

# Service Manual

Stereo Integrated Amplifier

## Amplifier SU-V55A

**Color**

(S) .....Silver Type  
(K) .....Black Type

**Area**

Color	Area
(S)(K)	(E) .....Continental Europe.
(S)(K)	(Ei) .....Italy.
(S)(K)	(EG) .....F.R.Germany.
(S)(K)	(EB) .....Belgium.
(S)(K)	(EK) .....United Kingdom.
(S)(K)	(EF) .....France.
(S)(K)	(EH) .....Holland.
(S)(K)	(XL) .....Australia.
(S)(K)	(XA) .....Asia, Latin America, Middle Near East, Africa and Oceania.

**SPECIFICATIONS**

(DIN 45 500)

**■ AMPLIFIER SECTION**

20 Hz ~ 20 kHz continuous power output both channels driven	2 x 60 W (8Ω)
1 kHz continuous power output both channels driven	2 x 100 W (4Ω)
Total harmonic distortion	
rated power at 20 Hz ~ 20 kHz	0.002% (8Ω)
rated power at 1 kHz	0.005% (4Ω)
half power at 20 Hz ~ 20 kHz	0.0009% (8Ω)
half power at 1 kHz	0.002% (8Ω)
Intermodulation distortion	
rated power at 250 Hz:8 kHz = 4:1, 8Ω	0.005%
rated power at 60 Hz:7 kHz = 4:1, SMPTE, 8Ω	0.005%
Power bandwidth	
both channels driven, -3dB	5 Hz ~ 60 kHz (8Ω, 0.03%)
Residual hum and noise	0.8 mV
Damping factor	30 (4Ω), 60 (8Ω)
Input sensitivity and impedance	
PHONO MM	2.5mV/47 kΩ
PHONO MC	170 μV/220 Ω
TUNER, CD, AUX, TAPE 1/DA TAPE, TAPE 2/EXT	150mV/22 kΩ
PHONO maximum input voltage (1 kHz, RMS)	
MM	160 mV
MC	12 mV
S/N	
rated power(4Ω)	
PHONO MM	77 dB (83 dB: IHF, A)
PHONO MC	64 dB (65 dB: IHF, A)
TUNER, CD, AUX, TAPE 1/DA TAPE, TAPE 2/EXT	91 dB (100 dB: IHF, A)
-26 db power (4Ω)	
PHONO MM	68 dB
PHONO MC	62 dB

TUNER, CD, AUX, TAPE 1/DA TAPE, TAPE 2/EXT	70 dB
50 mW power (4Ω)	
PHONO MM	62 dB
PHONO MC	61 dB
TUNER, CD, AUX, TAPE 1/DA TAPE, TAPE 2/EXT	62 dB
Frequency response	
PHONO	RIAA standard curve ± 0.8dB(30 Hz ~ 15 kHz)
TUNER, CD, AUX, TAPE 1/DA TAPE, TAPE 2/EXT	5 Hz ~ 120 kHz (-3 dB) + 0, -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, 2 REC OUT	150 mV
Channel balance, AUX 250 Hz ~ 6,300 Hz	±1 dB
Channel separation, AUX 1 kHz	50dB
Headphones output level and impedance	500 mV/330 Ω
Load impedance	
MAIN or REMOTE	4 Ω ~ 16 Ω
MAIN and REMOTE	8 Ω ~ 16 Ω
<b>■ GENERAL</b>	
Power consumption	490 W
Power supply	
For United Kingdom 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 x H x D)	430 x 126 x 290 mm (16-15/16" x 4-31/32" x 11-7/16")
Weight	7.5 kg (16.5 lb.)

**Notes:**

- Specifications are subject to change without notice. Weight and dimensions are approximate.
- Total harmonic distortion is measured by the digital spectrum analyzer (H.P. 3045 system).

# Technics

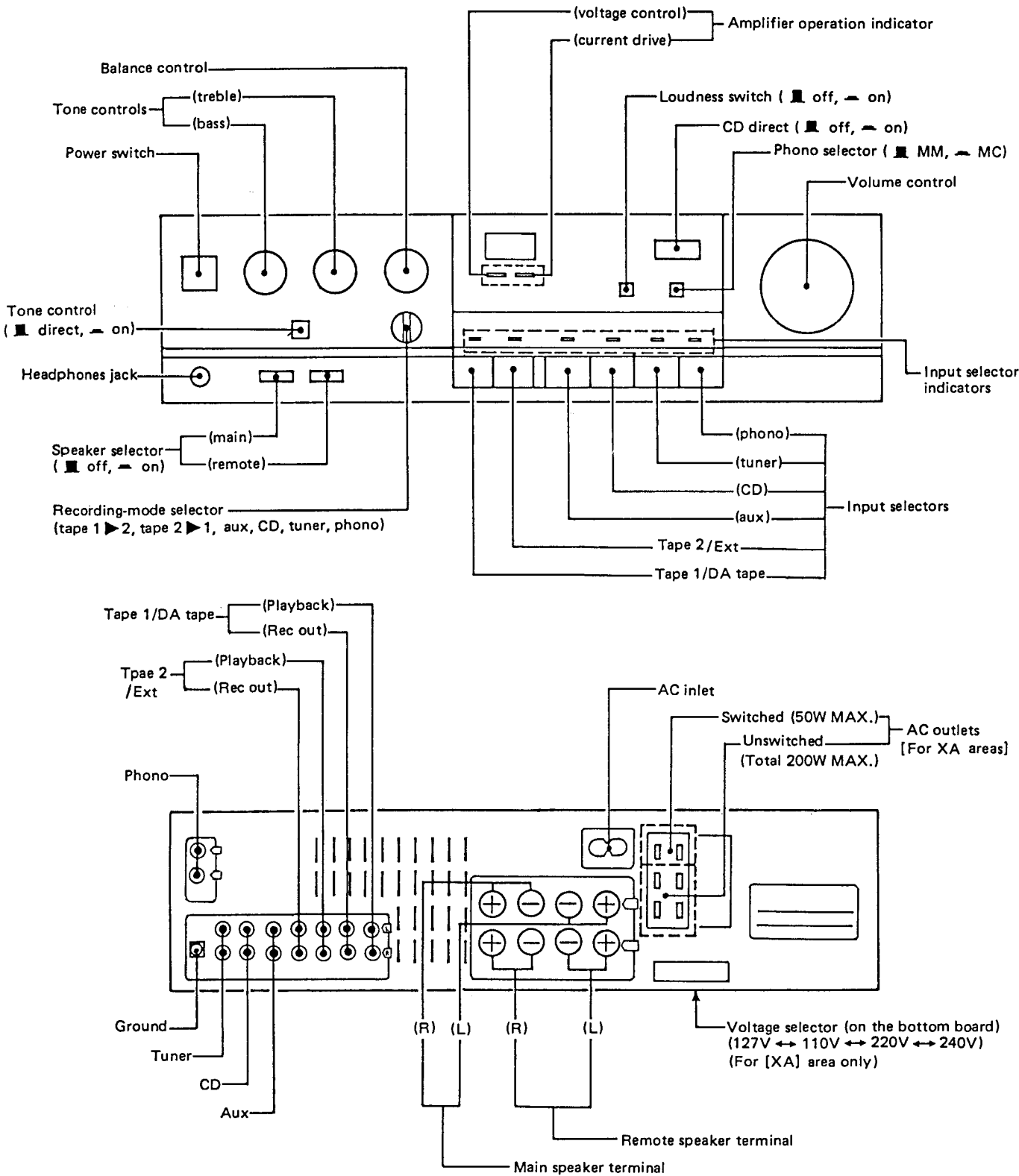
Matsushita Electric Trading Co., Ltd.  
P.O. Box 288, Central Osaka Japan

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## LOCATION OF CONTROLS



- The power supply for this unit varies depending upon the areas. Also, the parts used for power supply are different. So, refer to the circuit diagram and replacement parts list.
- \* [XA] area is provided with voltage selector and AC outlets.
- \* 240V (50/60Hz) for Australia and United Kingdom.
- \* 220V (50/60Hz) for Continental Europe.
- \* 127V/110V/220V/240V (50/60Hz) for other [XA] area.
- \* Phono input capacitance is about 100pF.

### Suggestions

- If noise is very annoying while listening to an FM or AM broadcast, switch OFF the video disc player, compact-disc player and turntable.
- Switch OFF the video disc player power if noise is excessive while listening to an audio tape, compact disc or regular phono disc.

### Notes:

- To record sounds from a compact disc, press the input selector marked "CD". The compact-disc-direct switch is for listening only; it cannot be used to select the compact disc as a recording source.

## 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.

## BEFORE REPAIR AND ADJUSTMENT

- (1) Turn off the power supply. Using a 10Ω, 5W resistor, shortcircuit both ends of power supply capacitors (C705, C706, 8200 μF) in order to discharge the voltage.
  - (2) Before turning on the power switch of the set.
    - 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 (VR401 and VR402) to minimum (counterclockwise).
    - D. After setting the output to zero of the voltage controller, turn on the power switch of the set. And increase the output of voltage controller gradually. Then, check carefully whether the current value of primary side become more than followings 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.
    - F. Check the transistors of voltage amplifier and current amplifier IC501.
    - G. After repairing, adjust the ICQ.
- The current value of the primary side at no signal. (Confirm the power supply voltage of each area and provided voltage of the set.)

Power supply voltage	AC110V	AC127V	AC220V	AC240V
Consumed current 50/60Hz	280 ~ 560mA	260 ~ 520mA	140 ~ 280mA	130 ~ 260mA

# DISASSEMBLY INSTRUCTIONS

" ATTENTION SERVICER "

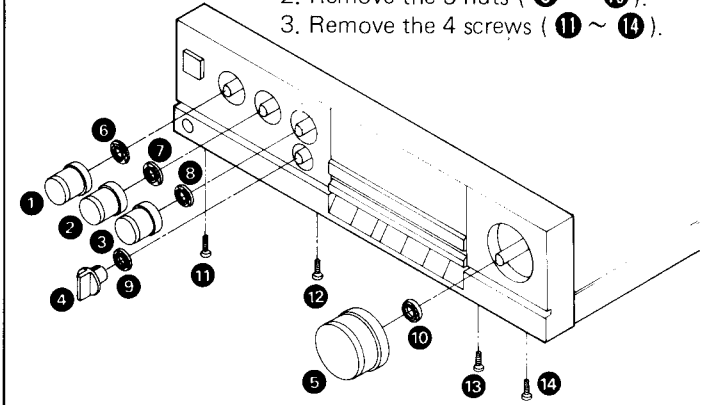
SOME CHASSIS COMPONENTS MAY HAVE SHARP EDGES.  
BE CAREFUL WHEN DISASSEMBLING AND SERVICING.

<b>Ref. No.</b> 1	<b>How to remove the cabinet</b>
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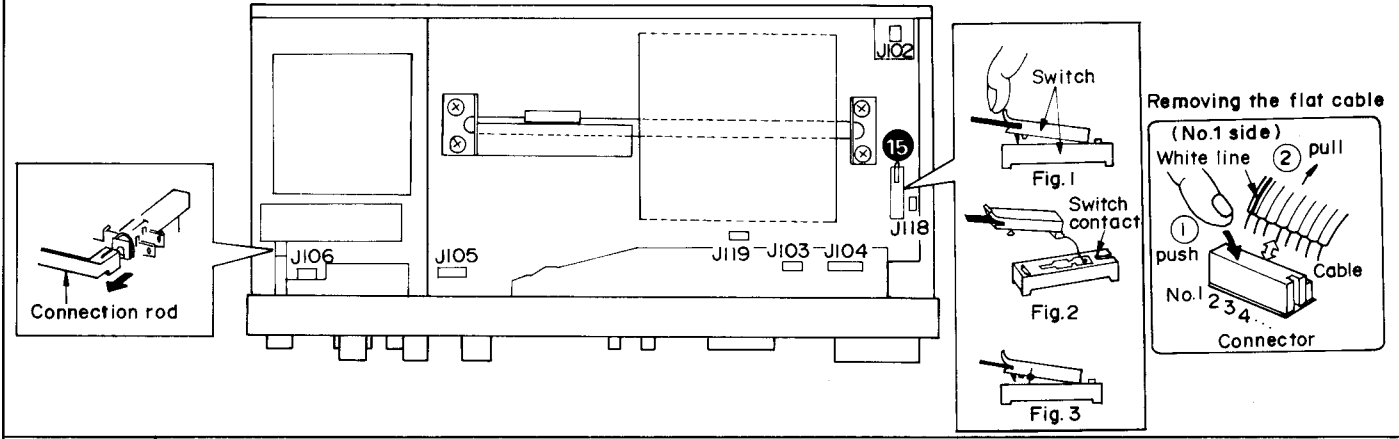
<b>Procedure</b> 1	<ul style="list-style-type: none"> <li>Remove the 5 screws.</li> </ul>
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<b>Ref. No.</b> 2	<b>How to remove the front panel</b>
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<b>Procedure</b> 1 → 2	<ol style="list-style-type: none"> <li>Remove the 5 knobs ( ① ~ ⑤ ).</li> <li>Remove the 5 nuts ( ⑥ ~ ⑩ ).</li> <li>Remove the 4 screws ( ⑪ ~ ⑭ ).</li> <li>Remove the connection rod.</li> <li>Remove the connector ( J102, J103, J106, J118, J119 ).</li> <li>Remove the flat cable ( J104, J105 ).</li> <li>Remove the "Rec-select" switch ( ⑮ ).</li> </ol>
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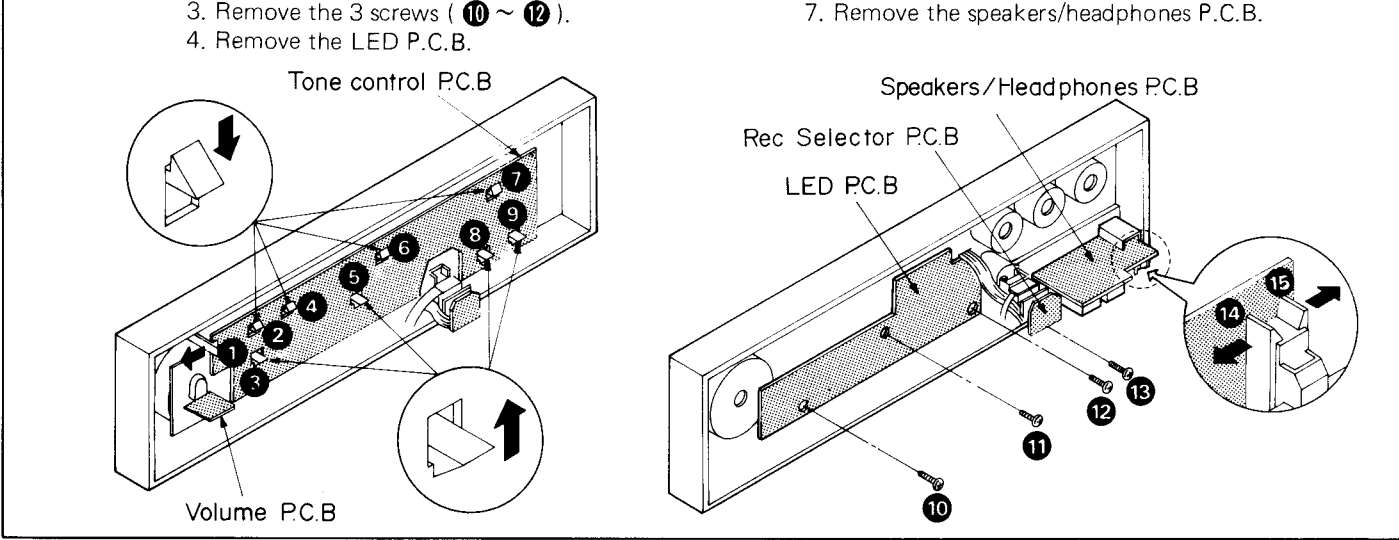


- Remove the connection rod.
  - Remove the connector ( J102, J103, J106, J118, J119 ).
  - Remove the flat cable ( J104, J105 ).
  - Remove the "Rec-select" switch ( ⑮ ).
- **How to remove the "Rec-select" switch**  
Pushing the rec switch, shift it up as in Fig. 1.
- **How to fit the rec switch**  
(1) Shift the switch contact inside.  
(2) Turn the "Rec-select" switch (selector knob) counterclockwise.  
(3) Let the "Rec-select" switch claw change with the switch, and shift the "Rec-select" switch down while pushing in.



<b>Ref. No.</b> 3	<b>How to remove the P.C.B.</b>
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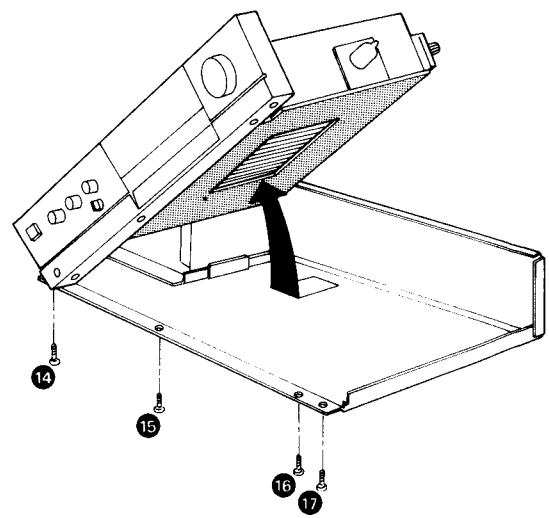
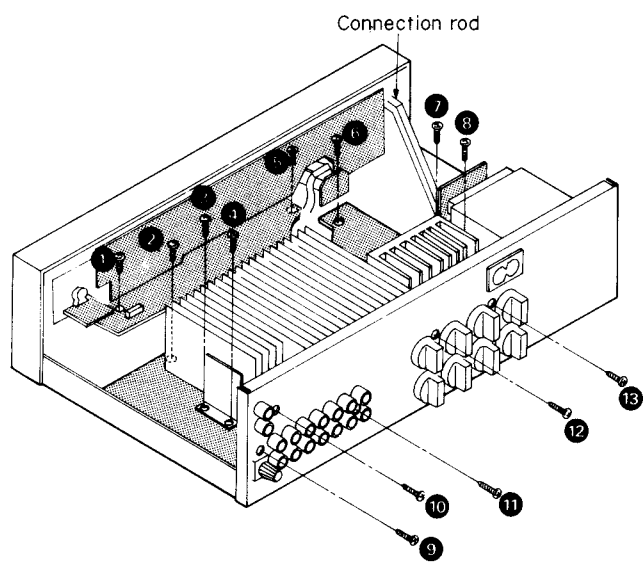
<b>Procedure</b> 1 → 2 → 3	<ol style="list-style-type: none"> <li>Push the 9 tabs ( ① ~ ⑨ ).</li> <li>Remove the tone and volume P.C.B.</li> <li>Remove the 3 screws ( ⑩ ~ ⑫ ).</li> <li>Remove the LED P.C.B.</li> <li>Remove the 1 screw ( ⑬ ).</li> <li>Push the 2 tabs ( ⑭, ⑮ ).</li> <li>Remove the speakers/headphones P.C.B.</li> </ol>
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<b>Ref. No.</b> 4	<b>How to remove the main P.C.B.</b>
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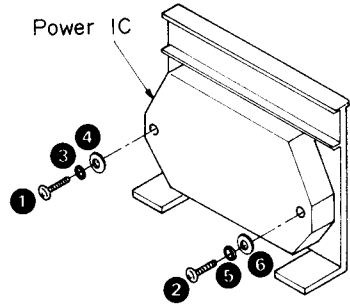
**Procedure**  
1 → 4

1. Remove the 15 screws ( ① ~ ⑭ ).
2. Remove the connection rod.
3. Remove the main P.C.B.



<b>Ref. No.</b> 5	<b>How to remove the power IC.</b>
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**Procedure**  
1 → 4 → 5



1. Unsolder the power IC.
2. Remove the 2 screws ( ① , ② ).
3. Remove the 4 washer ( ③ ~ ⑥ ).

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

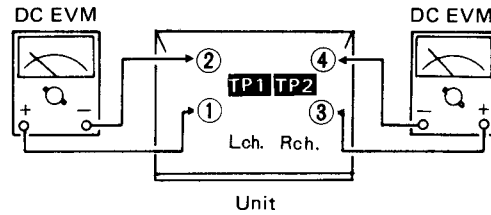
# MEASUREMENTS AND ADJUSTMENTS

## Control positions and equipment used.

- Volume knob . . . . . 0 (Minimum)
- Main speaker selector . . . . . off
- Remote speaker selector . . . . . off
- Speaker impedance switch . . . . .  $8\Omega \sim 16\Omega$
- DC electronic voltmeter (EVM)

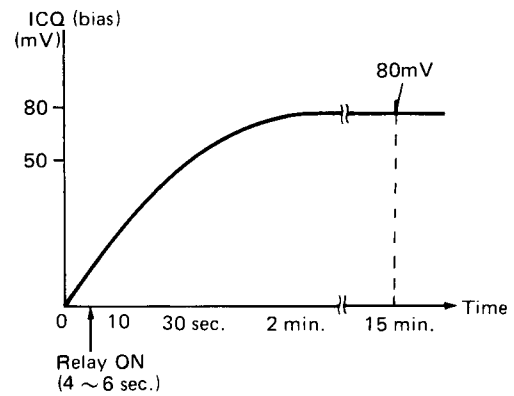
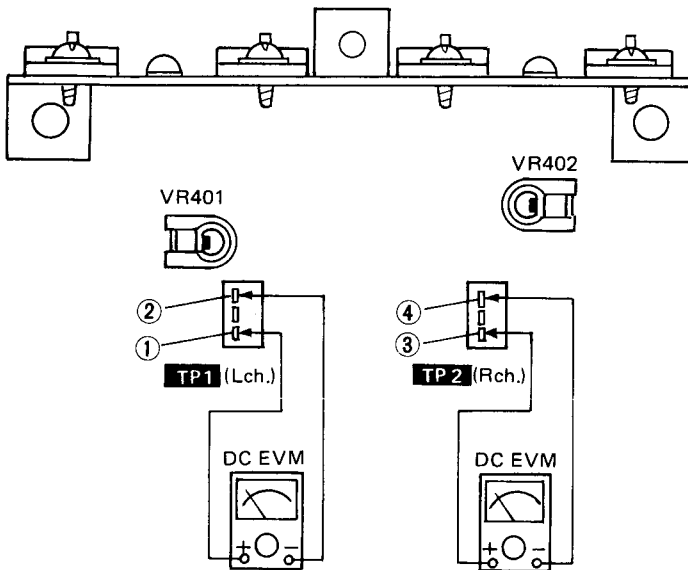
## IDLING (ICQ) ADJUSTMENT

1. Test equipment connection is shown in figure. Connect the DC EVM on both channels.
2. Turn the ICQ control volume (VR401, VR402) counter-clockwise.
3. Turn ON the set when it is cold, and 15 sec. later, adjust VR401 and VR402 so that the voltage is 50mV. Also, check that the voltage is 60 ~ 85mV (standard: 80mV) after lapse of 10 – 15 minutes. (Below 85mV after lapse of 60 min.).



## • Adjustment points

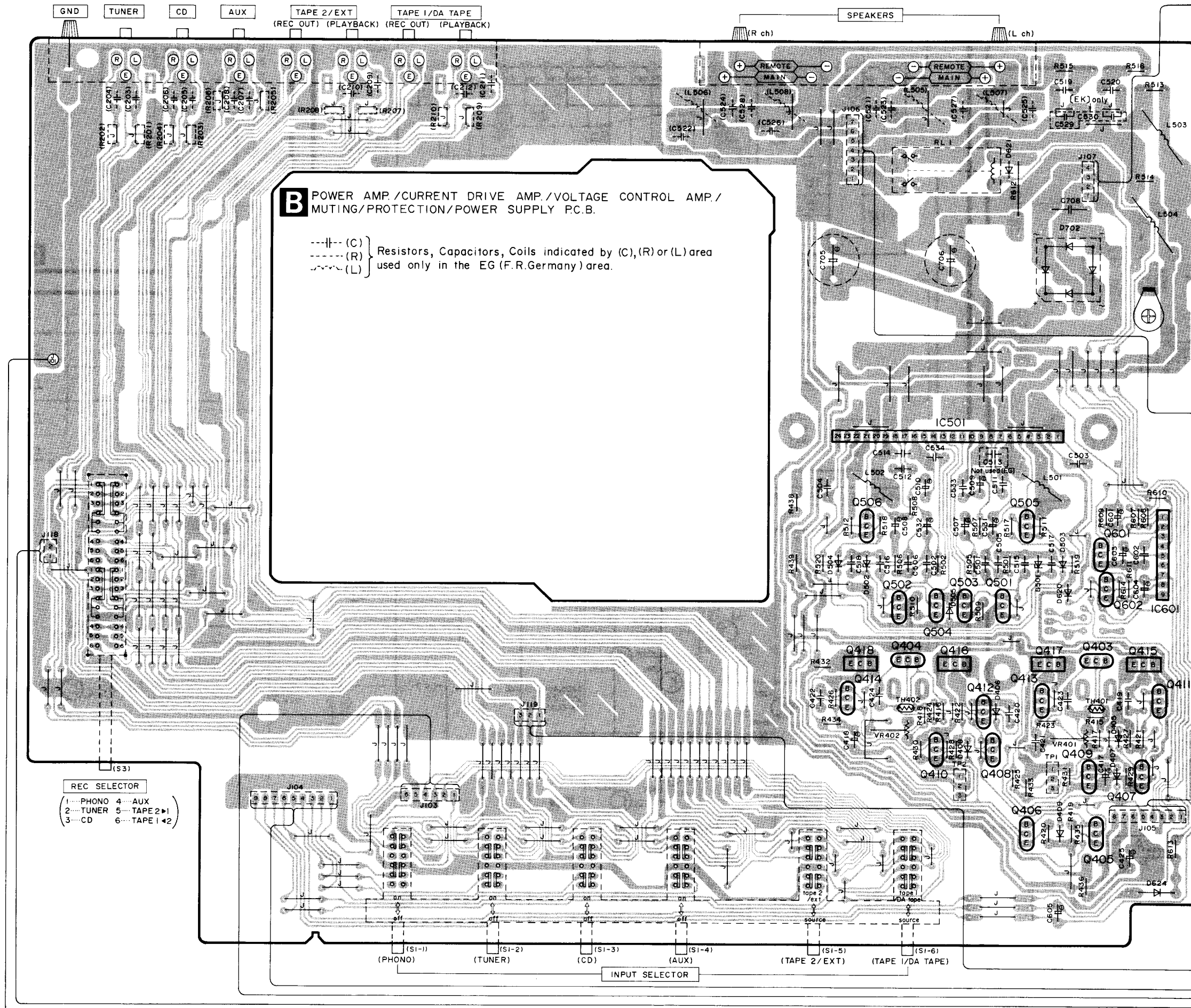
Voltage control Amp.



## • Terminal guide of IC, transistor and diodes

<table border="1"> <tr> <td>AN6558F</td> <td>8pin</td> </tr> <tr> <td>μPC4570C</td> <td>8pin</td> </tr> <tr> <td>AN7062N</td> <td>18pin</td> </tr> </table>	AN6558F	8pin	μPC4570C	8pin	AN7062N	18pin	<p>SVI4004 24pin</p>	<p>AN7073 9pin</p>	<p>2SA1123, 2SA992 2SC1685, 2SC2631</p>
AN6558F	8pin								
μPC4570C	8pin								
AN7062N	18pin								
<p>2SA1309 2SC3311</p>	<p>2SA1535 2SC3944</p>	<p>MA165, MA167 SVDS10VB20F SVDSR1K2LF MA29WA</p>	<p>MA4062M, MA4033M MA4160M</p>	<p>LN021315P LN014314PH1 LN064316P</p>					

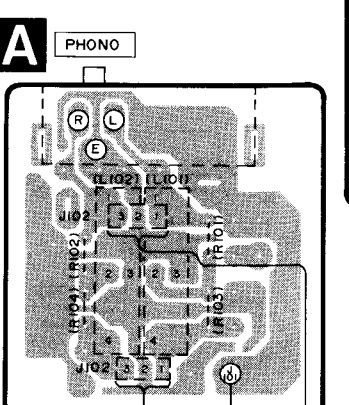
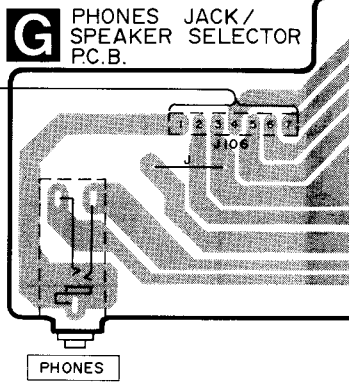
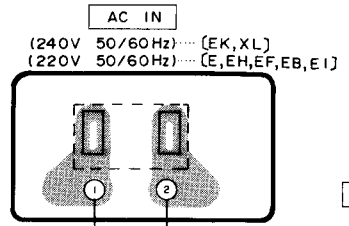
# PRINTED CIRCUIT BOARDS AND WIRING CONNECTION DIAGRAM



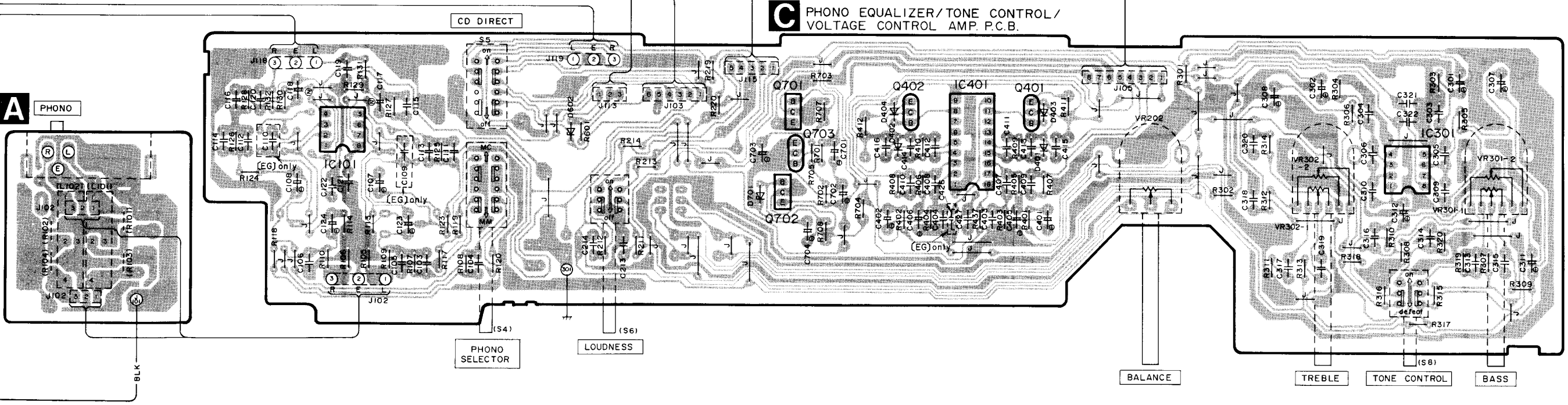
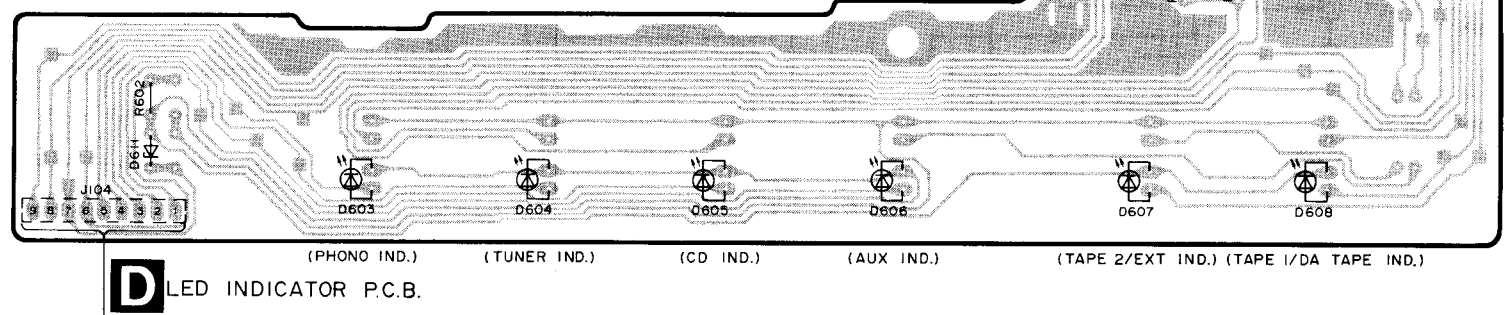
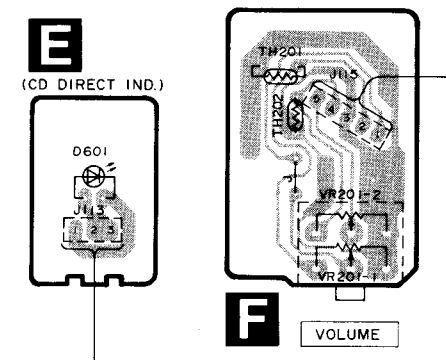
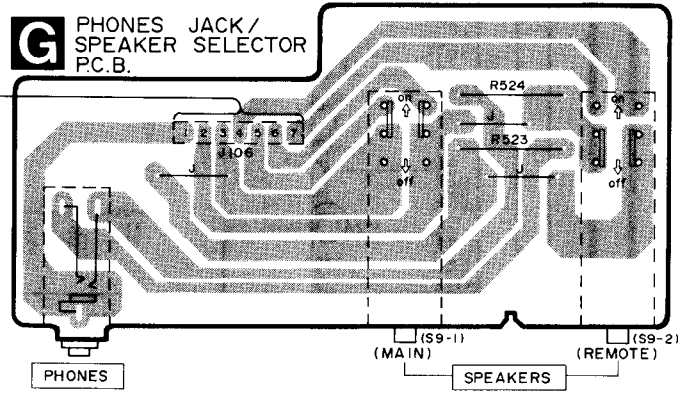
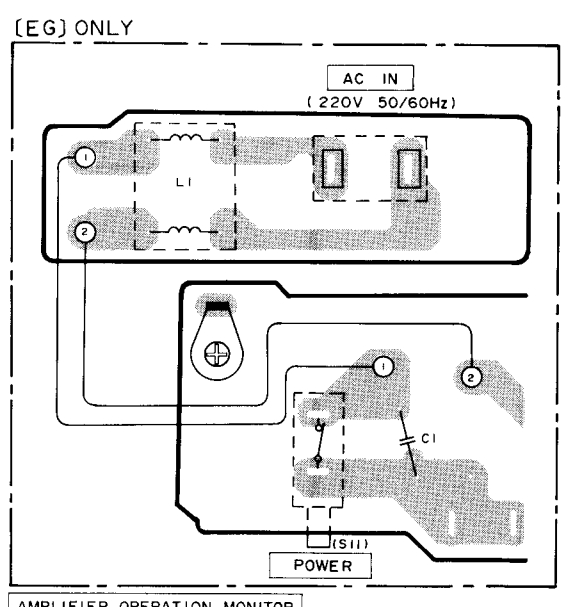
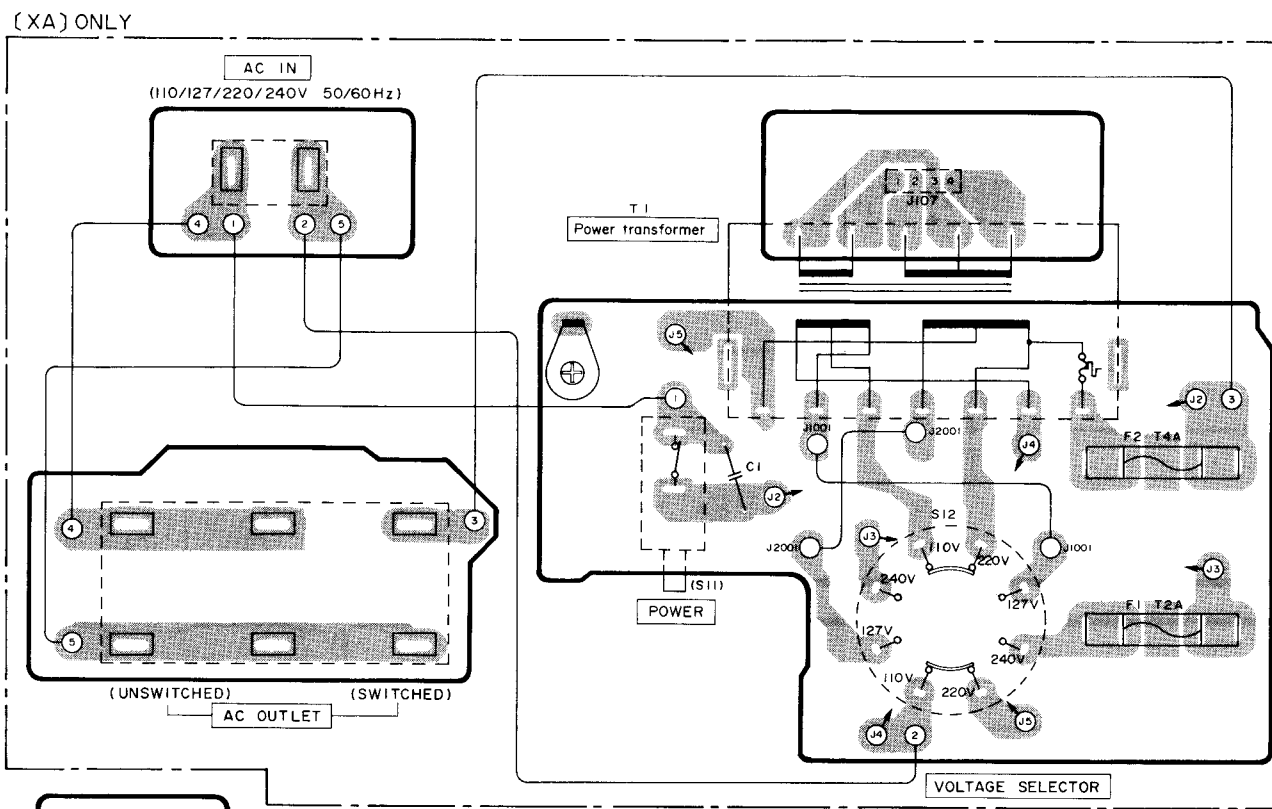
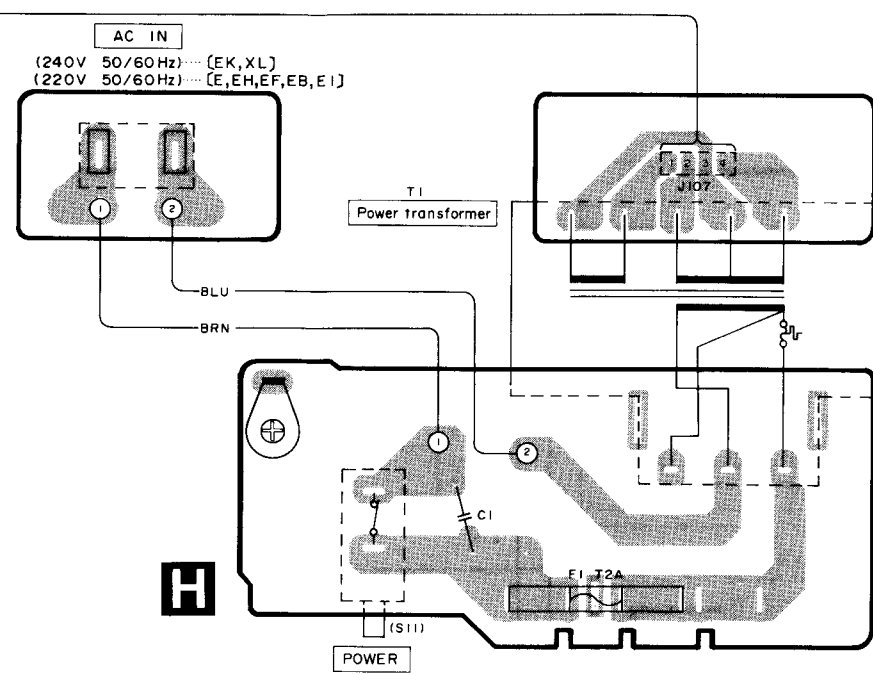
**B** POWER AMP./CURRENT DRIVE AMP./VOLTAGE CONTROL AMP./MUTING/PROTECTION/POWER SUPPLY P.C.B.

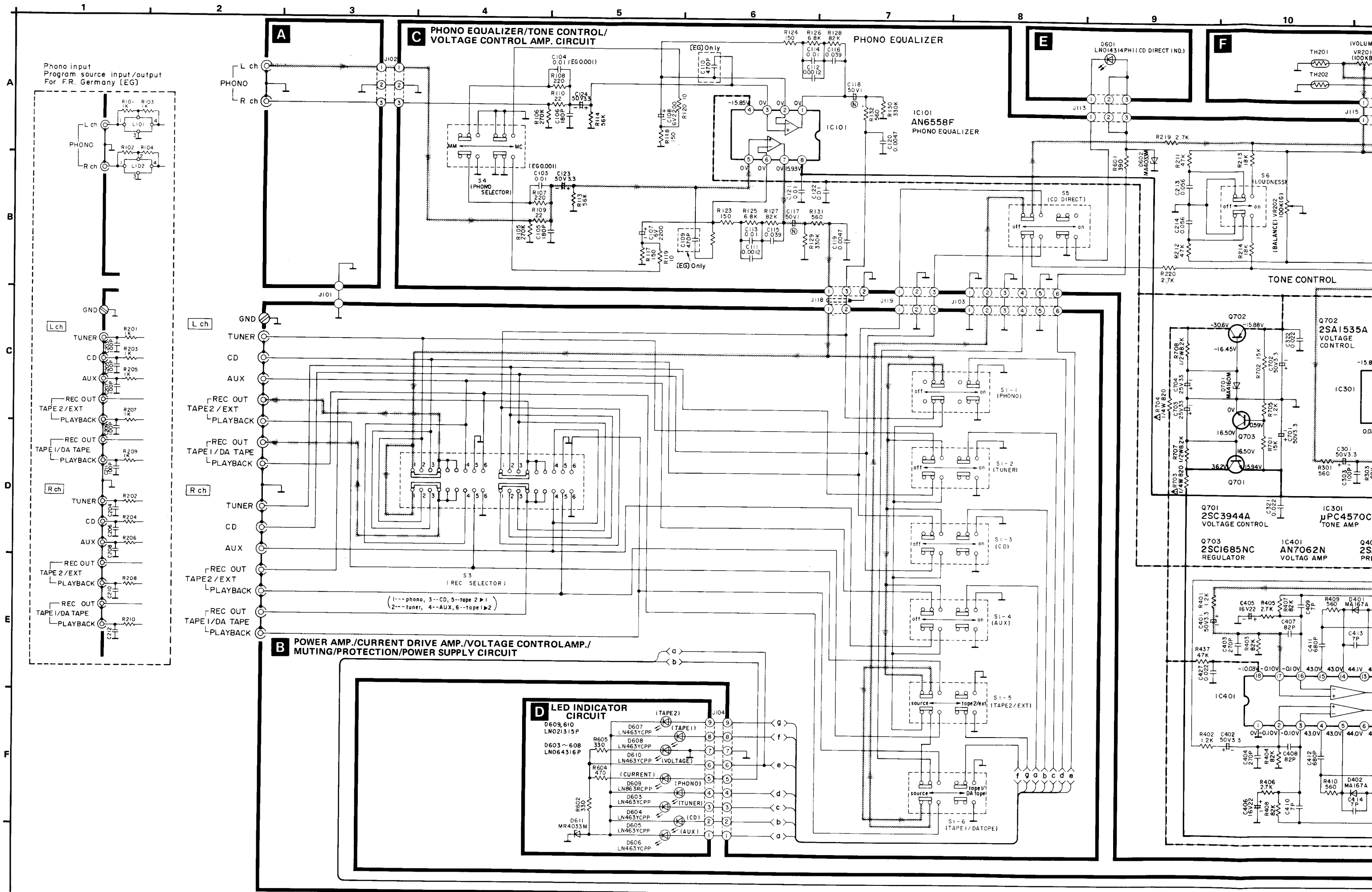
---||--- (C) } Resistors, Capacitors, Coils indicated by (C),(R) or (L) area  
 ---(R) } used only in the EG (F.R.Germany) area.  
 ---(L) }

**REC SELECTOR**  
 1---PHONO 4---AUX  
 2---TUNER 5---TAPE 2▶1  
 3---CD 6---TAPE 1◀2





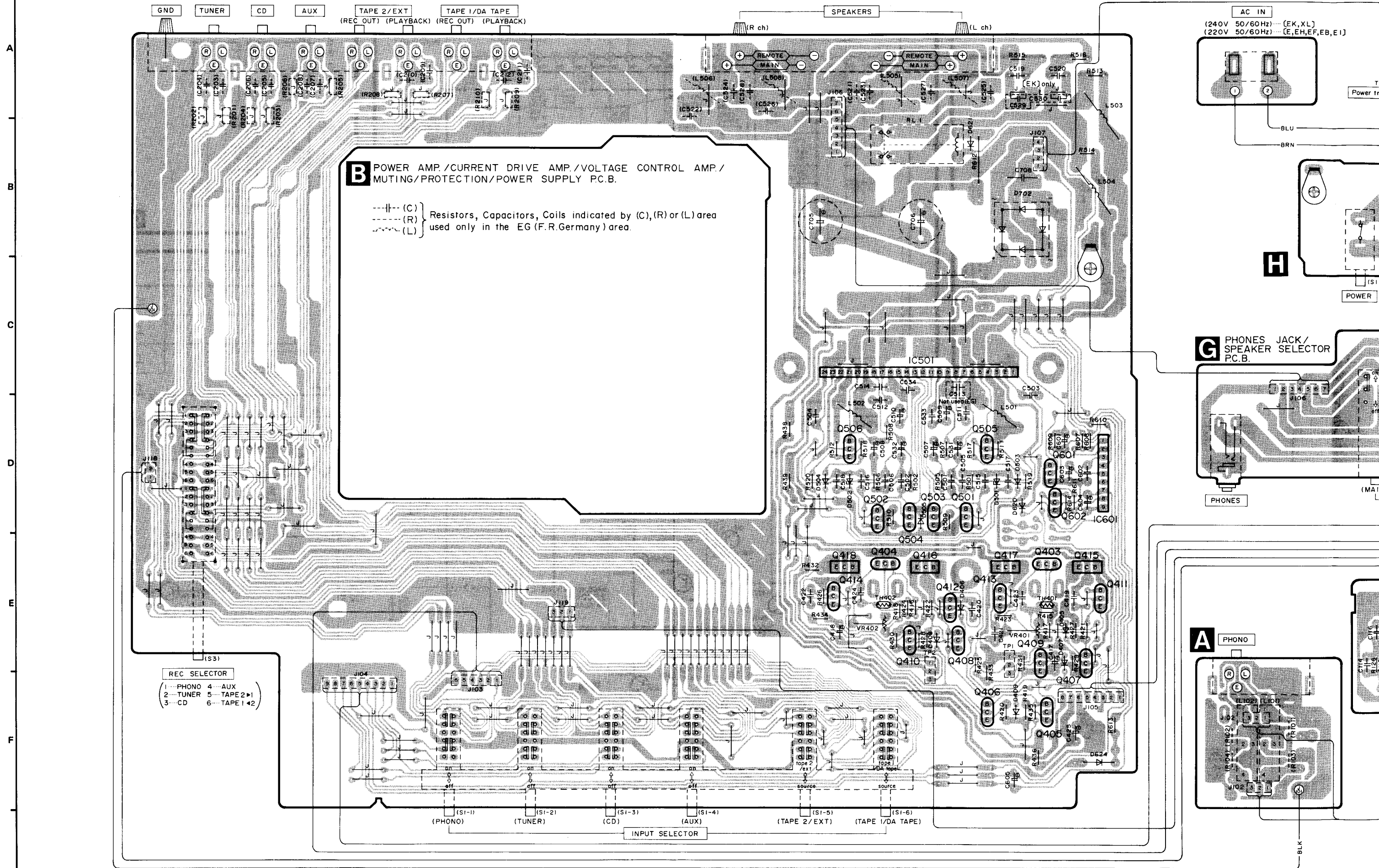








# PRINTED CIRCUIT BOARDS AND WIRING CONNECTION DIAGRAM



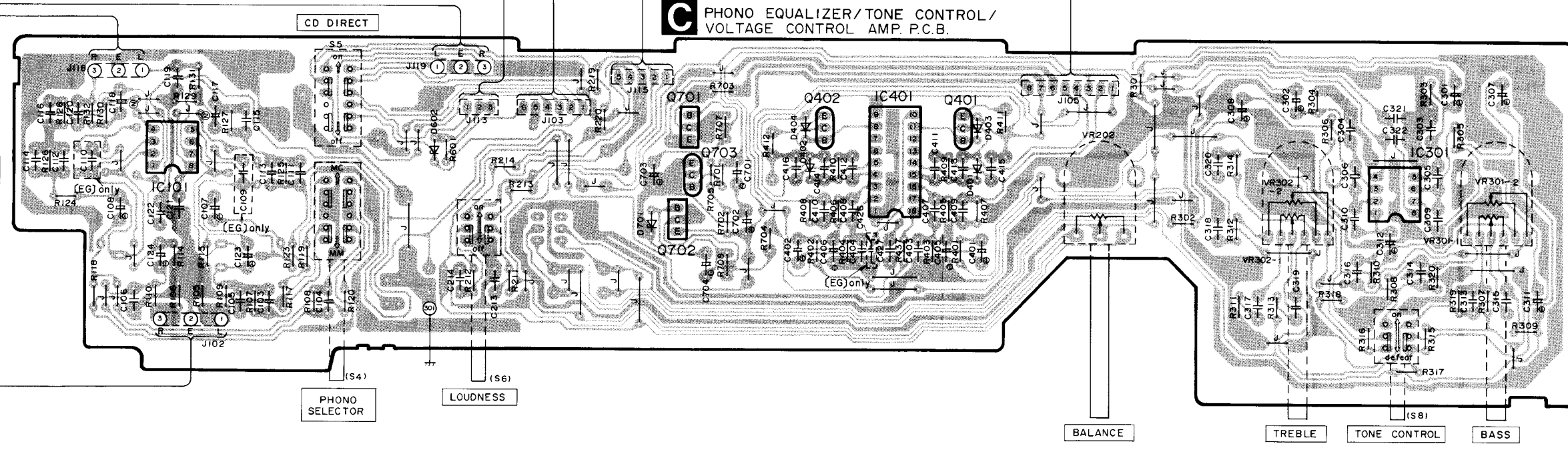
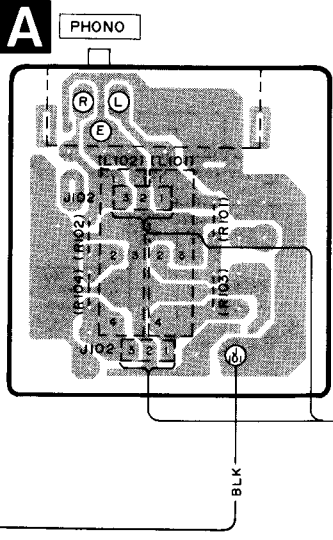
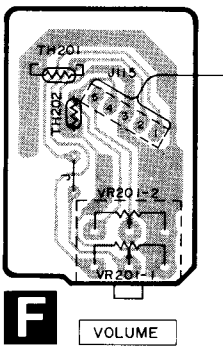
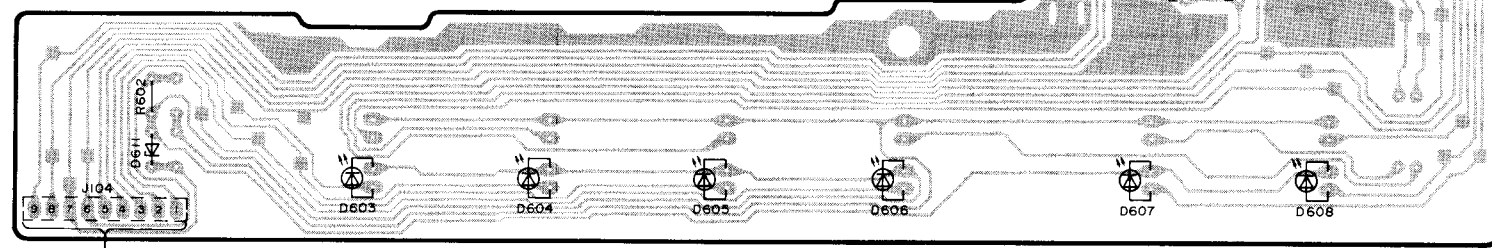
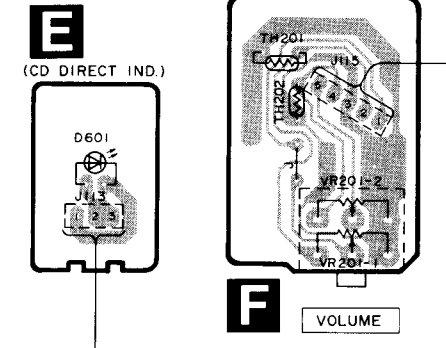
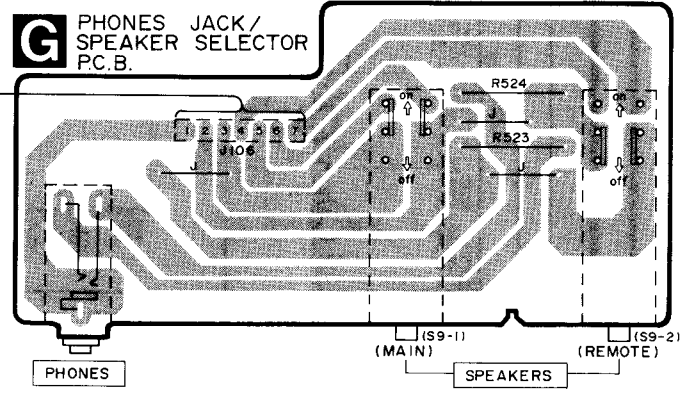
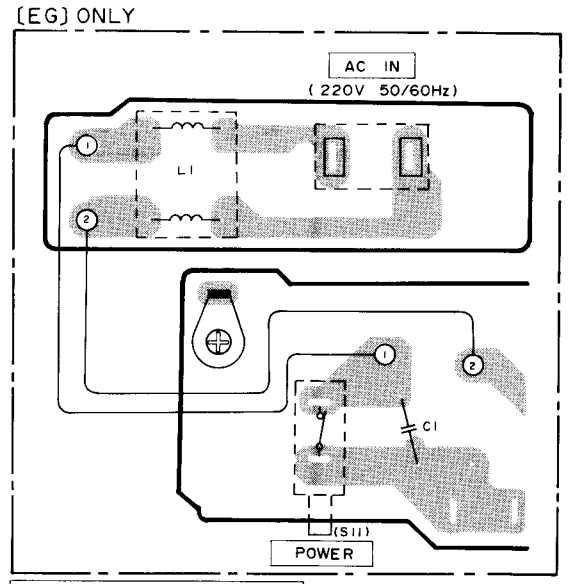
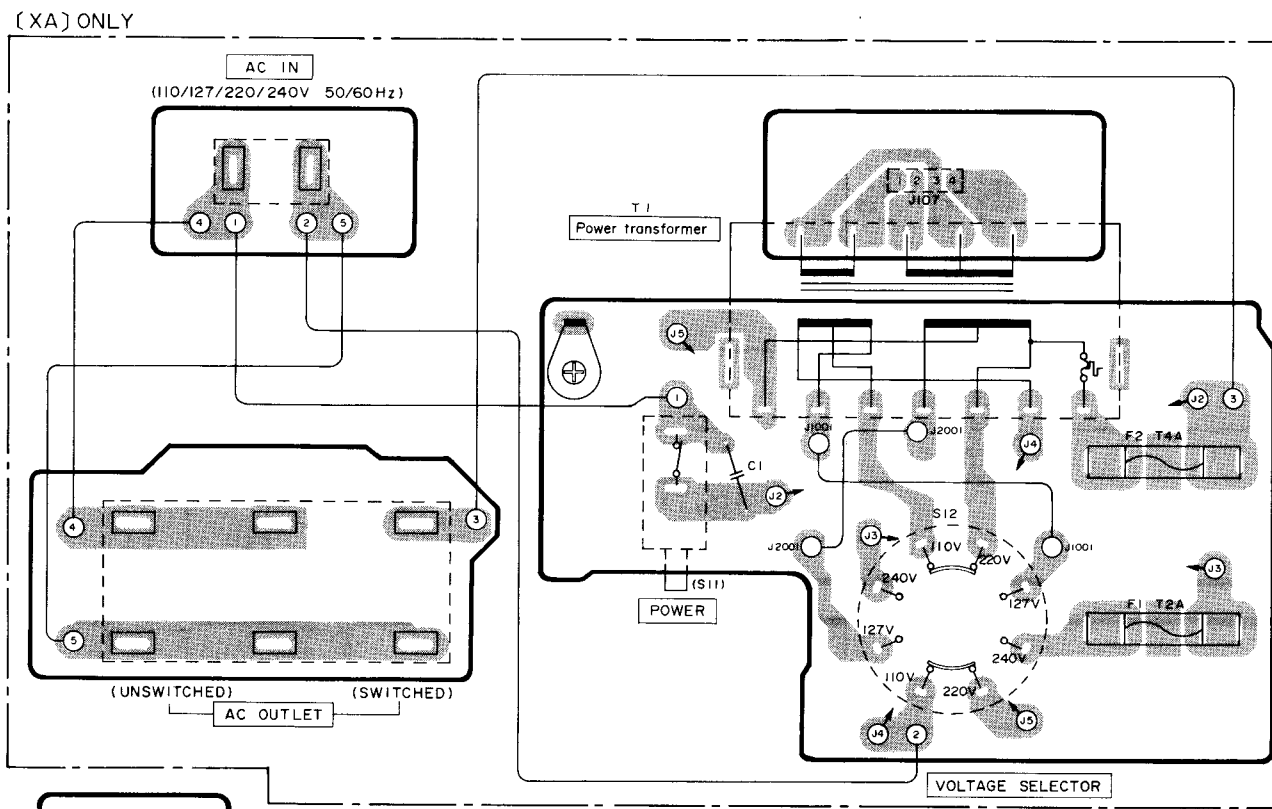
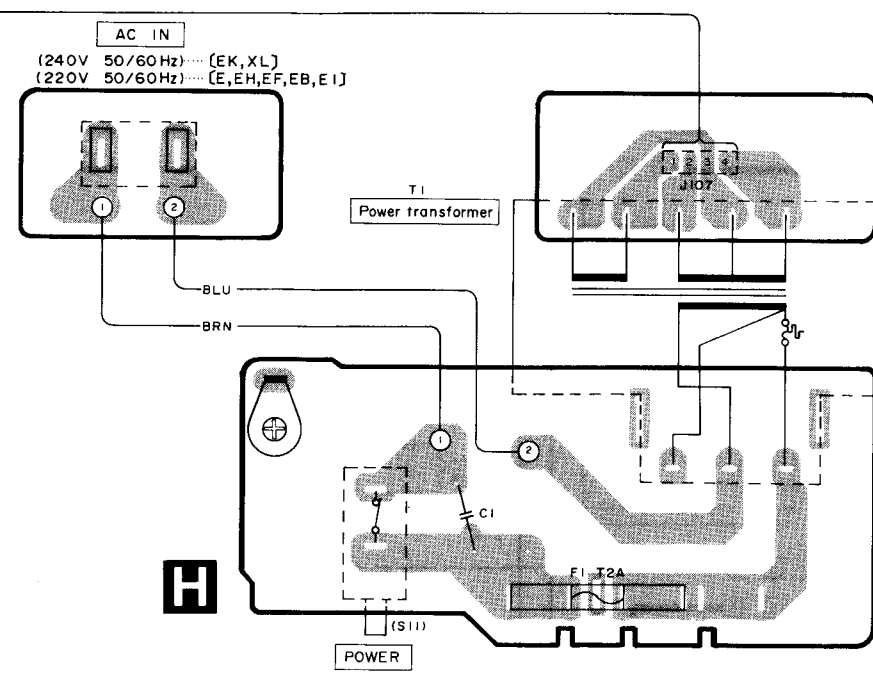
**B** POWER AMP./CURRENT DRIVE AMP./VOLTAGE CONTROL AMP./MUTING/PROTECTION/POWER SUPPLY PC.B.

---||--- (C) } Resistors, Capacitors, Coils indicated by (C), (R) or (L) area  
 ---(R) } used only in the EG (F.R.Germany) area.  
 ---(L) }

**REC SELECTOR**  
 1---PHONO 4---AUX  
 2---TUNER 5---TAPE 2/1  
 3---CD 6---TAPE 1/2

(S1-1) (S1-2) (S1-3) (S1-4) (S1-5) (S1-6)  
 (PHONO) (TUNER) (CD) (AUX) (TAPE 2/EXT) (TAPE 1/DA TAPE)  
**INPUT SELECTOR**



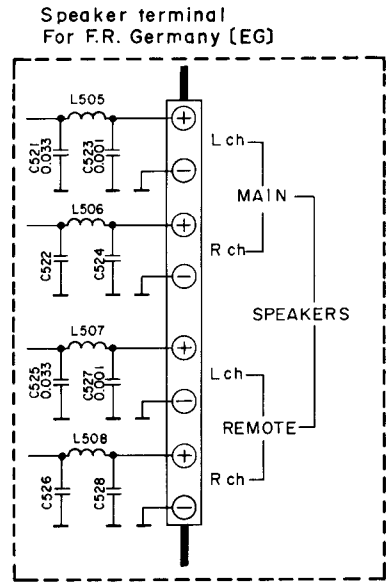


## SCHEMATIC DIAGRAM

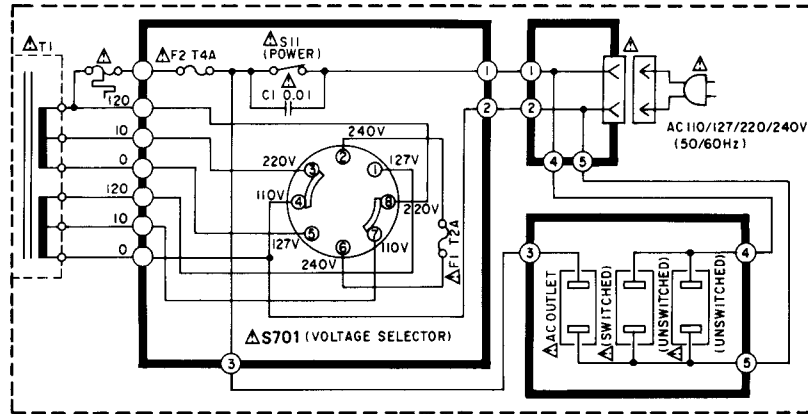
(This schematic diagram may be modified at any time with the development of new technology.)

### Note:

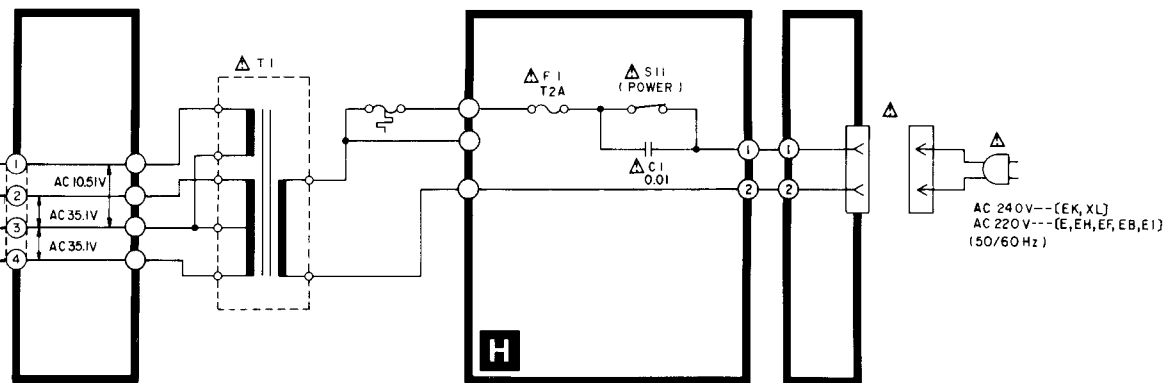
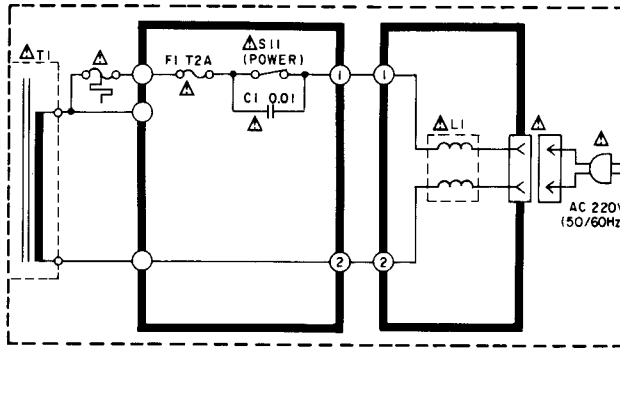
- S1-1 ~ S1-4:** Input selector switch in "phono" position.  
S1-1: phono S1-2: tuner S1-3: CD  
S1-4: aux S1-5: Tape 2/ext S1-6: Tape 1/DA tape
  - S3-1, S3-2:** Recording selector in "CD" position.
  - S4:** Phono selector in "MM" position.  
(MM, MC)
  - S5:** CD direct switch in "off" position.  
(off, on)
  - S6:** Loudness switch in "off" position.  
(off, on)
  - S8:** Tone control switch in "defeat" position.  
(defeat, on)
  - S9-1:** Main speaker switch in "on" position.  
(off, on)
  - S9-2:** Remote speaker switch in "off" position.  
(off, on)
  - S11:** Power switch in "on" position.  
(off, on)
  - S701:** (For [XA] area only): Voltage selector switch in "110V" position.  
(127V ↔ 110V ↔ 220V ↔ 240V)
11. 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.
- Phono signal (Lch)  
Positive voltage lines  
Negative voltage lines.
12. Important safety notice:  
Components identified by  $\Delta$  mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.



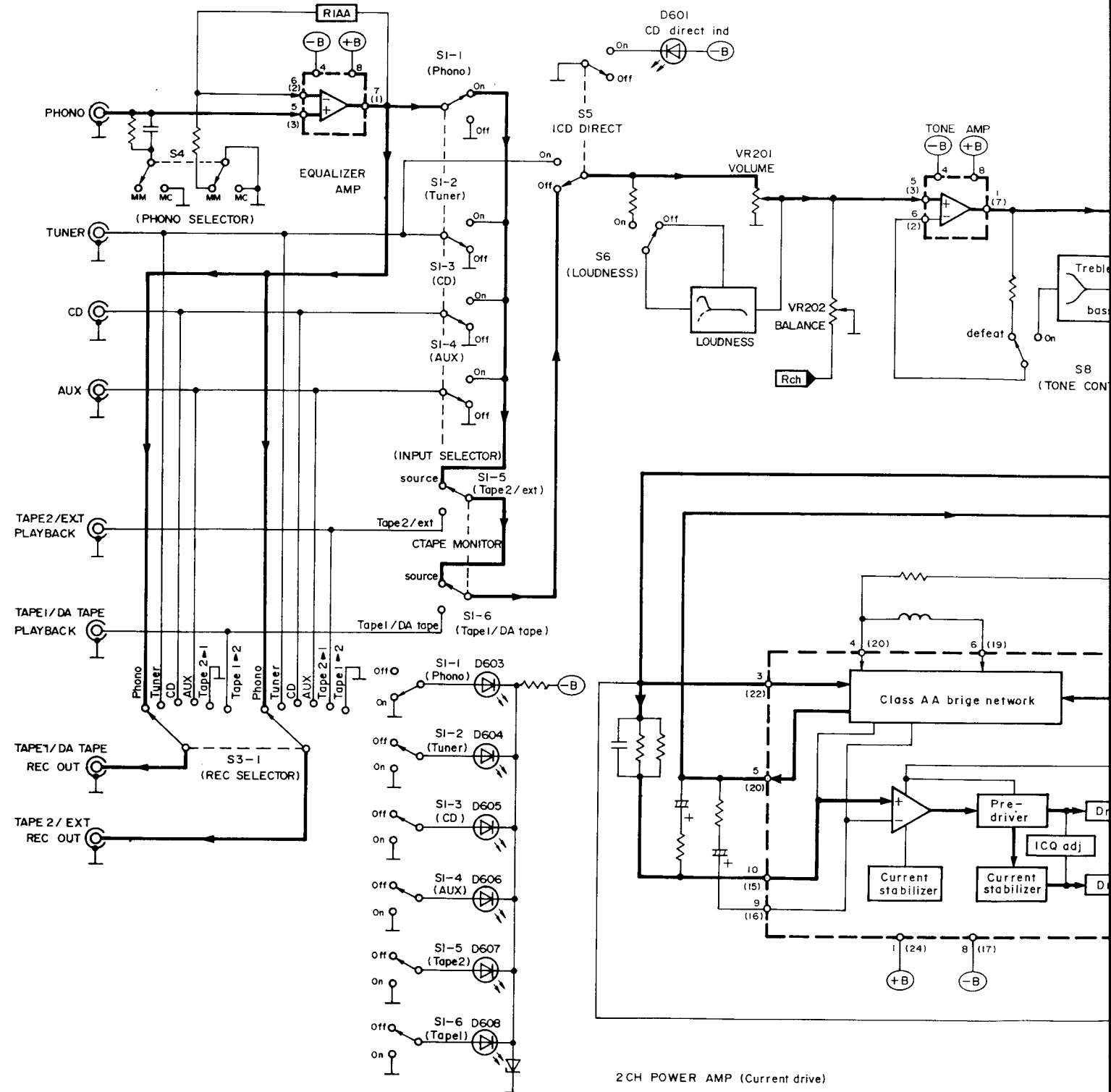
For other areas [XA]



For F.R. Germany [EG]



## BLOCK DIAGRAM



2CH POWER AMP (Current drive)

( ) Indicates pin NO. of right channel.

# REPLACEMENT PARTS LIST

## Notes: \* Important safety notice:

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

\* Bracketed indications in Ref. No. columns specify the area.

Parts without these indications can be used for all areas.

## Numbering System of Resistor

### Example

ERD	25	F	J	102
Type	Wattage	Shape	Tolerance	Value
ERX	2	AN	J	471
Type	Wattage	Shape	Tolerance	Value
				$47 \times 10^1$ (ohm)

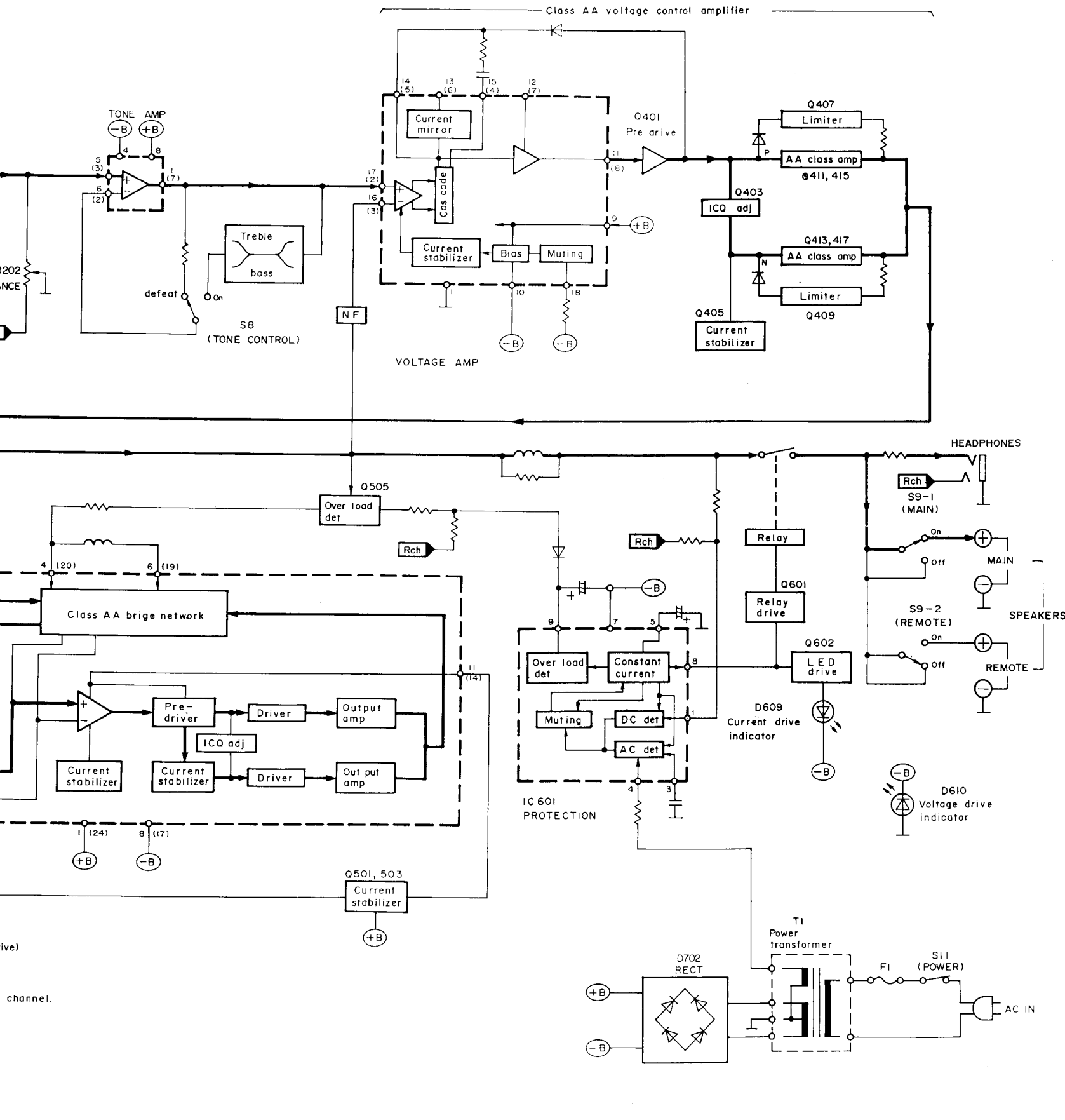
## Numbering System of Capacitor

### Example

ECKD	1H	102	Z	F
Type	Voltage	Value	Tolerance	Peculiarity
ECEA	50	M		330
Type	Voltage	Peculiarity		Value
				$(33 \times 10^0)$ microfarad

Resistor Type	Wattage	Tolerance
ERD : Carbon	10 : 1/8W	J : $\pm 5\%$
ERG : Metal Oxide	12 : 1/2W	F : $\pm 1\%$
ERX : Metal Film	25 : 1/4W	G : $\pm 2\%$
ERQ : Fuse Type Metal	1A : 1W	K : $\pm 10\%$
ERD : L : Carbon (chip)	18 : 1/8W	
ERD : K : Metal Film (chip)	S2 : 1/4W	
ERC : Solid	S1 : 1/2W	
	2F : 1/4W	
	50 : 1/2W	
	2A : 2W	

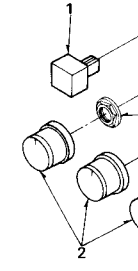
Capacitor Type	Voltage	Tolerance
ECE : Electrolytic	0J : 6.3V	C : $\pm 0.25\mu\text{F}$
ECCD : Ceramic	1A : 10V	J : $\pm 5\%$
ECKD : Ceramic	1C : 16V	K : $\pm 10\%$
ECQM : Polyester	1E : 25V	Z : $\pm 80\%$
	1H : 50V	
ECQP : Polypropylene	1V : 35V	P : $\pm 100\%$
	05 : 50V	
ECG : Ceramic	50 : 50V	
ECEADDON : Non Polar Electrolytic	2H : 500V	M : $\pm 20\%$
QCU : Ceramic (Chip Type)	2A : 100V	D : $\pm 0.5\mu\text{F}$
ECUX : Ceramic (Chip Type)	1 : 100V	G : $\pm 2\%$
ECF : Semiconductor	KC : 400V AC	
	KC : 125VAC (UL)	
	1J : 63V	
EECW : Liquid electrolyte double layer capacitor		



Ref. No.	Part No.	Part Code	Ref. No.	Part No.	Part Code	Ref. No.	Part No.	Part Code	
RESISTORS			R407, R408	FSR25TJ82T2		CAPACITORS			
R101, R102	ERDS2TJ102	001 152 2346 4	R409, R410	ERDS2TJ561	001 152 2364 2	C1	$\Delta$	ECKDKC103PF2	001 103 3734 7
R103, R104	ERDS2TJ102	001 152 2346 4	R411, R412	ERD25FJ470	001 152 0309 7	(XA)			
R105, R106	ERDS2TJ274	001 152 2437 2	R415, R416	ERDS2TJ182	001 152 2352 6	C1		ECKWNS103ZVS	001 103 9317 6
R107, R108	ERDS2TJ221	001 152 2431 8	R417, R418	ERDS2TJ391	001 152 2360 6	(E, EG, EF)			
R109, R110	ERDS2TJ220	001 152 2430 9	R419, R420	ERD25FJ101	001 152 0214 3	(EH, EB, EI)			
R113, R114	ERDS2TJ563	001 152 2446 1	R421, R422	ERDS2TJ223	001 152 2432 7	(XL)			
R117, R118	ERDS2TJ151	001 152 2426 5	R423, R424	ERD25FJ821	001 152 0354 2	C103		ECKD1H102KB	001 103 1414 8
R119, R120	ERDS2TJ100	001 152 2420 1	R425, R426	ERDS2TJ223	001 152 2432 7	(EG)			
R123, R124	ERDS2TJ151	001 152 2426 5	R427, R428	ERD25FJ101	001 152 0214 3	C103		ECQM1H103JZ	001 106 0667 8
R125, R126	ERDS2TJ682	001 152 2365 1	R429, R430	ERD25FJ2R2	001 152 0251 8	(E, EK, EF)			
R127, R128	ERDS2TJ823	001 152 2456 9	R431, R432	ERD25FJ2R2	001 152 0251 8	(EH, EB, EI)			
R129, R130	ERDS2TJ334	001 152 2438 1	R433, R434	ERD25FJ101	001 152 0214 3	(XL, XA)			
R131, R132	ERDS2TJ561	001 152 2364 2	R435	ERDS2TJ103	001 152 2347 3	C104		ECKD1H102KB	001 103 1414 8
R201, R202	ERDS2TJ102	001 152 2346 4	R436	ERD25FJ470	001 152 0309 7	(EG)			
R203, R204	ERDS2TJ102	001 152 2346 4	R437	ERDS2TJ473	001 152 2363 3	C104		ECQM1H103JZ	001 106 0667 8
R205, R206	ERDS2TJ102	001 152 2346 4	R438, R439	ERD25FJ6R8	001 152 0335 5	(E, EK, EF)			
R207, R208	ERDS2TJ102	001 152 2346 4	R501, R502	ERDS2TKF4220	001 151 5927 2	(EH, EB, EI)			
R209, R210	ERDS2TJ102	001 152 2346 4	R505, R506	ERDS2TJ101	001 152 2421 0	(XL, XA)			
R211, R212	ERDS2TJ473	001 152 2363 3	R507, R508	ERDS2TJ101	001 152 2421 0	C105, C106		ECCD1H181K	001 103 0466 0
R213, R214	ERDS2TJ183	001 152 2429 2	R511, R512	ERDS2TJ271	001 152 0272 3	(E, EK, EF)			
R219, R220	FSR25TJ272T2		R513, R514	ERDS1FJ100	001 152 2612 5	(EH, EB, EI)			
R301, R302	FSR25TJ561T2		R515, R516	ERD25FJ100	001 152 0213 4	(XL, XA)			
R303, R304	ERDS2TJ823	001 152 2456 9	R517, R518	ERDS2TJ472	001 152 2362 4	C107, C108		ECEA0JU22	001 120 3161 5
R305, R306	ERDS2TJ224	001 152 2433 6	R519, R520	ERDS2TJ153	001 152 2351 7	C109, C110		ECKD1H471KB	001 103 1551 0
R307, R308	ERDS2TJ392	001 152 2439 0	R523, R524	ERG2SJ331	001 151 3570 9	(EG)			
R309, R310	ERDS2TJ223	001 152 2432 7	R601	ERDS2TJ391	001 152 2360 6	C111, C112		ECQM1H122JZ	001 106 0683 8
R311, R312	ERDS2TJ102	001 152 2346 4	R602	ERDS2TJ331	001 152 2356 2	C113, C114		ECQM1H103JZ	001 106 0667 8
R313, R314	ERDS2TJ562	001 152 2445 2	R604	ERDS2TJ471	001 152 2361 5	C115, C116		ECQM1H393JZ	001 106 0794 2
R315, R316	FSR25TJ392T2		R605	ERDS2TJ331	001 152 2356 2	C117, C118		ECEA1HND101S	001 120 0354 0
R317, R318	FSR25TJ223T2		R607, R608	ERDS2TJ473	001 152 2363 3	C119, C120		ECQM1H472JZ	001 106 0801 0
R319, R320	ERDS2TJ183	001 152 2429 2	R609	ERDS2TJ153	001 152 2351 7	C121, C122		ECKD1H103PF	001 103 1449 7
R401, R402	ERDS2TJ122	001 152 2423 8	R610	ERDS2TJ124	001 152 2425 6	C123, C124		ECEA1HPS3R3	001 120 6064 3
R403, R404	ERDS2TJ823	001 152 2456 9	R611	ERDS2TJ472	001 152 2362 4	C203, C204		ECCD1H101K	001 103 0341 2
R405, R406	FSR25TJ272T2		R612	ERG2SJ821	001 151 4940 9	(EG)			
			R613	ERDS1FJ180	001 152 2620 5	C205, C206		ECCD1H101K	001 103 0341 2
			R614	ERDS2TJ183	001 152 2429 2	(EG)			
			R701, R702	ERDS2TJ153	001 152 2351 7	C207, C208		ECCD1H101K	001 103 0341 2
			R703, R704	ERD25FJ821	001 152 0354 2	(EG)			
			R705	ERDS2TJ122	001 152 2423 8	C209, C210		ECCD1H101K	001 103 0341 2
			R707, R708	ERDS1FJ822	001 152 5897 6	(EG)			



A  
B  
C  
D  
E  
F



Ref. No.	Part No.	Part Code	Ref. No.	Part No.	Part Code	Ref. No.	Part No.	Part Code
C213, C214	ECQM1H563JZ	001 106 0827 0	C427	ECKD1H223PF	001 103 1510 9	(EG)		
C301, C302	ECEA1HPS3R3	001 120 6064 3	C501, C502	ECCD1H560K	001 103 0660 0	C527, C528	ECKD1H102MD	001 103 1424 6
C303, C304	ECCD1H101K	001 103 0341 2	C503, C504	ECCD2H330K	001 103 0754 5	(EG)		
C305, C306	ECCD1H820K	001 103 0703 6	C505, C506	ECQM1H392JZ	001 106 0790 6	C529, C530	ECQM1H473JZ	001 106 0810 9
C307, C308	ECEA1VPS4R7		C507, C508	ECEA1AU101	001 120 2830 5	(EK)		
C309, C310	ECCD1H390K	001 103 0597 0	C509, C510	ECEA1AU101	001 120 2830 5	C531, C532	ECEA1HU010	001 120 2842 1
C311, C312	ECEA1CPS100	001 120 6036 7	C511, C512	ECCD2H330K	001 103 0754 5	C533, C534	ECFTD472KXL	001 108 0746 0
C313, C314	ECQM1H823JZ	001 106 0852 9	C513, C514	ECKD1H561KB	001 103 1576 1	(E, EK, EF)		
C315, C316	ECQM1H153JZ	001 106 0704 0	C515, C516	ECKD1H333PF	001 103 1539 6	(EH, EB, E1)		
C317, C318	ECQM1H183JZ	001 106 0723 7	C517, C518	ECKD1H333PF	001 103 1539 6	(XL, XA)		
C319, C320	ECQM1H182JZ	001 106 0718 4	C519	ECQM1H223JZ	001 106 0739 9			
C321, C322	ECKD1H223PF	001 103 1510 9	(E, EG, EF)			C601	ECEA0JS331	001 120 2975 9
C401, C402	ECEA1HPS3R3	001 120 6064 3	(EH, EB, E1)			C602	ECFTD223KXL	001 108 0342 6
C403, C404	ECKD1H271KB	001 103 1515 4	(XL, XA)			C603	ECEA0JU470	001 120 3125 9
C405, C406	ECEA1CPS220	001 120 6060 7	C519	ECQM1H473JZ	001 106 0810 9	C604	ECEA1EU4R7	001 120 2840 3
C407, C408	ECCD1H820K	001 103 0703 6	(EK)			C605	ECEA1CU471	001 120 3202 3
C409, C410	ECCD1H070D	001 103 0274 6	C520	ECQM1H223JZ	001 106 0739 9	C701, C702	ECEA1HJ3R3	001 120 3254 1
C411, C412	ECKD1H681K	001 103 1580 5	(E, EG, EF)			C703, C704	ECEA1ES330	001 120 2327 7
C413, C414	ECCD2H070D	001 103 0727 8	(EH, EB, E1)			C705, C706	ECEA1HV822UM	001 120 6259 4
C415, C416	ECQM1H102JZ	001 106 0661 4	(XL, XA)			C708	ECKD2H103PE	001 103 1626 8
C417, C418	ECEA1HU010	001 120 2842 1	C520	ECQM1H473JZ	001 106 0810 9	(E, EK, EF)		
C419, C420	ECCD2H680K	001 103 0772 3	(EK)			(EH, EB, E1)		
C421, C422	ECCD2H680K	001 103 0772 3	C521, C522	ECQM1H333JZ	001 106 0779 1	(XL, XA)		
C423, C424	ECKD1H333PF	001 103 1539 6	(EG)			C708	ECQE2104KS	001 106 0232 1
C425	ECEA2AU100	001 120 4922 4	(EG)			C712	ECKD1H223PF	001 103 1510 9
C426	ECKD1H102KB	001 103 1414 8	C523, C524	ECKD1H102MD	001 103 1424 6	(EG)		
(EG)			C525, C526	ECQM1H333JZ	001 106 0779 1			

Ref. No.	Part No.	Part Code	Description	Ref. No.	Part No.	Part Code	Description
INTEGRATED CIRCUITS				COILS AND TRANSFORMERS			
IC101	AN6558F	001 060 4009 1	I.C., EQUALIZER	L1	SLQZ650MH49	001 210 7126 1	COIL
IC301	SV1UPC4570C	001 060 8992 7	I.C., EQUALIZER, VOLUME	(EG)			
IC401	AN7062N	001 060 8240 0	I.C., AMP	L101, L102	SLM1Z33	001 210 7084 4	MPX COIL
IC501	SV14004	001 061 1230 5	I.C., POWER AMP, POWER AMP	(EG)			
IC601	AN7073	001 060 8241 9	I.C., PROTECTION	L501, L502	SLQY07G-40	001 211 2149 9	CHOKE COIL
TRANSISTORS				L503, L504	SLQY18G-10	001 211 2185 5	CHOKE COIL
Q401, Q402	2SA1123-R	001 030 0242 8	TRANSISTOR	L505, L506	SLQY07G-40	001 211 2149 9	CHOKE COIL
Q403, Q404	2SC1685-QNC	001 030 2729 2	TRANSISTOR	(EG)			
Q405, Q406	2SC2631-Q	001 030 2505 6	TRANSISTOR	L507, L508	SLQY07G-40	001 211 2149 9	CHOKE COIL
Q407, Q408	2SC3311A-Q	001 030 5279 5	TRANSISTOR	(EG)			
Q409, Q410	2SA1309Q	001 030 4058 0	TRANSISTOR	T1	SLT5M67	001 202 9077 1	POWER TRANSFORMER
Q411, Q412	2SC2631-Q	001 030 2505 6	TRANSISTOR	(E, EG, EF)			
Q413, Q414	2SA1123-R	001 030 0242 8	TRANSISTOR	(EH, EB, E1)			
Q415, Q416	2SC3944AQRS	001 030 5941 8	TRANSISTOR	T1	SLT5M68	001 202 9078 0	POWER TRANSFORMER
Q417, Q418	2SA1535AQRS	001 030 6991 4	TRANSISTOR	(EK)			
Q501, Q502	2SC2631-Q	001 030 2505 6	TRANSISTOR	T1	SLT5M69		POWER TRANSFORMER
Q503, Q504	2SA1123-R	001 030 0242 8	TRANSISTOR	(XA)			
Q505, Q506	2SA992E	001 030 0513 4	TRANSISTOR	FUSES			
Q601	2SA992E	001 030 0513 4	TRANSISTOR	F1	XBA2C20TB0	002 380 1352 0	FUSE, T2A250V
Q602	2SA1309Q	001 030 4058 0	TRANSISTOR	(EK)			
Q701	2SC3944AQRS	001 030 5941 8	TRANSISTOR	F1	XBAS2A2001	002 380 0410 1	FUSE, T2A250V
Q702	2SA1535AQRS	001 030 6991 4	TRANSISTOR	(E, EG, EF)			
Q703	2SC1685-QNC	001 030 2729 2	TRANSISTOR	(EH, EB, E1)			
DIODES				(XL, XA)			
D401, D402	MA167	001 032 4142 5	DIODE	F2	XBA2C40TR0	002 380 0417 4	FUSE, T4A250V
D403, D404	MA29WA	001 032 7250 0	DIODE	(XA)			
D405, D406	MA165	001 032 0494 0	DIODE	SWITCHES			
D407, D408	MA165	001 032 0494 0	DIODE	S1-1, S1-2	SSH656	003 435 5817 2	SWITCH
D409	MA29WA	001 032 7250 0	DIODE	S1-3, S1-4	SSH656	003 435 5817 2	SWITCH
D501, D502	MA4062-M	001 032 7211 7	DIODE	S1-5, S1-6	SSH656	003 435 5817 2	SWITCH
D503, D504	MA167	001 032 4142 5	DIODE	S3	ESA2682	003 439 0120 8	SWITCH
D505	MA29WA	001 032 7250 0	DIODE	S3	ESA335028B	003 439 1919 3	SWITCH
D602, D611	MA4033M	001 032 5623 9	DIODE	S4	SSH2114	003 435 5808 3	SWITCH
D620, D621	MA165	001 032 0494 0	DIODE	S5	SSH1215	003 435 5784 4	SWITCH
D624	SVDSR1K2	001 032 1343 0	DIODE	S6	SSH2114	003 435 5808 3	SWITCH
D701	MA4160M	001 032 5616 8	DIODE, S1	S8	SSH1218	003 435 5984 8	SWITCH
D702	SVDS10VB20F	001 032 1338 7	RECTIFIER	S9-1, S9-2	SSH2115	003 435 5785 3	SWITCH
VARIABLE RESISTORS				S11	ESB8215V	003 435 4958 4	PUSH SWITCH
VR201	EWJKA090B15	001 174 8555 1	VARIABLE RESISTOR	S701	ESE37263	003 430 2327 2	SWITCH
VR202	EVH0YA015G15	001 174 8584 6	VARIABLE RESISTOR	(XA)			
VR301, VR302	EWCRYA023C15	001 174 8586 4	VARIABLE RESISTOR	RELAYS			
VR401, VR402	EVNKGAA00B52	001 180 0496 1	VARIABLE RESISTOR	RL1	SSY126	003 450 2686 0	RELAY
THERMISTORS AND VARISTORS							
TH201, TH202	ERTD2MHL104S		THERMISTOR, THERMISTOR				
TH401, TH402	ERTD2MHL104S		THERMISTOR, THERMISTOR				

Ref. No.	Part No.	Part Code	Description	Ref. No.	Part No.	Part Code	Description
CABINET AND CHASSIS							
1	SBC666	016 702 5545 6	BUTTON, POWER	40	SJS9231A	003 410 5984 5	SOCKET COVER
1	SBC666-5	016 702 6679 9	BUTTON, POWER	(E, EG, EK)			
2	SBN1206	016 700 1846 2	KNOB	(EF, EH, EB)			
2	SBN1207-1	016 700 1845 3	KNOB	(E1, XA)			
3	SBN1089-3	016 700 1861 3	KNOB	40	SJS9234A	003 400 5921 6	AC INLET COVER
3	SBN1089-4	016 700 1860 4	KNOB	(XL)			
4	SBN1210	016 700 1859 7	KNOB	41	SMX477-1	016 600 0501 5	SHIELD SPACER
4	SBN1210-1	016 700 1862 2	KNOB	(EG)			
5	SGWUV55A-KE	016 840 7886 9	FRONT PANEL	42	SJF3062N	003 410 6082 0	TERMINAL BOARD
5	SGWUV55A-SE	016 840 8024 3	FRONT PANEL	43	SJF3057-5N	003 410 6144 3	TERMINAL BOARD
6	SGX7914	016 846 3856 1	ORNAMENT	44	SMX910	016 600 0496 6	SHIELD SPACER
6	SGX7914-1		ORNAMENT	(E, EG, EK)			
7	SGL246	016 846 3894 5	ORNAMENT	(EF, EH, EB)			
9	SGXUV55A-KE	016 846 3904 0	ORNAMENT	(E1, XL)			
9	SGXUV55A-SE	016 846 3927 3	ORNAMENT	45	SNE4021	005 507 0372 5	NUT
10	SXE1129		HEAT SINK	46	XTBS3+10JFZ1	005 501 3413 1	TAPPING SCREW
11	SMC6407-1	016 601 0633 9	SHIELD COVER	47	XTB3+10GFR	005 501 3126 5	SCREW
13	SBC439	016 702 0695 6	BUTTON	48	XTW3+10T	005 501 0596 9	SCREW
13	SBC439-2	016 702 6011 7	BUTTON	49	SNE2129	005 500 8058 5	SCREW
14	SJJ126B	003 400 5320 0	JACK	49	SNE2129-1	005 500 7938 6	SCREW
15	SBC719	016 702 6143 6	BUTTON	50	XTBS3+10JFZ1	005 501 3413 1	TAPPING SCREW
15	SBC719-1	016 702 1277 3	BUTTON	51	XTB3+8FFZ	005 501 2531 0	TAPPING SCREW
16	LN014314PH1		DIODE, GAASP	52	XYN3+F8	005 503 0513 0	SCREW
17	SBC820	016 702 6431 1	BUTTON	53	XTB3+20J	005 501 3410 4	SCREW
17	SBC820-1	016 702 6432 0	BUTTON	54	XTW3+8T	005 501 1358 9	SCREW
18	LN021315P	001 032 8371 8	DIODE, GAASP	55	XTBS3+20F1	005 501 2522 1	SCREW
19	LN064316P	001 032 8373 6	DIODE, GAASP	56	XYN3+F14	005 503 0346 7	TAPPING SCREW
20	SUB233	016 712 0272 6	ROD	57	SHR301	016 645 0044 0	CLAMPER
21	SJT388	003 410 6092 8	LUG TERMINAL	58	SJS5341	003 403 4292 1	CONNECTOR
(E, EG, EK)				59	SJT3311	003 410 1819 3	PLUG
(EF, EH, EB)				60	SJT3711	003 410 6955 6	CONNECTOR
(E1, XL)				61	SJT30840LX-V	003 410 5998 9	LUG TERMINAL
22	SHR415	016 652 0088 7	LOCK PIN	61	SJT30940LX-V	003 410 6150 5	LUG TERMINAL
23	SJS305-1		JACK, SOCKET	62	SJT783	003 410 6001 7	CONTACT
(E, EG, EK)				63	SJS5215	003 400 5923 4	CONNECTOR
(EF, EH, EB)				63	SJS5331	003 400 5924 3	CONNECTOR
(E1, XL)				63	SJS5629	003 400 5917 2	CONNECTOR
24	SKC1760K992	016 800 2648 5	CABINET	63	SJS5715	003 400 6034 4	SOCKET(7P)
24	SKC1760S992	016 800 2689 6	CABINET	64	SJT3213	003 410 6011 5	CONNECTOR
25	SKL308	016 828 0330 0	FOOT	64	SJT3319	003 403 3892 7	CONNECTOR
26	SKL309	016 828 0329 3	FOOT	64	SJT3321	003 410 5999 8	POST(3P)
27	SUB254	016 712 0318 9	ROD	64	SJT3611	003 410 6000 8	CONNECTOR
28	SKU11280-3	016 802 1927 5	BOTTOM BOARD	PACKINGS			
(XA)				P1	SPG5958	016 971 5141 1	CARTON BOX
28	SKU11280-4	016 802 1889 4	BOTTOM BOARD	(E, EG, EK)			
(E, EG, EK)				(EH			

EXPLODED VIEW

