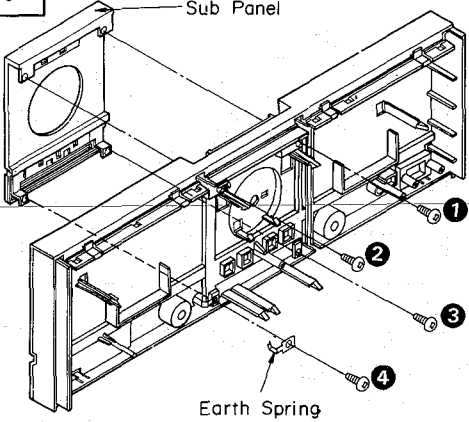
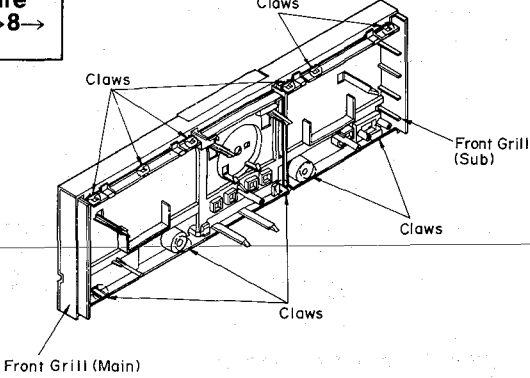
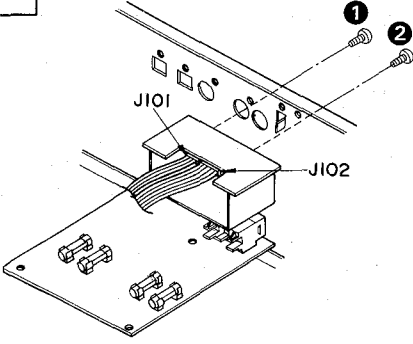
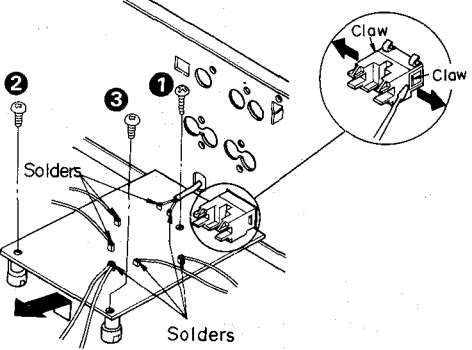
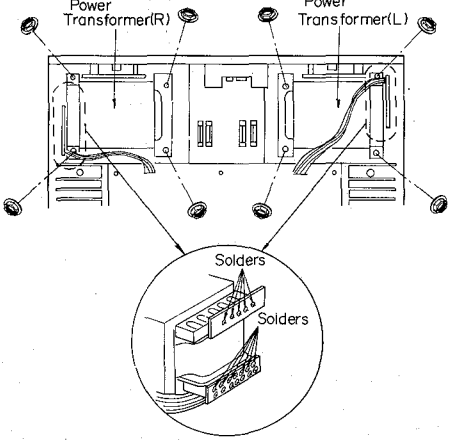
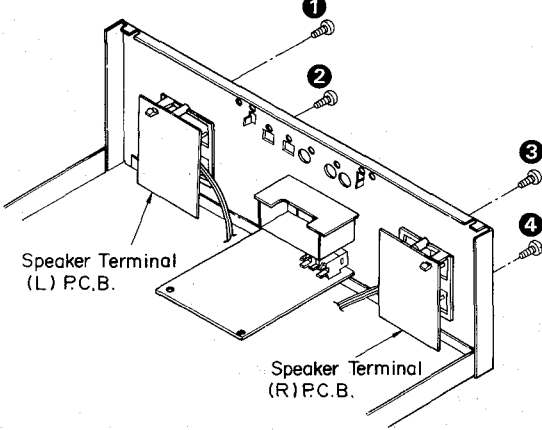
Ref. No. 8 **Removal of the volume P.C.B. and LED P.C.B.**

Procedure
5→7→8



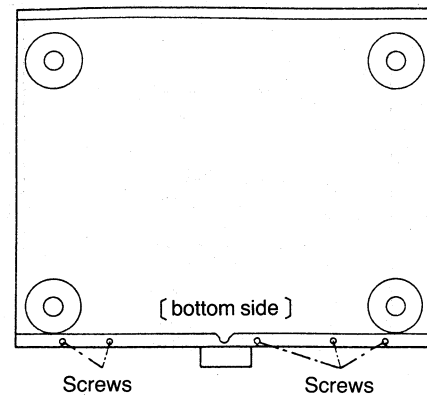
- Volume P.C.B.
- 1. Remove the volume dial and nut.
- LED P.C.B.
- 2. Remove the LED P.C.B. by releasing the 2 claws in the direction of the arrows.



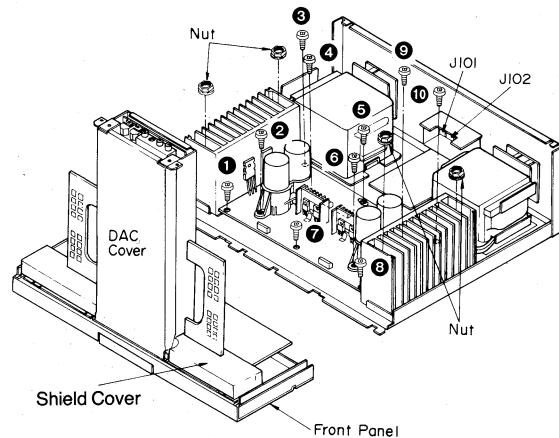
<p>Ref. No. 9</p>	<p>Removal of the sub panel</p>	<p>Ref. No. 10</p>	<p>Removal of the front grill</p>
<p>Procedure 5→7→8→9</p>	 <p>Sub Panel</p> <p>Earth Spring</p> <p>●Remove the 4 screws (1~4).</p>	<p>Procedure 5→6→7→8→ 9→10</p>	 <p>Claws</p> <p>Claws</p> <p>Claws</p> <p>Claws</p> <p>Front Grill (Main)</p> <p>Front Grill (Sub)</p> <p>●Front grill (Main) 1. Remove the front grill (Main) by releasing the 7 claws.</p> <p>●Front grill (Sub) 2. Remove the front grill (Sub) by releasing the 4 claws.</p>
<p>Ref. No. 11</p>	<p>Removal of the input terminal P.C.B.</p>	<p>Ref. No. 12</p>	<p>Removal of the power source P.C.B.</p>
<p>Procedure 1→2→3→4→ 11</p>	 <p>J101</p> <p>J102</p> <p>1</p> <p>2</p> <p>1. Pull out the 2 connectors (J101, J102). 2. Remove the 2 screws (1, 2).</p>	<p>Procedure 11→12</p>	 <p>Claw</p> <p>Claw</p> <p>Solders</p> <p>Solders</p> <p>1</p> <p>2</p> <p>3</p> <p>1. Remove the 3 screws (1~3). 2. Unsolder each lead wire. 3. Remove the power source P.C.B. by releasing the 2 claws of AC outlet.</p>
<p>Ref. No. 13</p>	<p>Removal of the power transformer</p>	<p>Ref. No. 14</p>	<p>Removal of the speaker terminals</p>
<p>Procedure 1→2→3→4→ 13</p>	 <p>Power Transformer(R)</p> <p>Power Transformer(L)</p> <p>Solders</p> <p>Solders</p> <p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>1. Unsolder each lead wire. 2. Remove the 8 nuts. (Do not remove the screws on the chassis.)</p>	<p>Procedure 13→14</p>	 <p>Speaker Terminal (L) P.C.B.</p> <p>Speaker Terminal (R) P.C.B.</p> <p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>●Remove the 4 screws (1~4).</p>

Ref. No. 15 **Checking of the main P.C.B.**

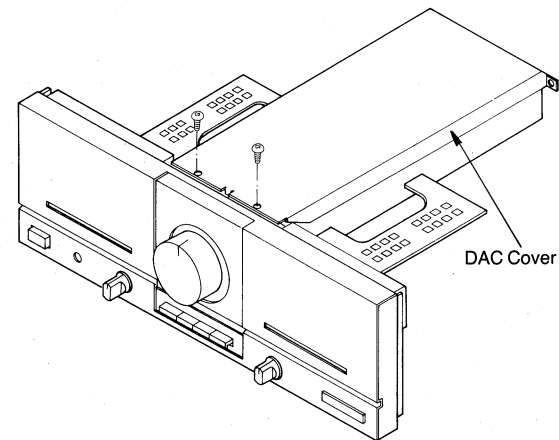
Procedure
1→15



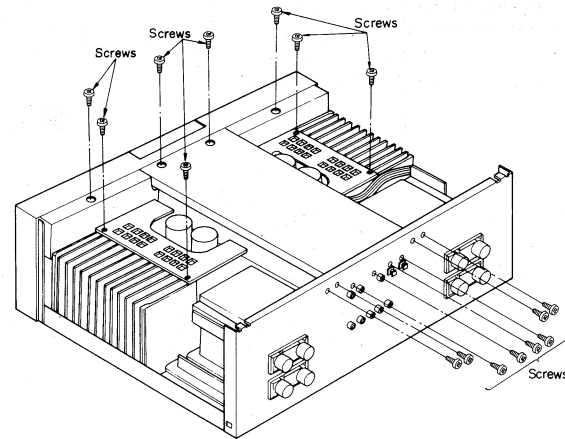
1. Remove the 5 screws on the bottom of the front panel.



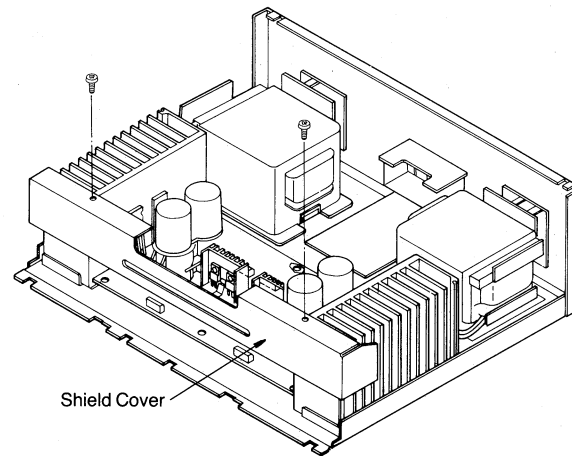
3. Remove the 10 screws (1~10) on the main P.C.B.
4. Remove the 4 nuts (8 mm) on the heat sink.
(Do not remove the screws on the chassis.)
5. Disconnect the 2 connectors (J101, J102).
6. Remove the front panel with the DAC cover toward you.



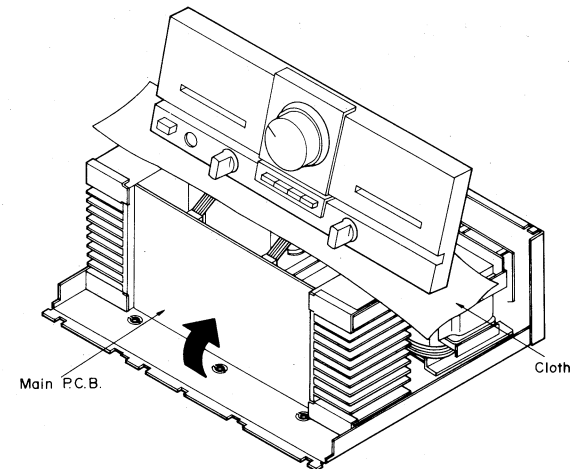
8. Attach the DAC cover to the front panel using two screws.
9. Connect J101 and J102.



2. Remove the 12 screws on the rear panel and the 4 screws on the heat sink.



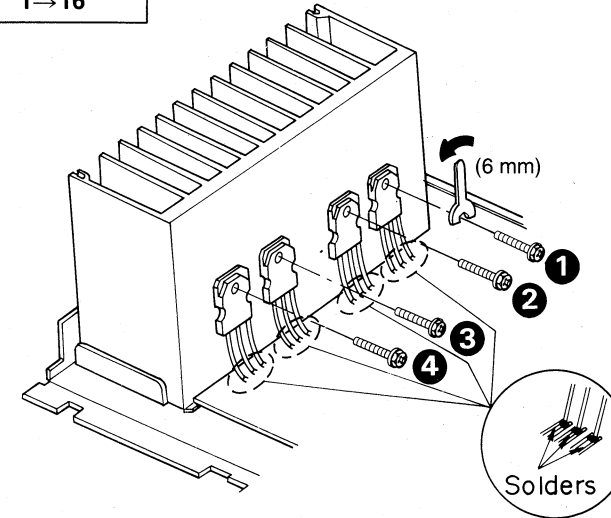
7. Remove the front cover, and attach it to the heat sink by using two screws in order to prevent main P.C.B. from crack.



10. Lift the main P.C.B. with the heat sink in the direction of the arrow together with the front panel.
11. Place cloth under the front panel to protect P.C.B.s from short-circuit.

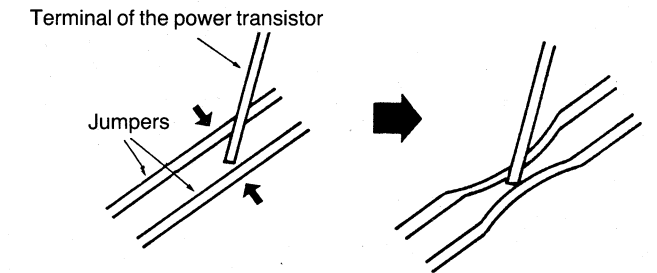
Ref. No. 16 **Removal of the power transistors**

Procedure
1→16



1. Unsolder the terminals of the power transistors.
2. Remove the 4 screws (1~4).

Caution:
When reinstalling the power transistors, be sure to apply silicone compound (SZZ0L15) to the back of the power transistors.
Bring the jumpers to be soldered toward the terminal of the power transistor.



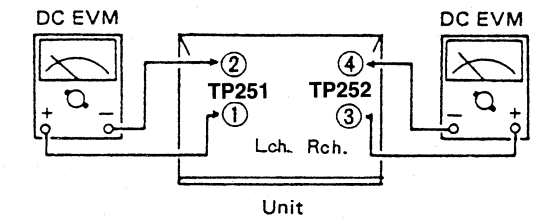
MEASUREMENTS AND ADJUSTMENTS

Control positions and equipment used.

- Volume knob ∞ (Minimum)
- Input selector knob digital
- Speaker selector knob A
- AC electronic voltmeter (EVM)
- DC electronic voltmeter (EVM)
- Distortion analyser
- Digital checker (SZZP1095C)

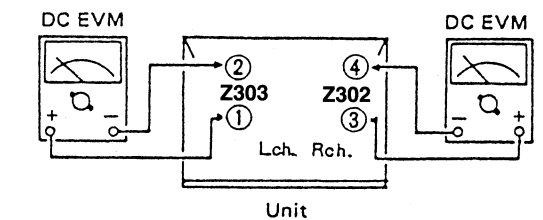
VOLTAGE CONTROL(V)AMP.IDLING(ICQ) ADJUSTMENT

1. Test equipment connection is shown in figure. (Connect the DC EVM on both channels.)
2. Completely turn the (V) amp. adjusting volumes (VR251, VR252) counter-clockwise.
3. Turn ON the set when it is cold, and immediately adjust VR251 and VR252 so that the voltage is 25 mV.
Also, check that the voltage is 25~30 mV (standard: 27 mV) after lapse of 10~15 minutes. (Below 30 mV after lapse of 20 min.)



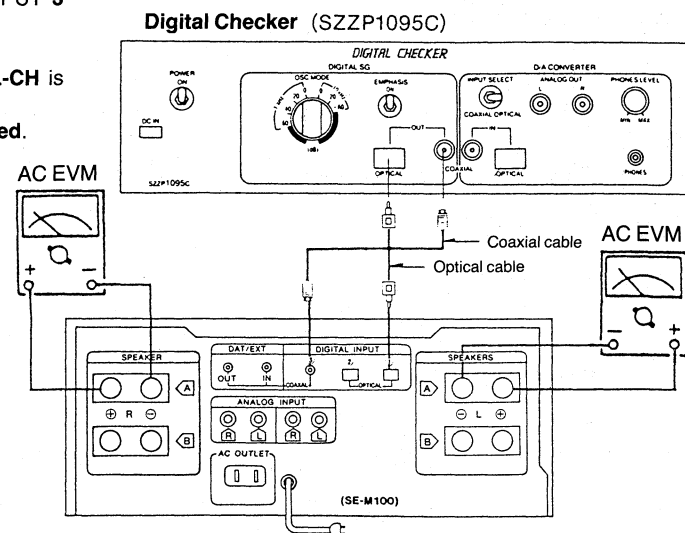
CURRENT DRIVE(C)AMP.IDLING(ICQ)ADJUSTMENT

1. Test equipment connection is shown in figure. (Connect the DC EVM on both channels.)
2. Completely turn the (C) amp. adjusting volumes (VR301, VR302) counter-clockwise.
3. Turn ON the set when it is cold, and after the adjustment of the (V) amp. ICQ, adjust VR301 and VR302 so that the voltage is 3 mV.
Also, check that the voltage is 4~7 mV (standard: 5 mV) after lapse of 10~15 minutes. (Below 10 mV after lapse of 20 min.)



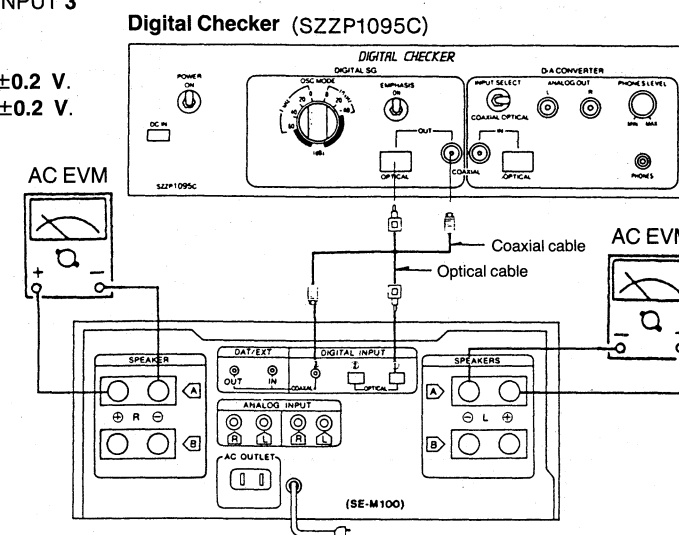
DA CONVERTER GAIN ADJUSTMENT

1. Test equipment connection is shown in figure (Connect the AC EVM on both channels.)
2. Set the input selector knob to the **digital** position.
3. Press the "**3 (COAXIAL)**" button of the digital input selectors.
4. Feed a digital signal (**1kHz, 0 dB**) into the DIGITAL INPUT 3 (**COAXIAL**) terminal.
5. Set the volume knob to the **-20 dB** position.
6. Short **TP801** and adjust **VR803** so that the voltage of **L-CH** is **minimized**.
7. Adjust **VR804** so that the voltage of **R-CH** is **minimized**.



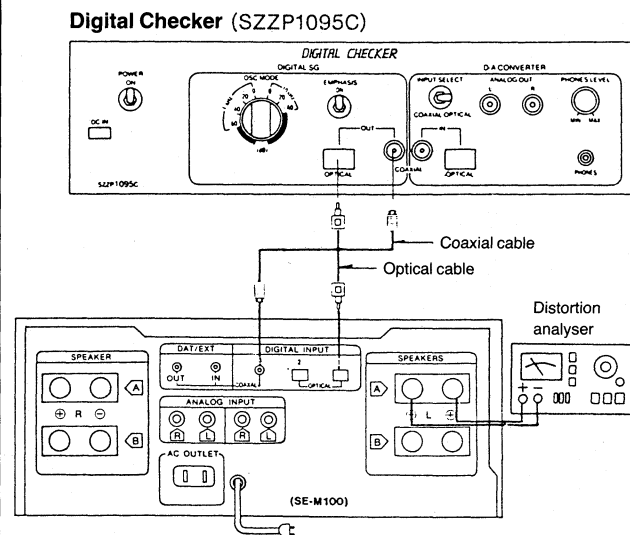
DA CONVERTER GAIN ADJUSTMENT

1. Test equipment connection is shown in figure (Connect the AC EVM on both channels.)
2. Set the input selector knob to the **digital** position.
3. Press the "**3 (COAXIAL)**" button of the digital input selectors.
4. Feed a digital signal (**1 kHz, -20 dB**) into the DIGITAL INPUT 3 (**COAXIAL**) terminal.
5. Set the volume knob to the **maximum** position.
6. Adjust **VR805** so that the voltage of **L-CH** is **10.0 V±0.2 V**.
7. Adjust **VR806** so that the voltage of **R-CH** is **10.0 V±0.2 V**.



DA CONVERTER MOST SIGNIFICANT BIT ADJUSTMENT

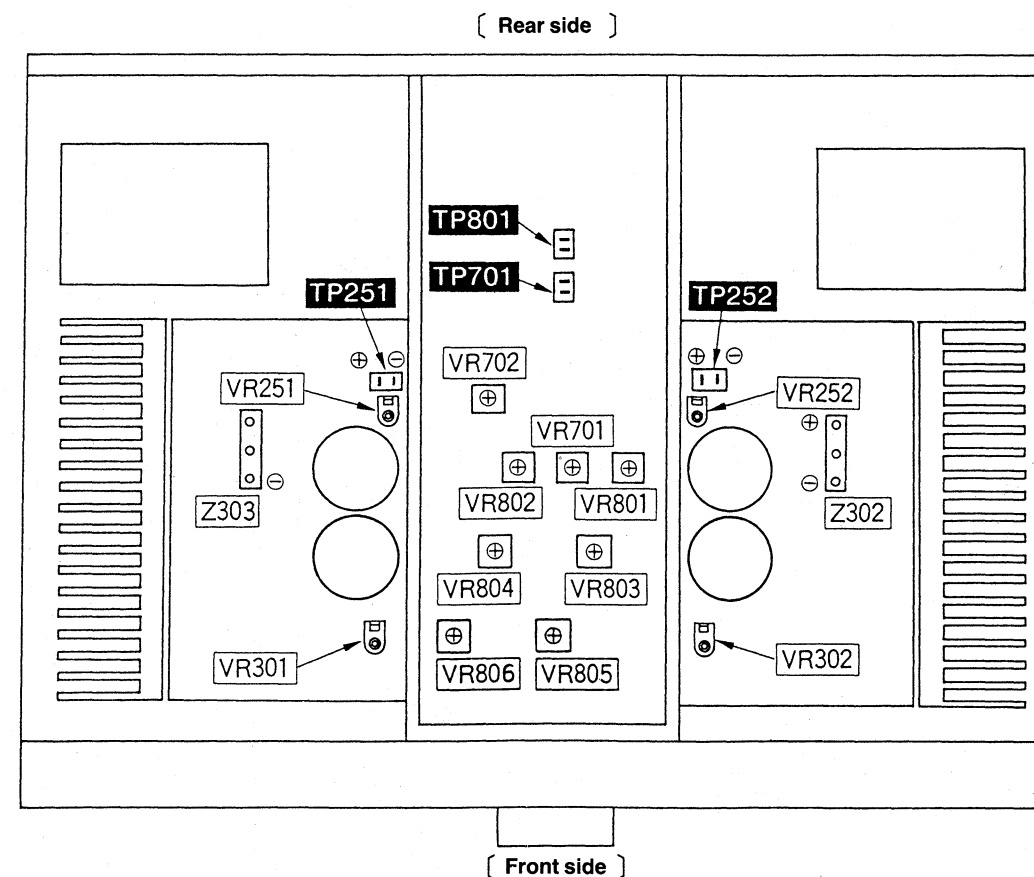
1. Test equipment connection is shown in figure.
2. Set the input selector knob to the **digital** position.
3. Press the "**3 (COAXIAL)**" button of the digital input selectors.
4. Feed a digital signal (**1 kHz, 0 dB**) into the DIGITAL INPUT 3 (**COAXIAL**) terminal.
5. Set the volume knob to the **-20 dB** position.
6. Adjust **VR801** so that the distortion factor of **L-CH** is **minimized**.
7. Adjust **VR802** so that the distortion factor of **R-CH** is **minimized**.



DA CONVERTER DISTORTIONS ADJUSTMENT

1. Test equipment connection is shown in figure.
2. Set the input selector knob to the **digital** position.
3. Press the "**3 (COAXIAL)**" button of the digital input selectors.
4. Feed a digital signal (**1 kHz, -24 dB**) into the DIGITAL INPUT 3 (**COAXIAL**) terminal.
5. Set the volume knob to the **maximum** position.
6. Short **TP701** and adjust **VR701** so that the distortion factor of **L-CH** is **minimized**.
7. Adjust **VR702** so that the distortion factor of **R-CH** is **minimized**.

• Adjustment points



Test point

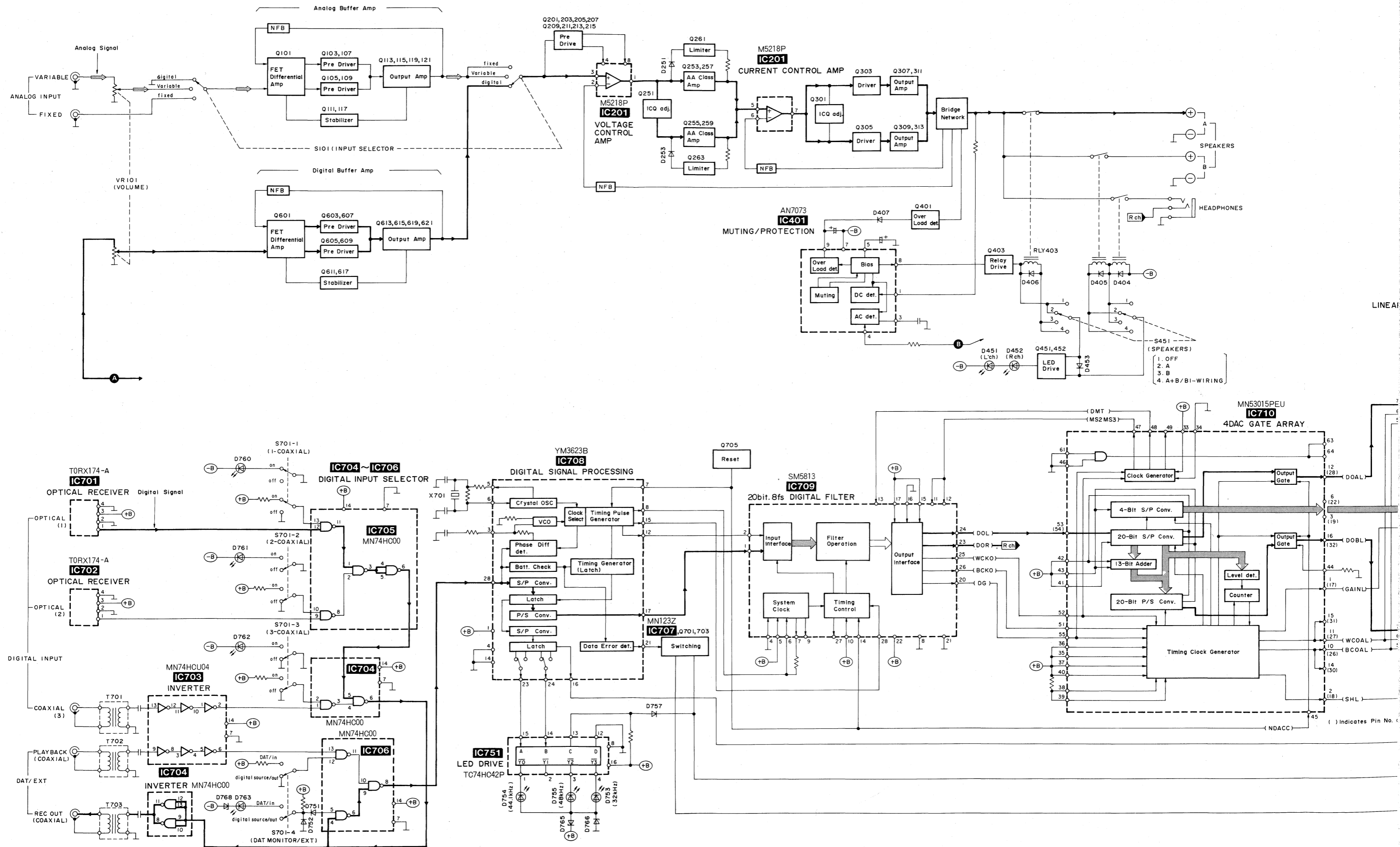
- TP251 ...Lch Voltage control amp I_{cc} adj.
- TP252 ...Rch Voltage control amp I_{cc} adj.
- TP701 ...DA Converter distortion adj.
- TP801 ...DA Converter MSB adj.
- Z302..... Rch Current drive amp I_{cc} adj.
- Z303..... Lch Current drive amp I_{cc} adj.

Adjustment VR

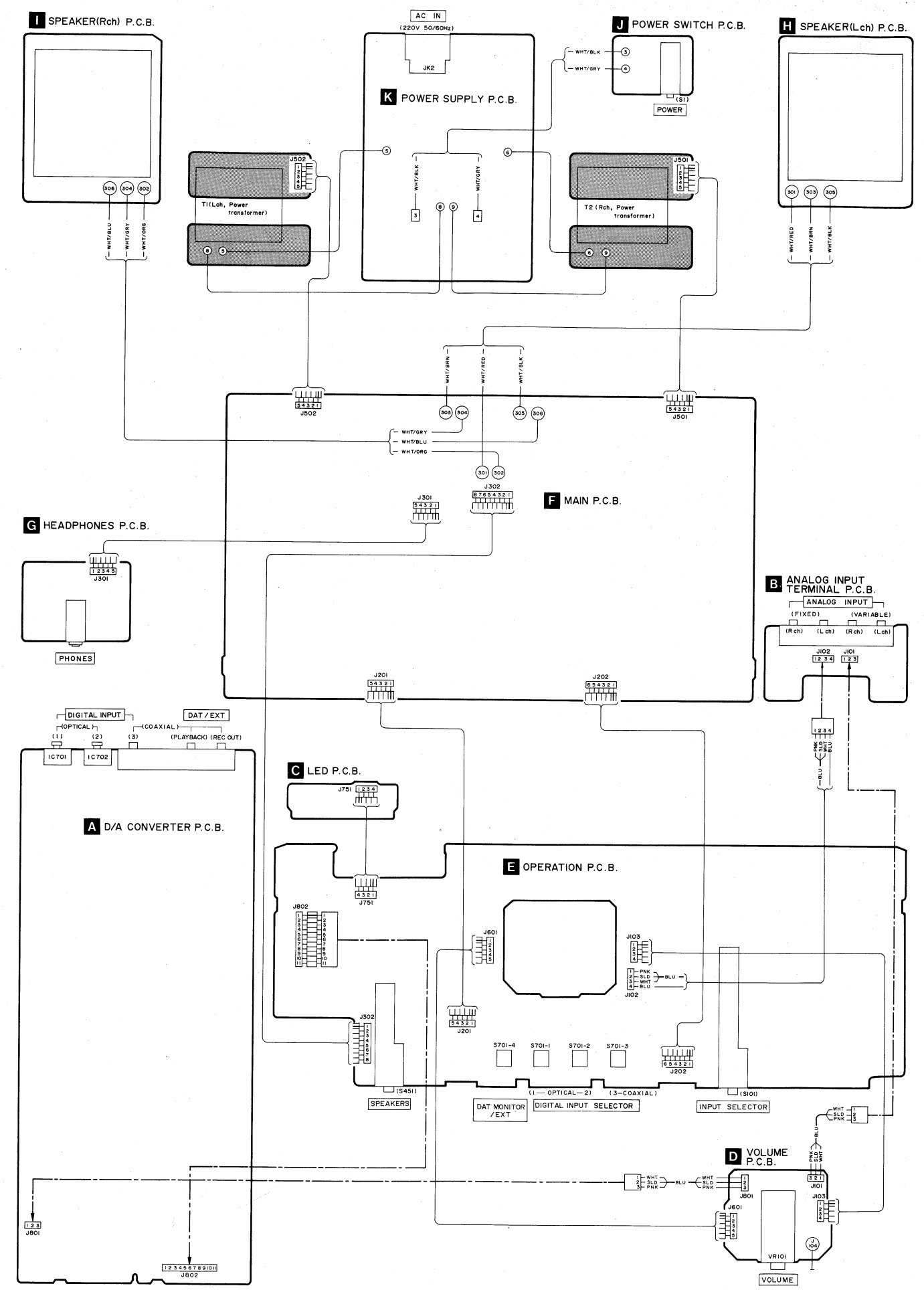
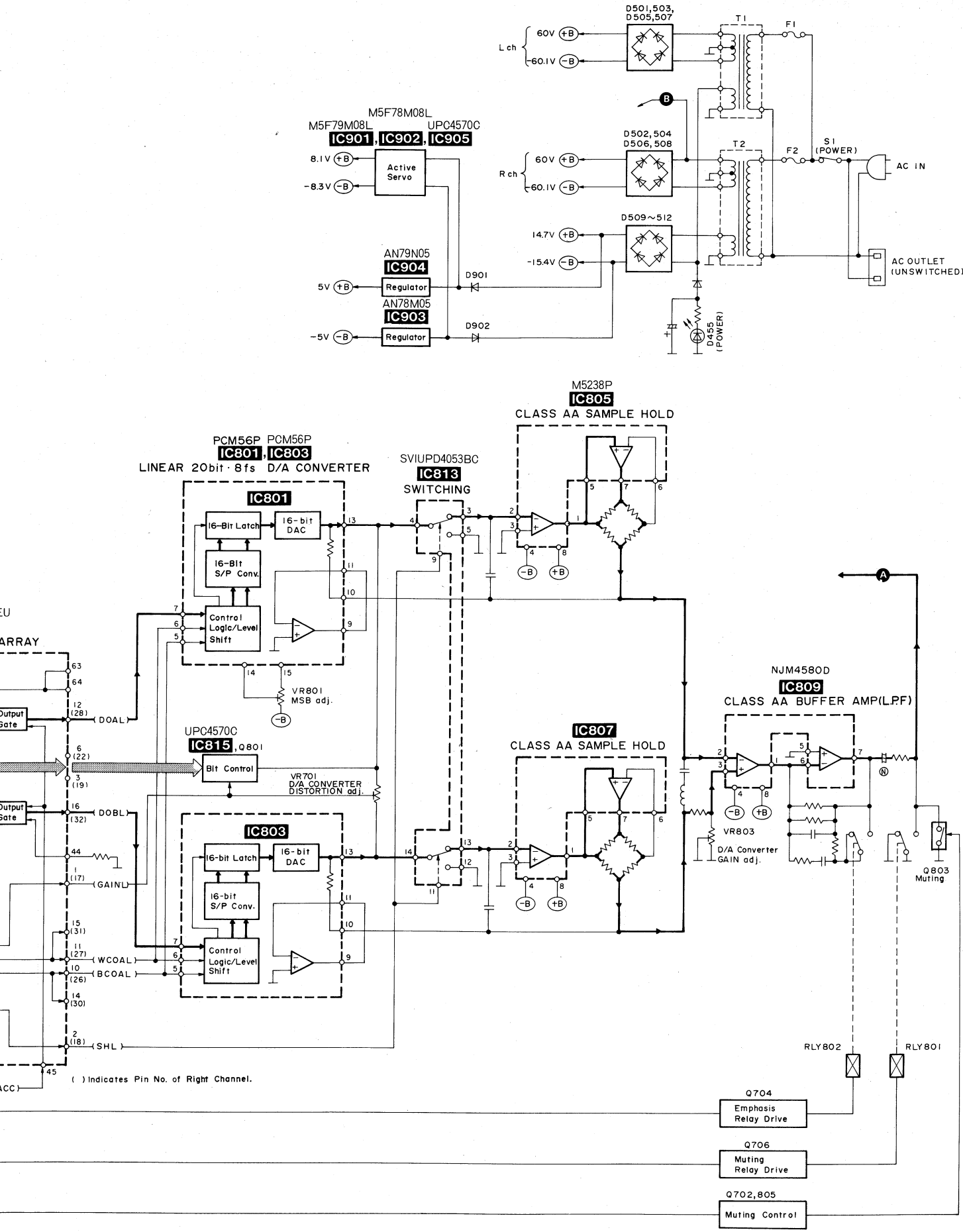
- VR251 ...Lch Voltage control amp I_{cc} adj.
- VR301...Lch Current drive amp I_{cc} adj.
- VR701...Lch DA Converter distortion adj.
- VR801...Lch DA Converter MSB adj.
- VR803...Lch DA Converter gain adj.
- VR805...Lch DA Converter gain adj.

- VR252...Rch Voltage control amp I_{cc} adj.
- VR302...Rch Current drive amp I_{cc} adj.
- VR702...Rch DA Converter distortion adj.
- VR802...Rch DA Converter MSB adj.
- VR804...Rch DA Converter gain adj.
- VR806...Rch DA Converter gain adj.

■ BLOCK DIAGRAM

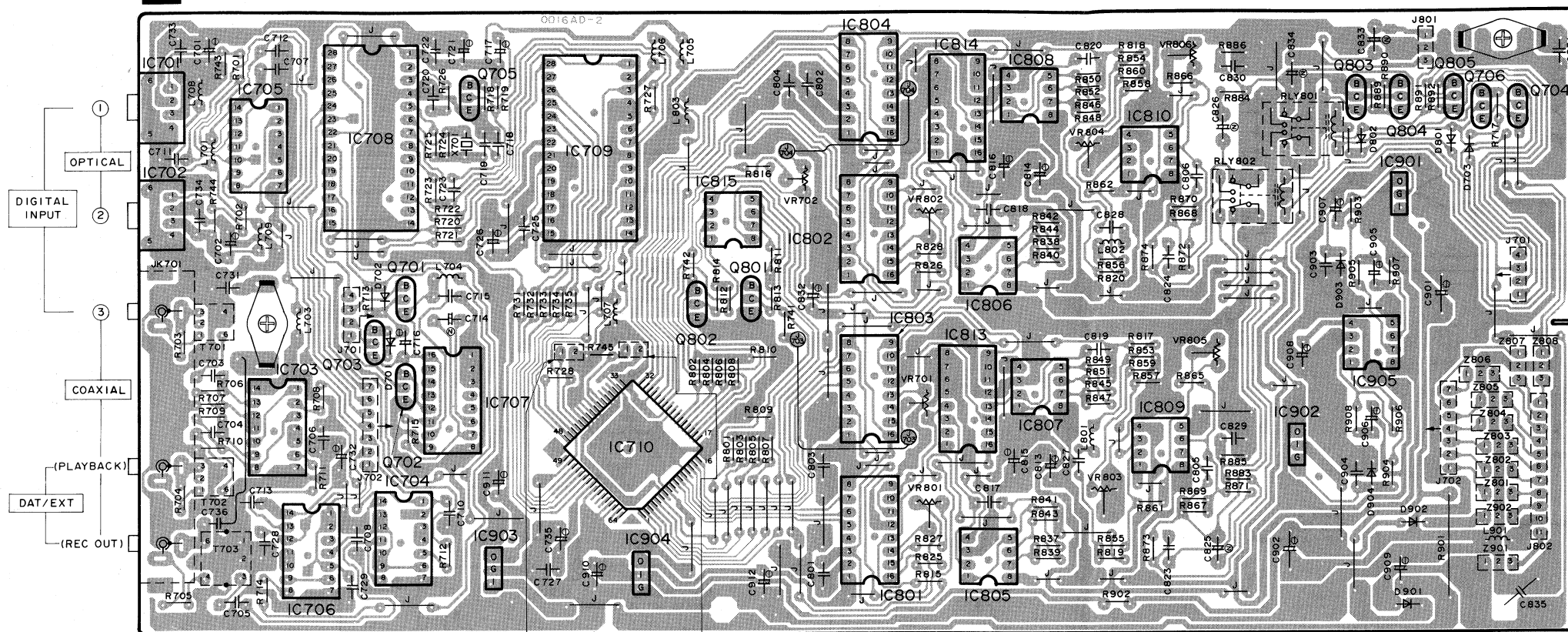


WIRING CONNECTION DIAGRAM

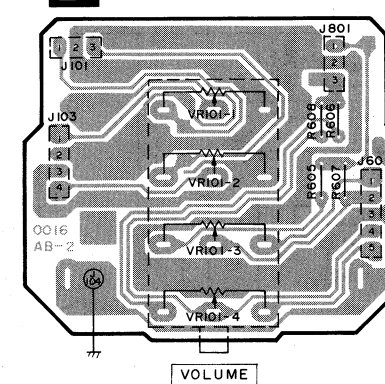


PRINTED CIRCUIT BOARDS (Parts list on page 34~43)

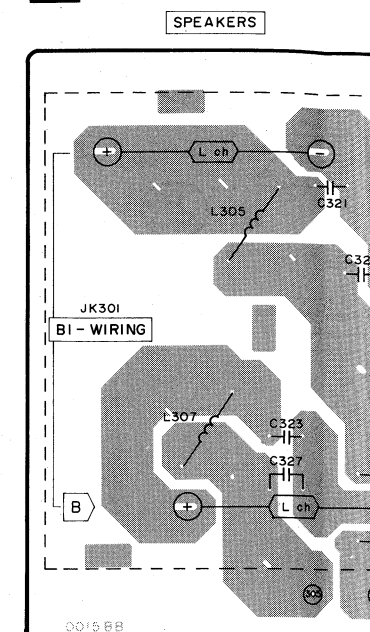
A D/A CONVERTER P.C.B.



D VOLUME P.C.B.

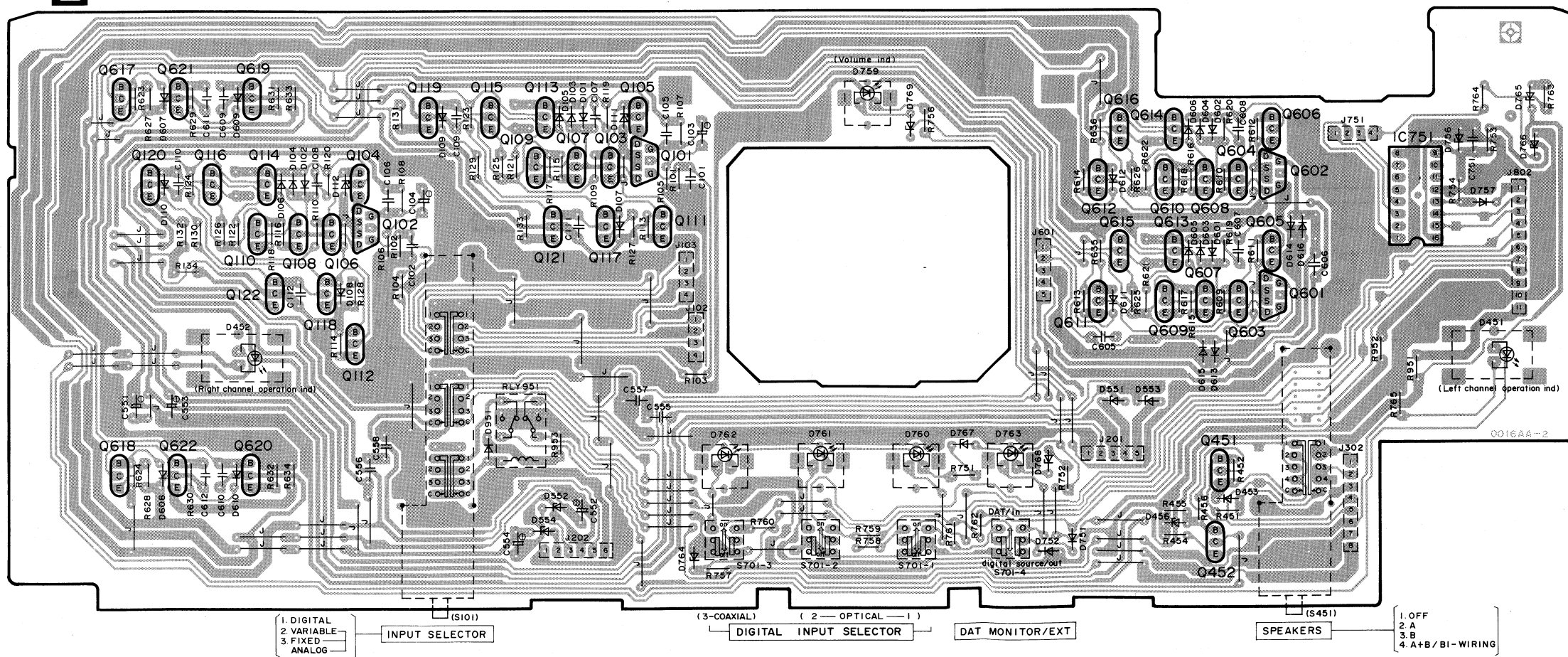


H SPEAKER (Lch) P.C.B.

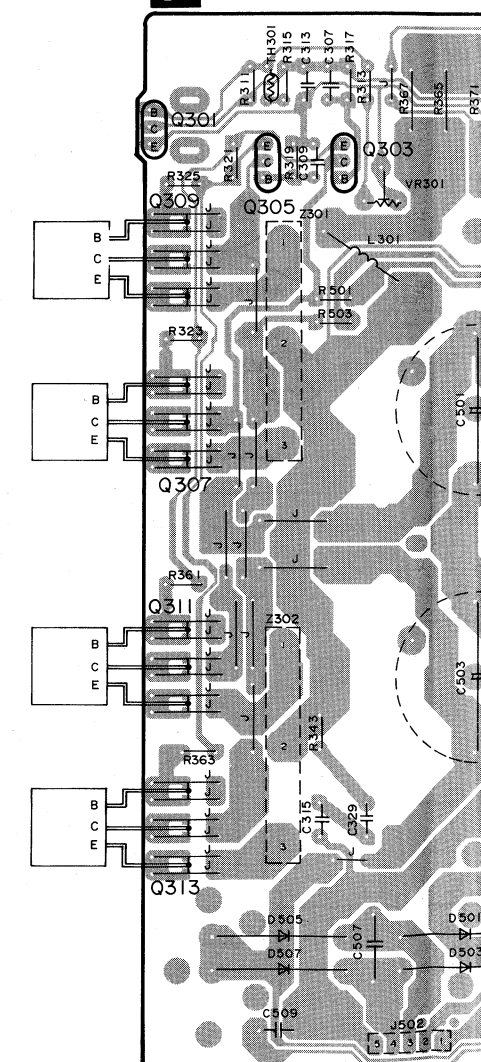


E OPERATION P.C.B.

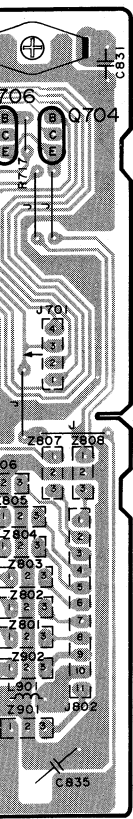
TP801 D/A CONVERTER GAIN ADJ. TP701 D/A CONVERTER DISTORTION ADJ.



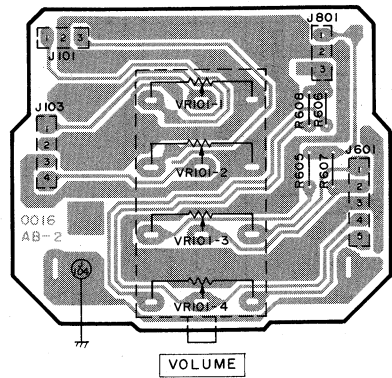
F MAIN P.C.B.



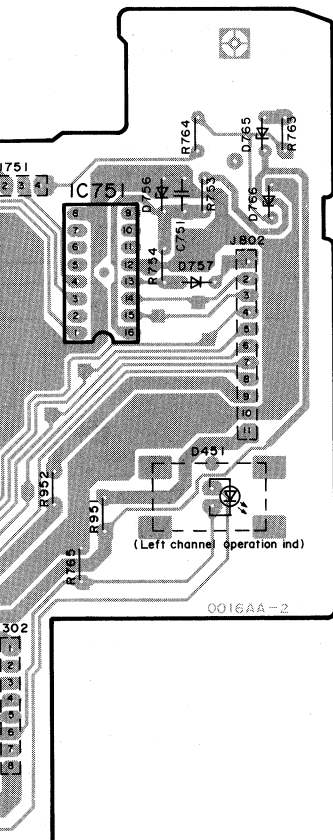
- 1. DIGITAL
 - 2. VARIABLE
 - 3. FIXED
 - ANALOG
- INPUT SELECTOR
- (3-COAXIAL) (2-OPTICAL) (1)
- DIGITAL INPUT SELECTOR
- DAT MONITOR/EXT
- SPEAKERS (S451)
- 1. OFF
 - 2. A
 - 3. B
 - 4. A+B/BI-WIRING



D VOLUME P.C.B.

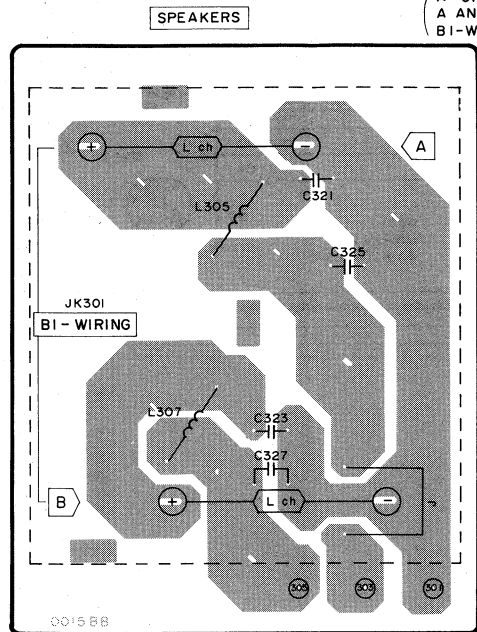


VOLUME



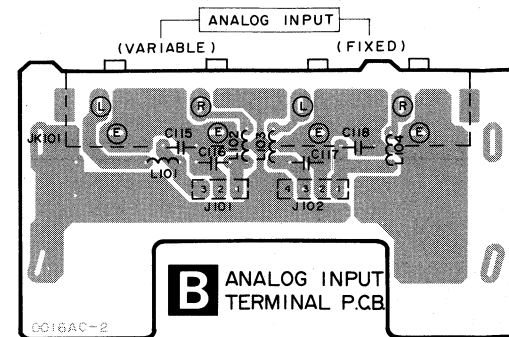
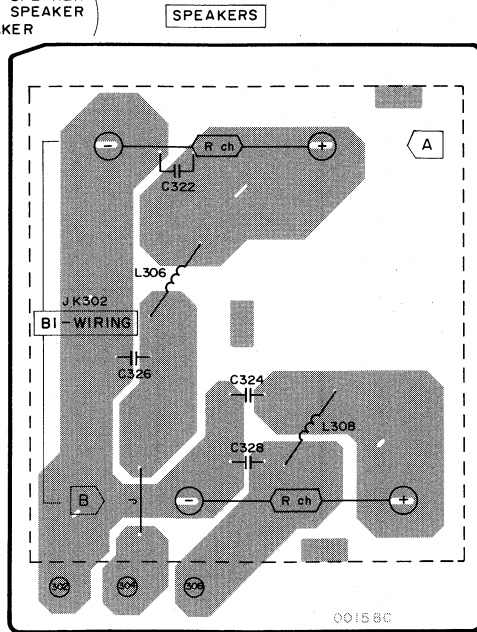
- 1. OFF
- 2. A
- 3. B
- 4. A+B/BI-WIRING

H SPEAKER (Lch) P.C.B.



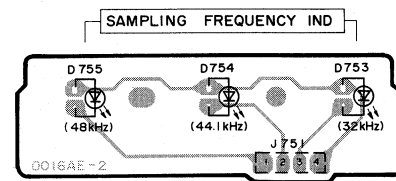
(A OR B : 4-16Ω / EACH SPEAKER
A AND B : 8-16Ω / EACH SPEAKER
BI-WIRING : 4-16Ω / SPEAKER)

I SPEAKER (Rch) P.C.B.

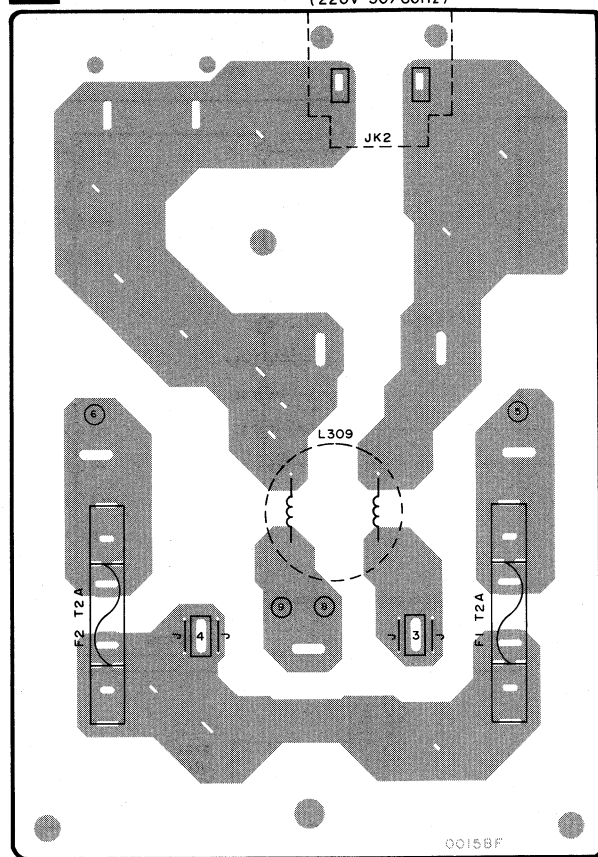


B ANALOG INPUT TERMINAL P.C.B.

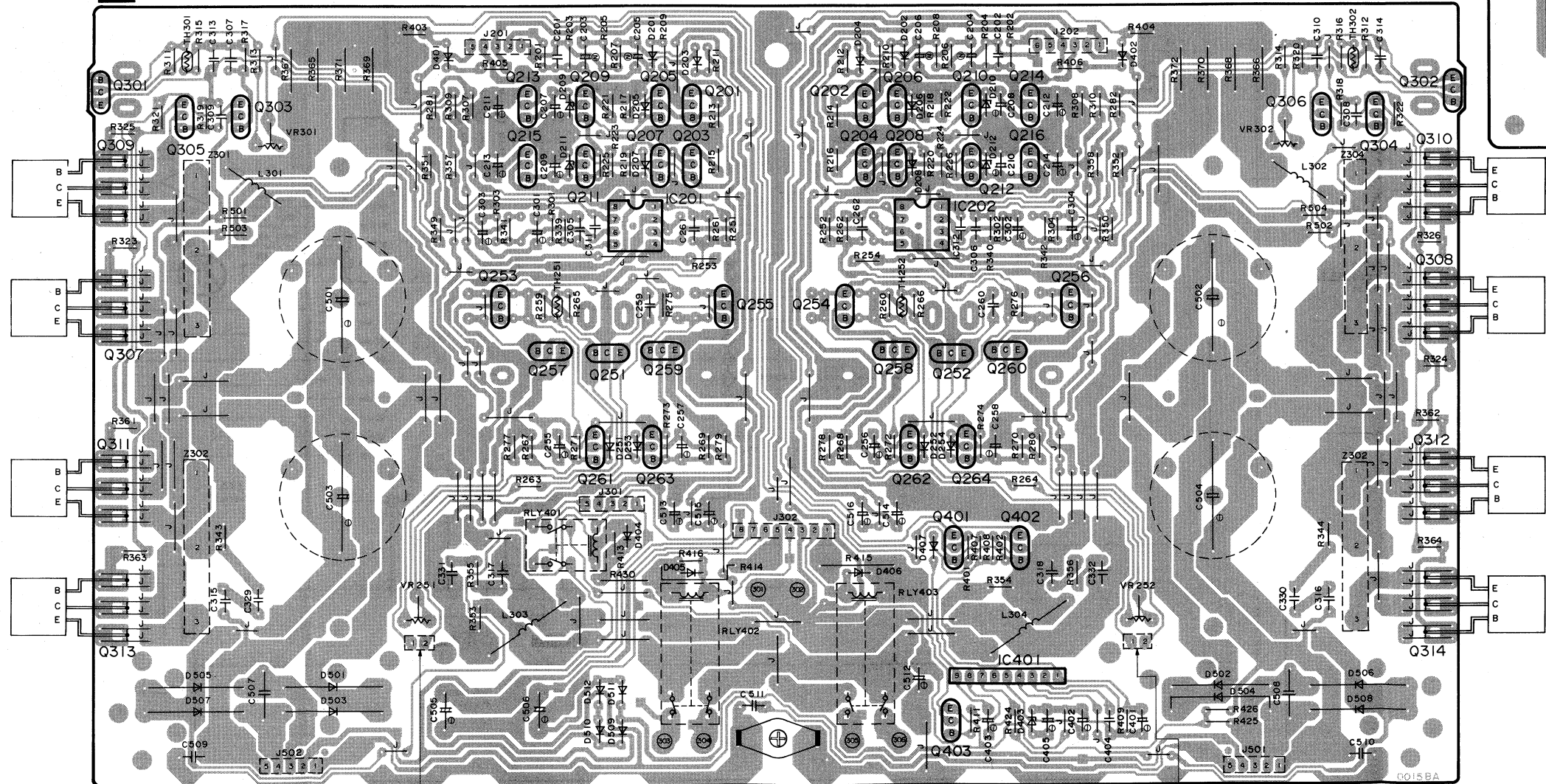
C LED P.C.B.



K POWER SUPPLY P.C.B. (220V 50/60Hz)



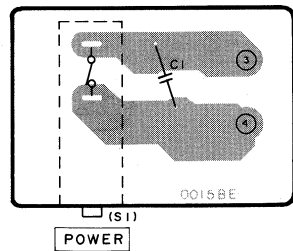
F MAIN P.C.B.



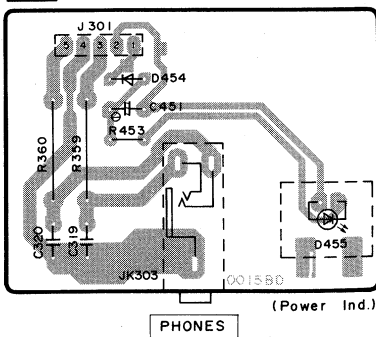
TP251 V-AMP ICQ ADJ.(Lch)

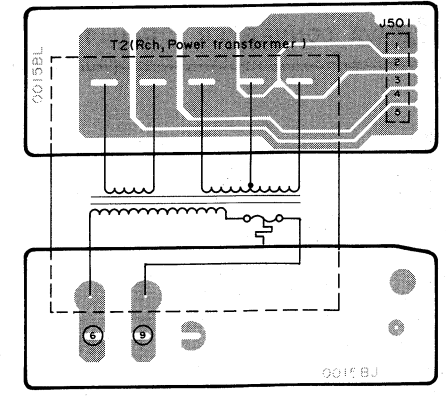
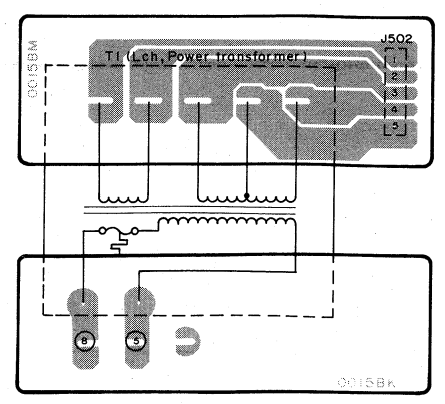
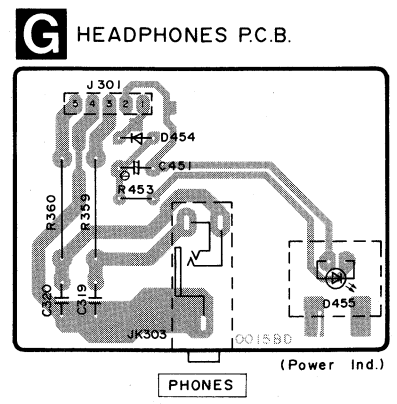
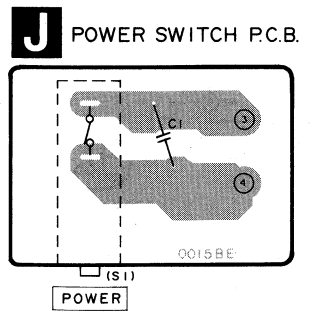
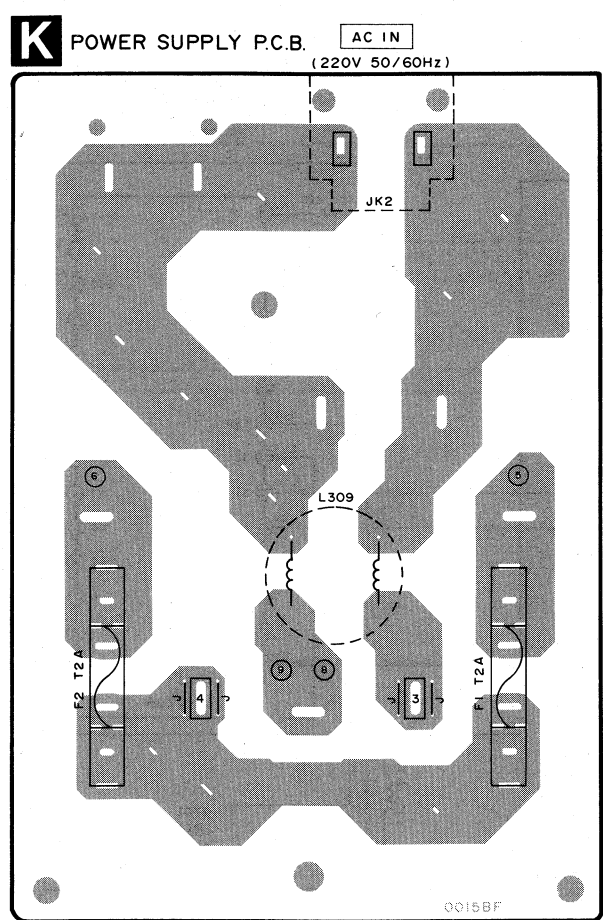
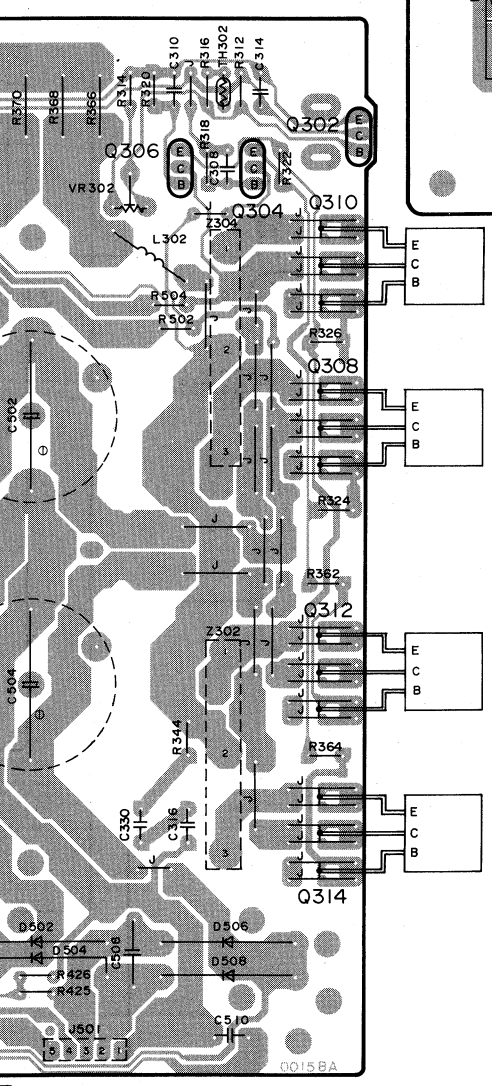
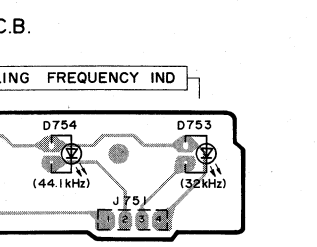
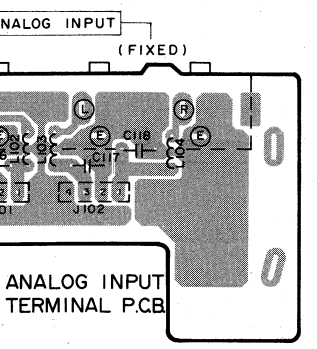
TP252 V-AMP ICQ ADJ.(Rch)

J POWER SWITCH P.C.B.

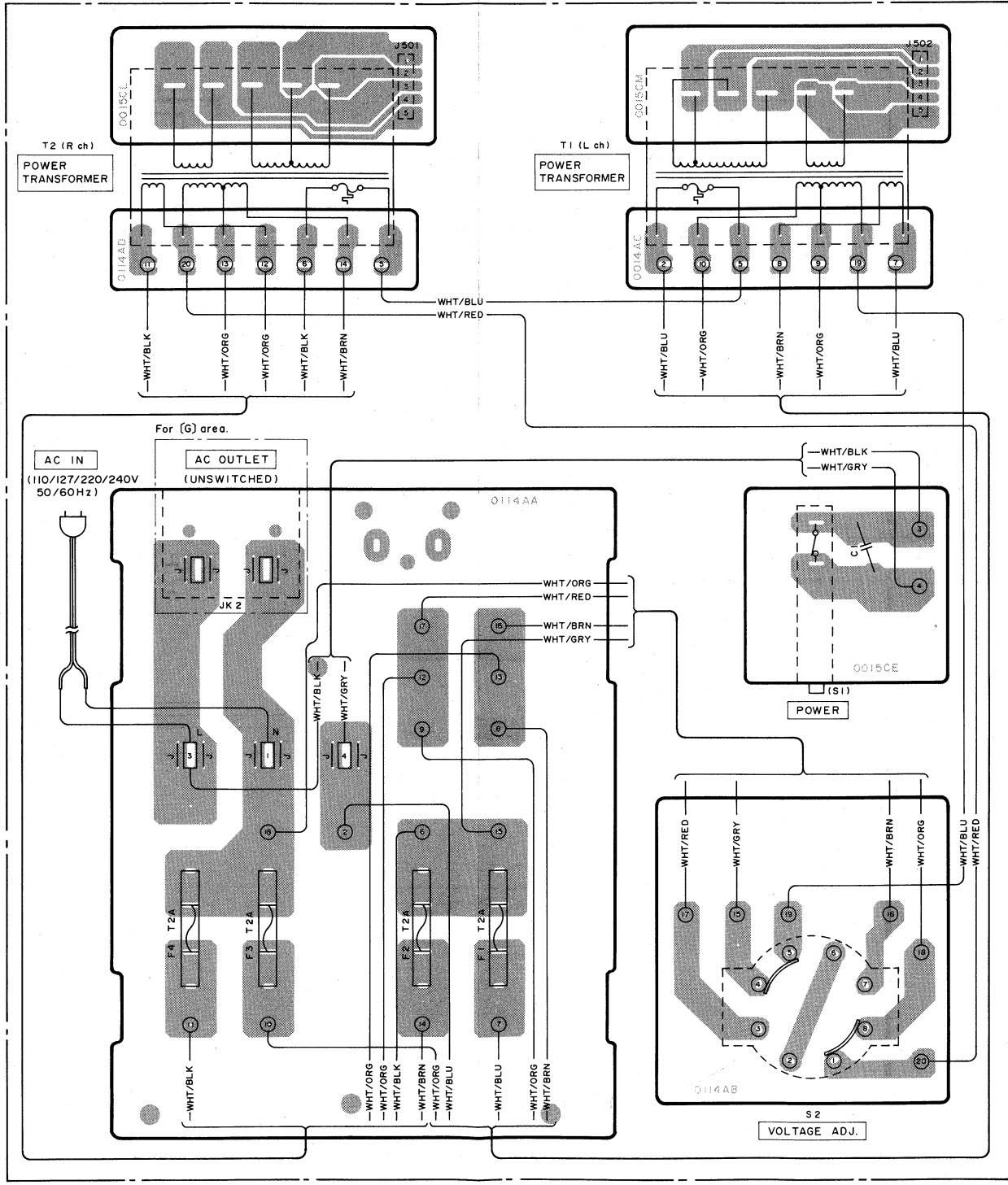


G HEADPHONES P.C.B.



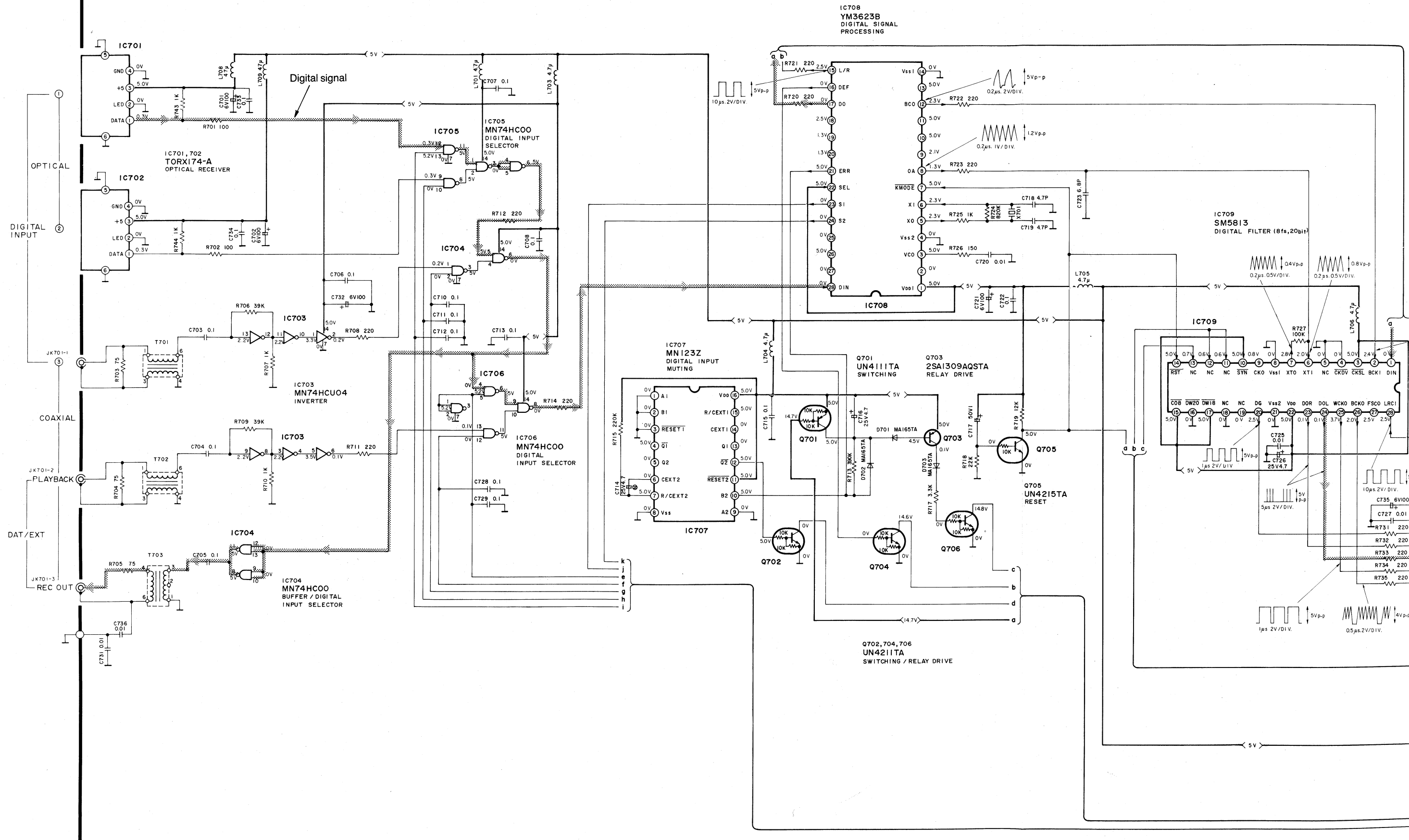


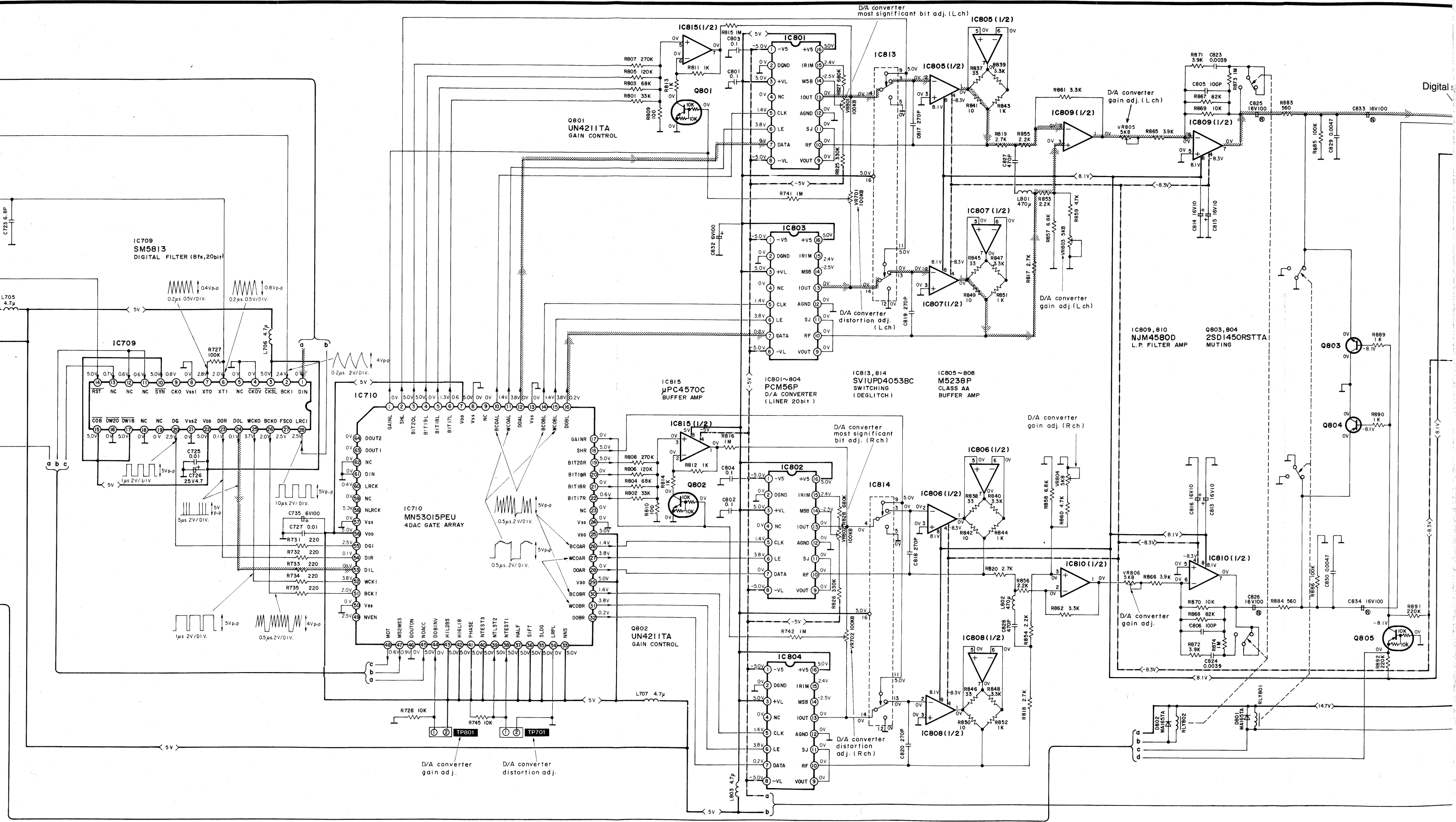
Power Source For [EB, G, GL] areas.

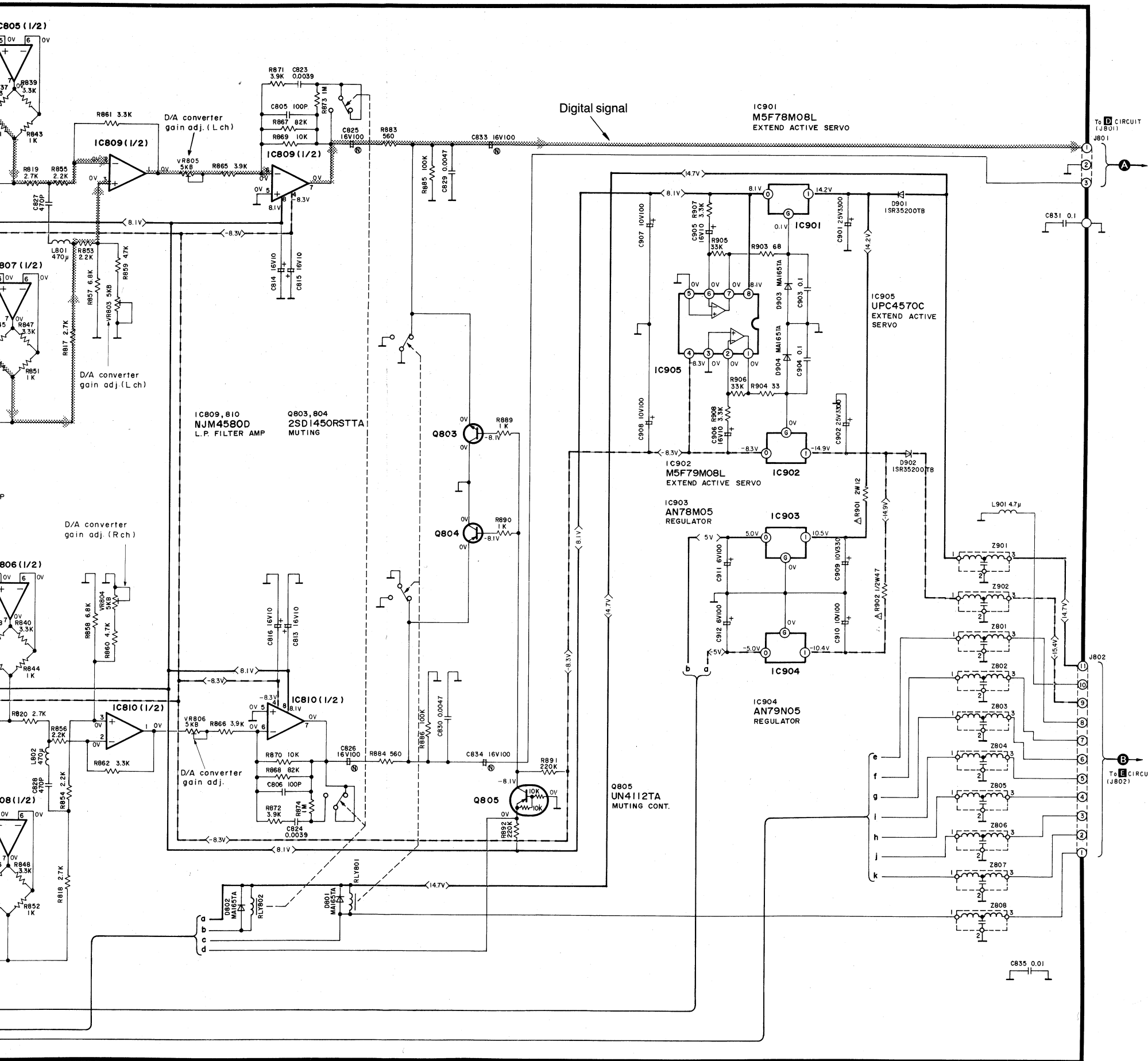


A D/A CONVERTER CIRCUIT

A
B
C
D
E
F







SCHEMATIC DIAGRAM (Parts list on page 34~43)

(This schematic diagram may be modified at any time with the development of new technology.)

- S1: Power switch in "on" position.
- S2: Voltage selector switch in "220 V" position. (110 V/127 V/220 V/240 V) for EB, G and GL areas.
- S101: Input selector switch in "digital" position. (digital/variable/fixd)
- S451: Speaker selector switch in "off" position. (off/ A/B/ A+B bi-wiring)
- S701-1~S701-3: Digital input selector switches. [S701-1:1, S701-1:2, S701-3:3]
- S701-4: DAT monitor switch in "digital" position. (DAT in/digital)

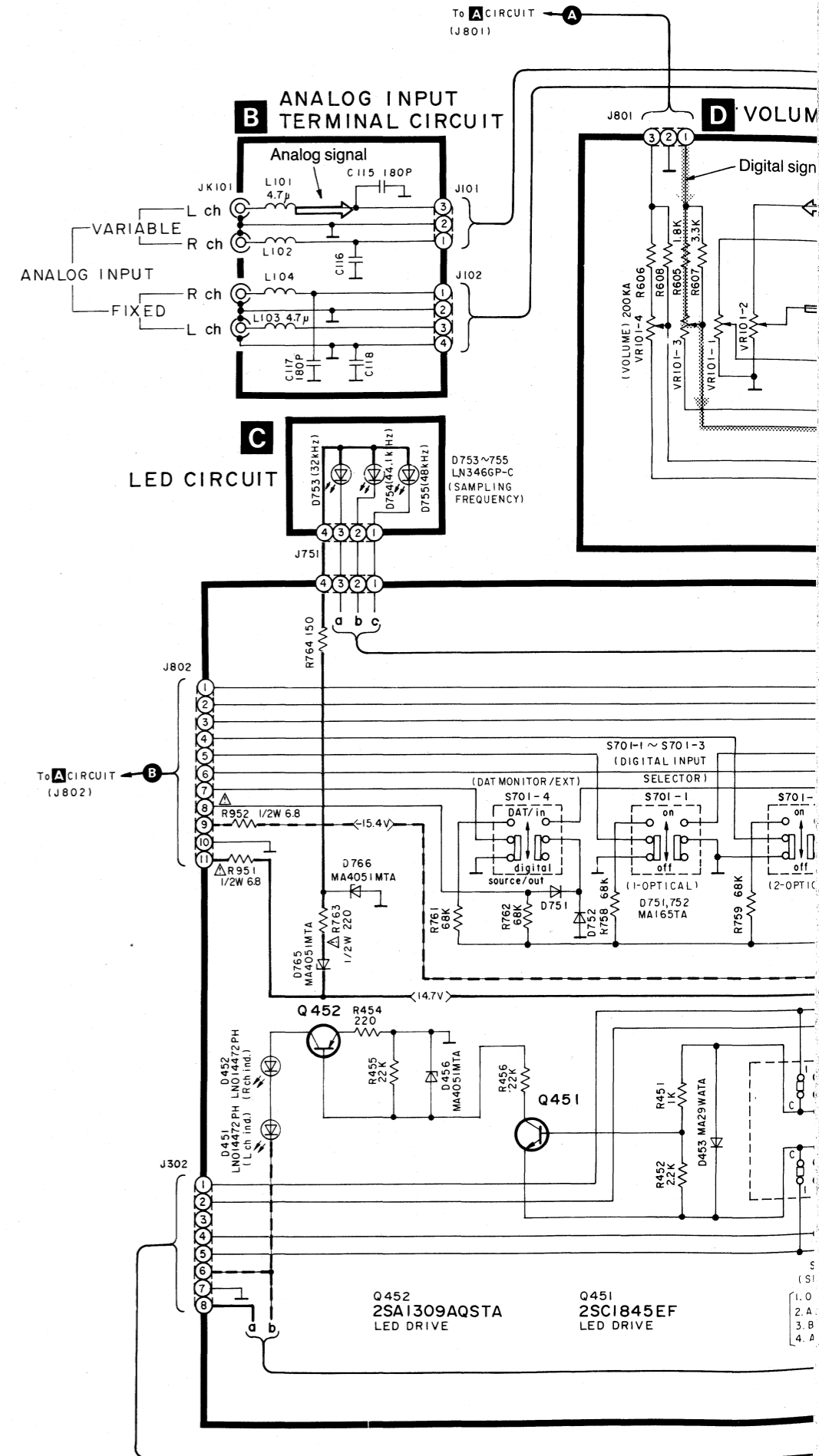


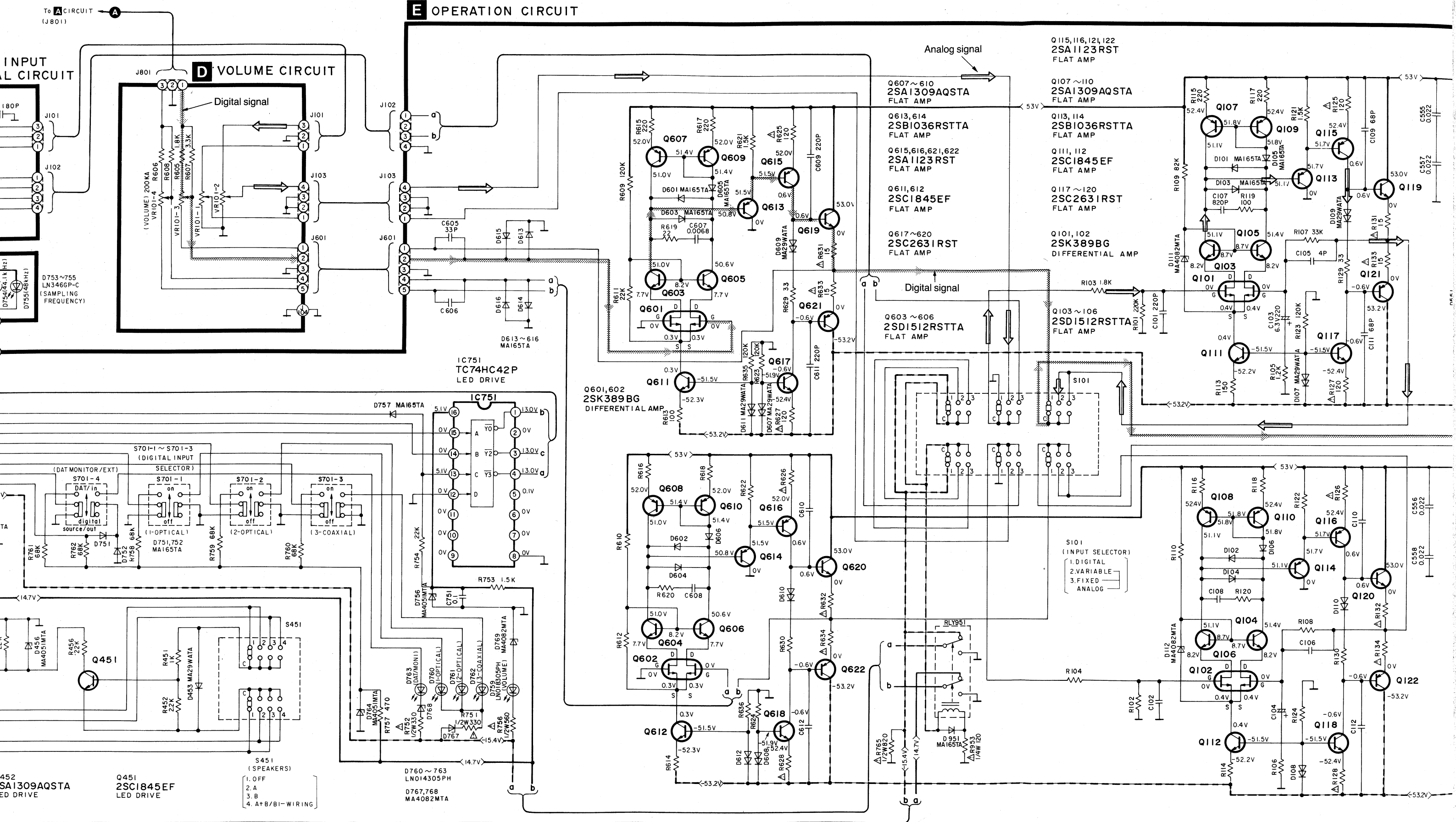
- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
- Important safety notice: Components identified by Δ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

***Caution!**
 IC and LSI are sensitive to static electricity. Secondary trouble can be prevented by taking care during repair.
 *Cover the parts boxes made of plastics with aluminum foil.
 *Ground the soldering iron.
 *Put a conductive mat on the work table.
 *Do not touch the legs of IC or LSI with the fingers directly.

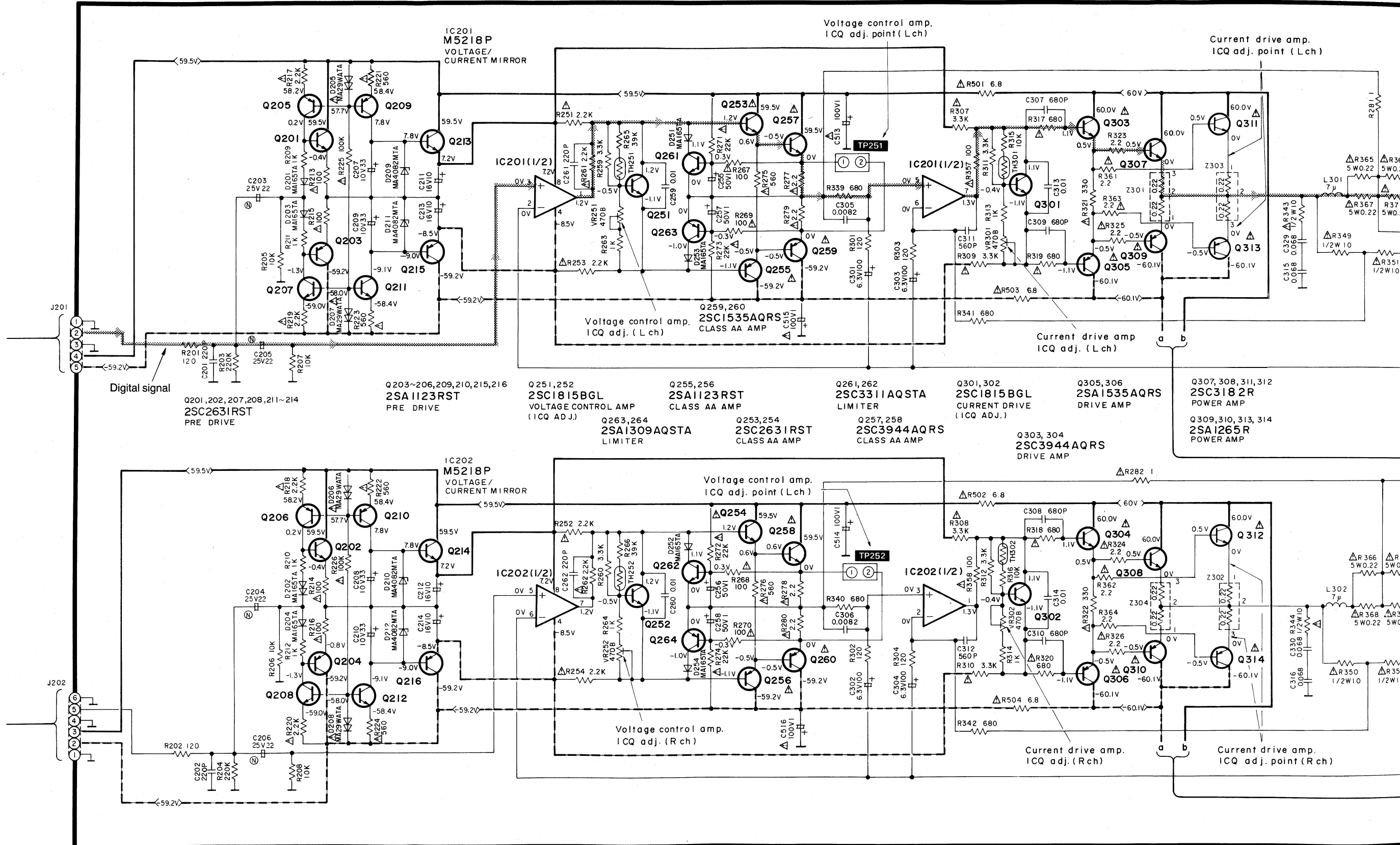
TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES

<table border="1"> <tr> <td>8 Pin</td> <td>M5218P M5238P NJM4580D UPC4570C</td> <td>16 Pin</td> <td>MN123Z TC74HC42P PCM56P SVIUPD4053BC</td> </tr> <tr> <td>14 Pin</td> <td>MIN74HCU04 MN74HC00</td> <td>28 Pin</td> <td>YM3623B SM5813</td> </tr> </table>	8 Pin	M5218P M5238P NJM4580D UPC4570C	16 Pin	MN123Z TC74HC42P PCM56P SVIUPD4053BC	14 Pin	MIN74HCU04 MN74HC00	28 Pin	YM3623B SM5813	<p>MN53015PEU 66 Pin</p>	<p>AN7073</p>	<p>① M5F78M08L ② M5F79M08L</p> <p>1. GND 2. Vin 3. Vout</p>
8 Pin	M5218P M5238P NJM4580D UPC4570C	16 Pin	MN123Z TC74HC42P PCM56P SVIUPD4053BC								
14 Pin	MIN74HCU04 MN74HC00	28 Pin	YM3623B SM5813								
<p>AN78M05</p> <p>1. Vin 2. GND 3. Vout</p>	<p>AN79N05</p> <p>1. GND 2. Vin 3. Vout</p>	<p>2SC3182R 2SA1265R</p>	<p>2SC3944AQRS 2SA1535AQRS</p>								
<p>2SK389BG</p>	<p>2SC1845EF, 2SA1123R, 2SC2631R, 2SC1815BGL, 2SA992EFP</p>	<p>MA165, MA167, 1SR35200TB, P300DLF, MA29WA</p> <p>Anode Cathode</p>	<p>MA4082M, MA4180M, MA4051M, MA4036M</p> <p>Anode Cathode</p>								
<p>LN346GP-C</p> <p>Anode Cathode</p>	<p>2SD1512R, 2SA1309A, 2SB1036R, 2SC3311A, UN4111, UN4211, UN4215, 2SD1450R, UN4112</p>	<p>MA4051MTA</p>	<p>LN346GP-C</p>								

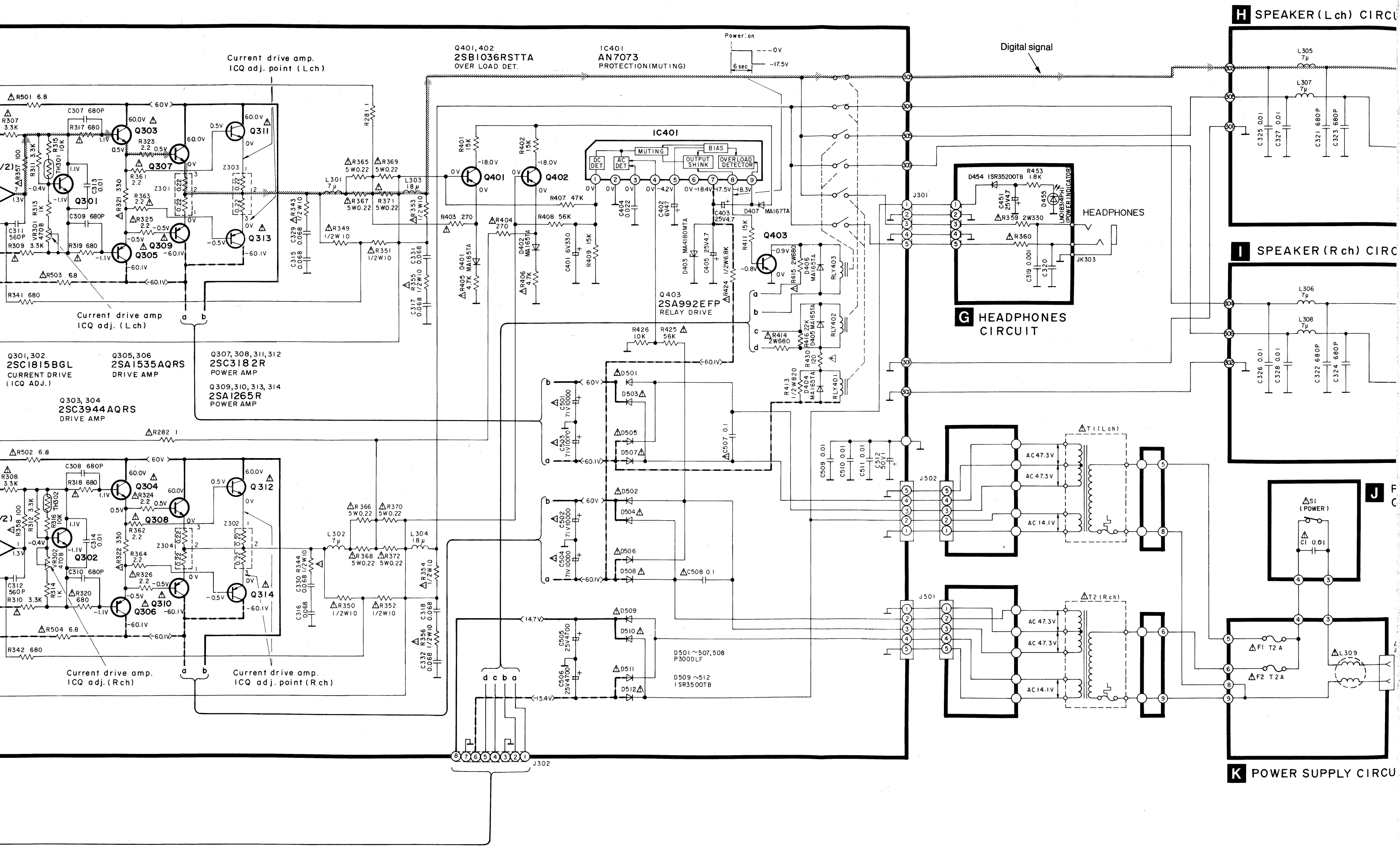




F MAIN CIRCUIT



- Q201, 202, 207, 208, 211~214 2SC2631RST PRE DRIVE
- Q203~206, 209, 210, 215, 216 2SA1123RST PRE DRIVE
- Q251, 252 2SC1815BGL VOLTAGE CONTROL AMP (ICQ ADJ.)
- Q253, 254 2SC2631RST CLASS AA AMP
- Q255, 256 2SA1123RST CLASS AA AMP
- Q259, 260 2SC1535AQRS CLASS AA AMP
- Q261, 262 2SC3311A QSTA LIMITER
- Q263, 264 2SA1309A QSTA LIMITER
- Q275, 276 2SC3944AQRS CLASS AA AMP
- Q277, 278 2SC3944AQRS CLASS AA AMP
- Q301, 302 2SC1815BGL CURRENT DRIVE (ICQ ADJ.)
- Q303, 304 2SC3944AQRS DRIVE AMP
- Q305, 306 2SA1535AQRS DRIVE AMP
- Q307, 308, 311, 312 2SC3182R POWER AMP
- Q309, 310, 313, 314 2SA1265R POWER AMP



H SPEAKER (L ch) CIRCUIT

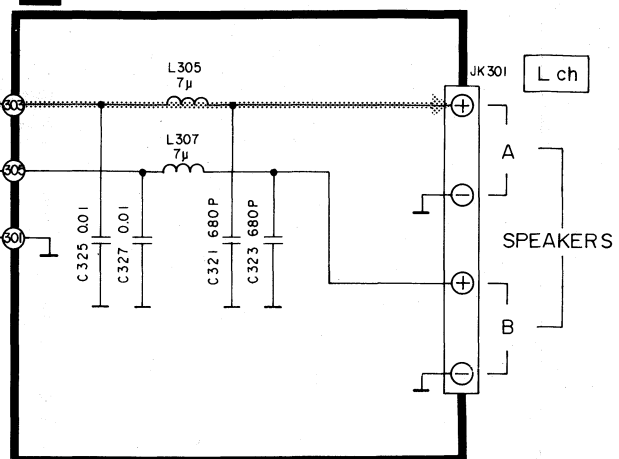
I SPEAKER (R ch) CIRCUIT

G HEADPHONES CIRCUIT

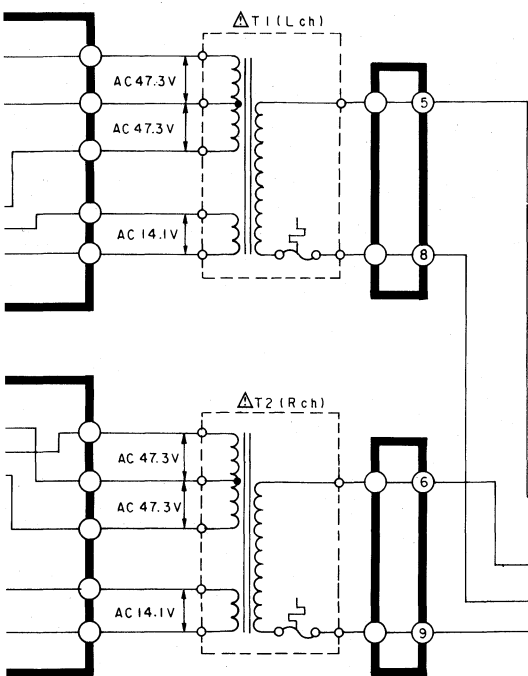
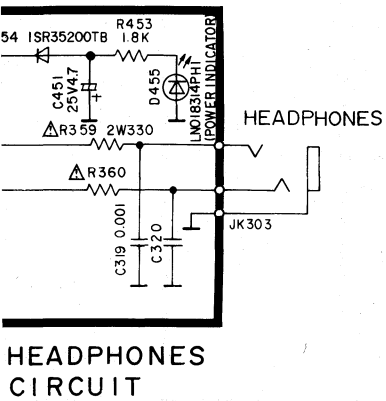
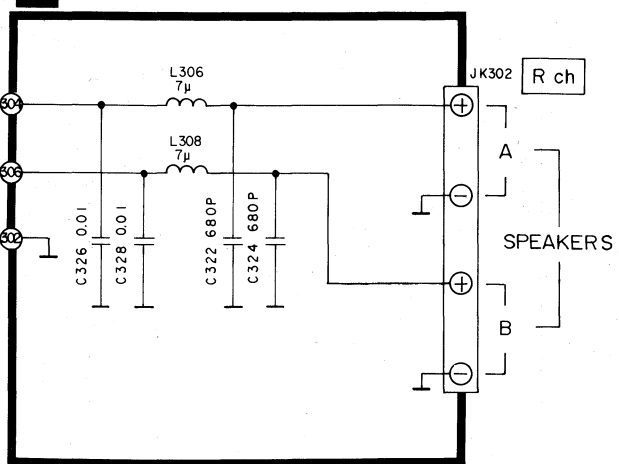
J POWER INDICATOR

K POWER SUPPLY CIRCUIT

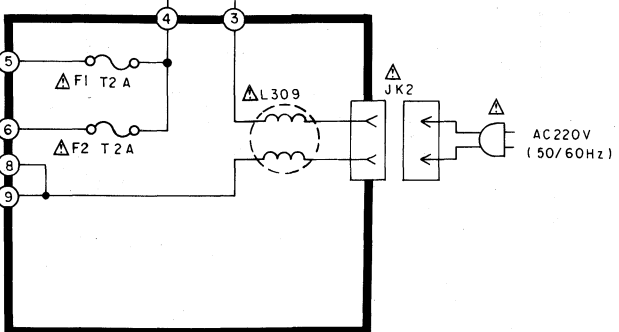
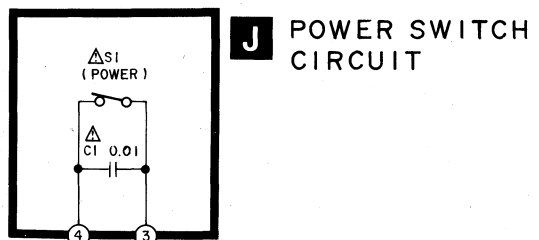
H SPEAKER (L ch) CIRCUIT



I SPEAKER (R ch) CIRCUIT

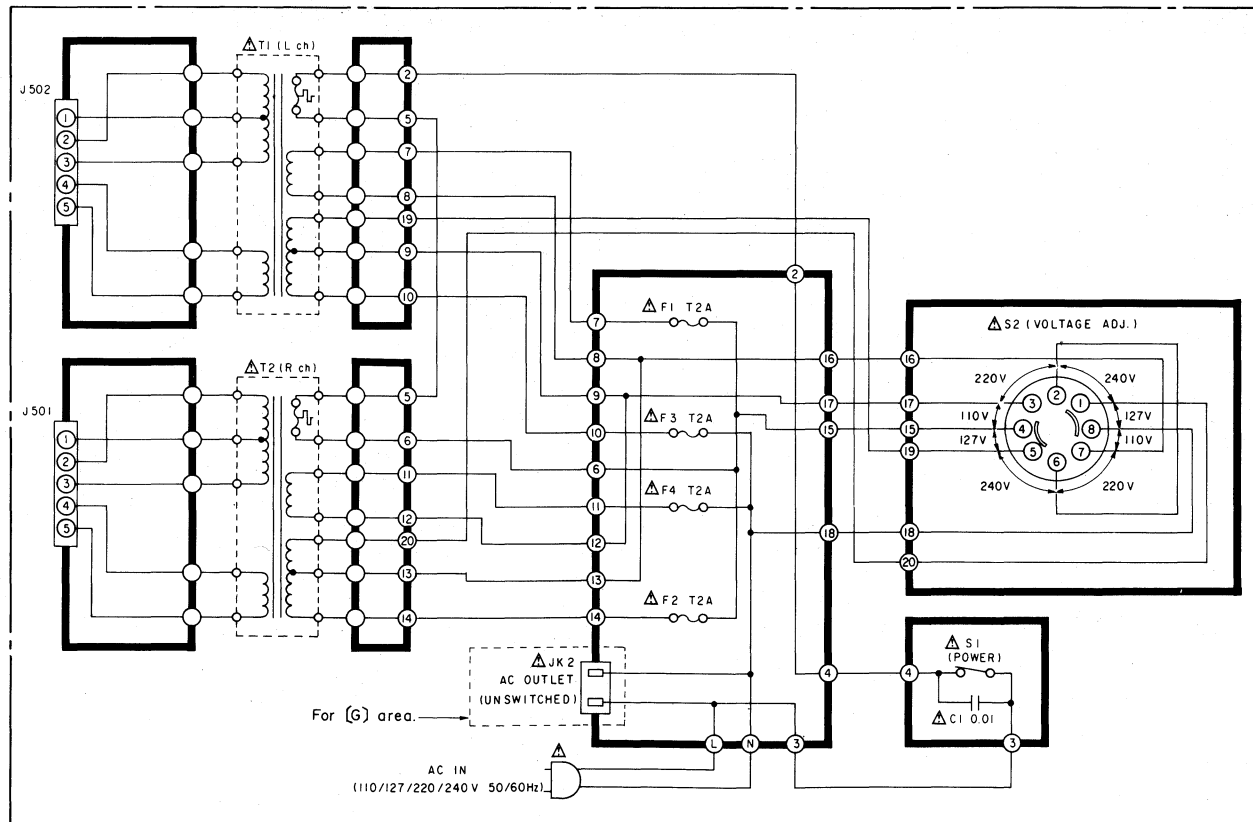


J POWER SWITCH CIRCUIT



K POWER SUPPLY CIRCUIT

Power Source For [EB, G, GL] areas.



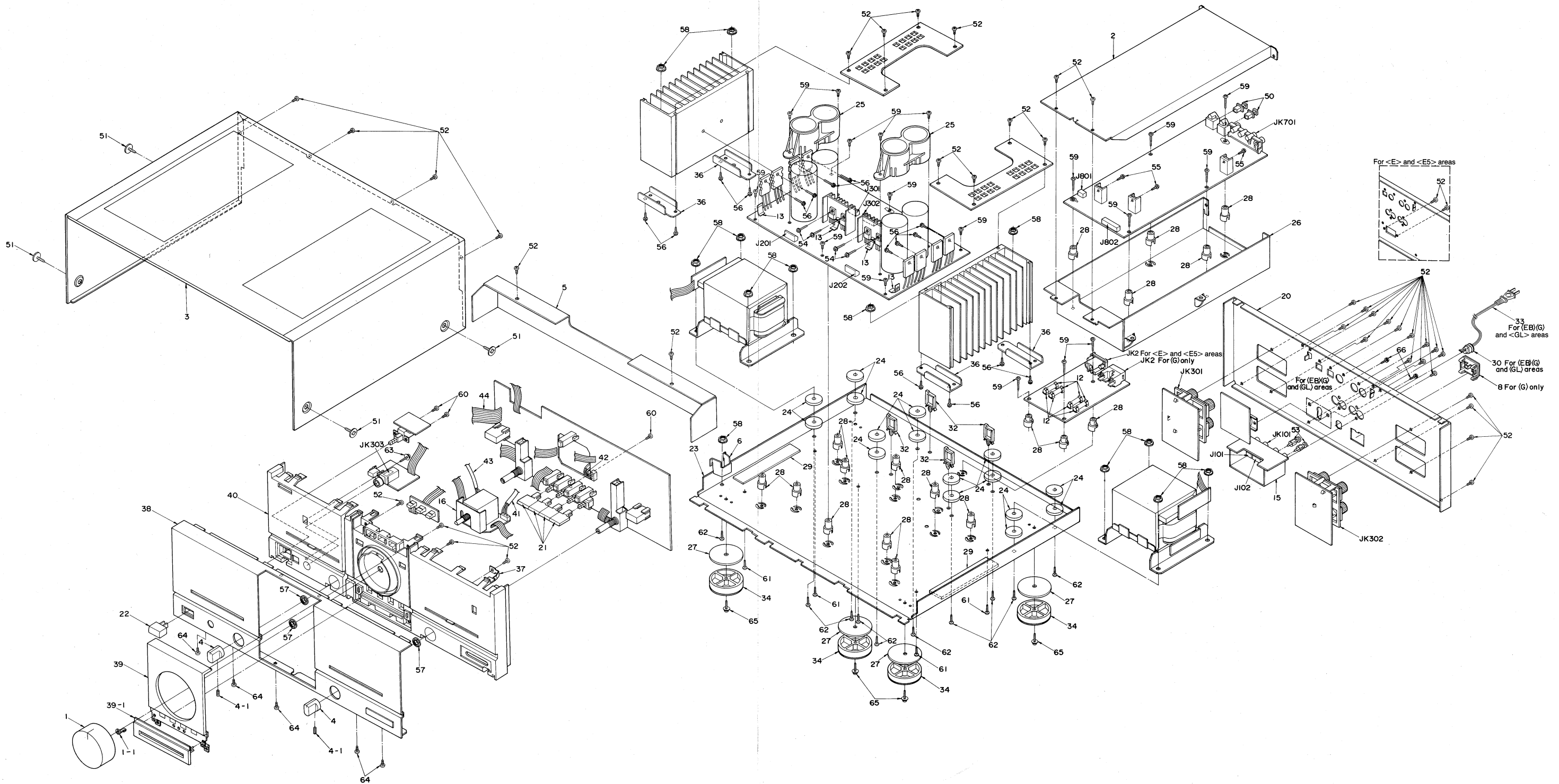
Ref. No.	Part No.	Part Name & Description	Remarks
L706	ELEPK4R7KA	COIL	
L707	ELEPK4R7KA	COIL	
L708	ELEPK470KA	COIL	
L709	ELEPK470KA	COIL	
L801	ELEV471KA	COIL	
L802	ELEV471KA	COIL	
L803	ELEPK4R7KA	COIL	
L901	ELEPK4R7KA	COIL	
		TRANSFORMERS	
T1. 2	RTP1N5B001	POWER TRANSFORMER	△<EB, G, GL>
T1. 2	RTP1N5G001	POWER TRANSFORMER	△<E, E5>
T701, 702	SLQB20G-1P	TRANSFORMER	
T703	SLZS10VN17-1	TRANSFORMER	
		OSCILLATORS	
X701	SVQAT1923-S	OSCILLATOR	
		FUSES	
F1. 2	XBA2C20TB0	FUSE 250V T2. 0A	△
F3, 4	XBA2C20TB0	FUSE 250V T2. 0A	△<EB, G, GL>
		SWITCHES	
S1	SSH1201	POWER	△
S2	ESE37263	VOLTAGE SELECTOR	△<EB, G, GL>
S101	RSR3F002	INPUT SELECTOR	
S451	RSR4B001	SPEAKER SELECTOR	
S701	RSP4001	DAT MONITOR	
		JACKS	
J101	SJT3321	CONNECTOR (3P)	
J102	SJT3417	CONNECTOR (4P)	
J201	SJT30543-V	CONNECTOR (5P)	
J202	SJT30643-V	CONNECTOR (6P)	
J301	SJT30543-V	CONNECTOR (5P)	
J302	SJT30843-V	CONNECTOR (8P)	
J801	SJT3319	CONNECTOR (3P)	
J802	SJT3011	CONNECTOR (11P)	
JK2	SJS9330B	AC OUTLET	△<G>
JK2	SJS9236	AC INLET	△<E, E5>
JK101	SJF3061-15A	TERMINAL BOARD	
JK301	RJH4402A	SPEAKER TERMINAL	
JK302	RJH4402A	SPEAKER TERMINAL	
JK303	SJJD17B	HEADPHONES JACK	
JK701	SJF3061-13A	TERMINAL BOARD	

Ref. No.	Part No.	Part Name & Description	Remarks
		RELAIIES	
RLY401	SFDYG5A237P	RERAY	
RLY402	SSY126	RERAY	
RLY403	SSY126	RERAY	
RLY801	SFDYG5A237P	RERAY	△
RLY802	SFDYG5A237P	RERAY	△
RLY951	SFDYG5A237P	RERAY	△
		TEST POINTS	
TP251, 252	SJT3209	TEST POINT	
TP701, 801	SJT3209	TEST POINT	

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET PARTS	
1	RGW002-1K	KNOB, MAIN VOLUME	
1-1	SHR9451	SPACER	
2	RSC0006-1	DAC COVER	
3	RYK0054	CABINET	
4	RGW003-1K	KNOB, SELECTOR	
4-1	XXE4D5FZS	SCREW	
5	RMV0003	FRONT COVER	
6	RMA0129	SCREW COVER	
8	SJS9330A	AC OUTLET COVER	<G>
12	SJT390	FUSE HOLDER	△
13	SUS227	BRACKET	
15	RSC0008	SHIELD COVER	
16	RSC0010	SHIELD COVER	
20	RGR0002B-A	REAR PANEL	<EB>
20	RGR0002C-A	REAR PANEL	<G>
20	RGR0036	REAR PANEL	<GL>
20	RGR0002A-A	REAR PANEL	<E>
20	RGR0035	REAR PANEL	<E5>
21	RGU0012	BUTTON, DIGITAL INPUT	
22	RGU0030	BUTTON, POWER	
23	RKU0001A	BOTTOM BOARD	
24	RMG0013	RUBBER, TRANSFORMER	
25	RMR0023	HOLDER, CAPACITORS	
26	RSC0007-1	DAC CASE	
27	SHG6405	SPACER, FOOT	
28	SHE187-1	SPACER, P. C. B	
29	SHG6404	RUBBER BOTTOM	
30	SHR129	CORD STOPER	<EB>
30	SHR127	CORD STOPER	<G, GL>
32	SHR9814	HOLDER, LEADWIRE	
33	SJA192	POWER CORD	△<EB>
33	SJA121	POWER CORD	△<G>
33	SJA190	POWER CORD	△<GL>
34	SKL306	FOOT	
36	SUW3099	BRACKET	
37	SUS800	SPRING	
38	RYP0073	FRONT PANEL	
39	RYP0074	CENTER PANEL	
39-1	RGK0027	ORNAMENT	
40	RGK0127	FRONT GRILL	
41	REX0010	LEADWIRE ASS'Y	
42	REX0011	LEADWIRE ASS'Y	
43	REX0012	LEADWIRE ASS'Y	
44	REX0013	LEADWIRE ASS'Y	
50	VJA1034	CAP	
51	SNE2129-3	SCREW	
52	XTBS3+8JFZ1	SCREW	
53	SJPA11-1	SHORTING PIN	
54	XTW3+8T	SCREW	

Ref. No.	Part No.	Part Name & Description	Remarks
55	XYN3+F8	SCREW	
56	SNE2117-1	SCREW	
57	SNE4021	NUT	
58	SNE4065	NUT	
59	XTB3+20J	SCREW	
60	XTB3+8G	SCREW	
61	XTB4+10FFZ	SCREW	
62	XTB4+20FFZ	SCREW	
63	XTWS3+10Q	SCREW	
64	XTB3+10JFZ	SCREW	
65	XTW3+10T	SCREW	
66	XYN3+C6FZ	SCREW	<EB, G, GL>
		PACKING MATERIAL	
P1	RPG0114	PACKING CASE	
P2	SPH6438	PROTECTION BAG (UNIT)	
P3	SPS4488	PAD	
P4	SPS4844-3	PAD	
P5	SPS4845-3	PAD	
P6	XZB10X20A04	PROTECTION BAG (CORD)	<EB, G, GL>
P7	SPB1035	PROTECTION BAG (CORD)	
		ACCESSORIES	
A1	RQT0094B	INSTRUCTION MANUAL	<EB>
A1	RQT0094G	INSTRUCTION MANUAL	<G, GL>
A1	RQF0278	INSTRUCTION MANUAL	<E, E5>
A2	SJPD18	STEREO PIN CORD	
A3	SJP9215	AC PLUG ADAPTOR	△<G>
A4	SFDAC05E03	POWER CORD	△<E, E5>

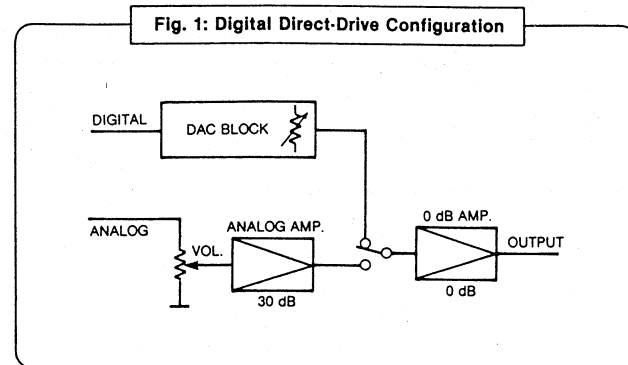
EXPLODED VIEW (Parts list on page 44)



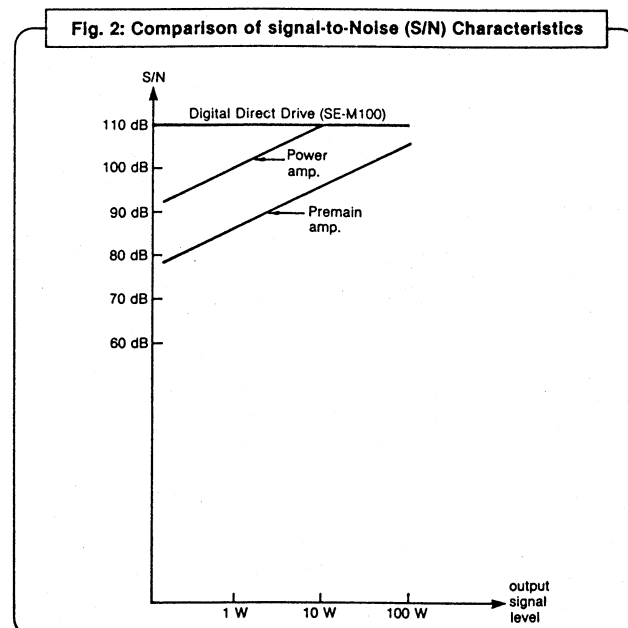
DIGITAL DIRECT-DRIVE CIRCUITRY

The various sound sources that we enjoy today are making steady progress toward digitalization. Technics, too, has been making remarkable progress in the field of digitalization, using the vast resources of its digital technology know-how to develop this digital power amplifier equipped with "Digital Direct Drive" circuitry ... new circuitry designed to display to the maximum degree the features of digital sound sources.

This "Digital Direct Drive" circuitry is designed so that the output of the DAC (digital/analog converters) is input directly to the voltage amplification gain 1 (0 dB) power amplifier. (Fig. 1) As a result, Technics has come close to the ultimate ideal for a digital amplifier: to make the analog signal path as short as possible.



In addition, there are of course a number of specific aspects that must be considered for the reproduction of a digital sound source, and one of those which is very important is the avoidance of a deterioration of the signal-to-noise (S/N) ratio during reproduction at a low volume level. The reason for this is, due to an amplification degree of "1" for the power amplifier, that when the volume control is used to reduce the signal level (S), the noise level (N) also drops accordingly. (Fig. 2)



Furthermore, the expressive capability of music is also greatly improved as a result of the application of such leading technology as the 4-DAC linear 20-bit 8-fold oversampling system (described at the right) employed in the DAC stage for processing of even very minute signals.

As a result of such technology, the excellence of digital sources can be satisfactorily extracted and reproduced to an extent that is quite appropriate to this age of digital audio.

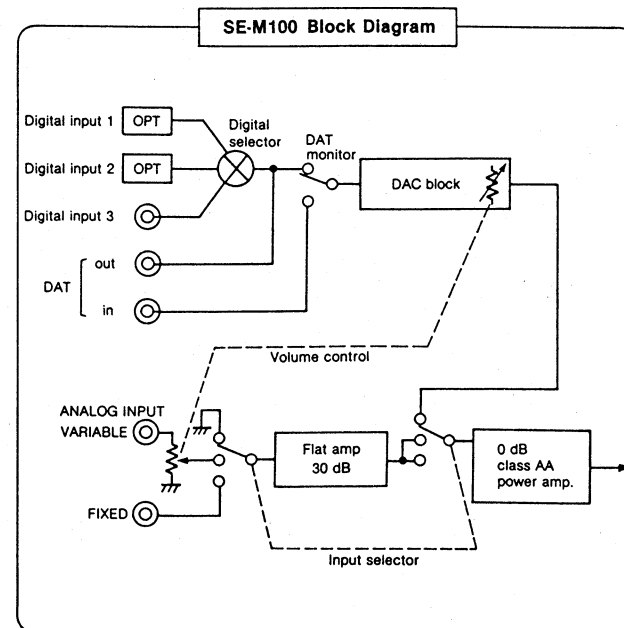
4-DAC linear 20-bit 8-fold oversampling system

Four non-zero-cross DACs

The problem of zero-cross distortion has been resolved through the employment of a total of four digital/audio converters, one each for the positive signal and negative signal for each (left and right) channel.

High-resolution linear 20-bit 8-fold oversampling

Through the use of a highly precise 20-bit 8-fold oversampling digital filter, 20-bit high-resolution operation has now become a reality. In addition, the reproduction capability for very minute signals has been greatly improved, and phase distortion has been suppressed to the minimum limit.



FUNCTIONS OF IC TERMINALS

IC708 (YM3623B) DIGITAL INTERFACE RECEPTION

(PU) terminals are "pulled up".

Pin No.	Terminal Name	I/O	Function																																						
1	VDD1	—	This is the power connection terminal (+5 V).																																						
2	ADJ	I	This terminal is for the adjustment of the VCO oscillation frequency, but it is not used in this unit.																																						
3	VCO	I/O	This is the external condenser terminal for the VCO circuitry.																																						
4	VSS2	—	This is the ground connection terminal of the system.																																						
5	XO	O	This is the output terminal for the crystal vibrator (16.9344 MHz).																																						
6	XI	I	This is the input terminal for the crystal vibrator.																																						
7	KMODE	I (PU)	At a high level...the PLL circuitry is activated when the DIN terminal receives an input signal. Otherwise, the crystal vibrator is activated. At a low level...the crystal vibrator is activated, regardless of the DIN terminal input.																																						
8	∅A	O	This terminal outputs a 16.9344-MHz frequency when the crystal vibrator functions. When the PLL circuitry is activated, the frequency varies according to the speed of input data of the DIN terminal (fs=about 16.9344 MHz when it is 44.2 kHz).																																						
9	∅B	O	The frequency of this terminal is divided into a third of that of terminal ∅A when the crystal vibrator functions. When the PLL circuitry is activated, the frequency varies according to the speed of input data of the DIN terminal (fs=about 16.9344 when it is 44.2 kHz).																																						
10	T1	I (PU)	This is the input terminal for checking the internal circuitry.																																						
11	T2	I (PU)	This is the input terminal for checking the internal circuitry.																																						
12	BCO	O	Used to output the time-clock signal from the DO terminal.																																						
13	SYNC	O	Used to output the synchronization signal.																																						
14	VSS1	O	This is the ground connection terminal of the system (+0 V).																																						
15	L/R	O	At a high level...data on the left channel is output from the DO terminal. At a low level...data on the right channel is output from the DO terminal.																																						
16	DEF	O	At a high level...input data is emphasized. At a low level...input data is not emphasized.																																						
17	DO	O	Outputs 16-bit data.																																						
18	WC	O	This is the terminal for checking data output to the DO terminal.																																						
19	DIGR	O	This terminal outputs the signal for the right channel.																																						
20	DIGL	O	This terminal outputs the signal for the left channel.																																						
21	ERR	O	Error detection terminal. H=Error is found during parity check L=No errors																																						
22	SEL	I (PU)	<table border="1"> <thead> <tr> <th>Input</th> <th>S1</th> <th>Function</th> <th>S2</th> <th>Output</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td rowspan="2">SEL</td> <td>L</td> <td>Copying is not possible</td> <td>L</td> <td>DC (except DAT)</td> <td></td> </tr> <tr> <td>H</td> <td>Copying is possible</td> <td>H</td> <td>DAT</td> <td></td> </tr> <tr> <td rowspan="4">H</td> <td>L</td> <td></td> <td>L</td> <td colspan="2">The sampling frequency of the DIN input signal is 44.1 kHz.</td> </tr> <tr> <td>L</td> <td></td> <td>H</td> <td colspan="2">48 kHz</td> </tr> <tr> <td>H</td> <td></td> <td>H</td> <td colspan="2">32 kHz</td> </tr> <tr> <td>H</td> <td></td> <td>L</td> <td colspan="2">—</td> </tr> </tbody> </table>	Input	S1	Function	S2	Output	Function	SEL	L	Copying is not possible	L	DC (except DAT)		H	Copying is possible	H	DAT		H	L		L	The sampling frequency of the DIN input signal is 44.1 kHz.		L		H	48 kHz		H		H	32 kHz		H		L	—	
Input	S1	Function	S2	Output	Function																																				
SEL	L	Copying is not possible	L	DC (except DAT)																																					
	H	Copying is possible	H	DAT																																					
H	L		L	The sampling frequency of the DIN input signal is 44.1 kHz.																																					
	L		H	48 kHz																																					
	H		H	32 kHz																																					
	H		L	—																																					
23	S1	O																																							
24	S2	O																																							
25	SCK	O	Terminal for the clock-signal of the sub code output.																																						
26	SSYNC	O	For the signal of the sub code.																																						
27	SDO	O	For the output of sub code data.																																						
28	DIN	I (PU)	For the input of data.																																						

●IC410 (MN53015PEU): 4DAC gate array

Pin No.	Mark	I/O Division	Function
1	GAINL	O	Gain select signal (Lch). [High signal (0~-42dB): "H" [Low signal (less than -42dB): "L"]
2	SHL	O	Sampling hold signal (Lch). [At sampling: "H" [At hold: "L"]
3	BIT20L	O	Output signal of 20 bits (Lch).
4	BIT19L	O	Output signal of 19 bits (Lch).
5	BIT18L	O	Output signal of 18 bits (Lch).
6	BIT17L	O	Output signal of 17 bits (Lch).
7	VDD	I	Power supply (connected to +5V).
8	VSS	I	GND terminal.
9	NC	—	Not connected.
10	BCOAL	O	Bit clock of DOAL data signal.
11	WCOAL	O	Word clock of DOAL data signal.
12	DOAL	O	Input data signal to (+) DAC (Lch).
13	VSS	I	GND terminal.
14	BCOBL	O	Bit clock of DOBL data signal.
15	WCOBL	O	Word clock of DOBL data signal.
16	DOBL	O	Input data signal to (-) DAC (Lch).
17	GAINR	O	Gain select signal (Rch). [High signal (0~-42dB): "H" [Low signal (less than -42dB): "L"]
18	SHR	O	Sampling hold signal (Rch). [At sampling: "H" [At hold: "L"]
19	BIT20R	O	Output signal of 20 bits (Rch).
20	BIT19R	O	Output signal of 19 bits (Rch).
21	BIT18R	O	Output signal of 18 bits (Rch).
22	BIT17R	O	Output signal of 17 bits (Rch).
23	NC	—	Not connected.
24	VSS	I	GND terminal.
25	VDD	I	Power supply (connected to +5V)
26	BCOAR	O	Bit clock of DOAR data signal.
27	WCOAR	O	Word clock of DOAR data signal.
28	DOAR	O	Input data signal to (+) DAC (Rch).
29	VDD	I	Power supply (connected to +5V).
30	BCOBR	O	Bit clock of DOBR data signal.
31	WCOBR	O	Word clock of DOBR data signal.
32	DOBR	O	Input data signal to (-) DAC (Rch).

Pin No.	Mark	I/O Division	Function		
33	NNS	I	Input signal to set NS of serial data (MDT). [NS ON: "L" [NS OFF: "H"]		
34	LRPL	I	Use to set the LRPL of the mode setting serial data (MDT) for digital filter. [Set to "L" to start operation at the rising edge of LRCI. Set to "H" to start operation at the falling edge of LRCI.		
35	SLDG	I	Use to select silent or ordinary degitching. [Set to "H" to activate silent degitching. Set to "L" to select ordinary degitching.		
36	SIFT	I	Use to switch in the small signal mode at a play signal level of less than -42dB. [Set to "H" to switch in the S.S. mode. Set to "L" to remain out of the S.S. mode.		
37	HALF	I	Use to switch in the half-wave (non-zero cross) operation at a play signal level of less than -42dB. ["H": Half-wave operation ["L": Full-wave operation]		
38	NTEST1	I	The small signal mode is switched in with the delay time selected with these pins after the play signal level is reduced to less than -42dB.		
	NTEST2			Delay time	
	H			H	186msec
	H			L	93msec
39	NTEST2				
	L	H	93msec		
	L	L	2.8μsec (1 sample)		
40	NTEST3	I	Use to reset all the chip's internal D-FFs and T-FFs when the chip requires checkout (active "L").		
41	PHASE	I	Use to invert the polarity of input data, DIL and DIR, to invert overall system phase ("H" to invert).		
42	H16L18	I	This is the input to select the order of the output data bits. [At "H": 16 bits DAC [At "L": 18 bits DAC]		
43	H1L2BS	I	Input signal to set the data bits of the bit shift. [At "H": 1 bit shift [At "L": 2 bit shift]		
44	DOBINV	I	Use to invert the polarity of output data, DOBL and DOBR ("H" to invert).		

●IC709 (SM5813): Digital filter

Pin No.	Mark	I/O Division	Function
1	DIN	I	Serial data Input signal.
2	BCKI	I	Serial bit clock Input signal.
3	CKSL	I	Input terminal to select Input frequency of XTI terminal.
4	CKDV		
5	NC	I	Not used, connected to GND.
6	XTI	I	Clock Input terminal. [384fs: CKSL = "H" CKDV = "L"]
7	XTO	O	Clock output terminal.
8	VSS1	I	GND terminal.
9	CKO	O	Clock output terminal (Not used, open).
10	SYN	I	Use to select either Jitter free mode or forced sync. mode ("H" for Jitter free mode: "L" for forced sync. mode).
11	NC	I	Mode select control signal.
12	(MS2MS3)		
13	NC (MDT)	I	Mode select data signal.
14	RST	I	Reset signal input (reset at "L").
15	COB	I	Use to select either two's complement or COB ("H" for two's complement: "L" for COB).

Pin No.	Mark	I/O Division	Function				
16	OW20	I	Input terminal to select output bits data.				
				Output bit	16	18	20
				OW18	H	L	H
17	OW18		OW20	H	H	L	
18	NC	—	Not used, connected to GND.				
19	NC	—	Not used, open.				
20	DG	O	Degitch control clock signal.				
21	VSS2	I	GND terminal.				
22	VDD	I	Power supply (connected to +5V).				
23	DOR	O	8fs output data signal (Rch).				
24	DOL	O	8fs output data signal (Lch).				
25	WCKO	O	Word clock of output data signal.				
26	BCKO	O	Bit clock of output data signal.				
27	FSCO	O	Internal operation timing clock with a period of fs (Not used, open).				
28	LRCI	I	Sample rate (fs) clock of input data ("H": Lch, "L": Rch)				

■ RESISTORS AND CAPACITORS

Notes : * Important safety notice :
Components identified by Δ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* Bracketed indications in Remarks columns specify the area. (Refer to the first page for area.)
Parts without these indications can be used for all areas.

Numbering System For Resistors

Example:

ERD	25	F	J	102
Type	Wattage (1/4W)	Shape	Tolerance	Value (1kΩ)
ERX	2	AN	J	471
Type	Wattage (2W)	Shape	Tolerance	Value (470Ω)

Numbering System For Capacitors

Example:

ECKD	1H	102	Z	F
Type	Voltage (50V)	Value (0.001μF)	Tolerance	Unique
ECEA	50	M		330
Type	Voltage (50V)	Characteristics		Value (33μF)

● Capacity values are in microfarads (μF) unless specified otherwise, P= Pico-farads (pF) F= Farads (F).
● Resistance values are in ohms (Ω), unless specified otherwise, 1K=1,000Ω, 1M=1,000kΩ

Resistor Type	Wattage		Tolerance
ERD : Carbon	10 : 1/8W	12 : 1/2W	J : ±5%
ERG : Metal Oxide	14 : 1/4W	25 : 1/4W	F : ±1%
ERQ : Fuse Type Metal	1A : 1W	18 : 1/8W	G : ±2%
ERX : Metal Film	S2 : 1/4W	S1 : 1/2W	J : ±5%
ERD L : Carbon (chip)	2F : 1/4W	50 : 1/2W	K : ±10%
ERD K : Metal Film (chip)	2A : 2W	3A : 3W	M : ±20%
ERC : Solid	6G : 1/10W	8G : 1/8W	
ERF : Incombustible Box-Shaped			
ERM : Wire-Wound			
RRJ : Chip Resistor			
ERJ : Chip Resistor			

Capacitor Type	Voltage		Tolerance
ECE : Electrolytic	0J : 6.3V	1A : 10V	K : ±10%
ECCD : Ceramic	1C : 16V	1E : 25V	M : ±20%
ECKD : Ceramic Capacitor	1H : 50V	1V : 35V	Z : +80% -20%
ECOM : Polyester	50 : 50V	05 : 50V	J : ±5%
ECQP : Polypropylene	2H : 500V	2A : 100V	G : ±2%
ECG : Ceramic	1 : 100V	1J : 63V	F : ±1%
ECEA N : Non Polar Electrolytic	KC : 400V AC		C : ±0.25pF
QCU : Ceramic (Chip Type)	KC : 125V AC		D : ±0.5pF
ECUX : Ceramic (Chip Type)	(UL)		
ECF : Semiconductor			
EECW : Liquid electrolyte double layer capacitor			

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		RESISTORS		R218	ERD25FVJ222T	C. RESISTOR 1/4W 2.2K	△
				R219	ERD25FVJ222T	C. RESISTOR 1/4W 2.2K	△
				R220	ERD25FVJ222T	C. RESISTOR 1/4W 2.2K	△
R101	ERDAS3G224T	C. RESISTOR 1/4W 220K		R221	ERD25FVJ561T	C. RESISTOR 1/4W 560	△
R102	ERDAS3G224T	C. RESISTOR 1/4W 220K		R222	ERD25FVJ561T	C. RESISTOR 1/4W 560	△
R103	ERDAS3G182T	C. RESISTOR 1/4W 1.8K		R223	ERD25FVJ561T	C. RESISTOR 1/4W 560	△
R104	ERDAS3G182T	C. RESISTOR 1/4W 1.8K		R224	ERD25FVJ561T	C. RESISTOR 1/4W 560	△
R105	ERDAS3G122T	C. RESISTOR 1/4W 1.2K		R225	ERDS2TJ104T	C. RESISTOR 1/4W 100K	△
R106	ERDAS3G122T	C. RESISTOR 1/4W 1.2K		R226	ERDS2TJ104T	C. RESISTOR 1/4W 100K	△
R107	ERDAS3G333T	C. RESISTOR 1/4W 33K		R251	ERD25FVJ222T	C. RESISTOR 1/4W 2.2K	△
R108	ERDAS3G333T	C. RESISTOR 1/4W 33K		R252	ERD25FVJ222T	C. RESISTOR 1/4W 2.2K	△
R109	ERDS2TJ823T	C. RESISTOR 1/4W 82K		R253	ERD25FVJ222T	C. RESISTOR 1/4W 2.2K	△
R110	ERDS2TJ823T	C. RESISTOR 1/4W 82K		R254	ERD25FVJ222T	C. RESISTOR 1/4W 2.2K	△
R113	ERDS2TJ151T	C. RESISTOR 1/4W 150		R259	ERDS2TJ332T	C. RESISTOR 1/4W 3.3K	
R114	ERDS2TJ151T	C. RESISTOR 1/4W 150		R260	ERDS2TJ332T	C. RESISTOR 1/4W 3.3K	
R115	ERDS2TJ221T	C. RESISTOR 1/4W 220		R261	ERD25FVJ222T	C. RESISTOR 1/4W 2.2K	△
R116	ERDS2TJ221T	C. RESISTOR 1/4W 220		R262	ERD25FVJ222T	C. RESISTOR 1/4W 2.2K	△
R117	ERDS2TJ221T	C. RESISTOR 1/4W 220		R263	ERDS2TJ102T	C. RESISTOR 1/4W 1K	
R118	ERDS2TJ221T	C. RESISTOR 1/4W 220		R264	ERDS2TJ102T	C. RESISTOR 1/4W 1K	
R119	ERDS2TJ101T	C. RESISTOR 1/4W 100		R265	ERDS2TJ393T	C. RESISTOR 1/4W 39K	
R120	ERDS2TJ101T	C. RESISTOR 1/4W 100		R266	ERDS2TJ393T	C. RESISTOR 1/4W 39K	
R121	ERDS2TJ152T	C. RESISTOR 1/4W 1.5K		R267	ERD25FVJ101T	C. RESISTOR 1/4W 100	△
R122	ERDS2TJ152T	C. RESISTOR 1/4W 1.5K		R268	ERD25FVJ101T	C. RESISTOR 1/4W 100	△
R123	ERDS2TJ124T	C. RESISTOR 1/4W 120K		R269	ERD25FVJ101T	C. RESISTOR 1/4W 100	△
R124	ERDS2TJ124T	C. RESISTOR 1/4W 120K		R270	ERD25FVJ101T	C. RESISTOR 1/4W 100	△
R125	ERD25FVJ121T	C. RESISTOR 1/4W 120	△	R271	ERDS2TJ223T	C. RESISTOR 1/4W 22K	△
R126	ERD25FVJ121T	C. RESISTOR 1/4W 120	△	R272	ERDS2TJ223T	C. RESISTOR 1/4W 22K	△
R127	ERD25FVJ121T	C. RESISTOR 1/4W 120	△	R273	ERDS2TJ223T	C. RESISTOR 1/4W 22K	△
R128	ERD25FVJ121T	C. RESISTOR 1/4W 120	△	R274	ERDS2TJ223T	C. RESISTOR 1/4W 22K	△
R129	ERDS2TJ330T	C. RESISTOR 1/4W 33		R275	ERD25FVJ561T	C. RESISTOR 1/4W 560	△
R130	ERDS2TJ330T	C. RESISTOR 1/4W 33		R276	ERD25FVJ561T	C. RESISTOR 1/4W 560	△
R131	ERD25FVJ150T	C. RESISTOR 1/4W 15	△	R277	ERD25FVJ2R2T	C. RESISTOR 1/4W 2.2	△
R132	ERD25FVJ150T	C. RESISTOR 1/4W 15	△	R278	ERD25FVJ2R2T	C. RESISTOR 1/4W 2.2	△
R133	ERD25FVJ150T	C. RESISTOR 1/4W 15	△	R279	ERD25FVJ2R2T	C. RESISTOR 1/4W 2.2	△
R134	ERD25FVJ150T	C. RESISTOR 1/4W 15	△	R280	ERD25FVJ2R2T	C. RESISTOR 1/4W 2.2	△
R201	ERDAS3G121T	C. RESISTOR 1/4W 120		R281	ERD25FVJ1R0T	C. RESISTOR 1/4W 1.0	
R202	ERDAS3G121T	C. RESISTOR 1/4W 120		R282	ERD25FVJ1R0T	C. RESISTOR 1/4W 1.0	
R203	ERDAS3G224T	C. RESISTOR 1/4W 220K		R301	ERDAS3G121T	C. RESISTOR 1/4W 120	
R204	ERDAS3G224T	C. RESISTOR 1/4W 220K		R302	ERDAS3G121T	C. RESISTOR 1/4W 120	
R205	ERDAS3G103T	C. RESISTOR 1/4W 10K		R303	ERDAS3G121T	C. RESISTOR 1/4W 120	
R206	ERDAS3G103T	C. RESISTOR 1/4W 10K		R304	ERDAS3G121T	C. RESISTOR 1/4W 120	
R207	ERDAS3G103T	C. RESISTOR 1/4W 10K		R307	ERD25FVJ332T	C. RESISTOR 1/4W 3.3K	△
R208	ERDAS3G103T	C. RESISTOR 1/4W 10K		R308	ERD25FVJ332T	C. RESISTOR 1/4W 3.3K	△
R209	ERDAS3G102T	C. RESISTOR 1/4W 1K		R309	ERD25FVJ332T	C. RESISTOR 1/4W 3.3K	△
R210	ERDAS3G102T	C. RESISTOR 1/4W 1K		R310	ERD25FVJ332T	C. RESISTOR 1/4W 3.3K	△
R211	ERDAS3G102T	C. RESISTOR 1/4W 1K		R311	ERDS2TJ332T	C. RESISTOR 1/4W 3.3K	
R212	ERDAS3G102T	C. RESISTOR 1/4W 1K		R312	ERDS2TJ332T	C. RESISTOR 1/4W 3.3K	
R213	ERD25FVJ101T	C. RESISTOR 1/4W 100	△	R313	ERDS2TJ102T	C. RESISTOR 1/4W 1K	
R214	ERD25FVJ101T	C. RESISTOR 1/4W 100	△	R314	ERDS2TJ102T	C. RESISTOR 1/4W 1K	
R215	ERD25FVJ101T	C. RESISTOR 1/4W 100	△	R315	ERDS2TJ103T	C. RESISTOR 1/4W 10K	
R216	ERD25FVJ101T	C. RESISTOR 1/4W 100	△	R316	ERDS2TJ103T	C. RESISTOR 1/4W 10K	
R217	ERD25FVJ222T	C. RESISTOR 1/4W 2.2K	△	R317	ERD25FVJ681T	C. RESISTOR 1/4W 680	△

SE-M100

Ref. No.	Part No.	Part Name & Description	Remarks
R318	ERD25FVJ681T	C. RESISTOR 1/4W 680	△
R319	ERD25FVJ681T	C. RESISTOR 1/4W 680	△
R320	ERD25FVJ681T	C. RESISTOR 1/4W 680	△
R321	ERD25FVJ331T	C. RESISTOR 1/4W 330	△
R322	ERD25FVJ331T	C. RESISTOR 1/4W 330	△
R323	ERD25FVJ2R2T	C. RESISTOR 1/4W 2.2	△
R324	ERD25FVJ2R2T	C. RESISTOR 1/4W 2.2	△
R325	ERD25FVJ2R2T	C. RESISTOR 1/4W 2.2	△
R326	ERD25FVJ2R2T	C. RESISTOR 1/4W 2.2	△
R339	ERDAS3G681T	C. RESISTOR 1/4W 680	
R340	ERDAS3G681T	C. RESISTOR 1/4W 680	
R341	ERDAS3G681T	C. RESISTOR 1/4W 680	
R342	ERDAS3G681T	C. RESISTOR 1/4W 680	
R343	ERDS1FVJ100T	C. RESISTOR 1/2W 10	△
R344	ERDS1FVJ100T	C. RESISTOR 1/2W 10	△
R349	ERDS1FVJ100T	C. RESISTOR 1/2W 10	△
R350	ERDS1FVJ100T	C. RESISTOR 1/2W 10	△
R351	ERDS1FVJ100T	C. RESISTOR 1/2W 10	△
R352	ERDS1FVJ100T	C. RESISTOR 1/2W 10	△
R353	ERDS1FVJ100T	C. RESISTOR 1/2W 10	△
R354	ERDS1FVJ100T	C. RESISTOR 1/2W 10	△
R355	ERDS1FVJ100T	C. RESISTOR 1/2W 10	△
R356	ERDS1FVJ100T	C. RESISTOR 1/2W 10	△
R357	ERD25FVJ101T	C. RESISTOR 1/4W 100	△
R358	ERD25FVJ101T	C. RESISTOR 1/4W 100	△
R359	ERG2SJ331H	M. RESISTOR 2W 330	△
R360	ERG2SJ331H	M. RESISTOR 2W 330	△
R361	ERD25FVJ2R2T	C. RESISTOR 1/4W 2.2	
R362	ERD25FVJ2R2T	C. RESISTOR 1/4W 2.2	
R363	ERD25FVJ2R2T	C. RESISTOR 1/4W 2.2	
R364	ERD25FVJ2R2T	C. RESISTOR 1/4W 2.2	
R365	RRECMKR22SC	RESISTOR 5W 0.22	△
R366	RRECMKR22SC	RESISTOR 5W 0.22	△
R367	RRECMKR22SC	RESISTOR 5W 0.22	△
R368	RRECMKR22SC	RESISTOR 5W 0.22	△
R369	RRECMKR22SC	RESISTOR 5W 0.22	△
R370	RRECMKR22SC	RESISTOR 5W 0.22	△
R371	RRECMKR22SC	RESISTOR 5W 0.22	△
R372	RRECMKR22SC	RESISTOR 5W 0.22	△
R401	ERDS2TJ153T	C. RESISTOR 1/4W 15K	
R402	ERDS2TJ153T	C. RESISTOR 1/4W 15K	
R403	ERD25FVJ271T	C. RESISTOR 1/4W 270	△
R404	ERD25FVJ271T	C. RESISTOR 1/4W 270	△
R405	ERD25FVJ472T	C. RESISTOR 1/4W 4.7K	△
R406	ERD25FVJ472T	C. RESISTOR 1/4W 4.7K	△
R407	ERDS2TJ473T	C. RESISTOR 1/4W 47K	
R408	ERDS2TJ563T	C. RESISTOR 1/4W 56K	
R409	ERDS2TJ153T	C. RESISTOR 1/4W 15K	
R411	ERDS2TJ153T	C. RESISTOR 1/4W 15K	
R413	ERDS1FVJ821T	C. RESISTOR 1/2W 820	
R414	ERG2SJ681H	M. RESISTOR 2W 680	△
R415	ERG2SJ681H	M. RESISTOR 2W 680	△

Ref. No.	Part No.	Part Name & Description	Remarks
R416	ERDS2TJ223T	C. RESISTOR 1/4W 22K	
R424	ERDS1FVJ682T	C. RESISTOR 1/2W 6.8K	△
R425	ERDS2TJ563T	C. RESISTOR 1/4W 56K	△
R426	ERDS2TJ103T	C. RESISTOR 1/4W 10K	
R430	ERD25FJ121P	C. RESISTOR 1/4W 120	
R451	ERDS2TJ102T	C. RESISTOR 1/4W 1K	
R452	ERDS2TJ222T	C. RESISTOR 1/4W 2.2K	
R453	ERDS2TJ182T	C. RESISTOR 1/4W 1.8K	
R454	ERDS2TJ221T	C. RESISTOR 1/4W 220	
R455	ERDS2TJ223T	C. RESISTOR 1/4W 22K	
R456	ERDS2TJ223T	C. RESISTOR 1/4W 22K	
R501	ERD25FVJ6R8T	C. RESISTOR 1/4W 6.8	△
R502	ERD25FVJ6R8T	C. RESISTOR 1/4W 6.8	△
R503	ERD25FVJ6R8T	C. RESISTOR 1/4W 6.8	△
R504	ERD25FVJ6R8T	C. RESISTOR 1/4W 6.8	△
R605	ERDAS3G182T	C. RESISTOR 1/4W 1.8K	
R606	ERDAS3G182T	C. RESISTOR 1/4W 1.8K	
R607	ERDAS3G332T	C. RESISTOR 1/4W 3.3K	
R608	ERDAS3G332T	C. RESISTOR 1/4W 3.3K	
R609	ERDS2TJ124T	C. RESISTOR 1/4W 120K	
R610	ERDS2TJ124T	C. RESISTOR 1/4W 120K	
R611	ERDS2TJ223T	C. RESISTOR 1/4W 22K	
R612	ERDS2TJ223T	C. RESISTOR 1/4W 22K	
R613	ERDS2TJ101T	C. RESISTOR 1/4W 100	
R614	ERDS2TJ101T	C. RESISTOR 1/4W 100	
R615	ERDS2TJ221T	C. RESISTOR 1/4W 220	
R616	ERDS2TJ221T	C. RESISTOR 1/4W 220	
R617	ERDS2TJ221T	C. RESISTOR 1/4W 220	
R618	ERDS2TJ221T	C. RESISTOR 1/4W 220	
R619	ERDS2TJ220T	C. RESISTOR 1/4W 22	
R620	ERDS2TJ220T	C. RESISTOR 1/4W 22	
R621	ERDS2TJ152T	C. RESISTOR 1/4W 1.5K	
R622	ERDS2TJ152T	C. RESISTOR 1/4W 1.5K	
R623	ERDS2TJ124T	C. RESISTOR 1/4W 120K	
R624	ERDS2TJ124T	C. RESISTOR 1/4W 120K	
R625	ERD25FVJ121T	C. RESISTOR 1/4W 120	△
R626	ERD25FVJ121T	C. RESISTOR 1/4W 120	△
R627	ERD25FVJ121T	C. RESISTOR 1/4W 120	△
R628	ERD25FVJ121T	C. RESISTOR 1/4W 120	△
R629	ERDS2TJ330T	C. RESISTOR 1/4W 33	
R630	ERDS2TJ330T	C. RESISTOR 1/4W 33	
R631	ERD25FVJ150T	C. RESISTOR 1/4W 15	△
R632	ERD25FVJ150T	C. RESISTOR 1/4W 15	△
R633	ERD25FVJ150T	C. RESISTOR 1/4W 15	△
R634	ERD25FVJ150T	C. RESISTOR 1/4W 15	△
R635	ERDS2TJ124T	C. RESISTOR 1/4W 120K	
R636	ERDS2TJ124T	C. RESISTOR 1/4W 120K	
R701	ERDS2TJ101T	C. RESISTOR 1/4W 100	
R702	ERDS2TJ101T	C. RESISTOR 1/4W 100	
R703	ERDS2TJ750T	C. RESISTOR 1/4W 75	
R704	ERDS2TJ750T	C. RESISTOR 1/4W 75	
R705	ERDS2TJ750T	C. RESISTOR 1/4W 75	

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
R706	ERDS2TJ393T	C. RESISTOR 1/4W 39K		R807	ERDS2TJ274T	C. RESISTOR 1/4W 270K	
R707	ERDS2TJ102T	C. RESISTOR 1/4W 1K		R808	ERDS2TJ274T	C. RESISTOR 1/4W 270K	
R708	ERDS2TJ221T	C. RESISTOR 1/4W 220		R809	ERDS2TJ101T	C. RESISTOR 1/4W 100	
R709	ERDS2TJ393T	C. RESISTOR 1/4W 39K		R810	ERDS2TJ101T	C. RESISTOR 1/4W 100	
R710	ERDS2TJ102T	C. RESISTOR 1/4W 1K		R811	ERDS2TJ102T	C. RESISTOR 1/4W 1K	
R711	ERDS2TJ221T	C. RESISTOR 1/4W 220		R812	ERDS2TJ102T	C. RESISTOR 1/4W 1K	
R712	ERDS2TJ221T	C. RESISTOR 1/4W 220		R813	ERDS2TJ102T	C. RESISTOR 1/4W 1K	
R713	ERDS2TJ394T	C. RESISTOR 1/4W 390K		R814	ERDS2TJ102T	C. RESISTOR 1/4W 1K	
R714	ERDS2TJ221T	C. RESISTOR 1/4W 220		R815	ERDS2TJ105T	C. RESISTOR 1/4W 1M	
R715	ERDS2TJ224T	C. RESISTOR 1/4W 220K		R816	ERDS2TJ105T	C. RESISTOR 1/4W 1M	
R717	ERDS2TJ332T	C. RESISTOR 1/4W 3.3K		R817	ERDAS3G272T	C. RESISTOR 1/4W 2.7K	
R718	ERDS2TJ223T	C. RESISTOR 1/4W 22K		R818	ERDAS3G272T	C. RESISTOR 1/4W 2.7K	
R719	ERDS2TJ123T	C. RESISTOR 1/4W 12K		R819	ERDAS3G272T	C. RESISTOR 1/4W 2.7K	
R720	ERDS2TJ221T	C. RESISTOR 1/4W 220		R820	ERDAS3G272T	C. RESISTOR 1/4W 2.7K	
R721	ERDS2TJ221T	C. RESISTOR 1/4W 220		R825	ERDS2TJ334T	C. RESISTOR 1/4W 330K	
R722	ERDS2TJ221T	C. RESISTOR 1/4W 220		R826	ERDS2TJ334T	C. RESISTOR 1/4W 330K	
R723	ERDS2TJ221T	C. RESISTOR 1/4W 220		R827	ERDS2TJ684T	C. RESISTOR 1/4W 680K	
R724	ERDS2TJ824T	C. RESISTOR 1/4W 820K		R828	ERDS2TJ684T	C. RESISTOR 1/4W 680K	
R725	ERDS2TJ102T	C. RESISTOR 1/4W 1K		R837	ERDAS3G330T	C. RESISTOR 1/4W 33	
R726	ERDS2TJ151T	C. RESISTOR 1/4W 150		R838	ERDAS3G330T	C. RESISTOR 1/4W 33	
R727	ERDS2TJ104T	C. RESISTOR 1/4W 100K		R839	ERDAS3G332T	C. RESISTOR 1/4W 3.3K	
R728	ERDS2TJ103T	C. RESISTOR 1/4W 10K		R840	ERDAS3G332T	C. RESISTOR 1/4W 3.3K	
R731	ERDS2TJ221T	C. RESISTOR 1/4W 220		R841	ERDAS3G100T	C. RESISTOR 1/4W 10	
R732	ERDS2TJ221T	C. RESISTOR 1/4W 220		R842	ERDAS3G100T	C. RESISTOR 1/4W 10	
R733	ERDS2TJ221T	C. RESISTOR 1/4W 220		R843	ERDAS3G102T	C. RESISTOR 1/4W 1K	
R734	ERDS2TJ221T	C. RESISTOR 1/4W 220		R844	ERDAS3G102T	C. RESISTOR 1/4W 1K	
R735	ERDS2TJ221T	C. RESISTOR 1/4W 220		R845	ERDAS3G330T	C. RESISTOR 1/4W 33	
R741	ERDS2TJ105T	C. RESISTOR 1/4W 1M		R846	ERDAS3G330T	C. RESISTOR 1/4W 33	
R742	ERDS2TJ105T	C. RESISTOR 1/4W 1M		R847	ERDAS3G332T	C. RESISTOR 1/4W 3.3K	
R743	ERDS2TJ102T	C. RESISTOR 1/4W 1K		R848	ERDAS3G332T	C. RESISTOR 1/4W 3.3K	
R744	ERDS2TJ102T	C. RESISTOR 1/4W 1K		R849	ERDAS3G100T	C. RESISTOR 1/4W 10	
R745	ERDS2TJ103T	C. RESISTOR 1/4W 10K		R850	ERDAS3G100T	C. RESISTOR 1/4W 10	
R751	ERDS1FVJ331T	C. RESISTOR 1/2W 330	△	R851	ERDAS3G102T	C. RESISTOR 1/4W 1K	
R752	ERDS1FVJ331T	C. RESISTOR 1/2W 330	△	R852	ERDAS3G102T	C. RESISTOR 1/4W 1K	
R753	ERDS2TJ152T	C. RESISTOR 1/4W 1.5K		R853	ERDAS3G222T	C. RESISTOR 1/4W 2.2K	
R754	ERDS2TJ223T	C. RESISTOR 1/4W 22K		R854	ERDAS3G222T	C. RESISTOR 1/4W 2.2K	
R756	ERDS1FVJ561T	C. RESISTOR 1/2W 560	△	R855	ERDAS3G222T	C. RESISTOR 1/4W 2.2K	
R757	ERDS2TJ471T	C. RESISTOR 1/4W 470		R856	ERDAS3G222T	C. RESISTOR 1/4W 2.2K	
R758	ERDS2TJ683T	C. RESISTOR 1/4W 68K		R857	ERDAS3G682T	C. RESISTOR 1/4W 6.8K	
R759	ERDS2TJ683T	C. RESISTOR 1/4W 68K		R858	ERDAS3G682T	C. RESISTOR 1/4W 6.8K	
R760	ERDS2TJ683T	C. RESISTOR 1/4W 68K		R859	ERDAS3G472T	C. RESISTOR 1/4W 4.7K	
R761	ERDS2TJ683T	C. RESISTOR 1/4W 68K		R860	ERDAS3G472T	C. RESISTOR 1/4W 4.7K	
R762	ERDS2TJ683T	C. RESISTOR 1/4W 68K		R861	ERDAS3G332T	C. RESISTOR 1/4W 3.3K	
R763	ERDS1FVJ221T	C. RESISTOR 1/2W 220	△	R862	ERDAS3G332T	C. RESISTOR 1/4W 3.3K	
R764	ERDS2TJ151T	C. RESISTOR 1/4W 150		R865	ERDAS3G392T	C. RESISTOR 1/4W 3.9K	
R765	ERDS1FVJ821T	C. RESISTOR 1/2W 820	△	R866	ERDAS3G392T	C. RESISTOR 1/4W 3.9K	
R801	ERDS2TJ333T	C. RESISTOR 1/4W 33K		R867	ERDAS3G823T	C. RESISTOR 1/4W 82K	
R802	ERDS2TJ333T	C. RESISTOR 1/4W 33K		R868	ERDAS3G823T	C. RESISTOR 1/4W 82K	
R803	ERDS2TJ683T	C. RESISTOR 1/4W 68K		R869	ERDAS3G103T	C. RESISTOR 1/4W 10K	
R804	ERDS2TJ683T	C. RESISTOR 1/4W 68K		R870	ERDAS3G103T	C. RESISTOR 1/4W 10K	
R805	ERDS2TJ124T	C. RESISTOR 1/4W 120K		R871	ERDAS3G392T	C. RESISTOR 1/4W 3.9K	
R806	ERDS2TJ124T	C. RESISTOR 1/4W 120K		R872	ERDAS3G392T	C. RESISTOR 1/4W 3.9K	

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
R873	ERDS2TJ105T	C. RESISTOR 1/4W 1M		C212	ECEA1CK100B	E. CAPACITOR 16V 10U	
R874	ERDS2TJ105T	C. RESISTOR 1/4W 1M		C213	ECEA1CK100B	E. CAPACITOR 16V 10U	
R883	ERDAS3G561T	C. RESISTOR 1/4W 560		C214	ECEA1CK100B	E. CAPACITOR 16V 10U	
R884	ERDAS3G561T	C. RESISTOR 1/4W 560		C255	ECEA1HK010B	E. CAPACITOR 50V 1U	
R885	ERDAS3G104T	C. RESISTOR 1/4W 100K		C256	ECEA1HK010B	E. CAPACITOR 50V 1U	
R886	ERDAS3G104T	C. RESISTOR 1/4W 100K		C257	ECEA1HK010B	E. CAPACITOR 50V 1U	
R889	ERDS2TJ102T	C. RESISTOR 1/4W 1K		C258	ECEA1HK010B	E. CAPACITOR 50V 1U	
R890	ERDS2TJ102T	C. RESISTOR 1/4W 1K		C259	ECKT1H103ZF	C. CAPACITOR 50V 0.01U	
R891	ERDS2TJ224T	C. RESISTOR 1/4W 220K		C260	ECKT1H103ZF	C. CAPACITOR 50V 0.01U	
R892	ERDS2TJ272T	C. RESISTOR 1/4W 2.7K		C261	RCBS1H221KBY	C. CAPACITOR 50V 220P	
R901	ERG2ANJP120S	M. RESISTOR 2W 12	△	C262	RCBS1H221KBY	C. CAPACITOR 50V 220P	
R902	ERDS1FVJ470T	C. RESISTOR 1/2W 47	△	C301	ECEAOJPX101B	E. CAPACITOR 6.3V 100U	
R903	ERDAS3G680T	C. RESISTOR 1/4W 68		C302	ECEAOJPX101B	E. CAPACITOR 6.3V 100U	
R904	ERDAS3G330T	C. RESISTOR 1/4W 33		C303	ECEAOJPX101B	E. CAPACITOR 6.3V 100U	
R905	ERDAS3G333T	C. RESISTOR 1/4W 33K		C304	ECEAOJPX101B	E. CAPACITOR 6.3V 100U	
R906	ERDAS3G333T	C. RESISTOR 1/4W 33K		C305	ECQB1H822JZ3	P. CAPACITOR 50V 8200P	
R907	ERDAS3G332T	C. RESISTOR 1/4W 3.3K		C306	ECQB1H822JZ3	P. CAPACITOR 50V 8200P	
R908	ERDAS3G332T	C. RESISTOR 1/4W 3.3K		C307	ECBT1H681KB5	C. CAPACITOR 50V 680P	
R951	ERDS1FVJ6R8T	C. RESISTOR 1/2W 6.8	△	C308	ECBT1H681KB5	C. CAPACITOR 50V 680P	
R952	ERDS1FVJ6R8T	C. RESISTOR 1/2W 6.8	△	C309	ECBT1H681KB5	C. CAPACITOR 50V 680P	
R953	ERD25FVJ121T	C. RESISTOR 1/4W 120	△	C310	ECBT1H681KB5	C. CAPACITOR 50V 680P	
		CAPACITORS		C311	ECBT1H561KB5	C. CAPACITOR 50V 560P	
				C312	ECBT1H561KB5	C. CAPACITOR 50V 560P	
				C313	ECKT1H103ZF	C. CAPACITOR 50V 0.01U	
C1	ECKWNS103ZVS	C. CAPACITOR 250V 0.01U	△	C314	ECKT1H103ZF	C. CAPACITOR 50V 0.01U	
C101	ECBT1H221KB	C. CAPACITOR 50V 220P		C315	ECQM1H683KV3	P. CAPACITOR 50V 0.068U	
C102	ECBT1H221KB	C. CAPACITOR 50V 220P		C316	ECQM1H683KV3	P. CAPACITOR 50V 0.068U	
C103	ECEAOJPX221B	E. CAPACITOR 6.3V 220U		C317	ECQM1H683KV3	P. CAPACITOR 50V 0.068U	
C104	ECEAOJPX221B	E. CAPACITOR 6.3V 220U		C318	ECQM1H683KV3	P. CAPACITOR 50V 0.068U	
C105	ECCT1H040C	C. CAPACITOR 50V 4P		C319	ECKT1H102KB	C. CAPACITOR 50V 0.001U	
C106	ECCT1H040C	C. CAPACITOR 50V 4P		C320	ECKT1H102KB	C. CAPACITOR 50V 0.001U	
C107	ECBT1H821KB5	C. CAPACITOR 50V 820P		C321	ECKT1H681KB	C. CAPACITOR 50V 680P	
C108	ECBT1H821KB5	C. CAPACITOR 50V 820P		C322	ECKT1H681KB	C. CAPACITOR 50V 680P	
C109	ECCT2H680K	C. CAPACITOR 500V 68P		C323	ECKT1H681KB	C. CAPACITOR 50V 680P	
C110	ECCT2H680K	C. CAPACITOR 500V 68P		C324	ECKT1H681KB	C. CAPACITOR 50V 680P	
C111	ECCT2H680K	C. CAPACITOR 500V 68P		C325	ECQM1H103KV3	P. CAPACITOR 50V 0.01U	
C112	ECCT2H680K	C. CAPACITOR 500V 68P		C326	ECQM1H103KV3	P. CAPACITOR 50V 0.01U	
C115	RCBS1H181KBY	C. CAPACITOR 50V 180P		C327	ECQM1H103KV3	P. CAPACITOR 50V 0.01U	
C116	RCBS1H181KBY	C. CAPACITOR 50V 180P		C328	ECQM1H103KV3	P. CAPACITOR 50V 0.01U	
C117	RCBS1H181KBY	C. CAPACITOR 50V 180P		C329	ECQM1H683KV3	P. CAPACITOR 50V 0.068U	
C118	RCBS1H181KBY	C. CAPACITOR 50V 180P		C330	ECQM1H683KV3	P. CAPACITOR 50V 0.068U	
C201	RCBS1H221KBY	C. CAPACITOR 50V 220P		C331	ECQM1H683KV3	P. CAPACITOR 50V 0.068U	
C202	RCBS1H221KBY	C. CAPACITOR 50V 220P		C332	ECQM1H683KV3	P. CAPACITOR 50V 0.068U	
C203	ECEA1EBZ220B	E. CAPACITOR 25V 22U		C401	ECEAOJU331B	E. CAPACITOR 6.3V 330U	
C204	ECEA1EBZ220B	E. CAPACITOR 25V 22U		C402	ECEAOJK470B	E. CAPACITOR 6.3V 47U	
C205	ECEA1EBZ220B	E. CAPACITOR 25V 22U		C403	ECEA1EK4R7B	E. CAPACITOR 25V 4.7U	
C206	ECEA1EBZ220B	E. CAPACITOR 25V 22U		C404	ECFTD223KXL	S. CAPACITOR 25V 0.022U	
C207	ECEA1AK330B	E. CAPACITOR 10V 33U		C405	ECEA1EK4R7B	E. CAPACITOR 25V 4.7U	
C208	ECEA1AK330B	E. CAPACITOR 10V 33U		C451	ECEA1EK4R7B	E. CAPACITOR 25V 4.7U	
C209	ECEA1AK330B	E. CAPACITOR 10V 33U		C501	ECET71V103MY	E. CAPACITOR 71V 0.01U	△
C210	ECEA1AK330B	E. CAPACITOR 10V 33U		C502	ECET71V103MY	E. CAPACITOR 71V 0.01U	△
C211	ECEA1CK100B	E. CAPACITOR 16V 10U		C503	ECET71V103MY	E. CAPACITOR 71V 0.01U	△

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
C504	ECET71V103MY	E. CAPACITOR 71V 0.01U	△	C726	ECEA1EK4R7B	E. CAPACITOR 25V 4.7U	
C505	ECEA1DPX472E	E. CAPACITOR 25V 4700U		C727	ECKT1H103ZF	C. CAPACITOR 50V 0.01U	
C506	ECEA1DPX472E	E. CAPACITOR 25V 4700U		C728	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U	
C507	ECQE2104KS	P. CAPACITOR 250V 0.1U	△	C729	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U	
C508	ECQE2104KS	P. CAPACITOR 250V 0.1U		C731	ECKT1H103ZF	C. CAPACITOR 50V 0.01U	
C509	ECKT1H103ZF	C. CAPACITOR 50V 0.01U		C732	ECEAOJPU101B	E. CAPACITOR 6.3V 100U	
C510	ECKT1H103ZF	C. CAPACITOR 50V 0.01U		C733	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U	
C511	ECKT1H103ZF	C. CAPACITOR 50V 0.01U		C734	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U	
C512	ECEA1HK010B	E. CAPACITOR 50V 1U		C735	ECEAOJPU101B	E. CAPACITOR 6.3V 100U	
C513	ECEA2APX010B	E. CAPACITOR 100V 1U	△	C736	ECKD1H103ZF	C. CAPACITOR 50V 0.01U	
C514	ECEA2APX010B	E. CAPACITOR 100V 1U	△	C751	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U	
C515	ECEA2APX010B	E. CAPACITOR 100V 1U	△	C801	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U	
C516	ECEA2APX010B	E. CAPACITOR 100V 1U	△	C802	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U	
C551	ECEA2APX010B	E. CAPACITOR 100V 1U		C803	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U	
C552	ECEA2APX010B	E. CAPACITOR 100V 1U		C804	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U	
C553	ECEA2APX010B	E. CAPACITOR 100V 1U		C805	RCBS1H101KBY	C. CAPACITOR 50V 100P	
C554	ECEA2APX010B	E. CAPACITOR 100V 1U		C806	RCBS1H101KBY	C. CAPACITOR 50V 100P	
C555	ECKT1H223ZF	C. CAPACITOR 50V 0.022U		C813	ECEA1CPX100B	E. CAPACITOR 16V 10U	
C556	ECKT1H223ZF	C. CAPACITOR 50V 0.022U		C814	ECEA1CPX100B	E. CAPACITOR 16V 10U	
C557	ECKT1H223ZF	C. CAPACITOR 50V 0.022U		C815	ECEA1CPX100B	E. CAPACITOR 16V 10U	
C558	ECKT1H223ZF	C. CAPACITOR 50V 0.022U		C816	ECEA1CPX100B	E. CAPACITOR 16V 10U	
C605	ECCT1H330K	C. CAPACITOR 50V 33P		C817	ECQP2A271JSP	P. CAPACITOR 500V 270P	
C606	ECCT1H330K	C. CAPACITOR 50V 33P		C818	ECQP2A271JSP	P. CAPACITOR 500V 270P	
C607	ECQM1H682KV3	P. CAPACITOR 50V 6800P		C819	ECQP2A271JSP	P. CAPACITOR 500V 270P	
C608	ECQM1H682KV3	P. CAPACITOR 50V 6800P		C820	ECQP2A271JSP	P. CAPACITOR 500V 270P	
C609	ECCT2H221K	C. CAPACITOR 500V 220P		C823	ECQP1392JZ3	P. CAPACITOR 100V 0.0039	
C610	ECCT2H221K	C. CAPACITOR 500V 220P		C824	ECQP1392JZ3	P. CAPACITOR 100V 0.0039	
C611	ECCT2H221K	C. CAPACITOR 500V 220P		C825	ECEA1CBZ101B	E. CAPACITOR 16V 100U	
C612	ECCT2H221K	C. CAPACITOR 500V 220P		C826	ECEA1CBZ101B	E. CAPACITOR 16V 100U	
C701	ECEAOJPU101B	E. CAPACITOR 6.3V 100U		C827	ECBT1H471KB5	C. CAPACITOR 50V 470P	
C702	ECEAOJPU101B	E. CAPACITOR 6.3V 100U		C828	ECBT1H471KB5	C. CAPACITOR 50V 470P	
C703	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U		C829	ECQP1472JZ3	C. CAPACITOR 100V 0.0047	
C704	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U		C830	ECQP1472JZ3	C. CAPACITOR 100V 0.0047	
C705	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U		C831	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U	
C706	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U		C832	ECEAOJPU101B	E. CAPACITOR 6.3V 100U	
C707	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U		C833	ECEA1CBZ101B	E. CAPACITOR 16V 100U	
C708	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U		C834	ECEA1CBZ101B	E. CAPACITOR 16V 100U	
C710	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U		C835	ECKT1H103ZF	C. CAPACITOR 50V 0.01U	
C711	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U		C901	ECEA1EPX332E	E. CAPACITOR 25V 3300U	
C712	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U		C902	ECEA1EPX332E	E. CAPACITOR 25V 3300U	
C713	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U		C903	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U	
C714	ECEA1EN4R7SB	E. CAPACITOR 25V 4.7U		C904	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U	
C715	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U		C905	ECEA1CPX100B	E. CAPACITOR 16V 10U	
C716	ECEA1EK4R7B	E. CAPACITOR 25V 4.7U		C906	ECEA1CPX100B	E. CAPACITOR 16V 10U	
C717	ECEA1HK010B	E. CAPACITOR 50V 1U		C907	ECEA1APX101B	E. CAPACITOR 10V 100U	
C718	RCBS1H4R7KLY	C. CAPACITOR 50V 4.7P		C908	ECEA1APX101B	E. CAPACITOR 10V 100U	
C719	RCBS1H4R7KLY	C. CAPACITOR 50V 4.7P		C909	ECEA1APX331B	E. CAPACITOR 10V 330U	
C720	ECFTD103KXL	S. CAPACITOR 25V 0.01U		C910	ECEA1APX101B	E. CAPACITOR 10V 100U	
C721	ECEAOJPU101B	E. CAPACITOR 6.3V 100U		C911	ECEAOJPU101B	E. CAPACITOR 6.3V 100U	
C722	ECFR1E104ZF5	S. CAPACITOR 25V 0.1U		C912	ECEAOJPU101B	E. CAPACITOR 6.3V 100U	
C723	RCBS1H6R8KLY	C. CAPACITOR 50V 6.8P					
C725	ECKT1H103ZF	C. CAPACITOR 50V 0.01U					

REPLACEMENT PARTS LIST

Notes : * Important safety notice:

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

* Bracketed indications in Remarks columns specify the area. (Refer to the first page for area.)
Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUITS		Q110	2SA1309AQSTA	TRANSISTOR	
				Q111	2SC1845EF	TRANSISTOR	
				Q112	2SC1845EF	TRANSISTOR	
IC201	M5218P	IC, VOLTAGE/CURRENT MIRROR		Q113	2SB1036RSTTA	TRANSISTOR	
IC202	M5218P	IC, VOLTAGE/CURRENT MIRROR		Q114	2SB1036RSTTA	TRANSISTOR	
IC401	AN7073	IC, PROTECTION		Q115	2SA1123RST	TRANSISTOR	
IC701	TORX174-A	IC, OPTICAL RECEIVER		Q116	2SA1123RST	TRANSISTOR	
IC702	TORX174-A	IC, OPTICAL RECEIVER		Q117	2SC2631RST	TRANSISTOR	
IC703	MN74HC04	IC, INVERTER		Q118	2SC2631RST	TRANSISTOR	
IC704	MN74HC00	IC, INPUT SELECTOR		Q119	2SC2631RST	TRANSISTOR	
IC705	MN74HC00	IC, INPUT SELECTOR		Q120	2SC2631RST	TRANSISTOR	
IC706	MN74HC00	IC, INPUT SELECTOR		Q121	2SA1123RST	TRANSISTOR	
IC707	MN123Z	IC, INPUT MUTING		Q122	2SA1123RST	TRANSISTOR	
IC708	YM3623B	IC, D SIGNAL PROCESSING		Q201	2SC2631RST	TRANSISTOR	
IC709	SM5813	IC, DIGITAL FILTER		Q202	2SC2631RST	TRANSISTOR	
IC710	MN53015PEU	IC, 4DAC GATE ARRAY		Q203	2SA1123RST	TRANSISTOR	
IC751	TC74HC42P	IC, LED DRIVE		Q204	2SA1123RST	TRANSISTOR	
IC801	PCM56P	IC, D/A CONVERTER		Q205	2SA1123RST	TRANSISTOR	
IC802	PCM56P	IC, D/A CONVERTER		Q206	2SA1123RST	TRANSISTOR	
IC803	PCM56P	IC, D/A CONVERTER		Q207	2SC2631RST	TRANSISTOR	
IC804	PCM56P	IC, D/A CONVERTER		Q208	2SC2631RST	TRANSISTOR	
IC805	M5238P	IC, CLASS AA BUFFER		Q209	2SA1123RST	TRANSISTOR	
IC806	M5238P	IC, CLASS AA BUFFER		Q210	2SA1123RST	TRANSISTOR	
IC807	M5238P	IC, CLASS AA BUFFER		Q211	2SC2631RST	TRANSISTOR	
IC808	M5238P	IC, CLASS AA BUFFER		Q212	2SC2631RST	TRANSISTOR	
IC809	NJM4580D	IC, L. P. FILTER AMP		Q213	2SC2631RST	TRANSISTOR	
IC810	NJM4580D	IC, L. P. FILTER AMP		Q214	2SC2631RST	TRANSISTOR	
IC813	SVIUPD4053BC	IC, DEGLITCH		Q215	2SA1123RST	TRANSISTOR	
IC814	SVIUPD4053BC	IC, DEGLITCH		Q216	2SA1123RST	TRANSISTOR	
IC815	UPC4570C	IC, BUFFER AMP		Q251	2SC1815BGL	TRANSISTOR	
IC901	M5F78M08L	IC, EXTEND ACTIVE SERVO		Q252	2SC1815BGL	TRANSISTOR	
IC902	M5F79M08L	IC, EXTEND ACTIVE SERVO		Q253	2SC2631RST	TRANSISTOR	Δ
IC903	AN78M05	IC, REGULATOR		Q254	2SC2631RST	TRANSISTOR	Δ
IC904	AN79N05	IC, REGULATOR		Q255	2SA1123RST	TRANSISTOR	Δ
IC905	UPC4570C	IC, EXTEND ACTIVE SERVO		Q256	2SA1123RST	TRANSISTOR	Δ
		TRANSISTORS		Q257	2SC3944AQRS	TRANSISTOR	Δ
				Q258	2SC3944AQRS	TRANSISTOR	Δ
				Q259	2SA1535AQRS	TRANSISTOR	Δ
Q101	2SK389BG	TRANSISTOR		Q260	2SA1535AQRS	TRANSISTOR	Δ
Q102	2SK389BG	TRANSISTOR		Q261	2SC3311AQSTA	TRANSISTOR	
Q103	2SD1512RSTTA	TRANSISTOR		Q262	2SC3311AQSTA	TRANSISTOR	
Q104	2SD1512RSTTA	TRANSISTOR		Q263	2SA1309AQSTA	TRANSISTOR	
Q105	2SD1512RSTTA	TRANSISTOR		Q264	2SA1309AQSTA	TRANSISTOR	
Q106	2SD1512RSTTA	TRANSISTOR		Q301	2SC1815BGL	TRANSISTOR	
Q107	2SA1309AQSTA	TRANSISTOR		Q302	2SC1815BGL	TRANSISTOR	
Q108	2SA1309AQSTA	TRANSISTOR		Q303	2SC3944AQRS	TRANSISTOR	Δ
Q109	2SA1309AQSTA	TRANSISTOR		Q304	2SC3944AQRS	TRANSISTOR	Δ

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
Q305	2SA1535AQRS	TRANSISTOR	△	D106	MA165TA	DIODE	
Q306	2SA1535AQRS	TRANSISTOR	△	D107	MA29WATA	DIODE	
Q307, 308	2SC3182R	TRANSISTOR	△	D108	MA29WATA	DIODE	
Q309, 310	2SA1265R	TRANSISTOR	△	D109	MA29WATA	DIODE	
Q311, 312	2SC3182R	TRANSISTOR	△	D110	MA29WATA	DIODE	
Q313, 314	2SA1265R	TRANSISTOR	△	D111	MA4082MTA	DIODE	
Q401	2SB1036RSTTA	TRANSISTOR		D112	MA4082MTA	DIODE	
Q402	2SB1036RSTTA	TRANSISTOR		D201	MA165TA	DIODE	
Q403	2SA992EFP	TRANSISTOR		D202	MA165TA	DIODE	
Q451	2SC1845EF	TRANSISTOR		D203	MA165TA	DIODE	
Q452	2SA1309AQSTA	TRANSISTOR		D204	MA165TA	DIODE	
Q601	2SK389BG	TRANSISTOR		D205	MA29WATA	DIODE	△
Q602	2SK389BG	TRANSISTOR		D206	MA29WATA	DIODE	△
Q603	2SD1512RSTTA	TRANSISTOR		D207	MA29WATA	DIODE	△
Q604	2SD1512RSTTA	TRANSISTOR		D208	MA29WATA	DIODE	△
Q605	2SD1512RSTTA	TRANSISTOR		D209	MA4082MTA	DIODE	
Q606	2SD1512RSTTA	TRANSISTOR		D210	MA4082MTA	DIODE	
Q607	2SA1309AQSTA	TRANSISTOR		D211	MA4082MTA	DIODE	
Q608	2SA1309AQSTA	TRANSISTOR		D212	MA4082MTA	DIODE	
Q609	2SA1309AQSTA	TRANSISTOR		D251	MA165TA	DIODE	
Q610	2SA1309AQSTA	TRANSISTOR		D252	MA165TA	DIODE	
Q611	2SC1845EF	TRANSISTOR		D253	MA165TA	DIODE	
Q612	2SC1845EF	TRANSISTOR		D254	MA165TA	DIODE	
Q613	2SB1036RSTTA	TRANSISTOR		D401	MA165TA	DIODE	
Q614	2SB1036RSTTA	TRANSISTOR		D402	MA165TA	DIODE	
Q615	2SA1123RST	TRANSISTOR		D403	MA4180MTA	DIODE	
Q616	2SA1123RST	TRANSISTOR		D404	MA165TA	DIODE	
Q617	2SC2631RST	TRANSISTOR		D405	MA165TA	DIODE	
Q618	2SC2631RST	TRANSISTOR		D406	MA165TA	DIODE	
Q619	2SC2631RST	TRANSISTOR		D407	MA167TA	DIODE	
Q620	2SC2631RST	TRANSISTOR		D451	LN014472PH	L. E. D.	
Q621	2SA1123RST	TRANSISTOR		D452	LN014472PH	L. E. D.	
Q622	2SA1123RST	TRANSISTOR		D453	MA29WATA	DIODE	
Q701	UN4111TA	TRANSISTOR		D454	1SR35200TB	DIODE	△
Q702	UN4211TA	TRANSISTOR		D455	LN018314PH1	L. E. D.	
Q703	2SA1309AQSTA	TRANSISTOR		D456	MA4051MTA	DIODE	
Q704	UN4211TA	TRANSISTOR		D501	P300DLF	DIODE	△
Q705	UN4215TA	TRANSISTOR		D502	P300DLF	DIODE	△
Q706	UN4211TA	TRANSISTOR		D503	P300DLF	DIODE	△
Q801	UN4211TA	TRANSISTOR		D504	P300DLF	DIODE	△
Q802	UN4211TA	TRANSISTOR		D505	P300DLF	DIODE	△
Q803	2SD1450RSTTA	TRANSISTOR		D506	P300DLF	DIODE	△
Q804	2SD1450RSTTA	TRANSISTOR		D507	P300DLF	DIODE	△
Q805	UN4112TA	TRANSISTOR		D508	P300DLF	DIODE	△
				D509	1SR35200TB	DIODE	△
		DIODES		D510	1SR35200TB	DIODE	△
				D511	1SR35200TB	DIODE	△
D101	MA165TA	DIODE		D512	1SR35200TB	DIODE	△
D102	MA165TA	DIODE		D551	MA4036MTA	DIODE	
D103	MA165TA	DIODE		D552	MA4036MTA	DIODE	
D104	MA165TA	DIODE		D553	MA4036MTA	DIODE	
D105	MA165TA	DIODE		D554	MA4036MTA	DIODE	

SE-M100

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
D601	MA165TA	DIODE		VR701	EVN38CA00B15	V. R, LCH DAC DISTORTION ADJ.	
D602	MA165TA	DIODE		VR702	EVN38CA00B15	V. R, RCH DAC DISTORTION ADJ.	
D603	MA165TA	DIODE		VR801	EVND4AA00B15	V. R, LCH DAC MSB. ADJ.	
D604	MA165TA	DIODE		VR802	EVND4AA00B15	V. R, RCH DAC MSB. ADJ.	
D605	MA165TA	DIODE		VR803	EVND4AA00B53	V. R, LCH DAC GAIN ADJ.	
D606	MA165TA	DIODE		VR804	EVND4AA00B53	V. R, RCH DAC GAIN ADJ.	
D607	MA29WATA	DIODE		VR805	EVND4AA00B53	V. R, LCH DAC GAIN ADJ.	
D608	MA29WATA	DIODE		VR806	EVND4AA00B53	V. R, RCH DAC GAIN ADJ.	
D609	MA29WATA	DIODE				THERMISTORS	
D610	MA29WATA	DIODE					
D611	MA29WATA	DIODE		TH251	ERTD2WHL104S	THERMISTOR	
D612	MA29WATA	DIODE		TH252	ERTD2WHL104S	THERMISTOR	
D613	MA165TA	DIODE		TH301	ERTD2WHL104S	THERMISTOR	
D614	MA165TA	DIODE		TH302	ERTD2WHL104S	THERMISTOR	
D615	MA165TA	DIODE				COMPONENT COMBINATIONS	
D616	MA165TA	DIODE					
D701	MA165TA	DIODE		Z301	ERF3GBKR22N	COMPONENT COMBINATION	
D702	MA165TA	DIODE		Z302	ERF3GBKR22N	COMPONENT COMBINATION	
D703	MA165TA	DIODE		Z303	ERF3GBKR22N	COMPONENT COMBINATION	
D751	MA165TA	DIODE		Z304	ERF3GBKR22N	COMPONENT COMBINATION	
D752	MA165TA	DIODE		Z801	EXCEMT103DC	COMPONENT COMBINATION	
D753	LN346GP-C	L. E. D.		Z802	EXCEMT103DC	COMPONENT COMBINATION	
D754	LN346GP-C	L. E. D.		Z803	EXCEMT103DC	COMPONENT COMBINATION	
D755	LN346GP-C	L. E. D.		Z804	EXCEMT103DC	COMPONENT COMBINATION	
D756	MA4051MTA	DIODE		Z805	EXCEMT103DC	COMPONENT COMBINATION	
D757	MA165TA	DIODE		Z806	EXCEMT103DC	COMPONENT COMBINATION	
D759	LN018305PH	L. E. D.		Z807	EXCEMT103DC	COMPONENT COMBINATION	
D760	LN014305PH	L. E. D.		Z808	EXCEMT103DC	COMPONENT COMBINATION	
D761	LN014305PH	L. E. D.		Z901	EXCEMT103DC	COMPONENT COMBINATION	
D762	LN014305PH	L. E. D.		Z902	EXCEMT103DC	COMPONENT COMBINATION	
D763	LN014305PH	L. E. D.				COILS	
D764	MA4051MTA	DIODE					
D765	MA4051MTA	DIODE		L101	RLQZP4R7KTY	COIL	
D766	MA4051MTA	DIODE		L102	RLQZP4R7KTY	COIL	
D767	MA4082MTA	DIODE		L103	RLQZP4R7KTY	COIL	
D768	MA4082MTA	DIODE		L104	RLQZP4R7KTY	COIL	
D769	MA4082MTA	DIODE		L301	SLQY07G-40	COIL	
D801	MA165TA	DIODE		L302	SLQY07G-40	COIL	
D802	MA165TA	DIODE		L303	SLQY18G-10	COIL	
D901	1SR35200TB	DIODE	△	L304	SLQY18G-10	COIL	
D902	1SR35200TB	DIODE	△	L305	SLQY07G-40	COIL	
D903	MA165TA	DIODE		L306	SLQY07G-40	COIL	
D904	MA165TA	DIODE		L307	SLQY07G-40	COIL	
D951	MA165TA	DIODE		L308	SLQY07G-40	COIL	
		VARIABLE RESISTORS		L309	SLQZ650MH49	COIL	△<E, E5>
VR101	EWCL5A020775	V. R, MAIN VOLUME		L701	ELEPK4R7KA	COIL	
VR251	QVNB3A00B471	V. R, LCH V-AMP. ICQ. ADJ.		L703	ELEPK4R7KA	COIL	
VR252	QVNB3A00B471	V. R, RCH V-AMP. ICQ. ADJ.		L704	ELEPK4R7KA	COIL	
VR301	QVNB3A00B471	V. R, LCH I-AMP. ICQ. ADJ.		L705	ELEPK4R7KA	COIL	
VR302	QVNB3A00B471	V. R, RCH I-AMP. ICQ. ADJ.					