

Service Manual

Amplifier

SU-V570

Stereo Integrated Amplifier



Color

(K) Black Type

Area

Country Code	Areas	Color
(E)	Continental Europe	(K)
(EB)	Great Britain	(K)
(EG)	F.R. Germany & Italy	(K)

SPECIFICATIONS

(DIN 45 500)

20 Hz~20 kHz continuous power output
both channels driven $2 \times 60 \text{ W (8 } \Omega\text{)}$

1 kHz continuous power output
both channels driven (THD: 1%) $2 \times 70 \text{ W (8 } \Omega\text{)}$
 $2 \times 100 \text{ W (4 } \Omega\text{)}$

63 Hz~12.5 kHz continuous power output
both channels driven (0.7%) $2 \times 60 \text{ W (8 } \Omega\text{)}$
 $2 \times 90 \text{ W (4 } \Omega\text{)}$

Total harmonic distortion (Power Amp Direct input)
rated power at 20 Hz~20 kHz 0.005 % (8 Ω)
rated power at 1 kHz 0.0009 % (8 Ω)
0.002 % (4 Ω)
half power at 20 Hz~20 kHz 0.005 % (8 Ω)
half power at 1 kHz 0.0009 % (8 Ω)
0.002 % (4 Ω)

Intermodulation distortion
rated power at 50 Hz: 7 kHz = 4:1, SMPTE, 8 Ω 0.007 %
Residual hum and noise 0.2 mV
Damping factor 60 (8 Ω), 30 (4 Ω)
Headphones output level and impedance 540 mV/330 Ω
Load impedance
A or B 4 Ω ~16 Ω
A and B 8 Ω ~16 Ω

Input sensitivity and impedance
PHONO MM 2.5 mV/47 k Ω
PHONO MC 170 μ V/220 Ω
TUNER, CD, AUX, TAPE 1, TAPE 2/DAT 150 mV/22 k Ω
POWER AMP DIRECT 1 V/18 k Ω

Phono maximum input voltage (IHF '66, 1 kHz, RMS)
MM 160 mV
MC 12 mV

S/N
rated power (4 Ω)
PHONO MM 77 dB (IHF '66: 83 dB)
PHONO MC 64 dB (IHF '66: 64 dB, S=250 μ V)
TUNER, CD, AUX, TAPE 1, TAPE 2/DAT

97 dB (IHF '66: 100 dB)
POWER AMP DIRECT 106 dB (IHF '66: 115 dB)
-26 dB power (4 Ω)

PHONO MM 76 dB
PHONO MC 63 dB
TUNER, CD, AUX, TAPE 1, TAPE 2/DAT 84 dB

50 mW power (4 Ω)
PHONO MM 75 dB
PHONO MC 63 dB
TUNER, CD, AUX, TAPE 1, TAPE 2/DAT 78 dB

Frequency response
PHONO MM RIAA standard curve
 $\pm 0.8 \text{ dB (30 Hz} \sim 15 \text{ kHz)}$

TUNER, CD, AUX, TAPE 1, TAPE 2/DAT
3 Hz~100 kHz (+0, -3 dB)
+0 dB, -0.2 dB (20 Hz~20 kHz)
POWER AMP DIRECT
2 Hz~120 kHz (+0, -3 dB)
+0 dB, -0.2 dB (20 Hz~20 kHz)

Tone controls
BASS 50 Hz, +10 dB, -10 dB
TREBLE 20 kHz, +10 dB, -10 dB
Loudness control (volume at -30 dB) 50 Hz, +9 dB

Output voltage
TAPE 1, TAPE 2/DAT REC OUT 150 mV
Channel balance, AUX 250 Hz~6,300 Hz $\pm 1 \text{ dB}$
Channel separation, AUX 1 kHz 50 dB

■ GENERAL

Power consumption 520 W
Power supply

For Great Britain AC 50 Hz/60 Hz, 240 V
For others AC 50 Hz/60 Hz, 220 V
Dimensions (W \times H \times D) 430 \times 158 \times 320 mm

(16-15/16" \times 6-7/32" \times 12-5/8")

Weight 9.2 kg (20.2 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

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■ BEFORE REPAIR AND ADJUSTMENT

- (1) Turn off the power supply. Using a 10Ω, 10W resistor, shortcircuit both ends of power supply capacitors (C705,C706) in order to discharge the voltage.
- (2) Before turning on the power switch of the unit.
 - A. Connect the voltage controller to the primary side.
 - B. Connect the AC ampere meter to the primary side or connect the DC voltage meter to the "±B" circuit of the secondary side.
 - C. Turn the VR of ICQ (VR451 and VR452) to minimum (counterclockwise).
 - D. After setting the output to zero of the voltage controller, turn on the power switch of the unit.
And increase the output of voltage controller gradually.
Then, check carefully whether the current value of primary side become more than following value or whether the DC voltage of secondary side is increasing slowly.
 - E. If the value of current is increasing unusually or the DC voltage is not increasing, lower the output level of voltage controller immediately.
- The current value of the primary side at no signal. (Confirm the power supply voltage of each area and provided voltage of the unit.)

Power supply voltage		AC 220 V	AC 240 V
Consumed current	50 Hz	68~272 mA	61~243 mA
	60 Hz	64~256 mA	58~230 mA

■ PROTECTION CIRCUITRY

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

- No sound is heard when the power is turned 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 the amplifier are used.

If this occurs, follow the procedure outlined below:

1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again.

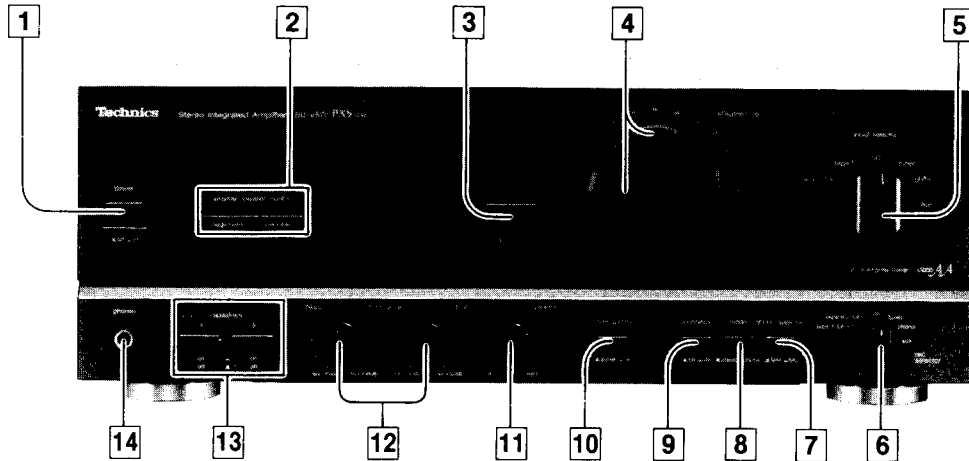
Note:

When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

■ ACCESSORY

- AC power supply cord 1
- (SFDAC05E03) For [E] and [EG] areas.
- (SJA193) For [EB] area only.

■ LOCATION OF CONTROLS



1 Power switch (power)

2 Operation indicators (amplifier operation monitor)

This indicator illuminates to indicate the operating condition of this unit.

voltage control:

When the power is switched ON, this indicator illuminates when the unit is in the operation condition.

current drive:

When the power is switched ON, this indicator illuminates after about 4 seconds when the unit is in the operation condition.

If an abnormal condition in the circuitry is detected, such as DC voltage appearing in the output, or a short-circuit of the positive (+) and negative (–) wires from the speaker terminals, the protection circuit functions and this indicator does not illuminate.

3 Power amplifier direct switch (power amp direct)

This switch is used to listen to the sound from a component connected to the "POWER AMP DIRECT" terminals.

When this switch is pressed inward to the "on" position, a superior level of tone quality can be obtained, because the signals from the component connected to the "POWER AMP DIRECT" terminals are sent directly to the volume control and power amp section of this unit. The mode selector, loudness switch, balance control and tone control circuit are bypassed.

4 Volume control/indicator (volume)

There are two types of volume scale indications: one for when the power amplifier direct switch is OFF, and one for when it is ON (Indicator will illuminate.).

5 Input selector (input selector)

This selector is used to select the sound source to be heard, such as a disc, radio broadcast, etc.

6 Recording output selector (rec selector)

This selector is used to select the sound source to be recorded by the connected tape deck 1 and/or tape deck 2 (or DAT).

7 Phono cartridge selector (phono selector)

This selector should be set to the position which corresponds to the type of cartridge used on the turntable.

8 Mode selector (mode)

This selector is used to select stereo or monaural operation.

9 Loudness switch (loudness)

This switch is used when listening to music at a low volume level. Auditory perception of sound in the low frequency range falls off at low volume, but when the switch is set to the "on" position, this deficiency is compensated for, so that the full impact of the musical performance can be enjoyed.

10 Tone control switch (tone control)

This switch is used to turn the tone control circuit (bass, treble) on or off.

11 Balance control (balance)

This control is used to adjust the left/right volume balance.

12 Tone controls (bass/treble)

The bass control is used to adjust the low-frequency sound range, and the treble control is used to adjust the high-frequency sound range.

13 Speaker selectors (speakers)

These selectors are used to turn the speaker systems on and off.

14 Headphones jack (phones)

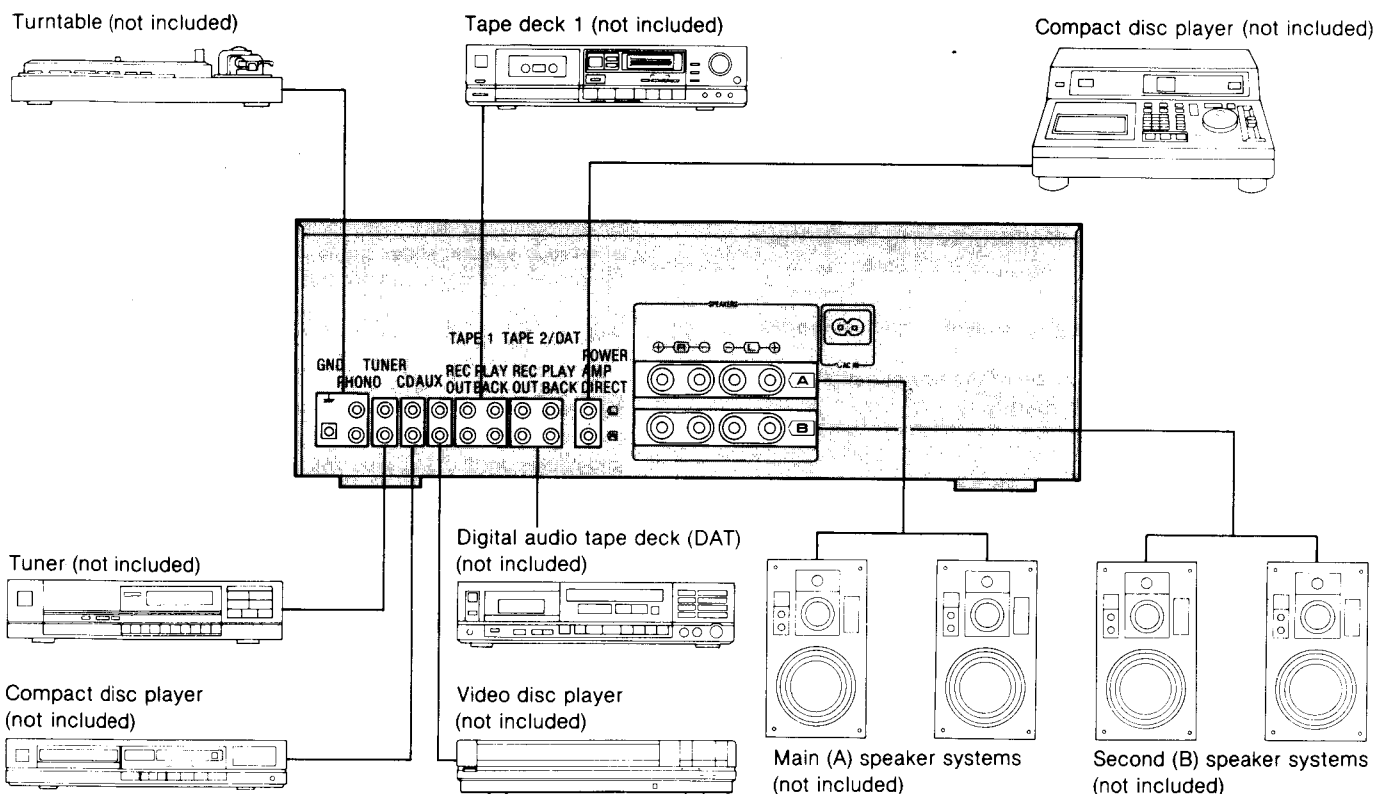
■ CONNECTIONS

Using the short-circuit pins (included)

Shorting pins are inserted into the "PHONO" terminals to reduce noise. Remove the pins before connecting a turntable and reinsert the pins if the turntable is later disconnected. Never connect a shorting pin to a "REC OUT" terminal or any terminal other than those above.



System configurations



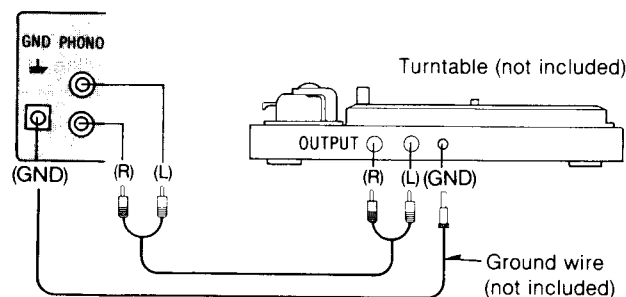
*Phono input capacitance is about 270 pF for EG area (about 100 pF for other areas).

To connect to each terminals

Make connections to each component in the system by using stereo connection cables (not included).

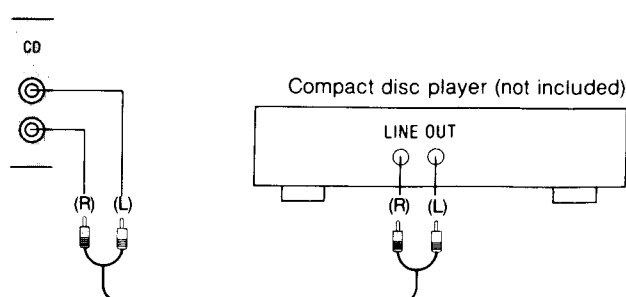
"PHONO" terminals

Connect a turntable. See "Using the short-circuit pins", above.



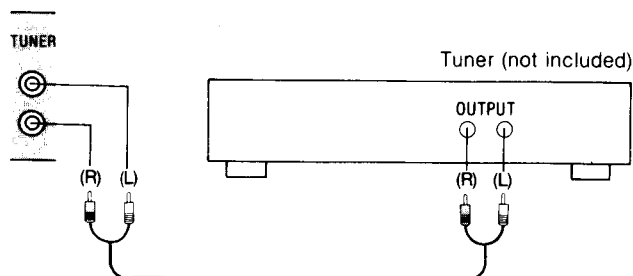
"CD" terminals

Connect a compact disc player.



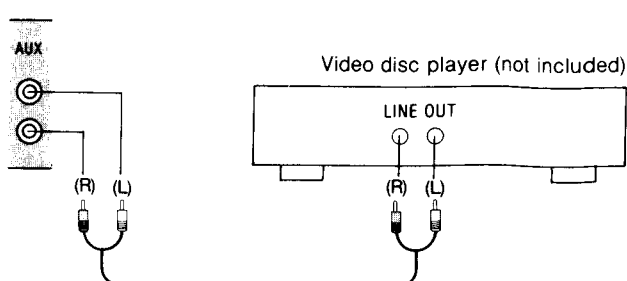
"TUNER" terminals

Connect a tuner.



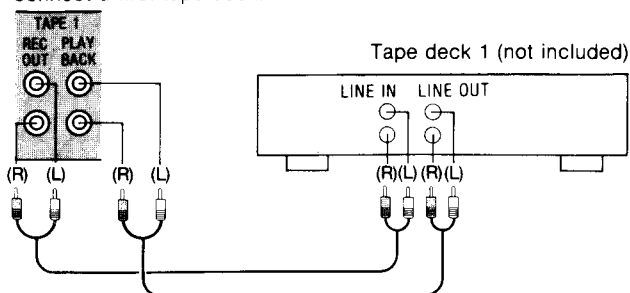
"AUX" terminals

Connect a component such as a video disc player (audio only connectable), etc.



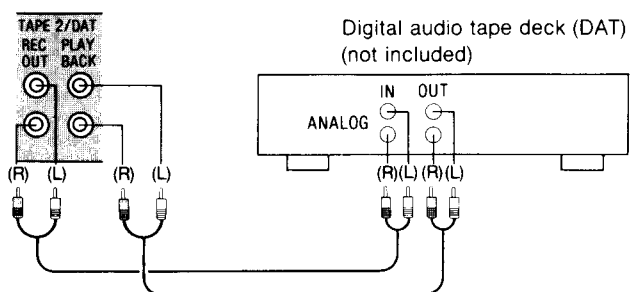
"TAPE 1" terminals

Connect a first tape deck.



"TAPE 2/DAT" terminals

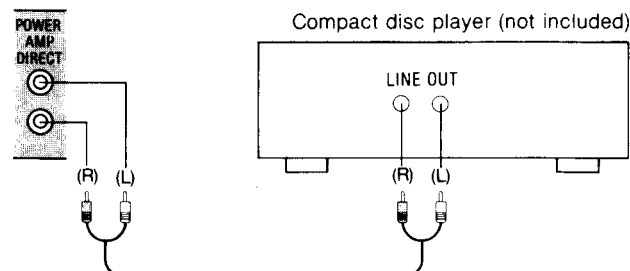
Connect a second tape deck or a digital audio tape deck (DAT).



"POWER AMP DIRECT" terminals

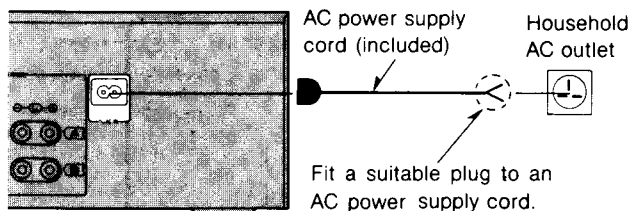
Connect a compact disc player.

A superior level of tone quality can be obtained, because the signal from these terminals are sent directly to the volume control and power amp section of this unit. The sounds from a component connected to these terminals cannot be recorded.



To connect the AC power supply cord (included)

Connect the AC power supply cord (included) after all other cables and cords are connected.



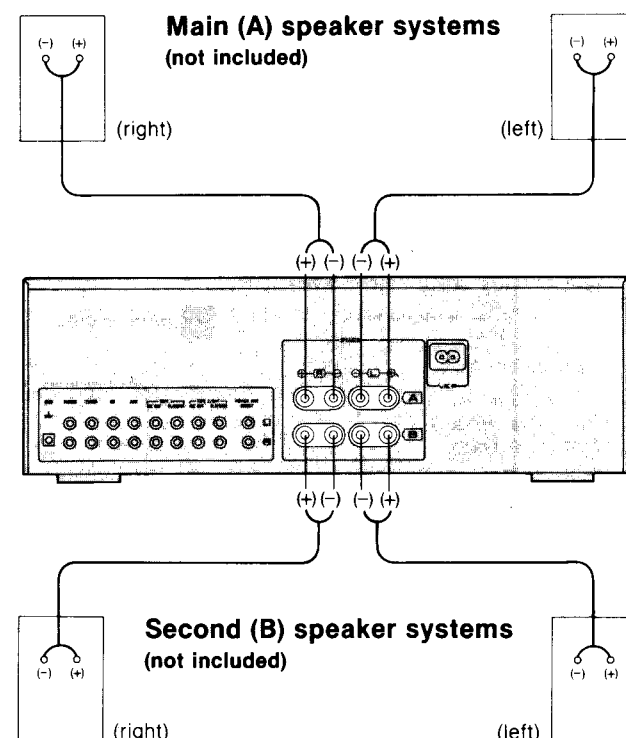
Connection to speaker systems

One pair of speaker systems can be connected to the "A" terminals of this unit and one pair to the "B" terminals.

Load impedance

- When only the "A" or only the "B" terminals are used: 4-16 ohms
- When both the "A" and the "B" terminals are used simultaneously: 8-16 ohms

To connect main (A) and/or second (B) speaker systems



To connect cords to terminals

- Strip off the outer covering, and twist the center conductor. 10 mm (13/32") Twist.
- Turn 5 or 6 times. 2
- Insert the wire and tighten screw completely. Pull the wire to assure a proper connection. 3

Note:

To prevent damage to circuitry, never short-circuit the plus (+) and minus (-) speaker terminals.

DISASSEMBLY INSTRUCTIONS

"ATTENTION SERVICER"

Some chassis components may have sharp edges. Be careful when disassembling and servicing.

Ref. No. 1	Removal of the cabinet	Ref. No. 2	Removal of the front panel
Procedure 1	<p>Remove the 6 screws (1-6).</p>	Procedure 1-2	<p>1. Remove the 3 screws (1-3). 2. Remove the shield plate (R). 3. Remove the 3 screws (4-6).</p>
Ref. No. 3	Removal of the power switch P.C.B.		
Procedure 1-2-3	<p>1. Remove the power switch button by pushing it from behind the front panel. 2. Remove the 2 screws (1, 2). 3. Release the 1 claw.</p>		<p>4. Remove the 2 connectors (CN101, CN102). 5. Remove the remote switch controller. 6. Remove the front panel in the direction of the arrow.</p>
Ref. No. 4	Removal of the LED P.C.B. and headphones P.C.B.		
Procedure 1-2-4	<p>1. Remove the 1 screw (1). 2. Release the 2 claws.</p> <p>Removal of the headphones P.C.B.</p> <p>1. Remove the 2 screws (2, 3). 2. Release the 1 claw.</p>		<p>Remove the 4 claws.</p>
	Removal of the LED P.C.B.		
	<p>1. Remove the 1 screw (1). 2. Release the 2 claws.</p>		
	Removal of the headphones P.C.B.		
	<p>1. Remove the 2 screws (2, 3). 2. Release the 1 claw.</p>		
			<p>1. Fully rotate the Recording Selector Control counterclockwise. 2. Push the Switch Slide in the direction of the arrow.</p>

never short-
(-) speaker

nt panel

Shield Plate(R)

CN101
CN102

Remote Switch
Controller

N102).

n of the arrow.

oller

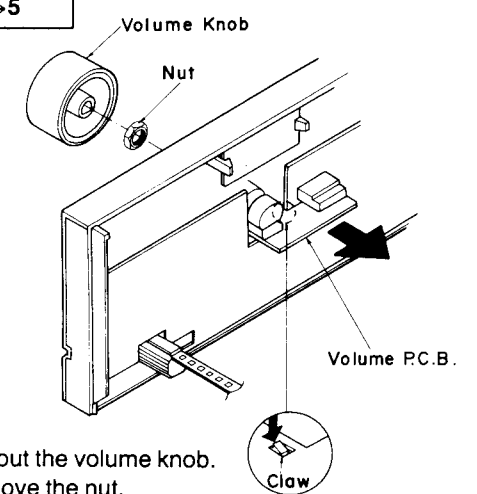
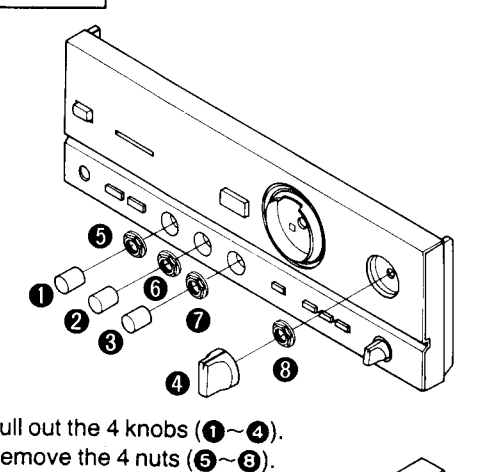
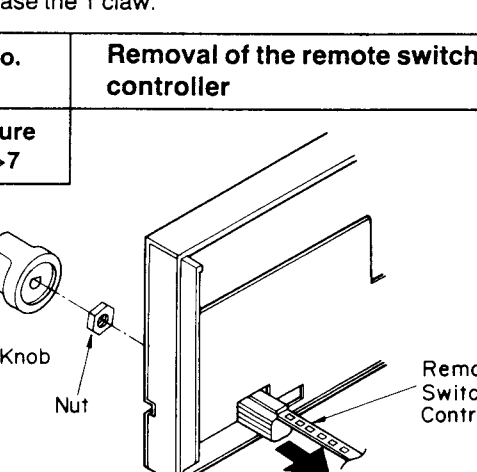
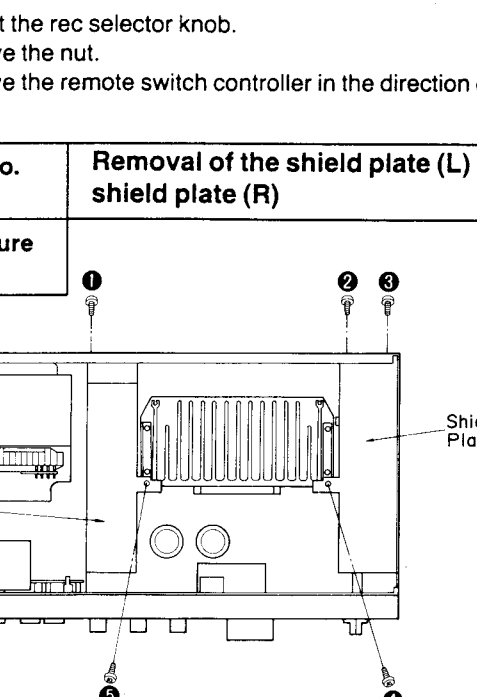
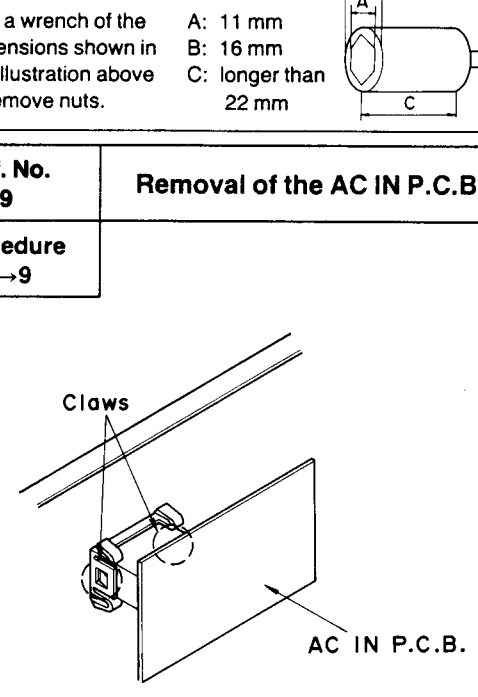
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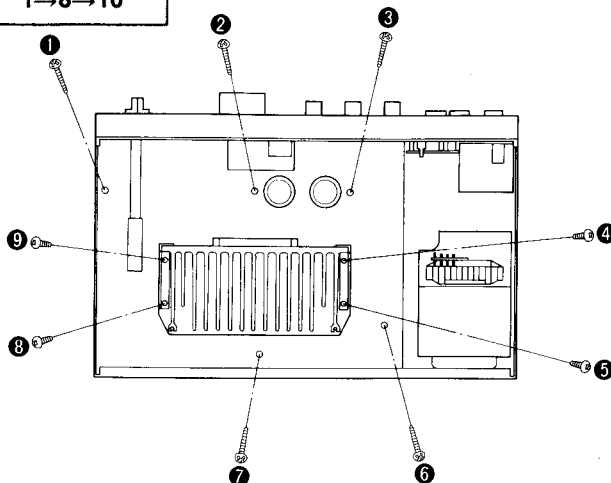
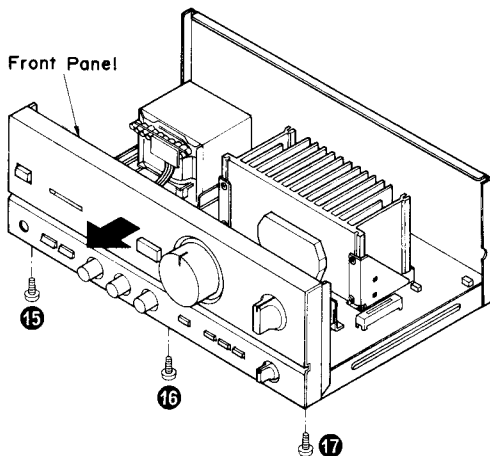
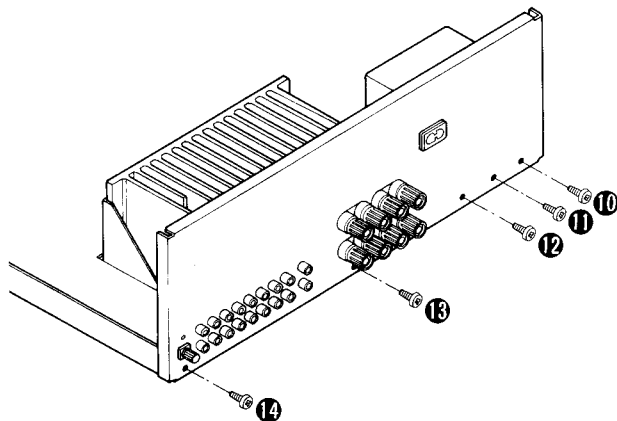
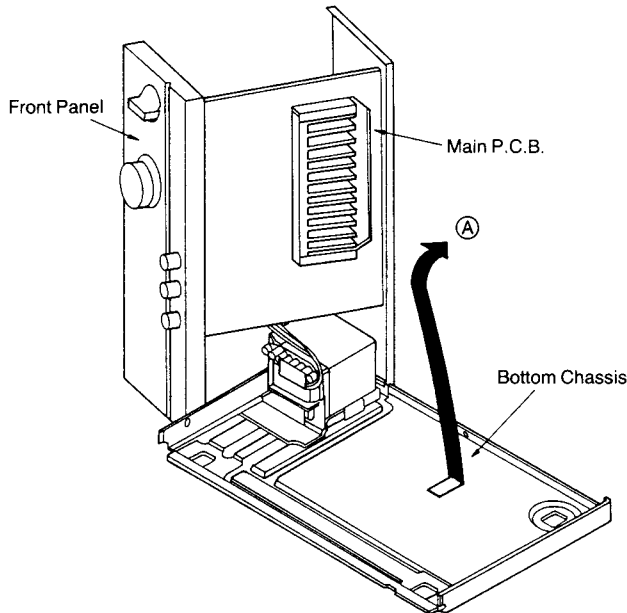
roller
Control

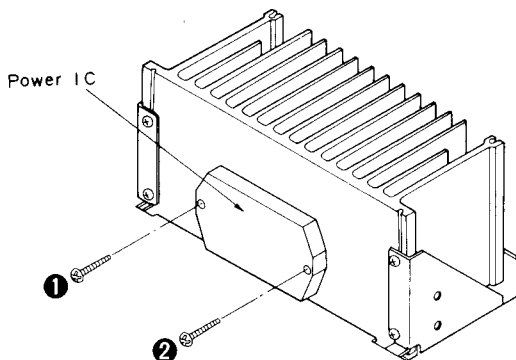
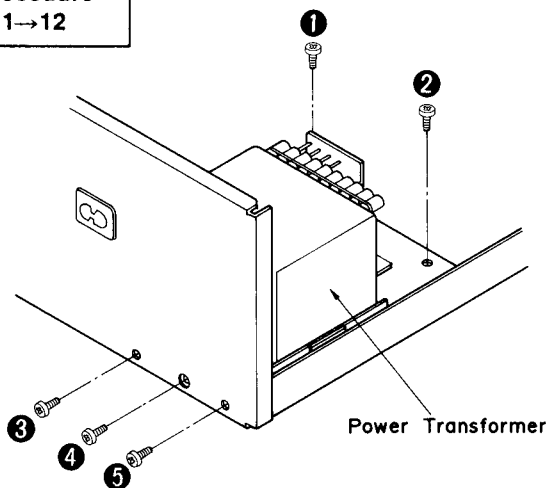
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ever

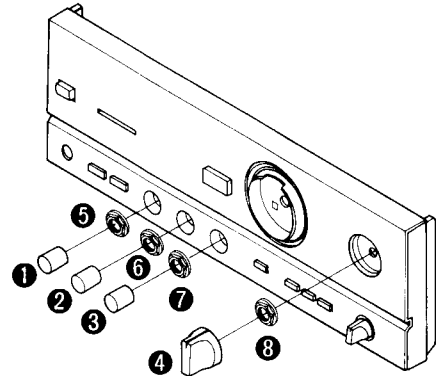
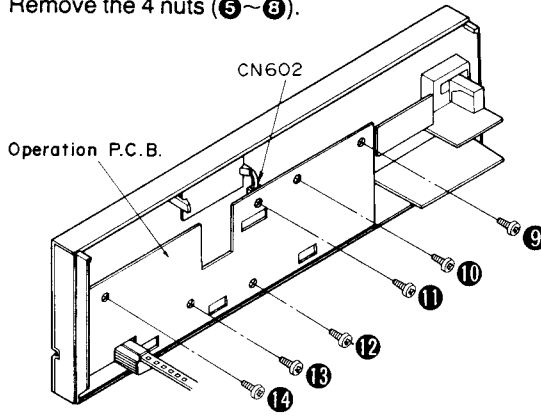
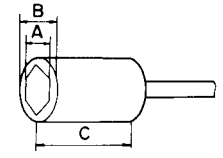
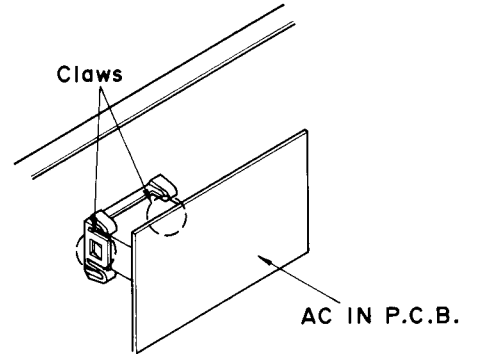
Switch Slide

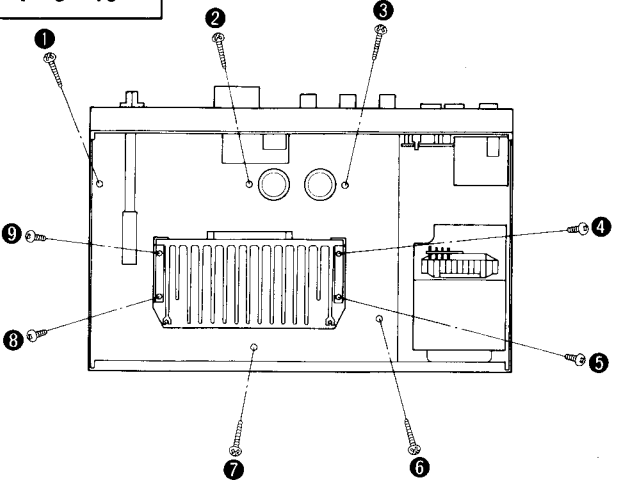
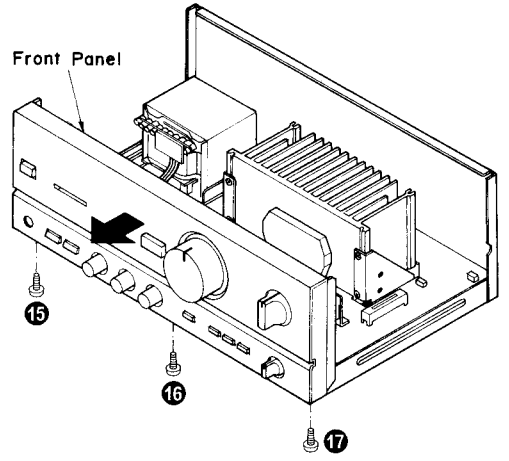
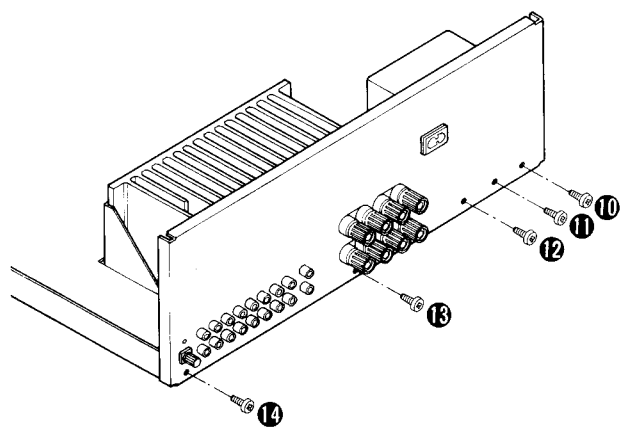
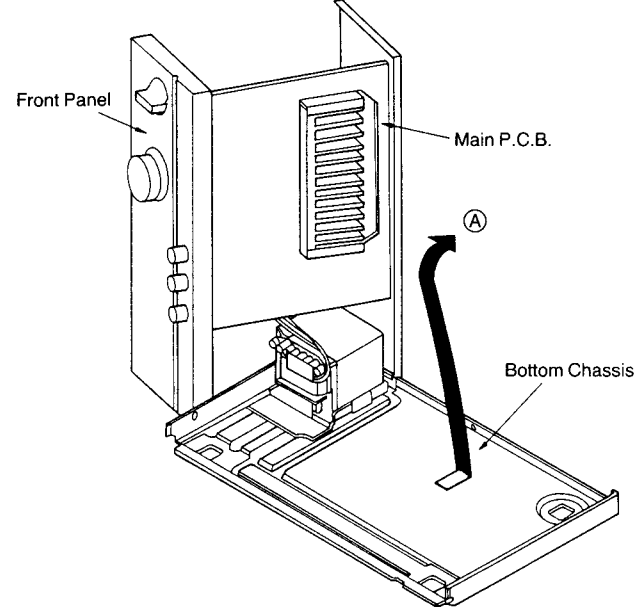
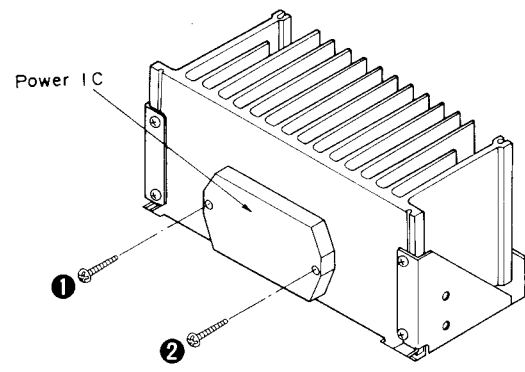
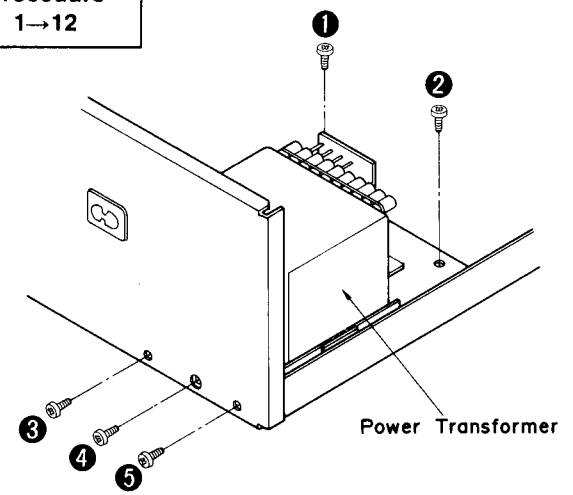
Ref. No. 5	Removal of the volume P.C.B.	Ref. No. 6	Removal of the operation P.C.B.
Procedure 1→2→5	 <ol style="list-style-type: none"> 1. Pull out the volume knob. 2. Remove the nut. 3. Release the 1 claw. 	Procedure 1→2→5→6	 <ol style="list-style-type: none"> 1. Pull out the 4 knobs (1~4). 2. Remove the 4 nuts (5~8).
Ref. No. 7	Removal of the remote switch controller	 <ol style="list-style-type: none"> 1. Pull out the rec selector knob. 2. Remove the nut. 3. Remove the remote switch controller in the direction of the arrow. 	
Ref. No. 8	Removal of the shield plate (L) and shield plate (R)	Ref. No. 9	Removal of the AC IN P.C.B.
Procedure 1→8	 <ul style="list-style-type: none"> Remove the 5 screws (1~5). 	Procedure 1→9	 <ul style="list-style-type: none"> Release the 2 claws.

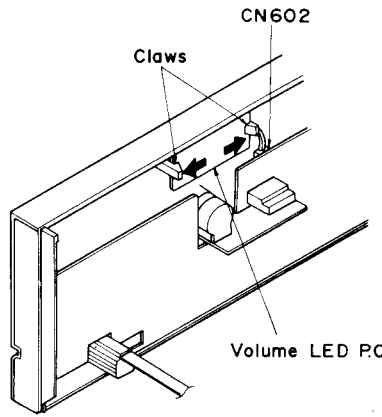
Ref. No. 10	Check of the main P.C.B.		
Procedure 1→8→10	 <p>1. Remove the 9 screws (1~9).</p>		
 <p>3. Remove the 3 screws (15~17).</p> <p>4. Remove the front panel.</p>		 <p>2. Remove the 5 screws (10~14).</p>	
 <p>5. Remove the main P.C.B. unit in the direction of the arrow A.</p> <p>6. Reinstall the front panel to the main P.C.B.</p>			

Ref. No. 11	Removal of the power IC	Ref. No. 12	Removal of the power transformer
Procedure 1→8→10→11	<p>1. Unsolder the power IC.</p> <p>2. Remove the 2 screws (1, 2).</p> 	Procedure 1→12	 <p>Remove the 5 screws (1~5).</p>

•When mounting the power IC, apply silicon thermal compound (SZZ0L15 or equivalent) to the rear of the power IC.

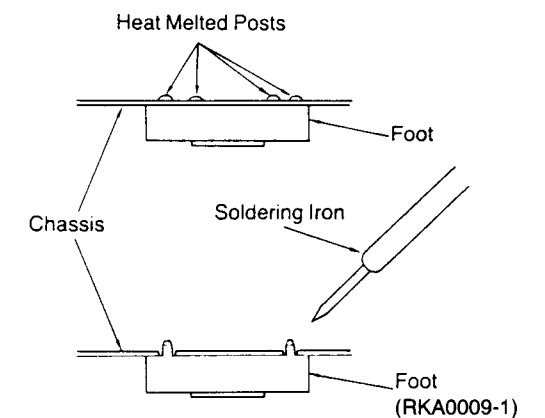
Volume P.C.B.	Ref. No. 6	Removal of the operation P.C.B.
	Procedure 1→2→5→6	 <ol style="list-style-type: none"> 1. Pull out the 4 knobs (1~4). 2. Remove the 4 nuts (5~8).  <ol style="list-style-type: none"> 3. Remove the 6 screws (9~14). 4. Remove the 1 connector (CN602). <p>•Use a wrench of the dimensions shown in the illustration above to remove nuts.</p> <p>A: 11 mm B: 16 mm C: longer than 22 mm</p> 
Remote switch		
Shield plate (L) and	Ref. No. 9	Removal of the AC IN P.C.B.
	Procedure 1→9	 <p>•Release the 2 claws.</p>

Ref. No. 10	Check of the main P.C.B.
Procedure 1→8→10	 <ol style="list-style-type: none"> 1. Remove the 9 screws (1~9).  <ol style="list-style-type: none"> 3. Remove the 3 screws (15~17). 4. Remove the front panel.
	 <ol style="list-style-type: none"> 2. Remove the 5 screws (10~14).  <ol style="list-style-type: none"> 5. Remove the main P.C.B. unit in the direction of the arrow A. 6. Reinstall the front panel to the main P.C.B.
Ref. No. 11	Removal of the power IC
Procedure 1→8→10→11	 <ol style="list-style-type: none"> 1. Unsolder the power IC. 2. Remove the 2 screws (1, 2). <p>•When mounting the power IC, apply silicon thermal compound (SZZ0L15 or equivalent) to the rear of the power IC.</p>
Ref. No. 12	Removal of the power transformer
Procedure 1→12	 <p>•Remove the 5 screws (1~5).</p>

Ref. No. 13	Removal of the volume LED P.C.B.
Procedure 1→2→13	 <ol style="list-style-type: none"> 1. Remove the 1 connector (CN602). 2. Release the 2 claws.

•Replacement of the Foot.

1. Remove the 4 heat melted posts on the chassis with a pair of diagonal pliers or similar tool.
2. To mount the foot (RKA0009-1) on the chassis, melt the 4 posts with a soldering iron.



SCHEMATIC DIAGRAM

(Parts list on page 20~22)

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

Notes:

- S1 : Power switch in "on" position.
- S101 : Input selector switch in "phono" position.
- S102 : Recording output selector switch in "tape 2/ DAT 1" position.
- S103-1 : Phono cartridge selector switch in "MM" position.
- S103-2 : Mode selector switch in "stereo" position.
- S103-3 : Loudness switch in "off" position.
- S301 : Tone control switch in "defeat" position.
- S302 : Power amplifier direct switch in "off" position.
- S501-1 : Speaker (A) selector switch in "on" position.
- S501-2 : Speaker (B) selector switch in "off" position.
- : Positive voltage lines.
- - - : Negative voltage lines.
- ⋯ : Phono Signal (Lch)
- ⋯ : Recording Signal

•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.

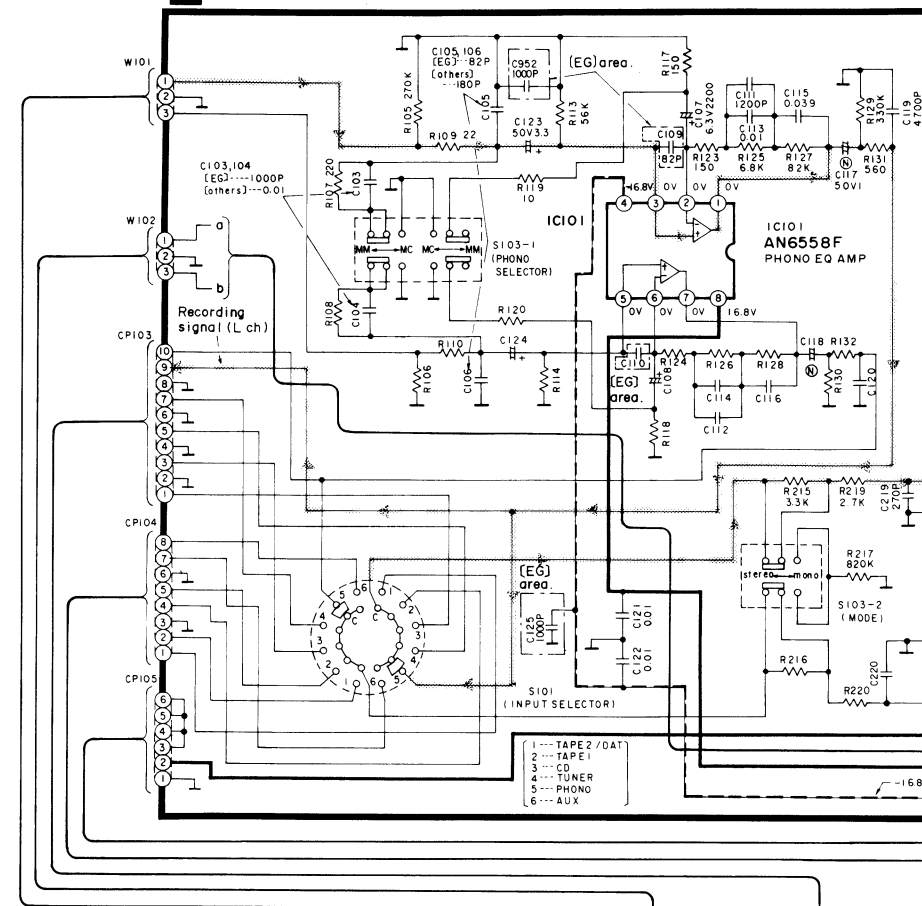
Important safety notice:

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

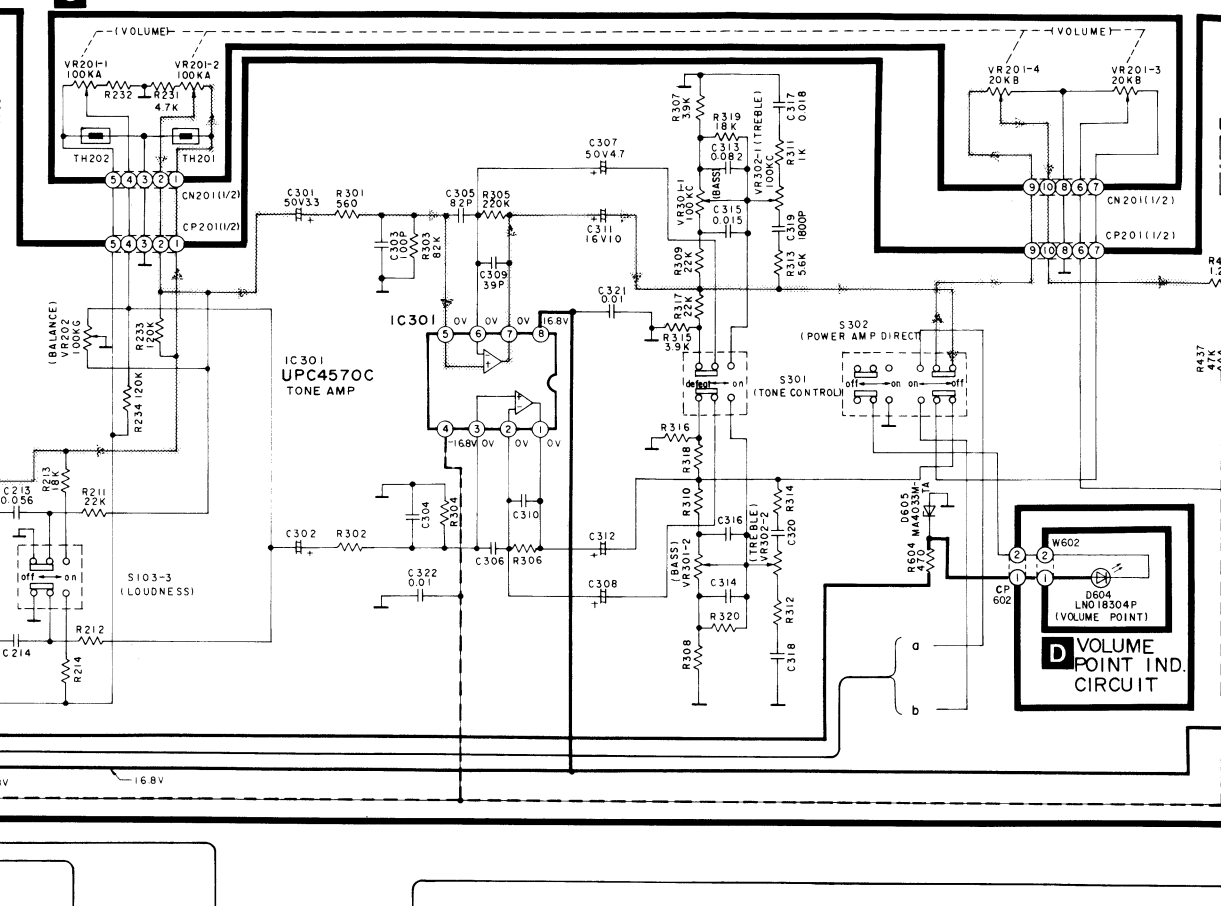
*Caution!

- 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.

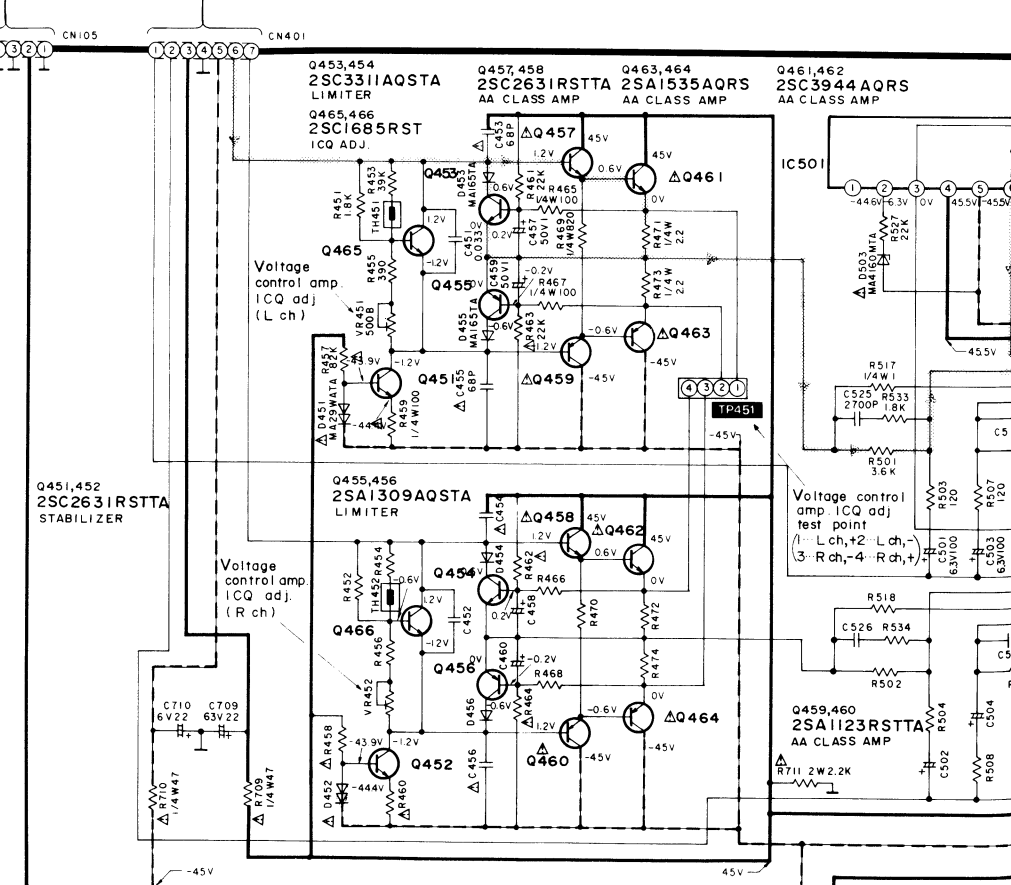
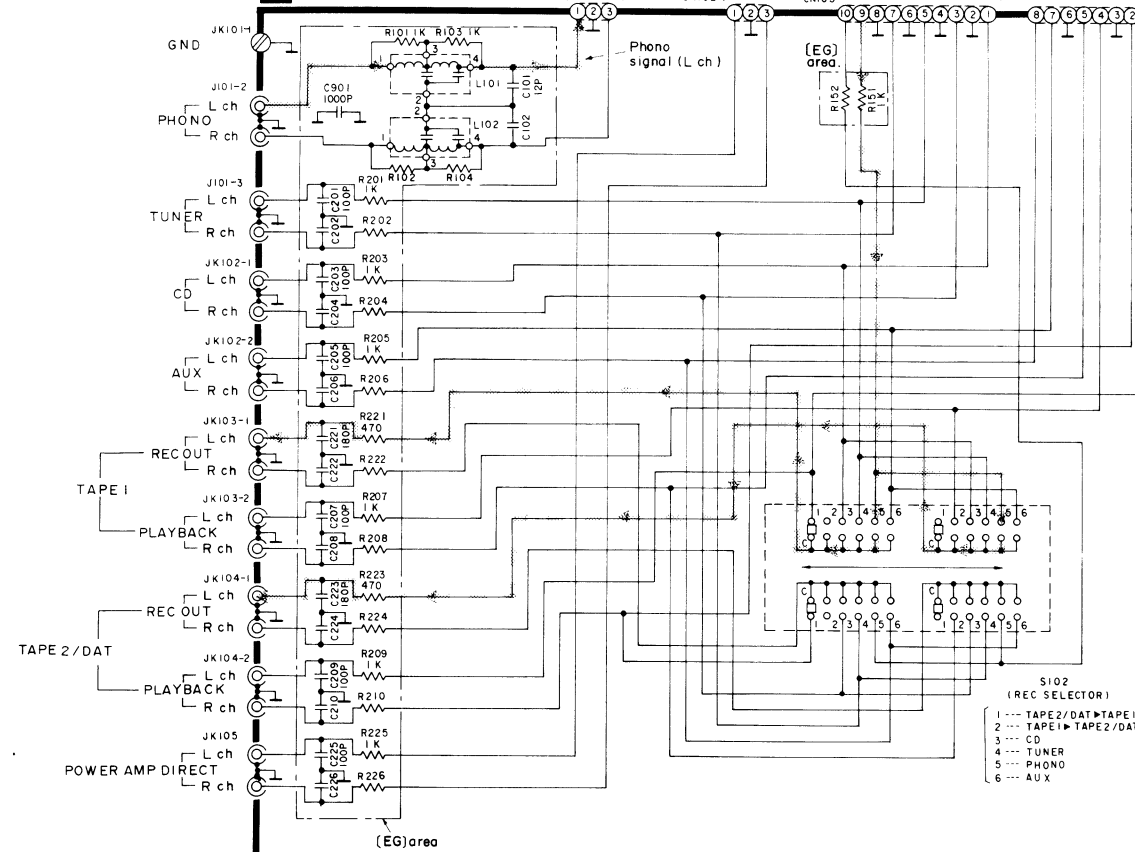
A PHONO EQ/TONE AMP CIRCUIT



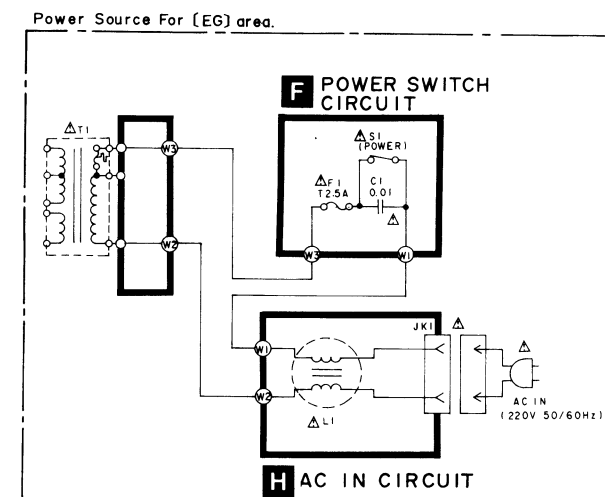
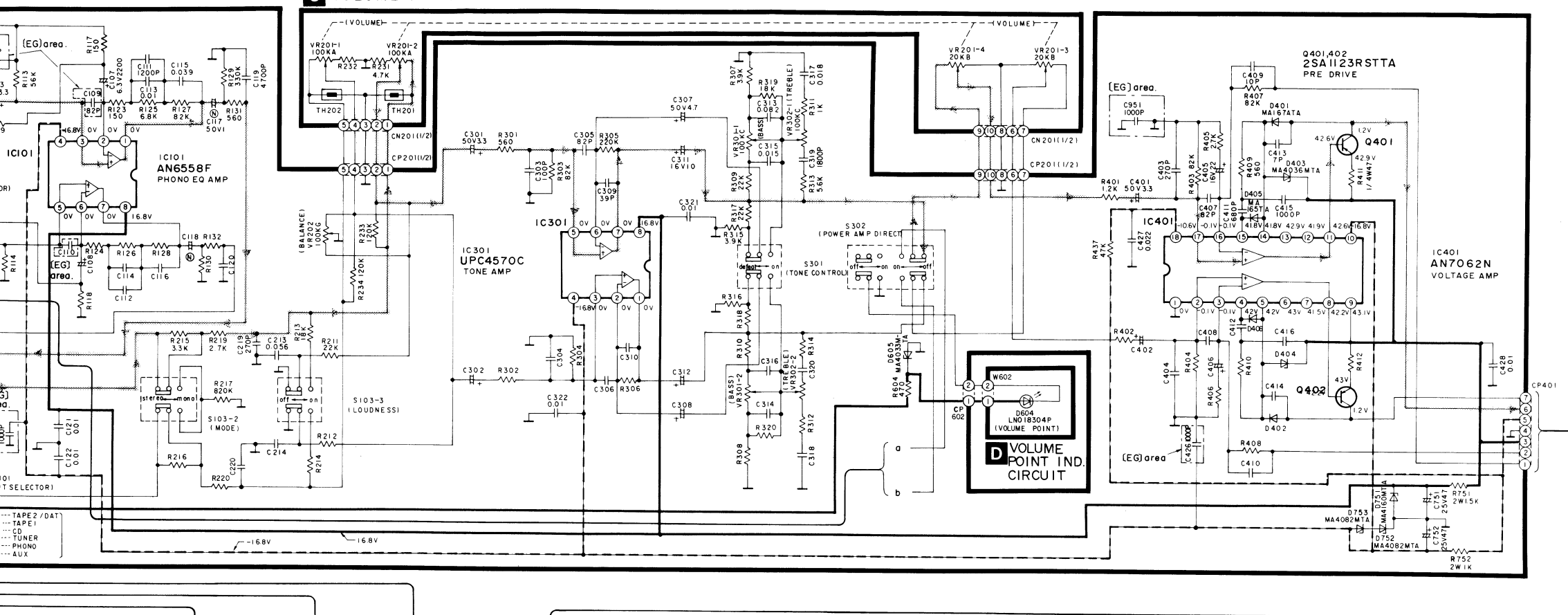
C VOLUME CIRCUIT



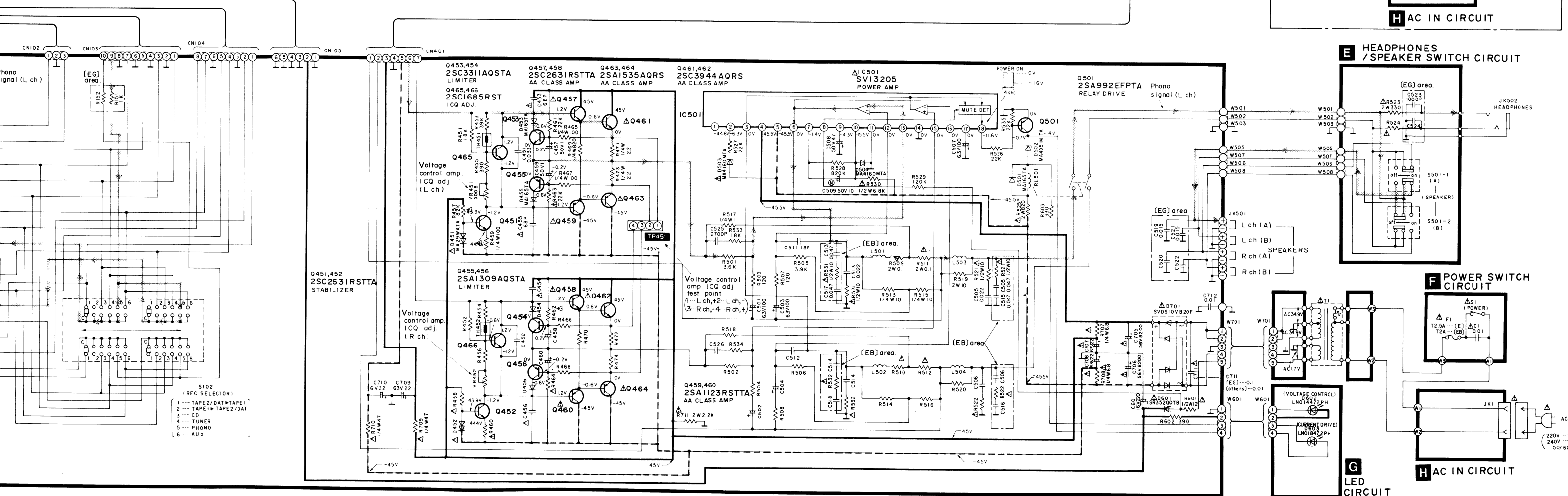
B MAIN CIRCUIT

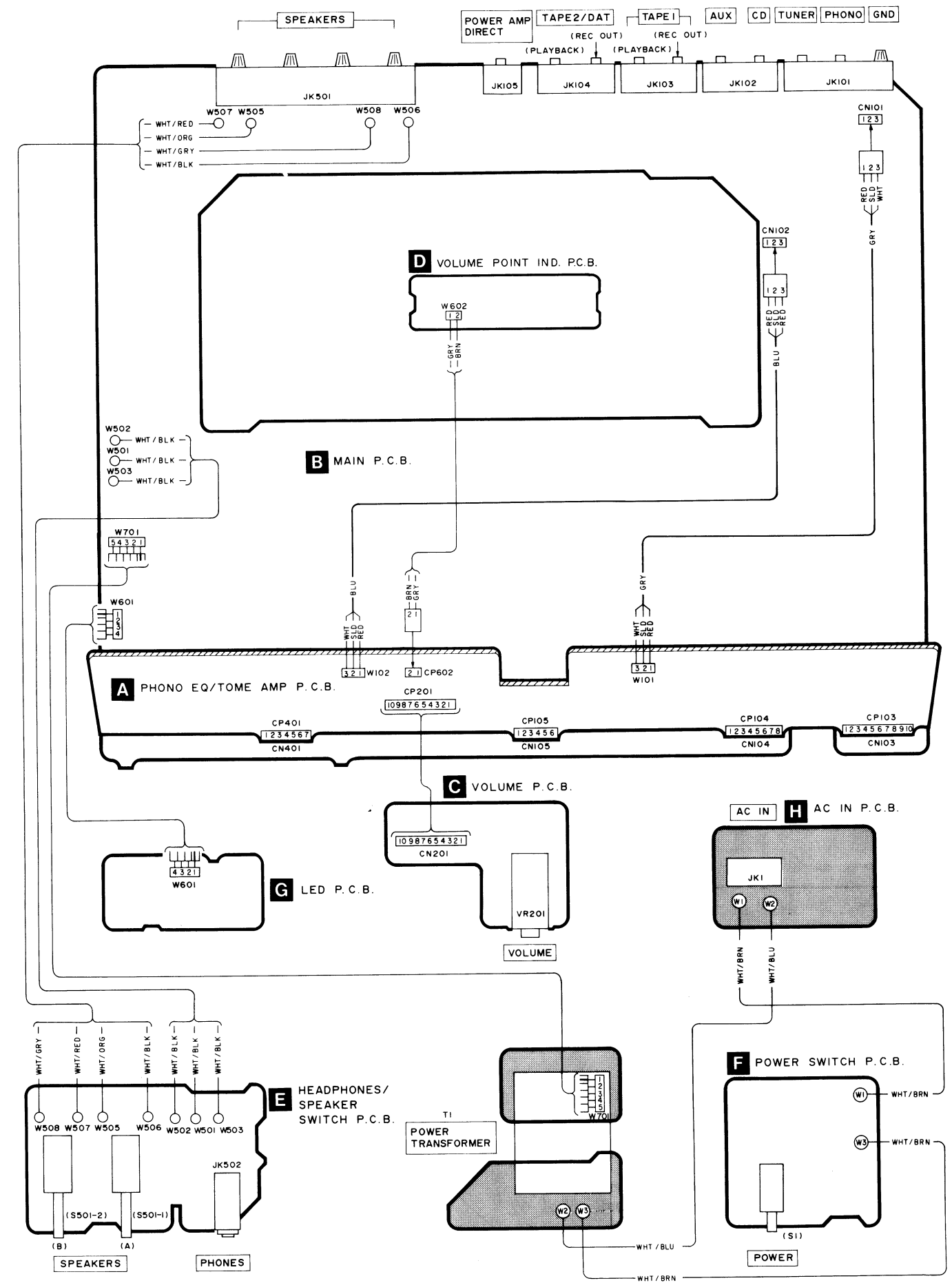
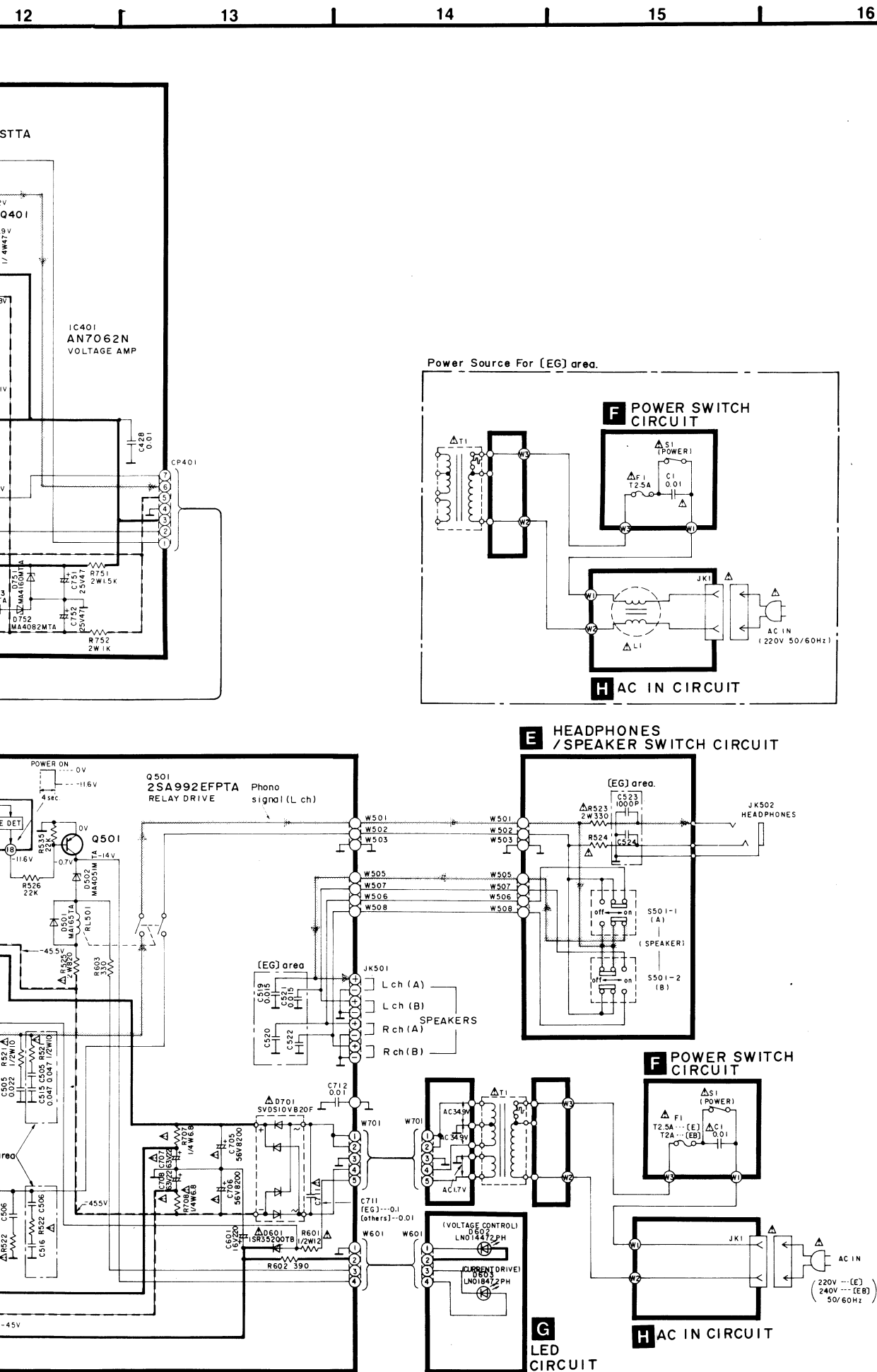


C VOLUME CIRCUIT

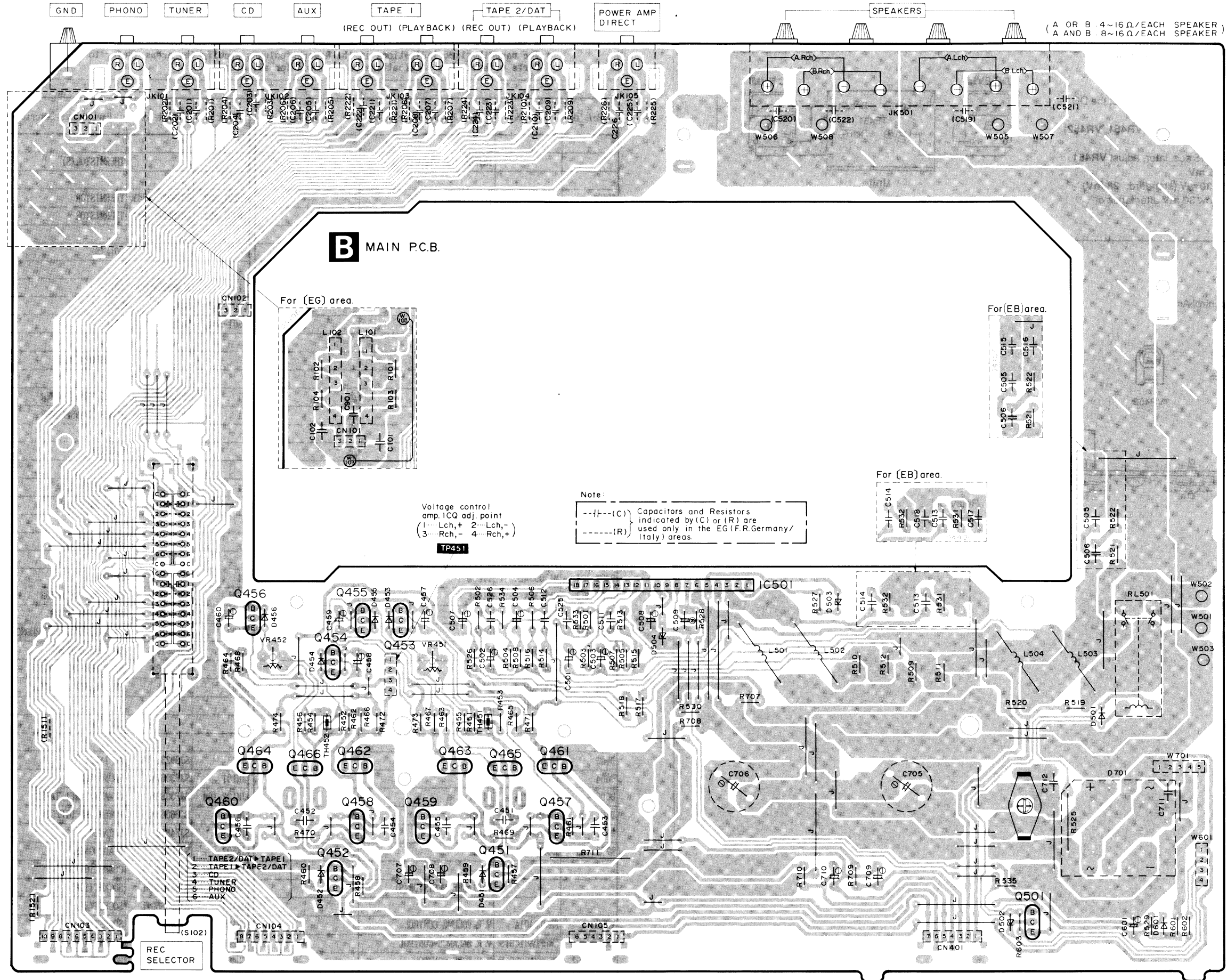


E HEADPHONES /SPEAKER SWITCH CIRCUIT

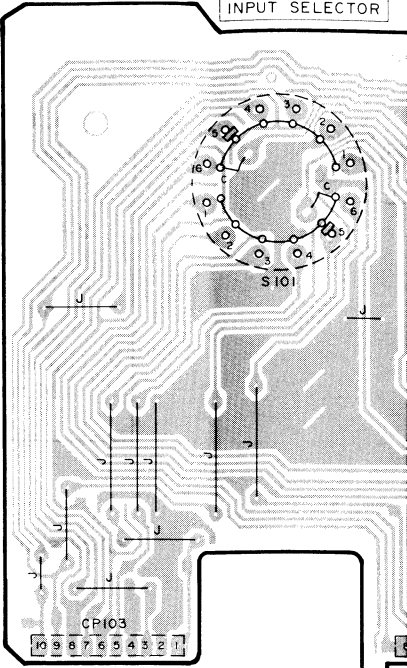




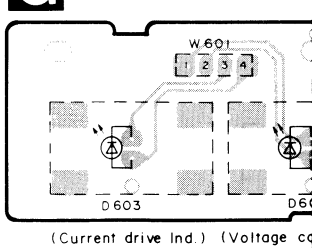
■ PRINTED CIRCUIT BOARDS (Parts list on pages 20~22)



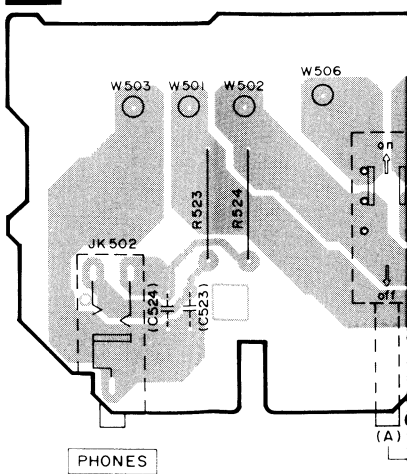
A PHONO EQ/TONE AMP P.C.B.

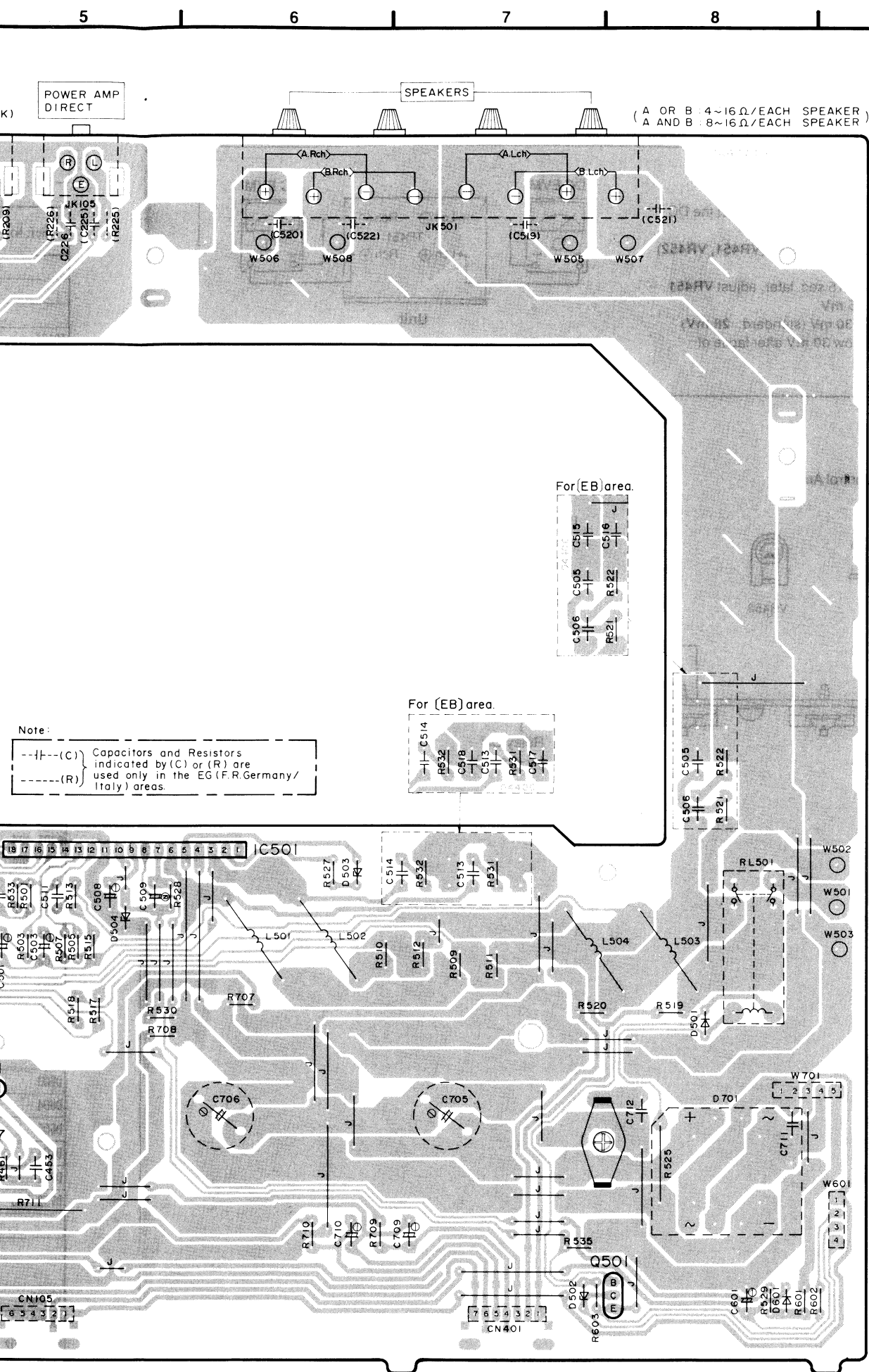


G LED P.C.B.

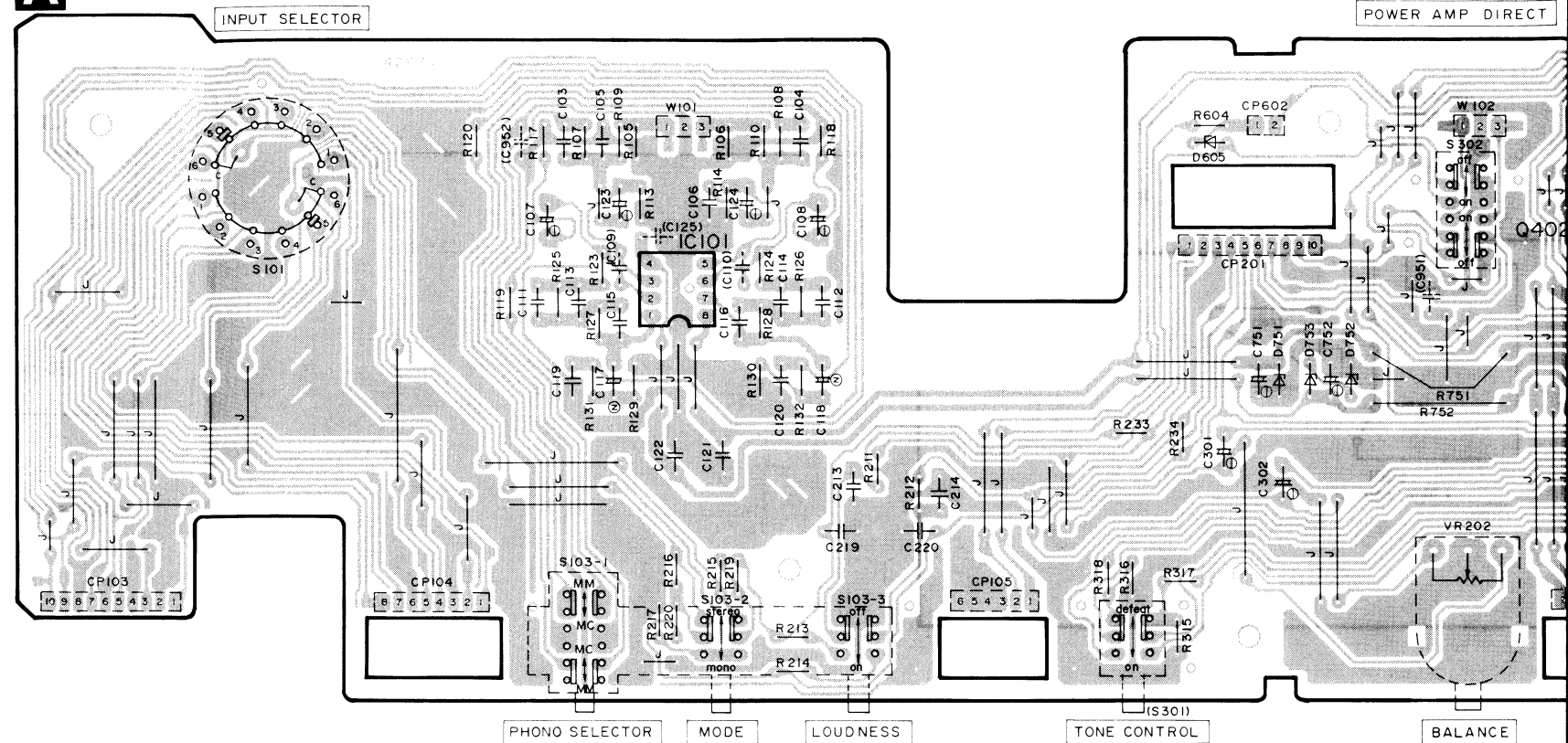


E HEADPHONES/SPEAKER SW

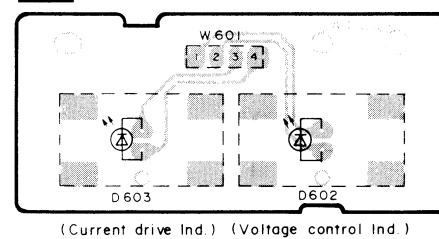




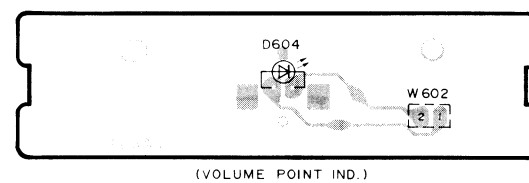
A PHONO EQ/TONE AMP P.C.B.



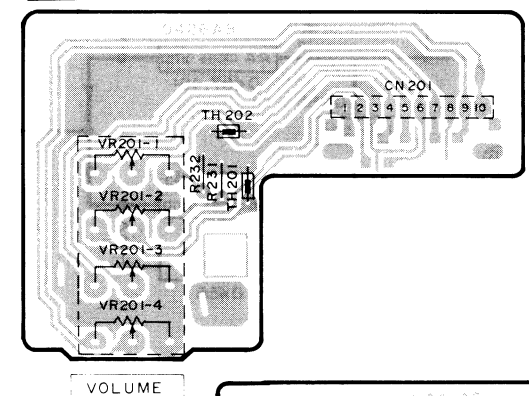
G LED P.C.B.



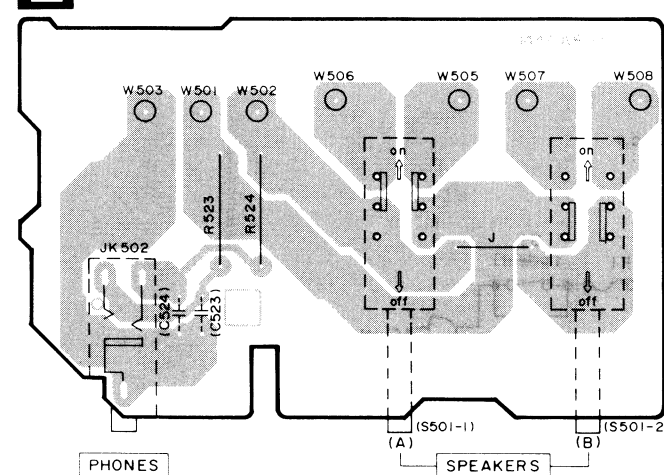
D VOLUME POINT IND. P.C.B.



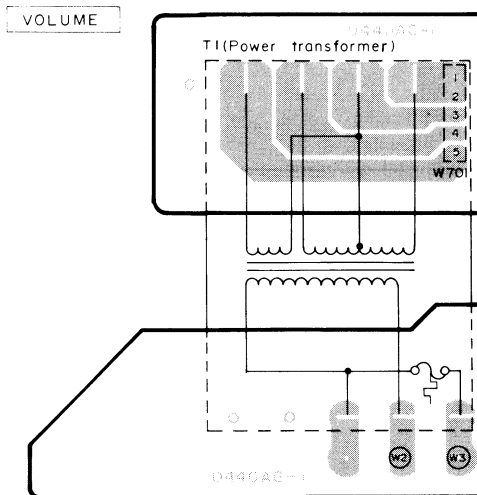
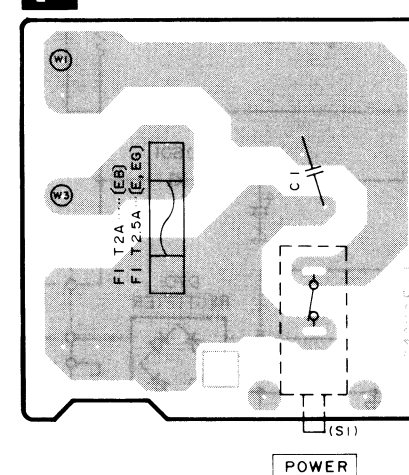
C VOLUME P.C.B.



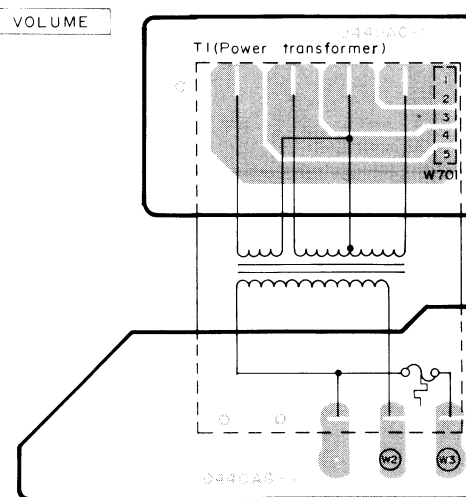
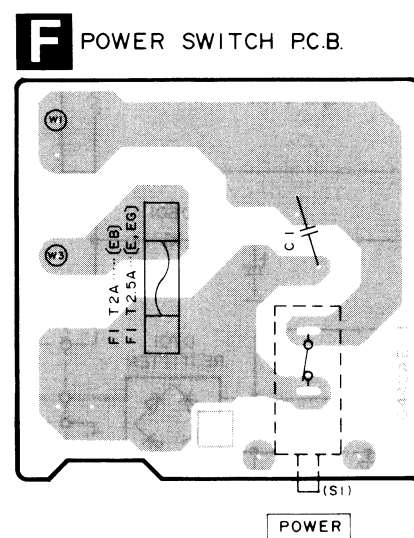
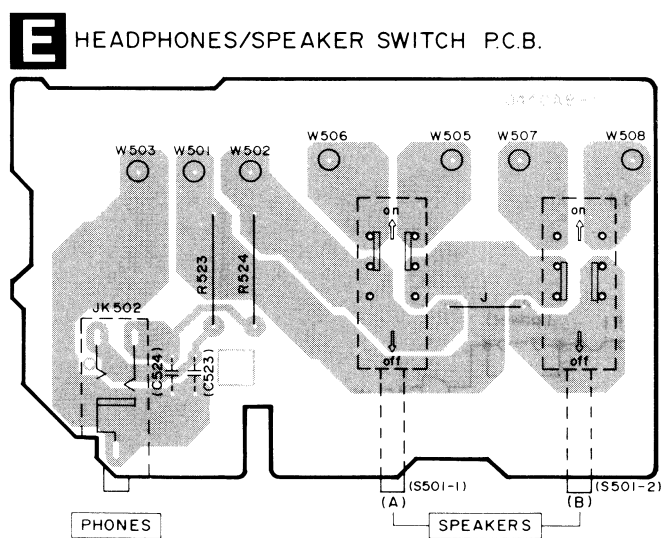
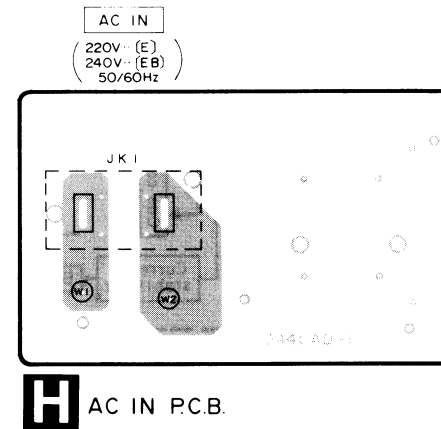
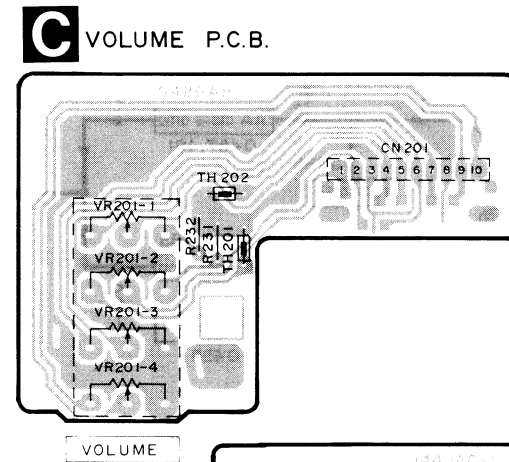
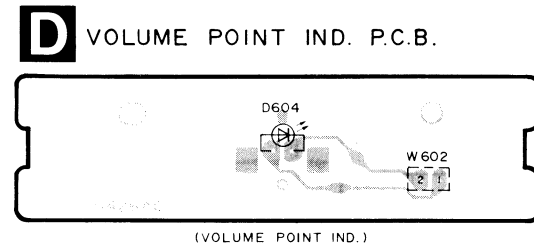
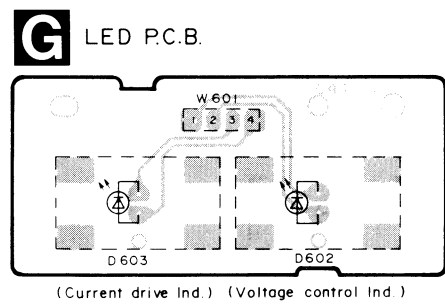
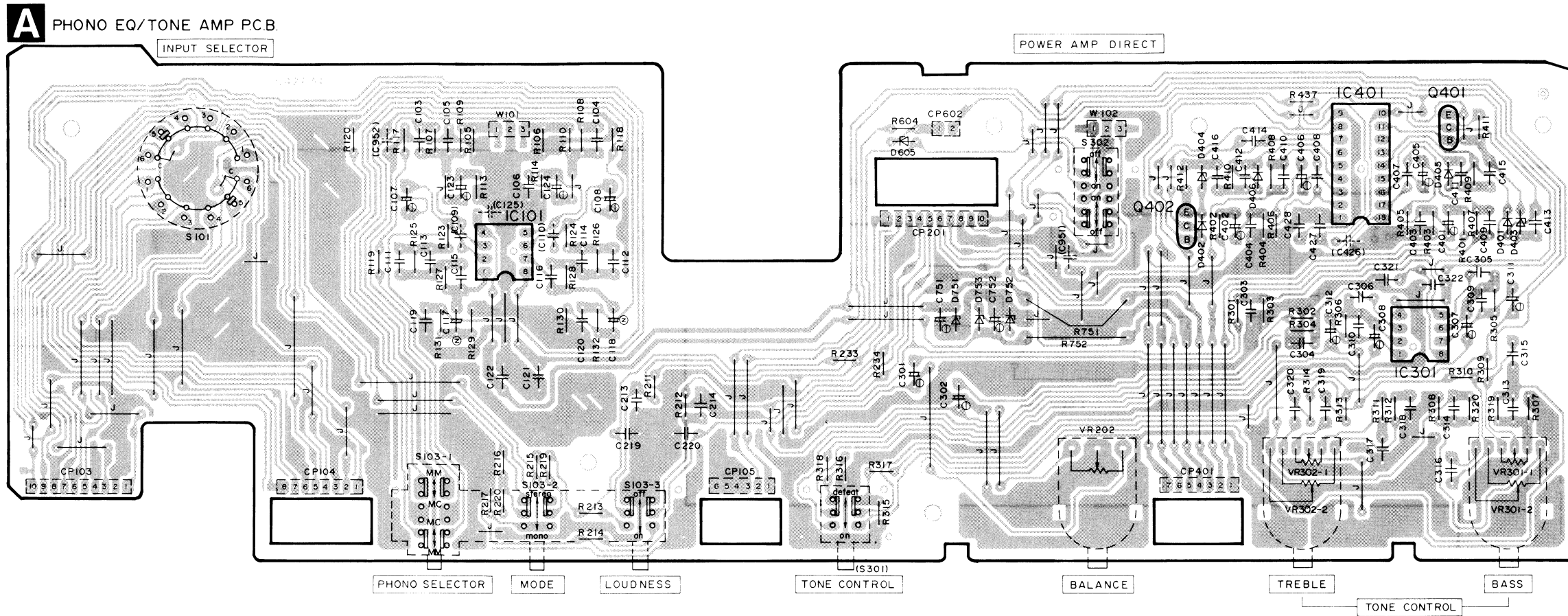
E HEADPHONES/SPEAKER SWITCH P.C.B.



F POWER SWITCH P.C.B.

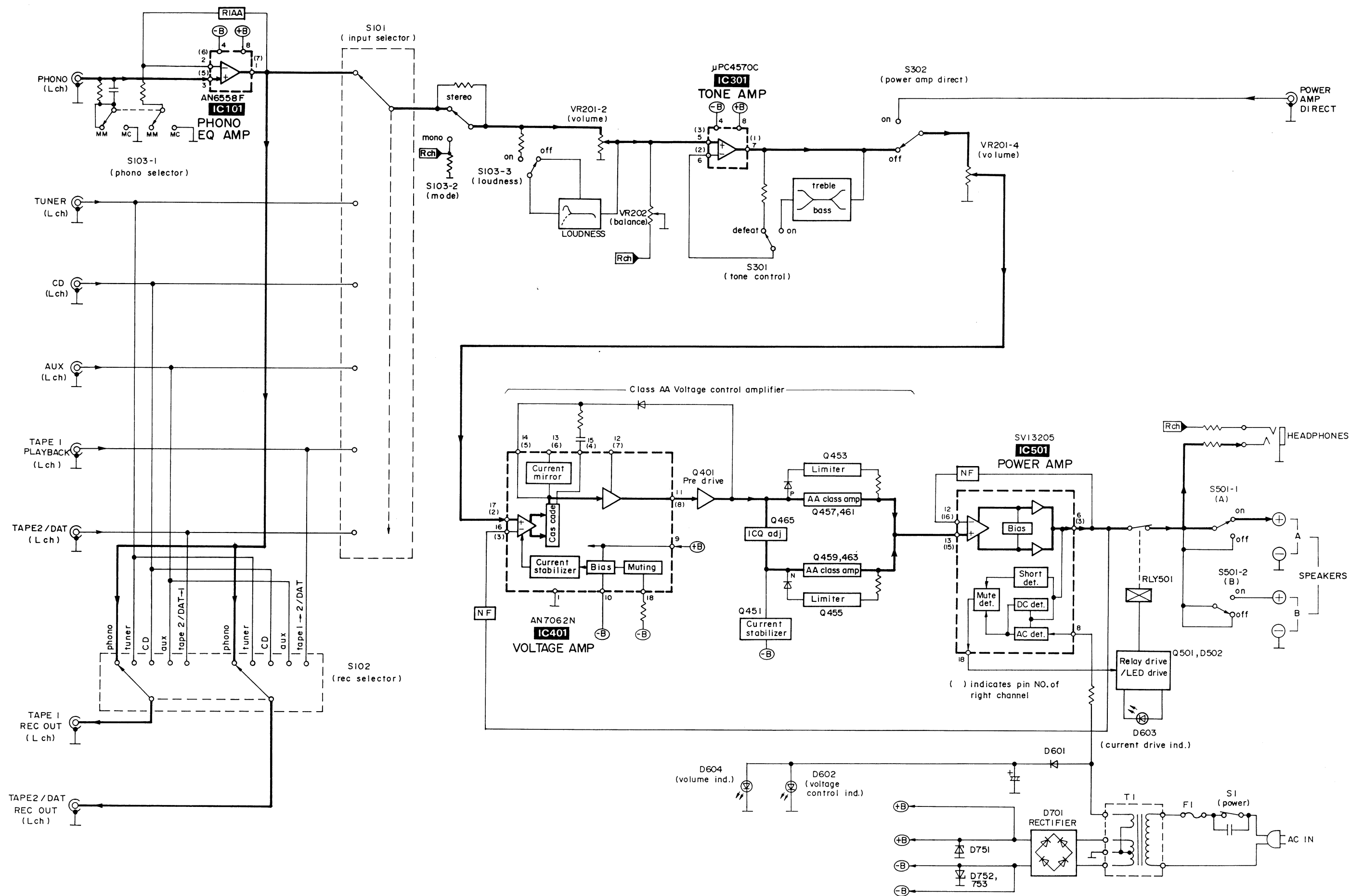


TERMINAL GUIDE OF IC'S TRANSISTORS AND DIODES



AN6558F UPC4570C	AN7062N
SVI3205	2SA1309AQRS 2SC3311AQSTA
2SA992EFPTA 2SA1123RSTTA 2SC1685RST 2SC2631RSTTA	
2SA1535AQRS 2SC3944AQRS	SVDS10VB20F
MA165TA MA167ATA MA29WATA 1SR35200TB	
MA4033MTA MA4036MTA MA4051MTA MA4082MTA	
MA4160MTA	P300DLF
LN014472PH LN018472PH	LN018304P

■ BLOCK DIAGRAM



■ MEASUREMENT

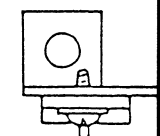
Control panel

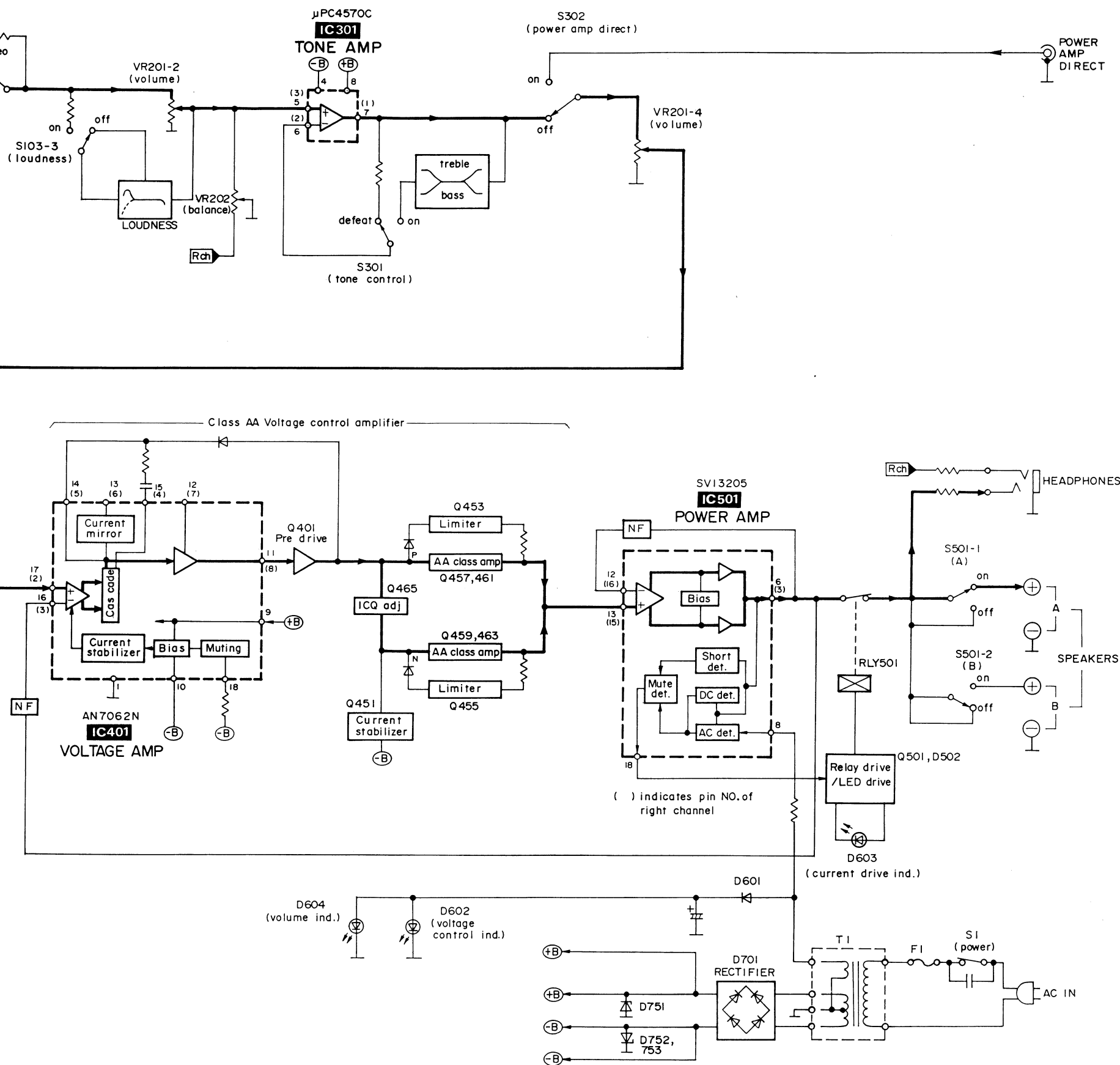
- Volume knob
- Main speaker

VOLTAGE ADJUSTMENT

1. Test equipment
2. EVM or
3. Complete counter
4. Turn on
5. and VR
6. Also, check
7. after lap
8. 60 min

•Adjustment





MEASUREMENTS AND ADJUSTMENTS

Control positions and equipment used.

- Volume knob ∞ (Minimum)
- Main speaker selector off

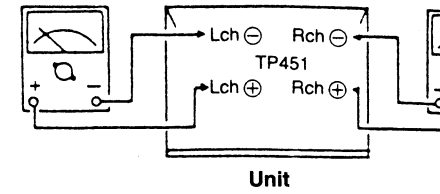
- Balance knob 0
- DC electronic voltmeter (EVM)

VOLTAGE CONTROL (V) AMP. IDLING (ICQ)

ADJUSTMENT

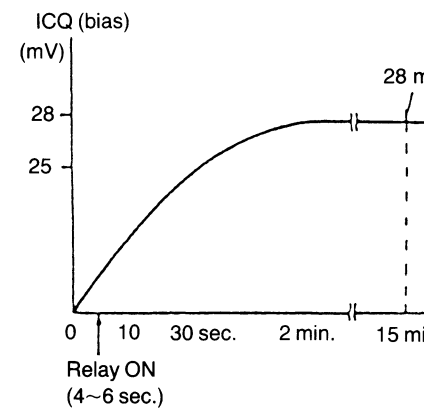
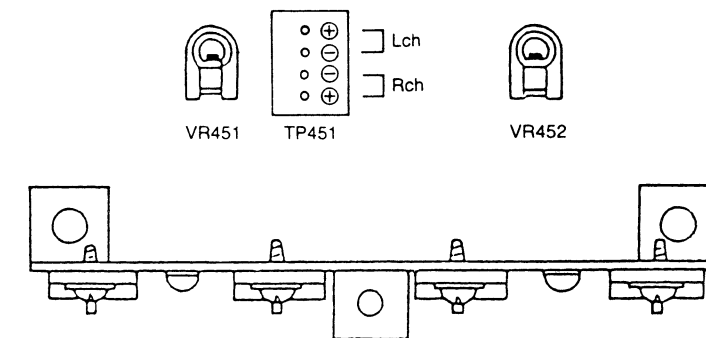
1. Test equipment connection is shown in figure. (Connect the DC EVM on both channels.)
2. Completely turn the (V) amp. adjusting volumes (VR451, VR452) counter-clockwise.
3. Turn ON the set when it is cold, and 15 sec. later, adjust VR451 and VR452 so that the voltage is 25 mV. Also, check that the voltage is 25~30 mV (standard: 28 mV) after lapse of 10~15 minutes. (Below 30 mV after lapse of 60 min.)

DC EVM



Adjustment points

Voltage control Amp.



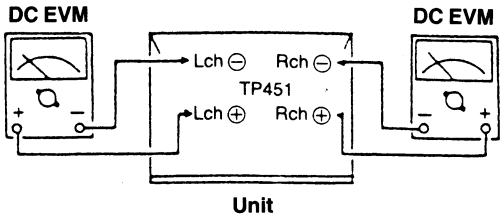
MEASUREMENTS AND ADJUSTMENTS

Control positions and equipment used.

- Volume knob ∞ (Minimum)
 - Main speaker selector off
- Balance knob 0
 - DC electronic voltmeter (EVM)

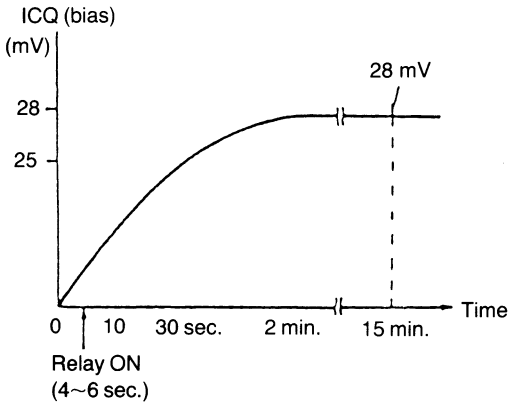
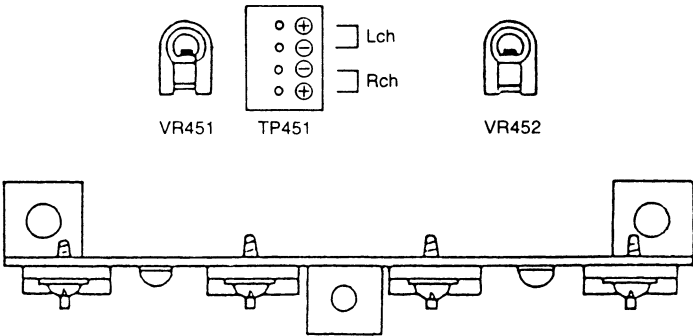
VOLTAGE CONTROL (V) AMP. IDLING (ICQ) ADJUSTMENT

1. Test equipment connection is shown in figure. (Connect the DC EVM on both channels.)
2. Completely turn the (V) amp. adjusting volumes (VR451, VR452) counter-clockwise.
3. Turn ON the set when it is cold, and 15 sec. later, adjust VR451 and VR452 so that the voltage is 25 mV. Also, check that the voltage is 25~30 mV (standard: 28 mV) after lapse of 10~15 minutes. (Below 30 mV after lapse of 60 min.)



Adjustment points

Voltage control Amp.



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.
* The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover 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 CIRCUIT(S)				THERMISTOR(S)	
IC101	AN6558F	I. C. PHONO EQ AMP.		TH201, 202	ERTD2ZHL104T	THERMISTOR	
IC301	UPC4570C	I. C. TONE AMP.		TH451, 452	ERTD2ZHL104T	THERMISTOR	
IC401	AN7062N	I. C. V AMP.				COIL(S)	
IC501	SV13205	I. C. POWER AMP.	Δ				
		TRANSISTOR(S)		L1	SLQZ650MH49	COIL	(EG) Δ
				L101, 102	SLM1Z33	COIL	(EG)
Q401, 402	2SA1123RSTTA	TRANSISTOR		L501-504	SLQY18G-10	COIL	
Q451, 452	2SC2631RSTTA	TRANSISTOR				TRANSFORMER(S)	
Q453, 454	2SC3311AQSTA	TRANSISTOR					
Q455, 456	2SA1309AQSTA	TRANSISTOR		T1	RFKCUV570E-K	POWER TRANSFORMER	(E, EG) Δ
Q457, 458	2SC2631RSTTA	TRANSISTOR	Δ	T1	RFKCUV570EBK	POWER TRANSFORMER	(EB) Δ
Q459, 460	2SA1123RSTTA	TRANSISTOR	Δ			FUSE(S)	
Q461, 462	2SC3944AQRS	TRANSISTOR	Δ				
Q463, 464	2SA1535AQRS	TRANSISTOR	Δ	F1	XBA2C25TB0	FUSE 250V 2. 5A	(E, EG) Δ
Q465, 466	2SC1685RST	TRANSISTOR		F1	XBA2C20TB0	FUSE 250V 2. 0A	(EB) Δ
Q501	2SA992EFPTA	TRANSISTOR				SWITCH(ES)	
		DIODE(S)					
D401, 402	MA167ATA	DIODE		S1	ESB8249V	SW, POWER	Δ
D403, 404	MA4036MTA	DIODE		S101	RSR6B001	SW, INPUT SELECTOR	
D405, 406	MA165TA	DIODE		S102	RSS6D001	SW, REC SELECTOR	
D451, 452	MA29WATA	DIODE	Δ	S103	ESB68106	SW, MODE/LOUDNESS/PHONO	
D453-456	MA165TA	DIODE		S301	ESB68107	SW, TONE COTNROL	
D501	MA165TA	DIODE		S302	ESB68109	SW, POWER AMP. DIRECT	
D502	MA4051MTA	DIODE		S501	RSP2002	SW, SPEAKER SELECTOR	
D503	MA4160MTA	DIODE	Δ			JACK(S)	
D504	MA4160MTA	DIODE					
D601	1SR35200TB	DIODE	Δ	JK1	SJS9231-1B	AC INLET	Δ
D602	LN014472PH	DIODE		JK101	SJF3067NJ	PHONO/TUNER	
D603	LN018472PH	DIODE		JK102-104	SJF3069N	CD/AUX/TAPE1/TAPE2	
D604	LN018304P	DIODE		JK105	SJF3068NJ	POWER AMP DIRECT	
D605	MA4033MTA	DIODE		JK501	SJF4819	SPEAKER	
D701	SVDS10VB20F	DIODE	Δ	JK502	SJJD19	HEADPHONES	
D751	MA4160MTA	DIODE		CN101, 102	SJT3319	CONNECTOR(3P)	
D752, 753	MA4082MTA	DIODE		CN103	SJS51080WL	SOCKET(10P)	
		VARIABLE RESISTOR(S)		CN104	SJS50880WL	SOCKET(8P)	
VR201	RRV16J01A	V. R, VOLUME CONTROL		CN105	SJS50680WL	SOCKET(6P)	
VR202	EWHFDA014G15	V. R, BALANCE CONTROL		CN201	SJS51080WL	SOCKET(10P)	
VR301, 302	EW2XA000C15	V. R, TONE CONTROL		CN401	SJS50780WL	SOCKET(7P)	
VR451, 452	EVNDXAA00B52	V. R, ICQ ADJ.		CP103	SJT31047WL	CONNECTOR(10P)	

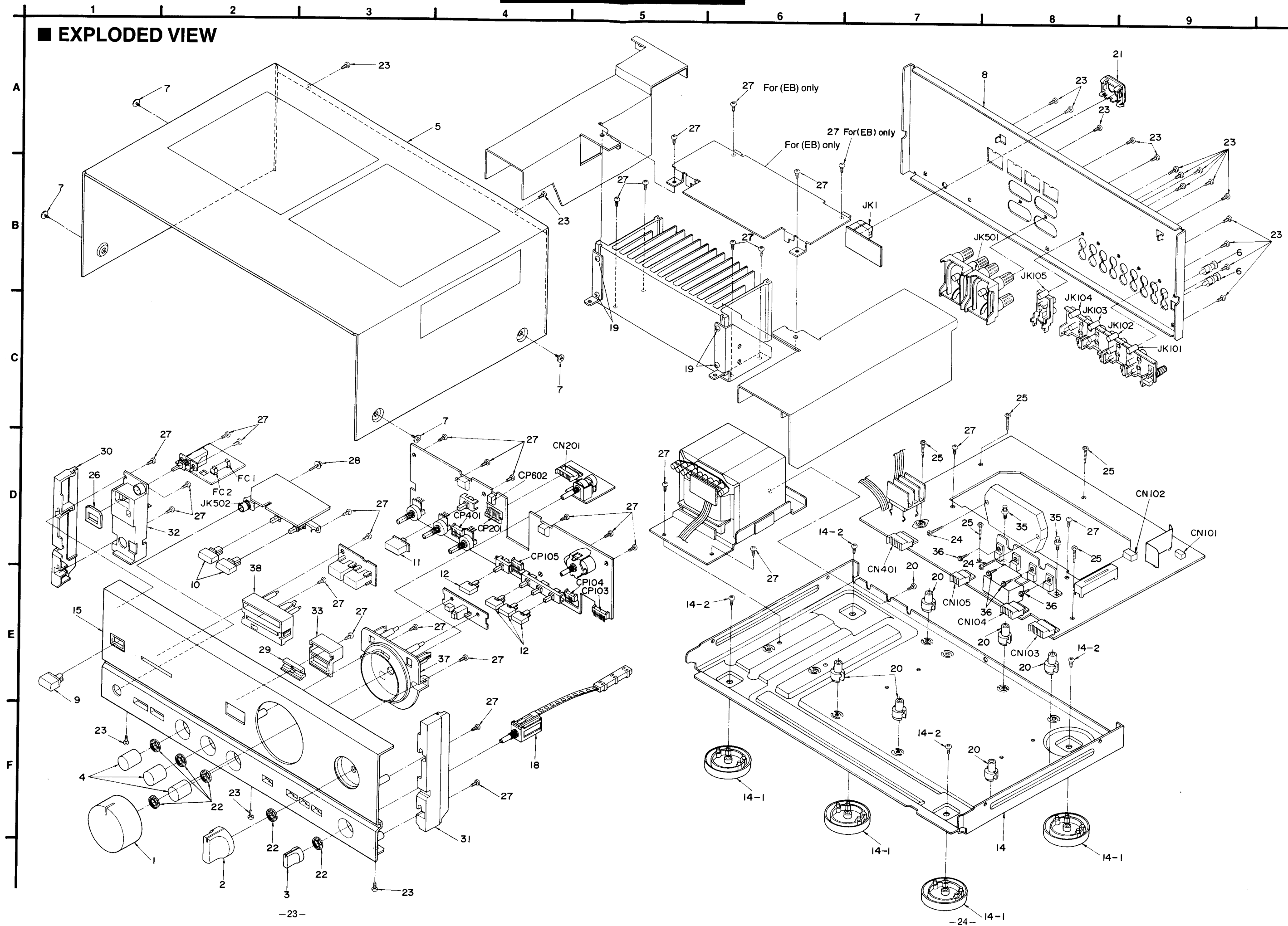
Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
CP104	SJT30847WL	CONNECTOR (8P)				FUSE HOLDER(S)	
CP105	SJT30647WL	CONNECTOR (6P)					
CP201	SJT31047WL	CONNECTOR (10P)		FC1, 2	EYF52BC	FUSE HOLDER	
CP401	SJT30747WL	CONNECTOR (7P)				RELAY	
CP602	SJT3215	CONNECTOR (2P)					
				RL501	SSY134	RELAY	

Notes : * Capacity valuse are in microfarads (uF) unless specified otherwise,P=Pico-farads (pF) F=Farads (F)
* Resistance values are in ohms,unless specified otherwise,1K=1,000 (OHM) , 1M=1,000k(OHM)

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
		RESISTORS						
R101-104	ERDS2TJ102T	1/4W 1K (EG)	R307, 308	ERDS2TJ392T	1/4W 3.9K	R517, 518	ERDFS2VJ1R0T	1/4W 1
R105, 106	ERDS2TJ274T	1/4W 270K	R309, 310	ERDS2TJ223T	1/4W 22K	R519, 520	ERDFS2VJ100T	1/4W 10
R107, 108	ERDS2TJ221T	1/4W 220	R311, 312	ERDS2TJ102T	1/4W 1K	R521, 522	ERDS1FVJ100T	1/2W 10 Δ
R109, 110	ERDS2TJ220T	1/4W 22	R313, 314	ERDS2TJ562T	1/4W 5.6K	R523, 524	ERG2SJ331H	2W 330 Δ
R113, 114	ERDS2TJ563T	1/4W 56K	R315, 316	ERDAS3G392T	1/4W 3.9K	R525	ERG2SJ102H	2W 1K Δ
R117, 118	ERDS2TJ151T	1/4W 150	R317, 318	ERDAS3G223T	1/4W 22K	R526, 527	ERDS2TJ223T	1/4W 22K
R119, 120	ERDS2TJ100T	1/4W 10	R319, 320	ERDS2TJ183T	1/4W 18K	R528	ERDS2TJ824T	1/4W 820K
R123, 124	ERDS2TJ151T	1/4W 150	R401, 402	ERDS2TJ122T	1/4W 1.2K	R529	ERDS2TJ124T	1/4W 120K
R125, 126	ERDS2TJ682T	1/4W 6.8K	R403, 404	ERDS2TJ823T	1/4W 82K	R530	ERDS1FVJ682T	1/2W 6.8K Δ
R127, 128	ERDS2TJ823T	1/4W 82K	R405, 406	ERDAS3G272T	1/4W 2.7K	R531, 532	ERDS1FVJ100T	1/2W 10 Δ
R129, 130	ERDS2TJ334T	1/4W 330K	R407, 408	ERDAS3G823T	1/4W 82K	R533, 534	ERDS2TJ182T	1/4W 1.8K
R131, 132	ERDS2TJ561T	1/4W 560	R409, 410	ERDS2TJ561T	1/4W 560	R535	ERDS2TJ223T	1/4W 22K
R151, 152	ERDS2TJ102T	1/4W 1K (EG)	R411, 412	ERDFS2VJ470T	1/4W 47	R601	ERDS1FVJ120T	1/2W 12 Δ
R201-210	ERDS2TJ102T	1/4W 1K (EG)	R437	ERDS2TJ473T	1/4W 47K	R602	ERDS2TJ391T	1/4W 390
R211, 212	ERDAS3G223T	1/4W 22K	R451, 452	ERDS2TJ182T	1/4W 1.8K	R603	ERDS2TJ331T	1/4W 330
R213, 214	ERDS2TJ183T	1/4W 18K	R453, 454	ERDS2TJ393T	1/4W 39K	R604	ERDS2TJ471T	1/4W 470
R215, 216	ERDS2TJ332T	1/4W 3.3K	R455, 456	ERDS2TJ391T	1/4W 390	R707, 708	ERDFS2VJ6R8T	1/4W 6.8 Δ
R217	ERDS2TJ824T	1/4W 820K	R457, 458	ERDS2TJ823T	1/4W 82K Δ	R709, 710	ERDFS2VJ470T	1/4W 47 Δ
R219, 220	ERDAS3G272T	1/4W 2.7K	R459, 460	ERDFS2VJ101T	1/4W 100 Δ	R711	ERG2ANJP222S	2W 2.2K Δ
R221-224	ERDS2TJ471T	1/4W 470 (EG)	R461-464	ERDS2TJ223T	1/4W 22K Δ	R751	ERG2ANJP152S	2W 1.5K
R225, 226	ERDS2TJ102T	1/4W 1K (EG)	R465-468	ERDFS2VJ101T	1/4W 100	R752	ERG2ANJP102S	2W 1K
R231, 232	ERDAS3G472T	1/4W 4.7K	R469, 470	ERDFS2VJ821T	1/4W 820			CAPACITORS
R233, 234	ERDAS3G124T	1/4W 120K	R471-474	ERDFS2VJ2R2T	1/4W 2.2			
R301, 302	ERDAS3G561T	1/4W 560	R501, 502	ERDS2TJ362T	1/4W 3.6K	C1	ECKWKC103PF2	400V 0.01U Δ
R303, 304	ERDS2TJ823T	1/4W 82K	R503, 504	ERDS2TJ121T	1/4W 120	C101, 102	ECBT1H120J5	50V 12P (EG)
R305, 306	ERDS2TJ224T	1/4W 220K	R505, 506	ERDS2TJ392T	1/4W 3.9K	C103, 104	ECKR1H103ZF5	50V 0.01U (E, EB)
			R507, 508	ERDS2TJ121T	1/4W 120	C103, 104	ECKR1H102KB5	50V 1000P (EG)
			R509-512	RREEMKR10VC	2W 0.1 Δ	C105, 106	ECBT1H181KB5	50V 180P (E, EB)
			R513-516	ERDFS2VJ100T	1/4W 10			

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks			
C105, 106	ECBT1H820KB5	50V 82P (EG)	C523, 524	ECBT1H102KB5	50V 1000P (EG)			
C107, 108	ECEA0JU222E	6.3V 2200U	C525, 526	ECQB1H272JZ3	50V 2700P			
C109, 110	ECBT1H820KB5	50V 82P (EG)	C529	ECEA1HK010B	50V 1U			
C111, 112	ECQM1H122KV3	50V 1200P	C601	ECEA1CU221B	16V 220U			
C113, 114	ECQM1H103KV3	50V 0.01U	C705, 706	ECESS56V822UG	56V 8200U Δ			
C115, 116	ECQV1H393JZ3	50V 0.039U	C707, 708	ECEA1JU220B	63V 22U Δ			
C117, 118	UES1H010M1TA	50V 1U	C709, 710	ECEA1JU220B	63V 22U			
C119, 120	ECQM1H472KV3	50V 4700P	C711	ECKR2H103ZU	500V 0.01U Δ (E, EB)			
C121, 122	ECKR1H103ZF5	50V 0.01U	C711	ECQE2104KF3	200V 0.1U Δ (EG)			
C123, 124	ECA1HPXS3R3B	50V 3.3U	C712	ECKR1H103ZF5	50V 0.01U			
C125	ECBT1H102KB5	50V 1000P (EG)	C751, 752	ECA1EPXS470B	25V 47U			
C201-210	ECBT1H101KB5	50V 100P (EG)	C901	ECKR1H102KB5	50V 1000P (EG)			
C213, 214	ECQV1H563JZ3	50V 0.056U	C951, 952	ECBT1H102KB5	50V 1000P (EG)			
C219, 220	ECBT1H271KB5	50V 270P						
C221-224	ECBT1H181KB5	50V 180P (EG)						
C225, 226	ECBT1H101KB5	50V 100P (EG)						
C301, 302	ECA1HPXS3R3B	50V 3.3U						
C303, 304	ECBT1H101KB5	50V 100P						
C305, 306	ECBT1H820KB5	50V 82P						
C307, 308	ECA1HPXS47B	50V 4.7U						
C309, 310	ECBT1H390J5	50V 39P						
C311, 312	ECA1CPXS100B	16V 10U						
C313, 314	ECQV1H823JZ3	50V 0.082U						
C315, 316	ECQM1H153KV3	50V 0.015U						
C317, 318	ECQM1H183KV3	50V 0.018U						
C319, 320	ECQM1H182KV3	50V 1800P						
C321, 322	ECKR1H103ZF5	50V 0.01U						
C401, 402	ECA1HPXS3R3B	50V 3.3U						
C403, 404	ECBT1H271KB5	50V 270P						
C405, 406	ECA1CPXS220B	16V 22U						
C407, 408	ECBT1H820KB5	50V 82P						
C409, 410	ECBT1H100J5	50V 10P						
C411, 412	ECBT1H681KB5	50V 680P						
C413, 414	ECCR2H070D5	500V 7P						
C415, 416	ECQM1H102KV3	50V 1000P						
C426	ECBT1H102KB5	50V 1000P (EG)						
C427	ECKR1H223ZF5	50V 0.022U						
C428	ECKR1H103ZF5	50V 0.01U						
C451, 452	ECKR1H333ZF5	50V 0.033U						
C453-456	ECCR2H680K5	500V 68P Δ						
C457-460	ECEA1HK010B	50V 1U						
C501-504	ECA0JPXS101B	6.3V 100U						
C505, 506	ECKR1H223ZF5	50V 0.022U (E, EG)						
C505, 506	ECKR1H473ZF5	50V 0.047U (EB)						
C507	ECEA0JK101B	6.3V 100U						
C508	ECEA1HU470B	50V 47U						
C509	ECEA1HN100SB	50V 10U						
C511, 512	ECBT1H180J5	50V 18P						
C513, 514	ECKR1H223ZF5	50V 0.022U (E, EG)						
C513, 514	ECKR1H473ZF5	50V 0.047U (EB)						
C515-518	ECKR1H473ZF5	50V 0.047U (EB)						
C519-522	ECQM1H153KV3	50V 0.015 (EG)						

EXPLODED VIEW



Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET PARTS		29	RGK0097	ORNAMENT (GOLD LINE)	
				30	RGK0109-K	SIDE ORNAMENT (L)	
				31	RGK0108-K	SIDE ORNAMENT (R)	
1	RGW0002-2K	VOLUME KNOB		32	RMRO144	HOLDER	
2	RGW0029-K	INPUT SELECTOR KNOB		33	RMRO137-K	HOLDER	
3	RGW0027-2K	REC SELECTOR KNOB		35	SHR415	LATCH	
4	RGW0030-K	BALANCE/TONE KNOB		36	XTW3+8T	SCREW	
5	RKM0128-K	CABINET		37	RFKNUV570EK1	VOLUME ORNAMENT	
6	SJPA11-1	SHORTING PIN		38	RFKNUV470EK2	INDICATOR ORNAMENT	
7	SNE2129-1	SCREW					
8	RGR0021D-A	REAR PANEL	(E)			PACKING MATERIAL	
8	RGR0021D-C	REAR PANEL	(EB)				
8	RGR0021D-B	REAR PANEL	(EG)	P1	RPG0553	CARTON BOX	
9	RGU0030	POWER BUTTON		P2	SPS5185	PAD (POWER CORD)	
10	RGU0118-K	SPEAKER SELECT BUTTON		P3	SPS5257-2	PAD (FRONT)	
11	RGU0119-K	POWER AMP DIRECT BUTTON		P4	SPS5258-2	PAD (REAR)	
12	RGU0120-K	SELECT BUTTON		P5	SPP701	PROTECTION COVER	
14	RFKJUV470E-K	CHASSIS ASS'Y					
14-1	RKA0009-1	FOOT				ACCESSORIES	
14-2	XTB3+6J	SCREW					
15	RFKGV570E-K	FRONT PANEL ASS'Y		A1	RQF0715	INSTRUCTIONS MANUAL ASS'Y	(E)
18	RSQ0004	REC SELECTOR		A1	RQF0716	INSTRUCTIONS MANUAL ASS'Y	(EB)
19	XTB3+8J	SCREW		A1	RQF0717	INSTRUCTIONS MANUAL ASS'Y	(EG)
20	SHE187-2	HOLDER		A1-1	RQA0013	WARRANTY CARD	
21	SJS9231A	AC INLET COVER		A1-2	RQCB0169	SERVICENTOR LIST	
22	SNE4021-1	NUT		A1-3	RFKSUV570E-K	INSTRUCTIONS MANUAL	(E)
23	XTBS3+8JFZ1	SCREW		A1-3	RQT0707-B	INSTRUCTIONS MANUAL	(EB)
24	XTB3+16JFZ	SCREW		A1-3	RQT0620-D	INSTRUCTIONS MANUAL	(EG)
25	XTB3+20JFZ	SCREW		A1-4	RQCS0009	CAUTION NOTE for FTZ	(EG)
26	RGQ0006-1	ORNAMENT		A2	SFDAC05E03	POWER CORD	△ (E, EG)
27	XTB3+8JFZ	SCREW		A2	SJA193	POWER CORD	△ (EB)
28	XTWS3+8T	SCREW					