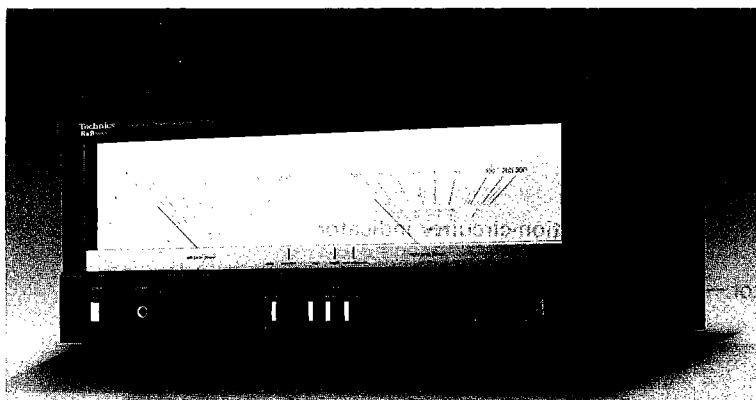


# Service Manual

Stereo DC Power Amplifier

SE-A3K

[M], [MC]



## Areas

- \* [M] is available in U.S.A.
- \* [MC] is available in Canada.

## TECHNICAL SPECIFICATIONS

Specifications are subject to change without notice for further improvement.

(IHF '78)

### ■ AMPLIFIER SECTION

#### Rated minimum sine wave RMS power output

20 Hz~20 kHz both channels driven

0.002% total harmonic distortion

200W per channel (8 ohms)

20 Hz~20 kHz both channels driven

0.003% total harmonic distortion

320W per channel (4 ohms)

#### 1 kHz continuous power output

both channels driven

0.001% total harmonic distortion

220W per channel (8 ohms)

0.003% total harmonic distortion

350W per channel (4 ohms)

#### Dynamic headroom

1.1 dB (8 ohms)

1.8 dB (4 ohms)

#### Total harmonic distortion

rated power at 20 Hz~20 kHz

0.002% (8 ohms)

half power at 20 Hz~20 kHz

0.001% (8 ohms)

half power at 1 kHz

0.0003% (8 ohms)

#### SMPTE intermodulation distortion

0.002% (8 ohms)

#### TIM (Transient Intermodulation Distortion)

unmeasurably small

#### Frequency response

+0 dB, -0.1 dB (DC~20 kHz)

DC~300 kHz, (+0 dB, -3 dB)

#### Input sensitivity

70 mV (1V, IHF '66)

#### S/N (IHF, A)

100 dB (123 dB, IHF '66)

#### Input impedance

47 kilohms

#### Low frequency damping factor

200 (8 ohms)

100 (4 ohms)

#### Load impedance

MAIN or REMOTE

4~16 ohms

MAIN and REMOTE

8~16 ohms

#### Meter

reading range

0.0001 W~300 W (8 ohms)

-60 dB~+5 dB

(logarithmic compression)

#### frequency response (reading accuracy)

10 Hz~20 kHz  $\pm 1$  dB (more than -40 dB)10 Hz~10 kHz  $\pm 1$  dB (less than -40 dB)

attack time

50  $\mu$ sec.

recovery time

750 msec. (0 dB~-20 dB)

### ■ GENERAL

#### Power consumption

1150W, 1400 VA

#### Power supply

AC 120V, 60 Hz

#### Dimensions (W×H×D)

430 × 208 × 507 mm

(16-15/16" × 8-3/16" × 19-31/32")

#### Weight

35.2 kg

(78.3 lb.)

#### Note:

Total harmonic distortion is measured by the digital spectrum analyzer (H.P. 3045 system).

**Technics**  
R&B series

Panasonic Company  
Division of Matsushita Electric  
Corporation of America  
One Panasonic Way, Secaucus,  
New Jersey 07094

Panasonic Hawaii, Inc.  
320 Waiakamilo Road, Honolulu,  
Hawaii 96817

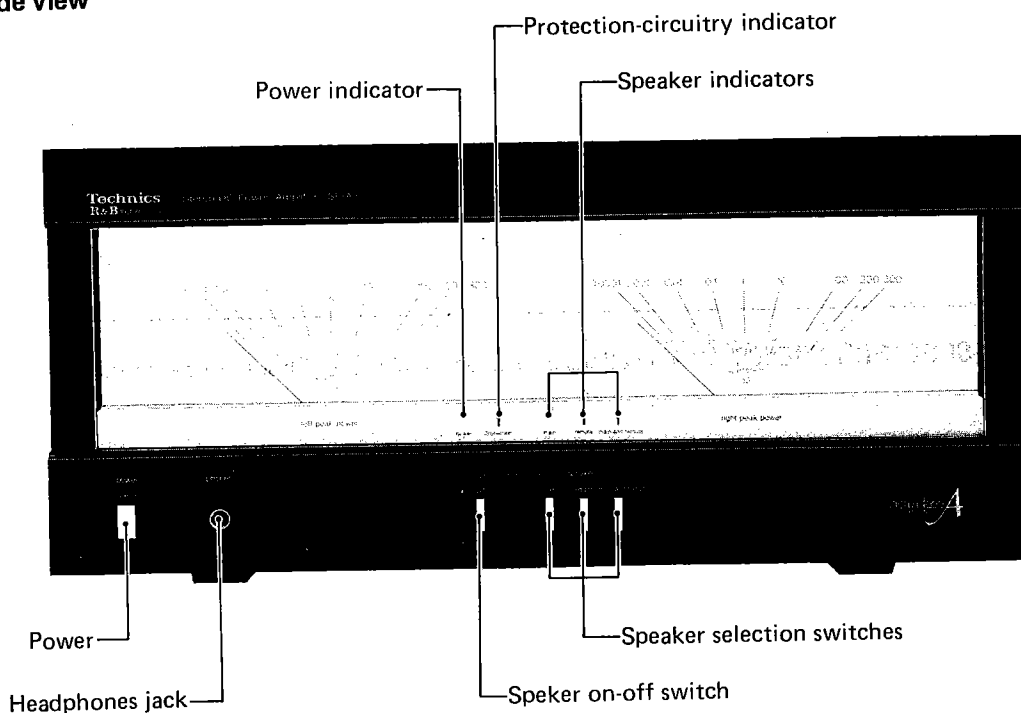
Panasonic Canada  
Division of Matsushita Electric,  
of Canada Ltd.  
5770 Ambler Drive,  
Mississauga, Ontario L4W 2T3

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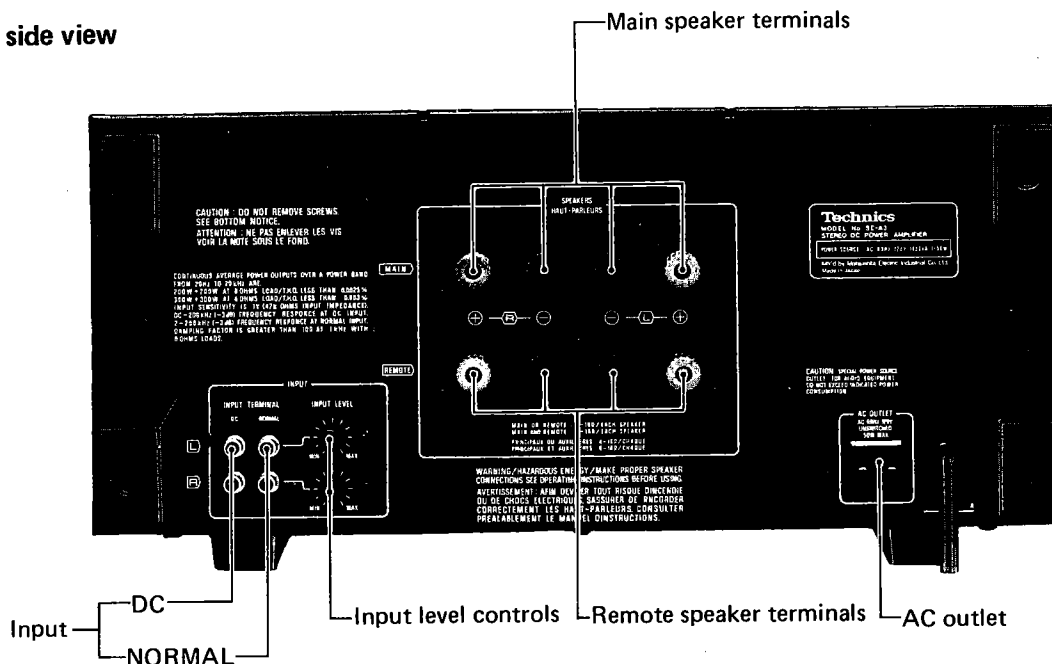
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## LOCATION OF CONTROLS

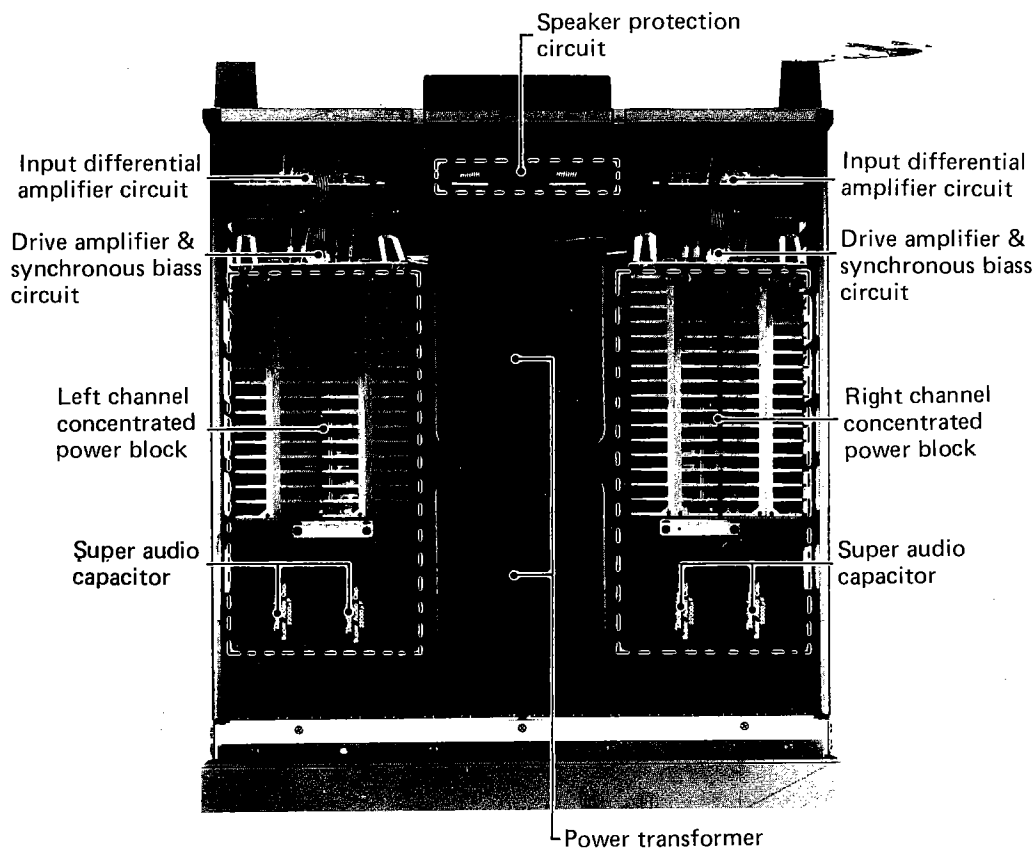
### Front side view



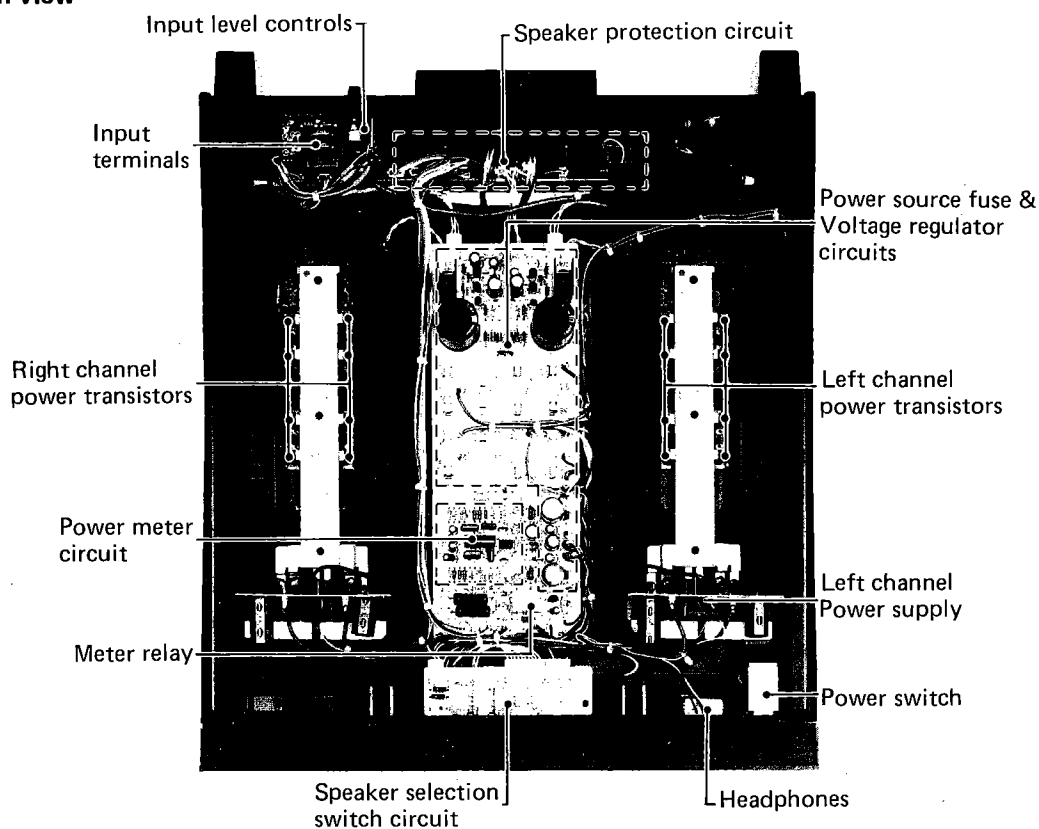
### Rear side view



## • Top view



## • Bottom view



## DISASSEMBLY INSTRUCTIONS

### How to remove the cabinet

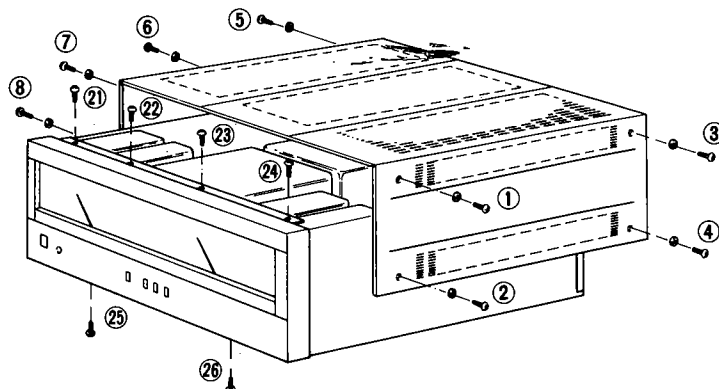
Remove the 8 setscrews (① ~ ⑧) in Fig. 1) on the side of the cabinet, and then the cabinet can be removed.

### How to remove the bottom board

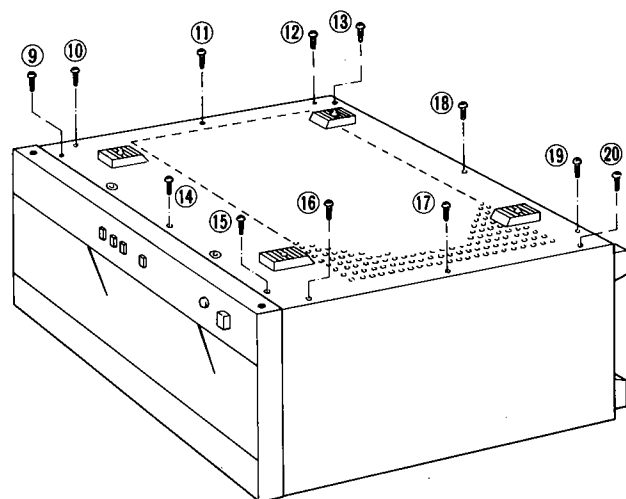
Remove the 12 setscrews (⑨ ~ ⑳) in Fig. 2) to remove the bottom board".)

### How to remove the front panel

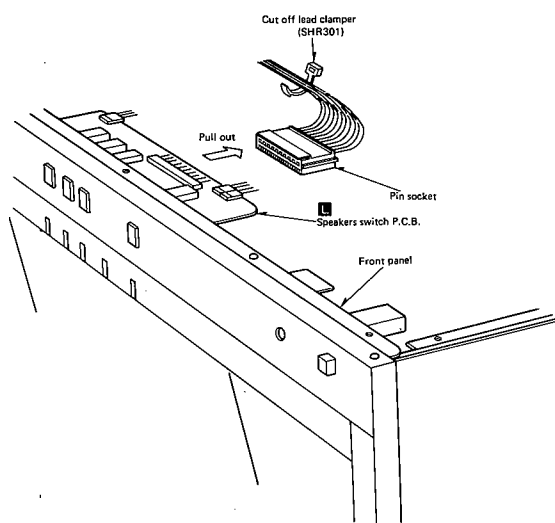
1. Remove the cabinet and bottom board. (Refer to "How to remove the cabinet" and "How to remove the bottom board".)
2. Pull out the pin socket of **L** printed circuit board (Speaker selection switch and indicator circuits) [Fig. 3].
3. Remove the 6 setscrews (㉑ ~ ㉒) in Fig. 1) of the front panel.



[Fig. 1]



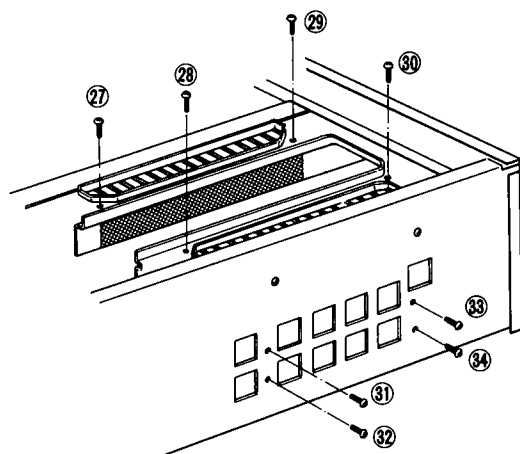
[Fig. 2]



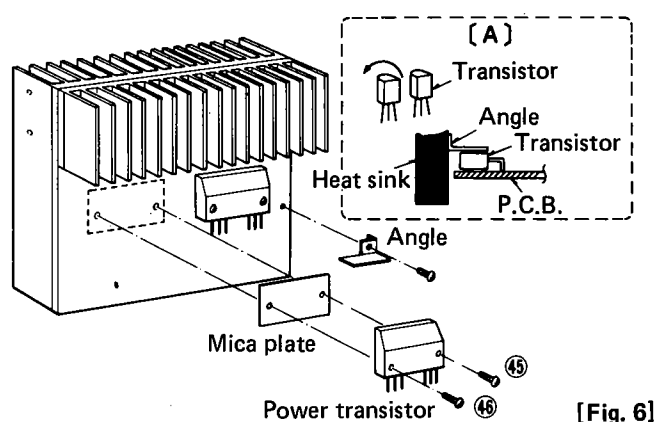
[Fig. 3]

### How to remove the power transistor

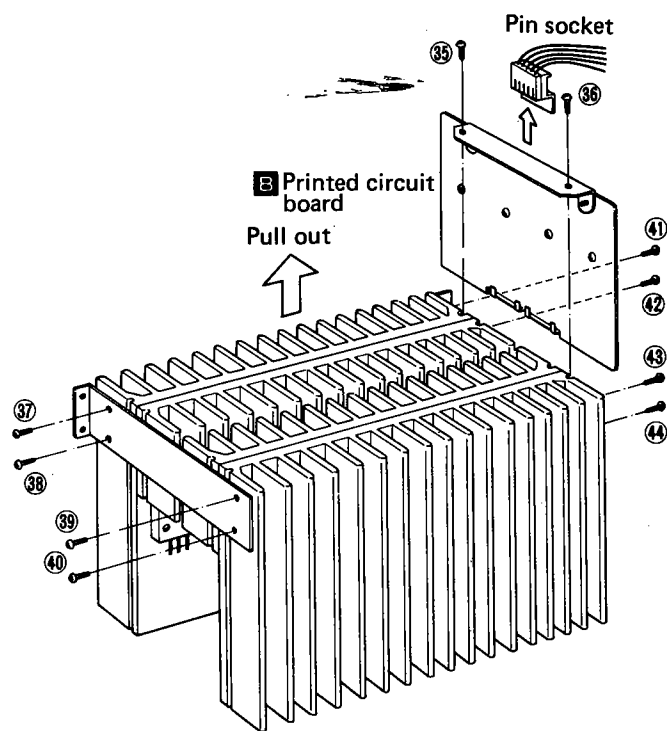
1. Remove the cabinet and bottom board. (Refer to "How to remove the cabinet" and "How to remove the bottom board".)
  2. Pull out the pin socket of **E** printed circuit board (driver stage, synchro bias circuit).  
Next, remove the 2 setscrews (㉓, ㉔) in Fig. 5) of the printed circuit board. Then remove the printed circuit board by lifting it upward.
  3. Unsolder the 4 power transistors (Q125 ~ Q128).
  4. Remove the 4 setscrews (㉕ ~ ㉖) in Fig. 4) which secure the heat sink from the power block chassis bottom:
  5. Remove the 4 setscrews (㉗ ~ ㉘) in Fig. 4) which secure the heat sink from the side of the set.
  6. Remove the heat sink from the chassis by lifting it upward.
  7. Remove the 8 setscrews (㉙ ~ ㉚) in Fig. 5) which secure the heat sink connector.
  8. Remove the 2 setscrews (㉛, ㉜) in Fig. 6) to remove the power transistor.
  9. When installing the power transistor, apply silicone compound (or equivalent heat diffuser) to the back and the mica plate (heat sink side of the power transistor, and then reverse the procedure 1 ~ 8.
- Note: 1. When the temperature compensating transistor (Q113, Q114 — Q119, Q120) are replaced, install the transistors at an angle of 90° as in Fig. 6 (A).
2. When installing the temperature compensating transistor holders, apply silicone compound (or equivalent heat diffuser) to them.



[Fig. 4]



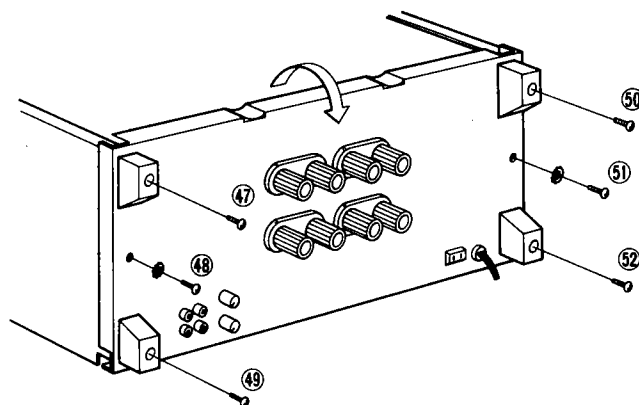
[Fig. 6]



[Fig. 5]

### ● How to remove the speaker protection circuit printed board

1. Remove the cabinet and bottom board. (Refer to "How to remove the cabinet" and "How to remove the bottom board".)
2. Remove the 6 setscrews (47)~(52) in Fig. 7) of the rear panel. Then open the rear panel in the direction of the arrow.
3. Unsolder the speaker terminals. (8 portions)
4. Remove the 4 setscrews of the printed circuit board and then the board can be removed.



[Fig. 7]

### ● Before starting the repairing

Before adjusting or repairing, be sure to short-circuit opposite poles of the 22000 $\mu$ F capacitors (C3, 4) with a resistor approximately of 10 $\Omega$ , 10W for discharging the charged voltage.

Short-circuiting with a screw driver and the like is not only dangerous, but may destroy transistors and diodes, and should therefore be avoided.

## ■ ADJUSTING INSTRUCTIONS

When adjusting and measuring this set, perform ageing of the set in normal position for about 10 minutes beforehand.

### ● Setting of controls and instruments to be used

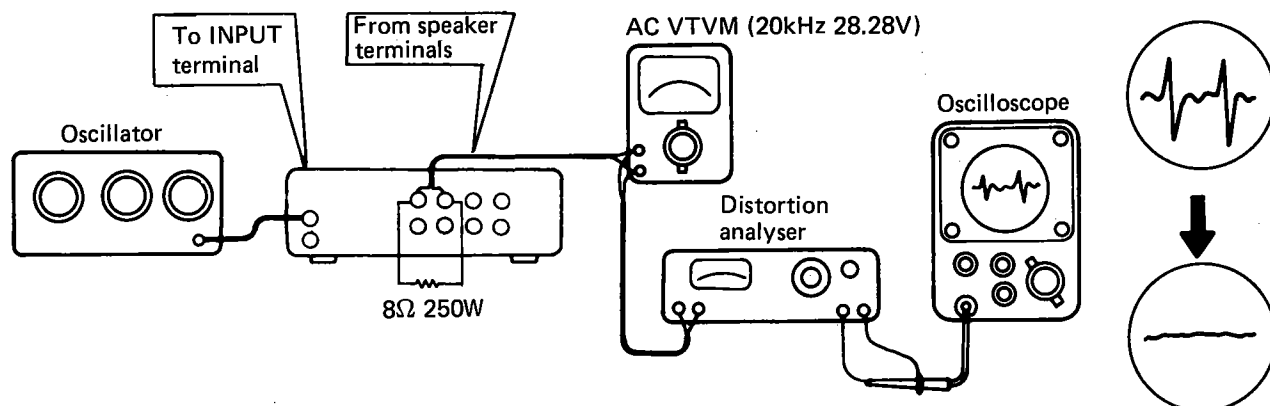
1. Speakers on/off switch . . . . . on
2. Speaker switch . . . . . main
3. Input Level volume (rear side) . . . . . MIN
4. DC voltmeter (capable to measure 5mV)
5. Oscilloscope
6. Oscillator
7. Distortion analyser
8. AC electronic voltmeter
9. 8-ohm load resistor

### 1. Adjustment of Voltage regulator and DC balance

Adjustments	DC Voltmeter Connections	Adjusting Point	Adjustment Procedure
Voltage regulator	Between <b>TP 5</b> and <b>TP4</b> (minus probe)	VR201	* Turn voltage regulator semi-fixed resistor VR201 to minimum. (counterclockwise direction) * Adjust VR201 so that voltage is 85.5V.
DC balance	Main Speaker terminals (L & R channels)	VR103 (L & R channels)	* Adjust it to 0mV with DC voltmeter set to 30mV range. * Cut off the jumper wire if adjustment is not possible.

### 2. Adjustment of Clamp Voltage and I<sub>ce</sub>

- 1) Set the clamp voltage semi-fixed resistor VR105 to minimum.
- 2) Apply 20kHz sine wave to INPUT DC terminals.
- 3) Set the input level control volume to MAX.
- 4) Connect the distortion analyser to the speaker terminals and connect the output from the distortion analyser to the vertical input of the oscilloscope.
- 5) Turn the oscillator attenuator so that the output of the speaker terminal is 28.28V.
- 6) Turn the I<sub>ce</sub> semi-fixed resistor VR104 so that the distorted waveform is minimized.
- 7) Furthermore, turn the clamp voltage semi-fixed resistor VR105 so that the distorted waveform is minimized.



PROTECTION CIRCUITRY INDICATOR

The indicator lights up when a trouble occurs in this unit.

With the power switch set to "on", the indicator lights up, and it goes out when the unit is in normal operation (about 7 sec. later). If abnormality takes place during operation, the indicator lights up or blinks. In that case, set the power switch to "off" and check the cause according to the following procedure.

When the indicator lights up:

(Cause)

- 1. Due to troubles in other equipment (preamp, etc.), direct current is applied to the input, causing the protection circuit to operate.
- 2. This unit is in trouble, causing the protective circuit to operate.

(Check of the cause)

Set the power switch of this unit to "off", shift the input terminal connection on the back side from "DC" to "NOR-MAL", and then set the power switch to "on".

1. Indicator does not light up .....

Equipment (preamp side) other than this unit is abnormal.

2. Indicator lights up .....

This unit is abnormal. Then check the following points.

- 1) Middle point potential detection circuit \_\_\_\_\_ Constant voltage power source circuit (Q201 ~ Q208, D203 ~ D206, F3, F4)  
(\* Refer to "Adjustment" on page 6.) \_\_\_\_\_ Adjustment of DC balance
- 2) Overcurrent detection circuit \_\_\_\_\_ Temperature compensation circuit (Q113, Q114, Q119, Q120)
- 3) Power ON/OFF detection circuit \_\_\_\_\_ Muting circuit (R309 ~ R311, C304, D301)
- 4) Over-load limit circuit \_\_\_\_\_ Current limiter circuit (Q305, D311)

When the indicator blinks:

(Cause)

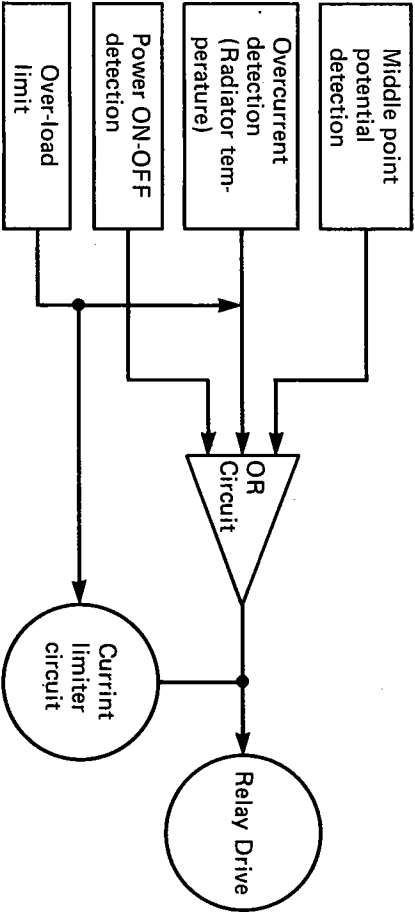
The speaker terminals or the power cord cable (positive and negative) are short-circuited, causing the protection circuit to operate.

(Check of the cause)

Set the power switch of this unit to "off", check the speaker terminal and the cord, and then set the power switch to "on".

- 1. Indicator does not blink ..... Speaker terminal and cord connections are correct and normal.
- 2. Indicator blinks ..... Speaker terminal or cord cable short-circuit trouble is possible. In this case, take proper measures, replacing the cord, etc., and check for trouble again.

The block diagram of the protection circuit is shown below



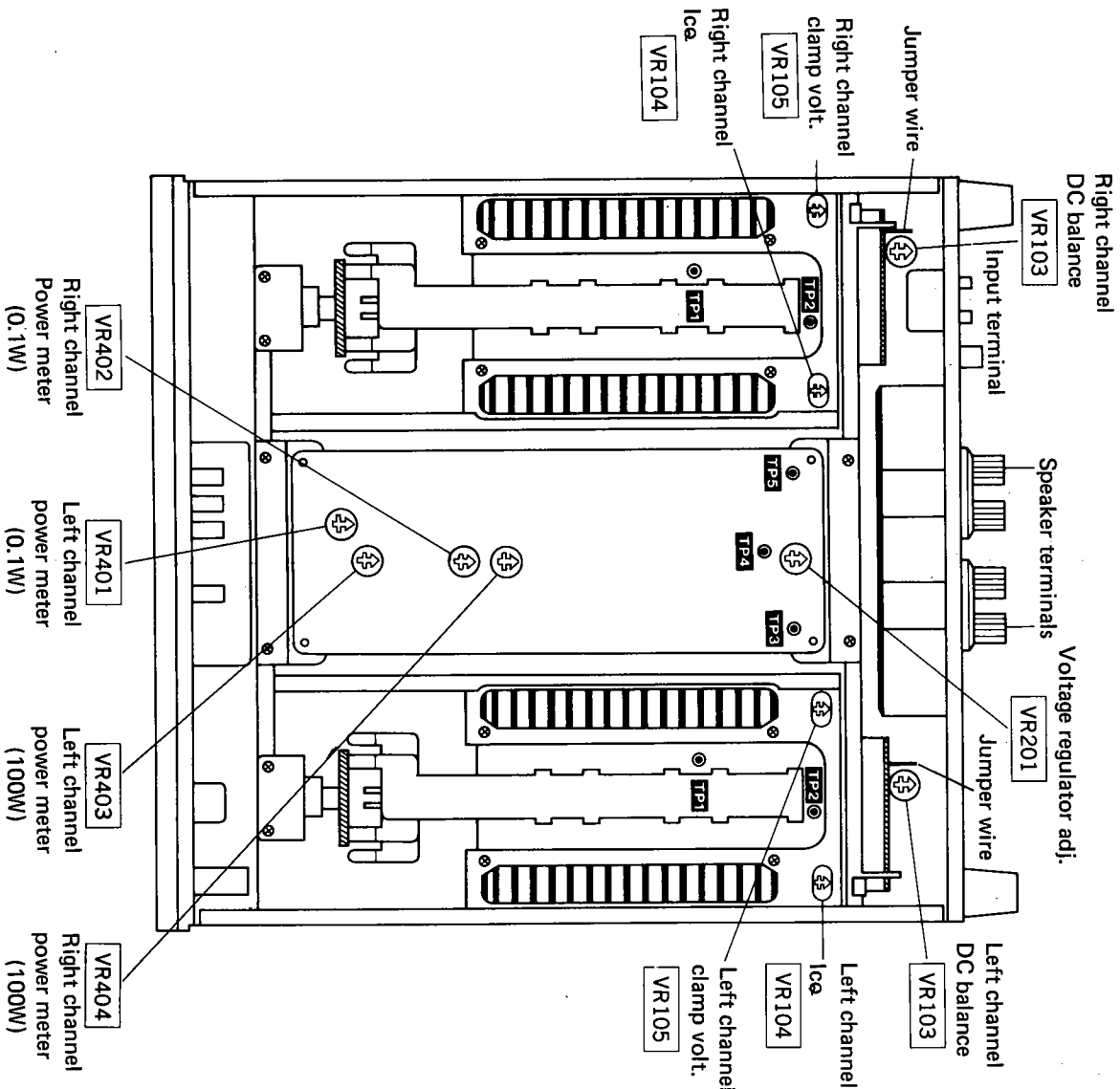
\* If the speaker impedance is too (low less than 4Ω), the limiter circuit operates and power is extremely reduced.

(Relay does not operate.)

3. Adjustment of Peak power meter

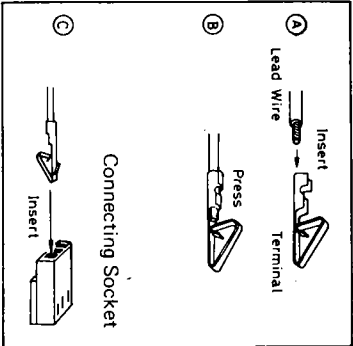
- 1) Connect the oscillator to INPUT DC terminal, and the AC electronic voltmeter to the speaker terminals in parallel with the load resistor.
- 2) Set the input level control volume to MAX.
- 3) Apply 1kHz signal from the oscillator, and turn the attenuator of the oscillator so that the AC electronic voltmeter indicates 0.894V.
- 4) Adjust VR401 (left channel) so that the power meter indicates 0.1W.
- 5) Similarly, make the adjustment of VR402 (right channel).
- 6) Apply 1kHz signal from the oscillator, and turn the attenuator of the oscillator so that the AC electronic voltmeter indicates 28.28V.
- 7) Adjust VR403 (left channel) so that the power meter indicates 100W.
- 8) Similarly, make the adjustment of VR404 (right channel).
- 9) Perform the adjustments, repeating the procedure (3) ~ (8) in order.

ADJUSTING POINTS

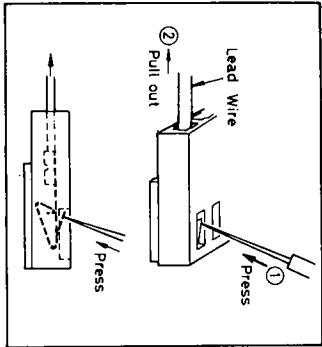


HOW TO PREPARE LEAD-CONNECTOR SOCKETS

shown in figure 8 (A), insert the lead wire to the terminal.  
shown in figure 8 (B), press the terminal to secure the lead wire.  
shown in figure 8 (C), insert into a connector socket.  
remove from the socket, hold the terminal with a sharp-point tool such as a needle, as shown in figure 9, and pull out the lead wire at the same time.



[Fig. 8]



[Fig. 9]

RECAUTIONS FOR CONNECTIONS

making connections, be absolutely sure that the power to this unit and all other connected equipment is first off.  
connections are made while the power is on, a large input will be applied to the speaker systems, which might damage so special care should be taken concerning this point.

EPLACEMENT PARTS LIST... Electric Parts

- Notes: 1. Part numbers are indicated on most mechanical parts.  
Please use this part number for parts orders.  
2.  $\Delta$  indicates that only parts specified by the manufacturer be used for safety.

Part No.	Part Name & Description
TED CIRCUIT	
SV1TA7317P SV1TA7318P AN6552F	IC, Speaker Protection Operation Amplifier IC, Logarithm Amplifier IC, Power Meter Operation Amplifier
ORS	
SV1UPA68H-M	Transistor, Input Differential Amplifier (Use in ranks L or M) [FET]
2SC1980-T	Transistor, Current Stabilizer (Use in ranks R, S or T)
2SC2291N-G	Transistor, Current Stabilizer (Use in ranks F or G)
2SA995N-G	Transistor, Current Mirror (Use in ranks F or G)
2SA902S-F	Transistor, Differential Amplifier (Product Part No. 2SA722-S, T or U)
2SA964-Q	Transistor, Current Stabilizer (Use in ranks P, Q or R)
2SC2224-Q	Transistor, Drive Amplifier (Use in ranks P, Q or R)
2SC1328-T	Transistor, Current Mirror (Use in ranks S, T or U)
2SA1015-Y	Transistor, Temperature Detection (Use in ranks Y or O) as same as Q113 ~ Q119 and Q120.
2SC1815-Y	Transistor, Temperature Detection (Use in ranks Y or O) Q119 and Q120.
2SC2224-Q	Transistor, Drive Amp. (Use in ranks P, Q or R) same as Q115 ~ Q117 and Q118.
2SA964-Q	Transistor, Drive Amp. (Use in ranks P, Q or R)
2SA1112-R	Transistor, Drive Amp. (Use in ranks Q, R or S) same as Q121 ~ Q123 and Q124.
2SC2592-R	Transistor, Drive Amp. (Use in ranks Q, R or S)
DIODES	
D101 (X2) 105 (X2)	MA27A1 Diode, Bias Supply
D102, 103, 104 106, 107, 122 (X2)	MA27A2 Diode, Bias Supply
D108, 109, 114 ~ 117, 123 124, 130, 311 (X2)	MA162A Diode, Bias Supply & Current Limiter Circuit

Ref. No.	Part No.	Part Name & Description
D110 ~ 113 (X2) D201 (X2) D203 ~ 206, 210, 211 D207, 208 D209 D212, 213 D215 D301, 307 D302, 303 305, 306 D401 ~ 404 D405, 406	20A90 SVDS10VB20 $\Delta$ SVDSR1K2 MA27A2 SVDNZ339A SVDNZ310B SVDNZ324A MA162A SVDSR1K2 MA162A 20A90	Diode, Synchronous Bias Switching Rectifier Diode Diode, 33V Zener Diode, 10V Zener Diode, 24V Zener Diode, Protection Circuit Diode, Pulse Cancel Diode, Power Meter Circuit Diode, Power Meter Circuit
VARIABLE RESISTORS		
VR101, 102 VR103 (X2) VR104 (X2) 105 (X2) VR201 VR401 ~ 404	EVH6UA524B54 EVMH8GA00B53 EVMH8GA00B13 EVMH9GA00B53 EVMH9GA00B33	Input Level Control, 50k $\Omega$ (B) DC Unbalance Adjustment, 5k $\Omega$ (B) Power Amp. Idling Current Adjustment & Clamp Voltage Adjustment, 1k $\Omega$ (B) Voltage Control Adjustment, 5k $\Omega$ (B) Power Meter Adjustment, 3k $\Omega$ (B)
THERMISTERS		
TH101 (X2) 401, 402	ERTD2FHL103S	Thermister, Thermal Compensation, 10k $\Omega$
RELAYS		
RLV301 ~ 303 RLV305 RLV501, 502	SSV47 SSV31 SSV77	Relay, Speaker Output Relay, Meter Output Relay, Protection

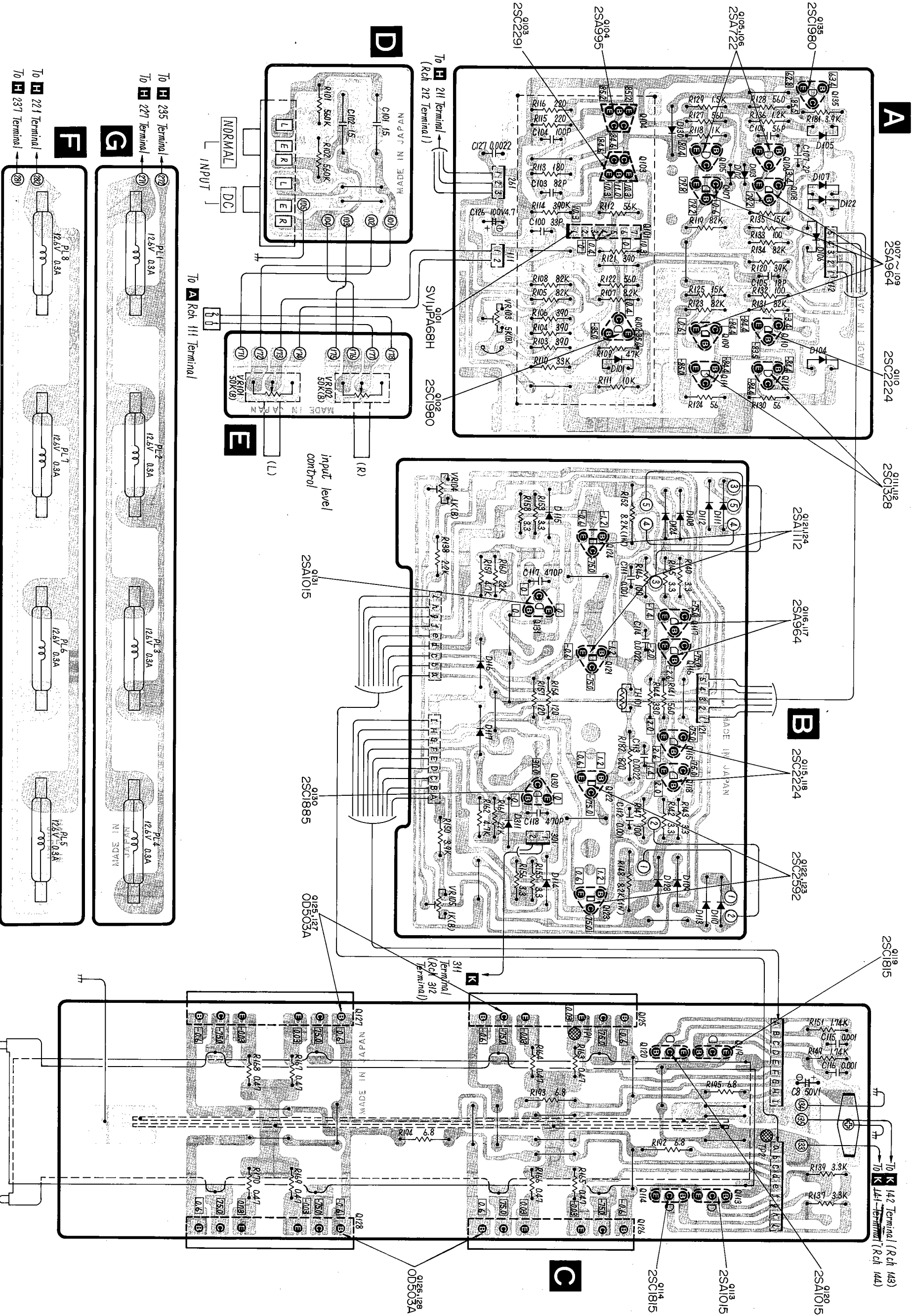
Ref. No.	Part No.	Part Name & Description
METER		
	SSM153-N	Meter, Peak Power
COMPONENT COMBINATIONS		
Z201 (X2) 203	EXRFS203ZS	Component Combination, 0.01 $\mu$ F (X2)
FUSES		
F1, 2 F3, 4 F5, 6	$\Delta$ XBAS2A10001 $\Delta$ XBA2FE08NU100 $\Delta$ XBA1F25NU14	Fuse, 10A (250V) Fuse, 800mA (250V) Fuse, 2.5A (125V)
SWITCHES		
S1 ~ S4 S5	SSH429 $\Delta$ ESB9939C	Switch, Speaker Selection Switch, Power Source
LAMPS		
PL1 ~ 8 PL9 ~ 13	$\Delta$ XAM43P $\Delta$ XAMR48T250	Lamp, Peak Power Meter Lamp, Speaker Indicator
COILS and TRANSFORMER		
L101, 102 T1 T2	SLQV07G-10 $\Delta$ SLT5S41-1 $\Delta$ SLT5S41	Coil, Power Amplifier Output Choke Transformer, Power Source Transformer, Power Source



Ground (Earth) circuit

# PRINTED CIRCUIT BOARD

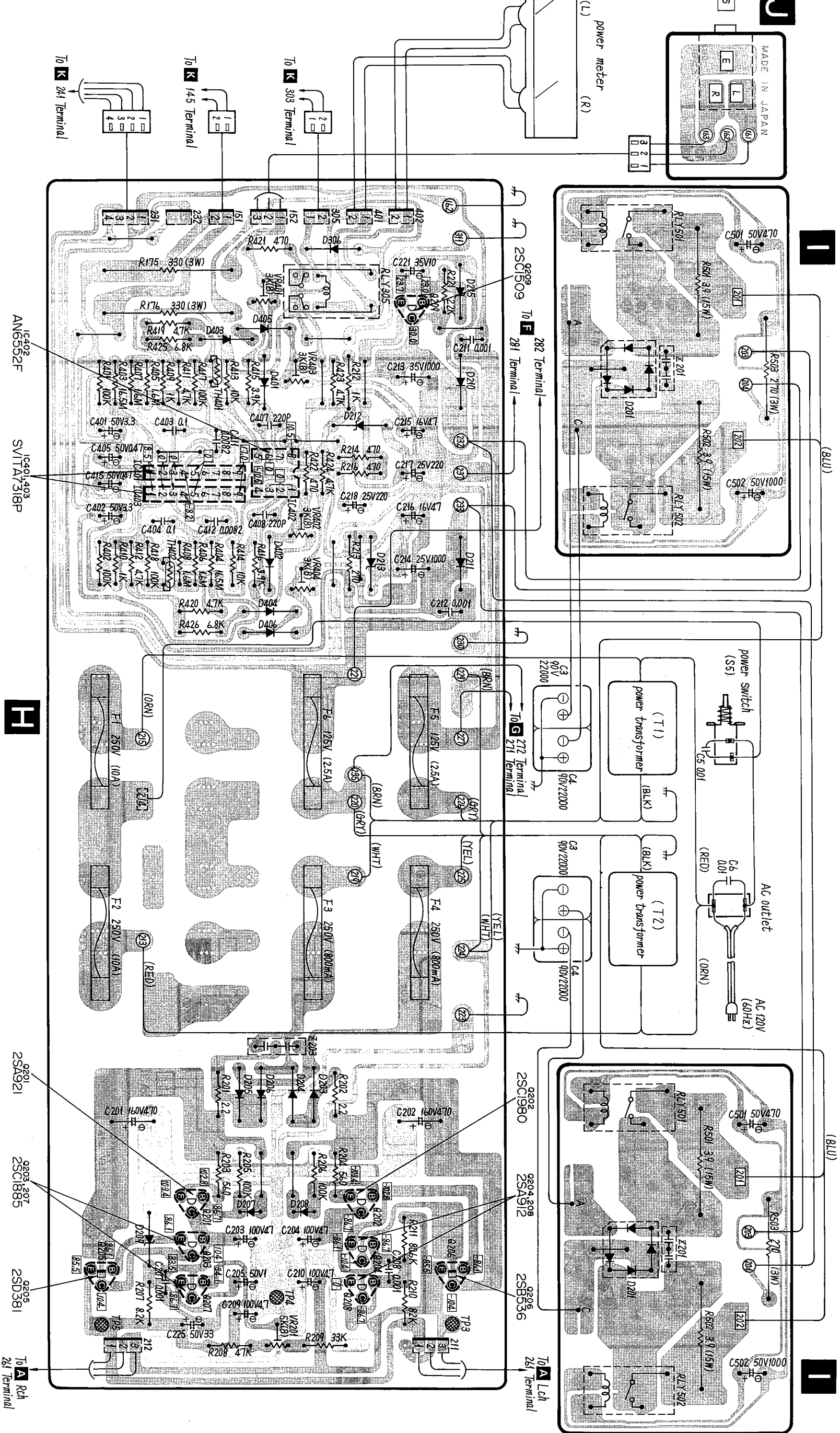
( **A** 1st Differential amplifier circuit, **B** Drive amplifier & synchronous bias circuits, **C** Power amplifier, **D** Input terminals, **E** Input level controls, **F** - **G** Peak-power meter lamps )



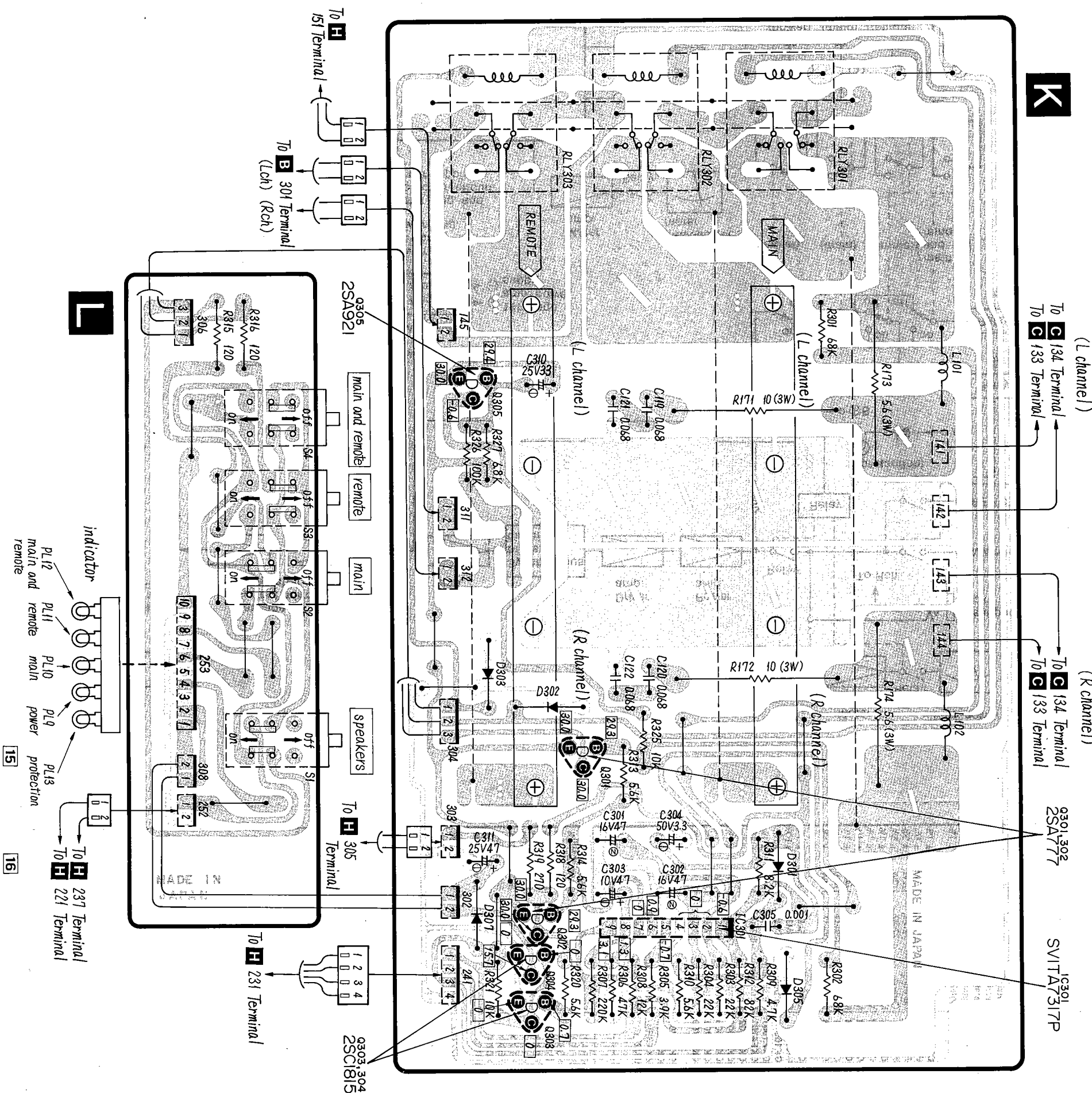
# PRINTED CIRCUIT BOARD

**F** Power source fuse, **V** Voltage regulator & meter circuits, **I** Power supply, **J** Headphone circuit)

### Ground (Earth) circuit



PRINTED CIRCUIT BOARD ( **K** Speakers protection, **L** Speaker selection switches & speaker indicators) Ground (Earth) circuit



■ TERMINAL GUIDE OF TRANSISTORS AND IC'S

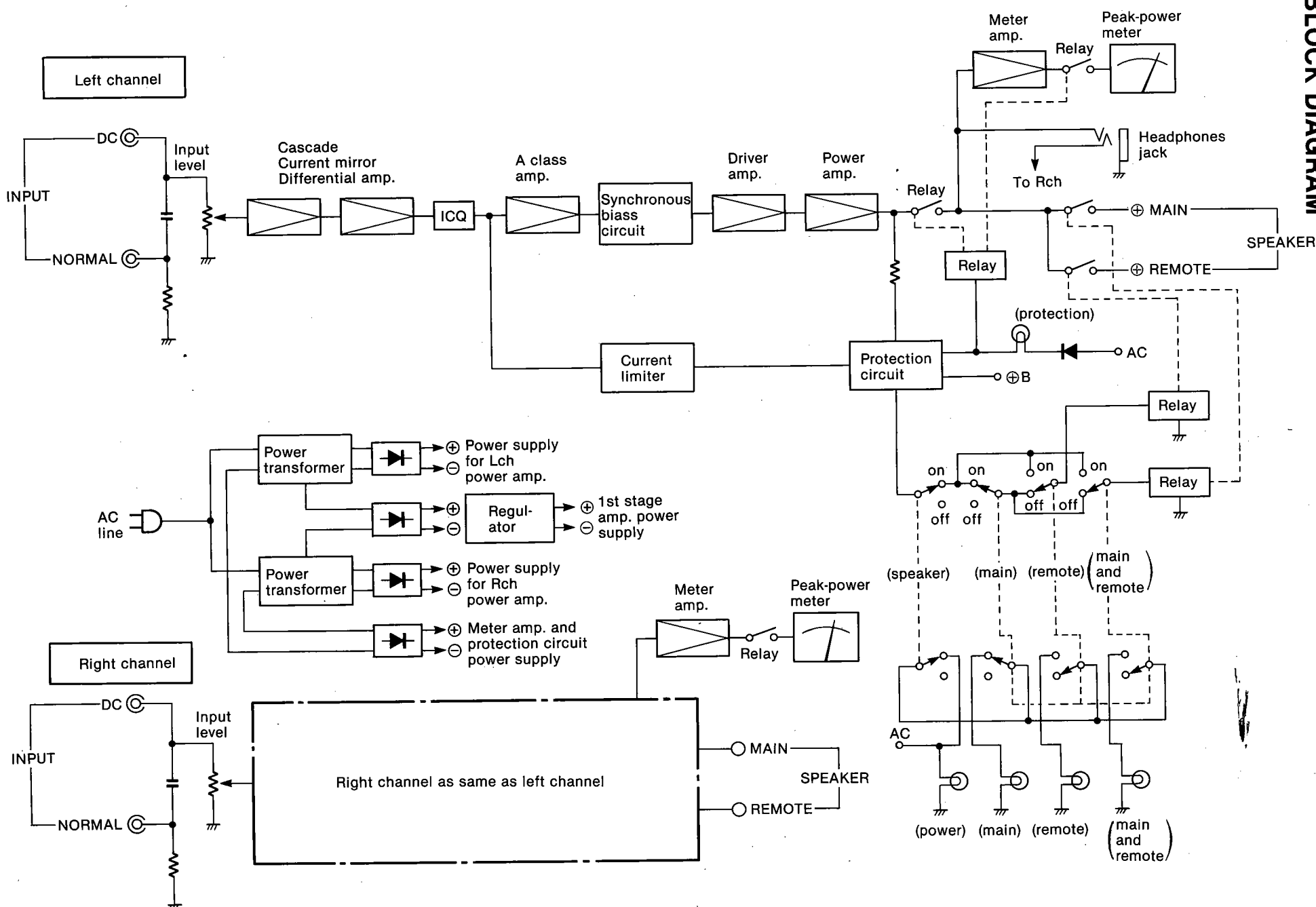
SVTA7317P SVTA7318P	2SA1112, 2SC2592
AN6552	2SA1722, 2SC1328 2SA1777, 2SC1509 2SA912, 2SC1815 2SA921, 2SC1885 2SA1015, 2SC1980
SVTA7318P	2SB536, 2SD381
2SA995, 2SC2291	2SA964, 2SC2224
OD503A	

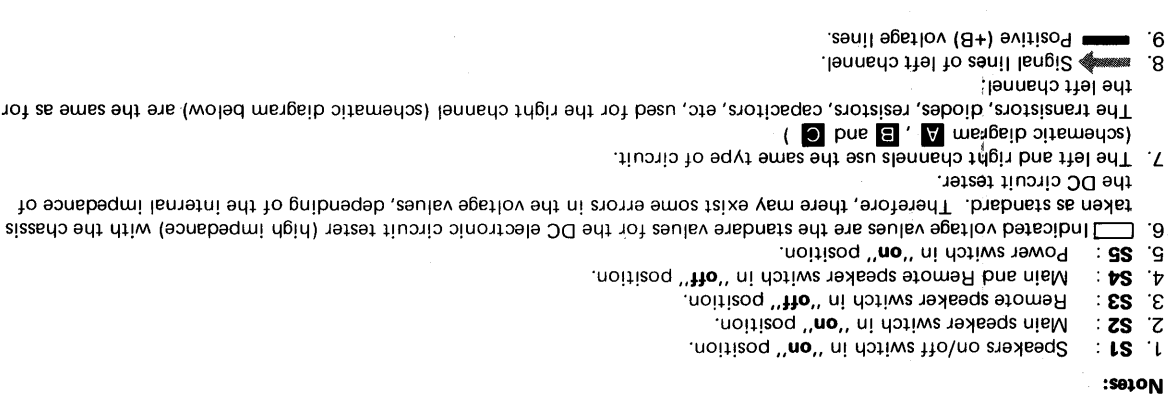


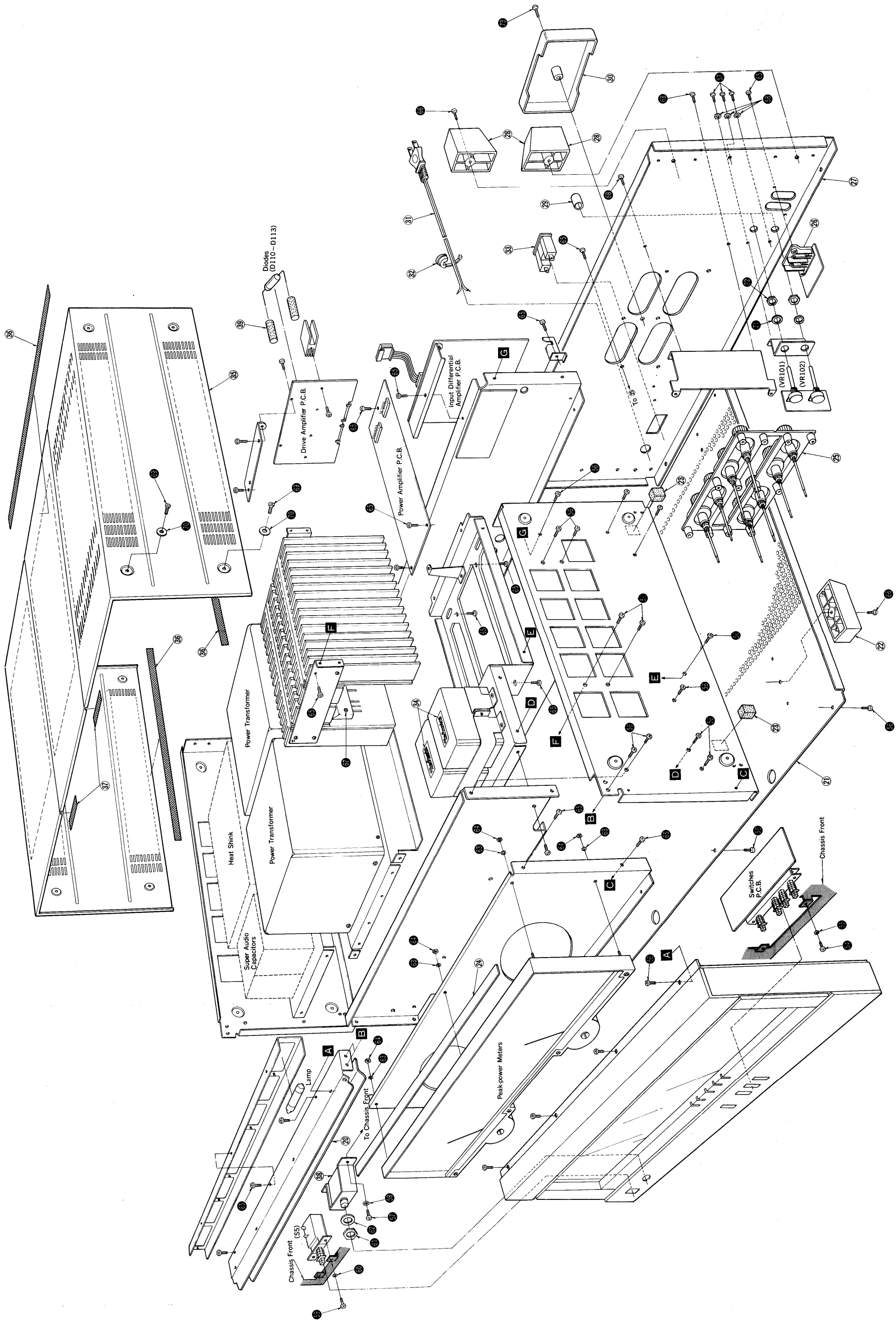
**Note:**  indicates that only parts specified by the manufacturer be used for safety.

## ■ BLOCK DIAGRAM

Part No.		Part Name & Description		Ref. No.	Part No.	Part Name & Description				
X2	ER025CKF5603	Metal Film,	560kΩ,	1/4W,	± 1%	ER025CKF4701	Metal Film,	3.9kΩ,	1/4W,	± 1%
	ER025CKF3900	Metal Film,	390Ω,	1/4W,	± 1%	ER025CKF2203	Metal Film,	220kΩ,	1/4W,	± 1%
	ER025CKF8202	Metal Film,	82kΩ,	1/4W,	± 1%	ER025CKF1202	Metal Film,	1.2kΩ,	1/4W,	± 1%
	ER025CKF3900	Metal Film,	390Ω,	1/4W,	± 1%	ER025CKF4701	Metal Film,	4.7kΩ,	1/4W,	± 1%
	ER025CKF8202	Metal Film,	8.2kΩ,	1/4W,	± 1%	ER025CKF5601	Metal Film,	5.6kΩ,	1/4W,	± 1%
	ER025CKF8202	Metal Film,	82kΩ,	1/4W,	± 1%	ER025CKF8201	Metal Film,	8.2kΩ,	1/4W,	± 1%
	ER025CKF3302	Metal Film,	47kΩ,	1/4W,	± 1%	ER025CKF8202	Metal Film,	82kΩ,	1/4W,	± 1%
	ER025CKF1002	Metal Film,	10kΩ,	1/4W,	± 1%					
	ER025CKF5602	Metal Film,	56kΩ,	1/4W,	± 1%					
	ERD25FJ181	Carbon,	180Ω,	1/4W,	± 5%	ER025CKF5601	Metal Film,	5.6kΩ,	1/4W,	± 1%
X2	ER025CF3903	Metal Film,	390kΩ,	1/4W,	± 5%	ER050FJ121	Carbon,	120Ω,	1/2W,	± 5%
	ERD25FJ221	Carbon,	220kΩ,	1/4W,	± 1%	ERD50FJ121	Carbon,	270Ω,	1/2W,	± 5%
	ERD25FJ102	Carbon,	1kΩ,	1/4W,	± 5%	ER025CKF5601	Metal Film,	5.6kΩ,	1/4W,	± 1%
	ER025CKF8202	Metal Film,	82kΩ,	1/4W,	± 1%	ER025CKF1002	Metal Film,	10kΩ,	1/4W,	± 1%
	ER025CKF3902	Metal Film,	39kΩ,	1/4W,	± 1%	ER025CKF1003	Metal Film,	100kΩ,	1/4W,	± 1%
	ERD25FJ391	Carbon,	390Ω,	1/4W,	± 5%	ER025CKF6801	Metal Film,	6.8kΩ,	1/4W,	± 1%
	ERD25FJ561	Carbon,	560Ω,	1/4W,	± 5%	ER025CKF1003	Metal Film,	100kΩ,	1/4W,	± 1%
	ER025CKF8202	Metal Film,	82kΩ,	1/4W,	± 1%	ER025CKF1652	Metal Film,	16.5kΩ,	1/4W,	± 1%
	ER025FJ560	Carbon,	56Ω,	1/4W,	± 5%	ERC14GK165	Carbon,	1.6MΩ,	1/4W,	± 10%
	ER025CKF1502	Metal Film,	15kΩ,	1/4W,	± 1%	ERC14GK165	Carbon,	1.6MΩ,	1/4W,	± 10%
X2	ER025FJ152	Carbon,	15kΩ,	1/4W,	± 5%	ER025CKF4701	Metal Film,	4.7kΩ,	1/4W,	± 1%
	ERD25FJ152	Carbon,	1.5kΩ,	1/4W,	± 5%	ER025CKF1002	Metal Film,	10kΩ,	1/4W,	± 1%
	ERD25CF8202	Metal Film,	82kΩ,	1/4W,	± 1%	ER025CKF3901	Metal Film,	3.9kΩ,	1/4W,	± 1%
	ER025CKF8202	Metal Film,	100Ω,	1/4W,	± 5%	ER025CKF1003	Metal Film,	100kΩ,	1/4W,	± 1%
	ER025FJ101	Metal Film,	82kΩ,	1/4W,	± 5%	ER025CKF4701	Metal Film,	4.7kΩ,	1/4W,	± 1%
	ER025FJ153	Carbon,	15kΩ,	1/4W,	± 5%	ER025CKF4701	Metal Film,	4.7kΩ,	1/4W,	± 1%
	ERD25FJ153	Carbon,	1.2kΩ,	1/4W,	± 5%	ER025CKF4701	Metal Film,	4.7kΩ,	1/4W,	± 1%
	ERD25FJ332	Carbon,	3.3kΩ,	1/4W,	± 5%	ER025CKF4701	Metal Film,	4.7kΩ,	1/4W,	± 1%
	ERD25FJ222	Carbon,	2.2kΩ,	1/4W,	± 5%	ER025CKF4701	Metal Film,	4.7kΩ,	1/4W,	± 1%
	ERD25FJ332	Carbon,	3.3kΩ,	1/4W,	± 5%	ER025CKF6801	Metal Film,	6.8kΩ,	1/4W,	± 1%
X2	ERD25FCJ3R3	Fuse Type Carbon,	560Ω,	1/4W,	± 2%	ERF15XK3R59	Non-Flammable,	3.9Ω,	15W,	± 10%
	ERD25FCJ561	Fuse Type Carbon,	560Ω,	1/4W,	± 2%	ERG3ANJ271	Metal Oxide,	270Ω,	3W,	± 5%
	ERD25FJ3R3	Carbon,	3.3Ω,	1/4W,	± 5%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ331	Carbon,	3.3Ω,	1/4W,	± 5%					
	ERD25FJ3R3	Fuse Type Carbon,	120Ω,	1/4W,	± 2%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Carbon,	3.3Ω,	1/4W,	± 5%					
	ERD25CF1472	Carbon,	4.7kΩ,	1/4W,	± 1%					
	ERD25CF2202	Metal Film,	22kΩ,	1/4W,	± 1%					
X2	ERD25FJ392	Carbon,	3.9kΩ,	1/4W,	± 5%	ER025CKF4701	Metal Film,	4.7kΩ,	1/4W,	± 1%
	ER025CKF1741	Metal Film,	1.74kΩ,	1/4W,	± 1%	ER025CKF6801	Metal Film,	6.8kΩ,	1/4W,	± 1%
	ERG1ANJ822	Metal Oxide,	8.2kΩ,	1W,	± 5%	ERG3ANJ271	Metal Oxide,	270Ω,	3W,	± 5%
	ERD25FJ3R3	Carbon,	3.3Ω,	1/4W,	± 5%					
	ERD2FCG121	Fuse Type Carbon,	120Ω,	1/4W,	± 2%					
	ERD25FJ3R3	Carbon,	3.3Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Carbon,	3.3Ω,	1/4W,	± 5%					
X2	ERD25FJ3R3	Fuse Type Carbon,	120Ω,	1/4W,	± 2%	ER025CKF4701	Metal Film,	4.7kΩ,	1/4W,	± 1%
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%	ER025CKF6801	Metal Film,	6.8kΩ,	1/4W,	± 1%
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%	ERG3ANJ271	Metal Oxide,	270Ω,	3W,	± 5%
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
X2	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%	ER025CKF4701	Metal Film,	4.7kΩ,	1/4W,	± 1%
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%	ER025CKF6801	Metal Film,	6.8kΩ,	1/4W,	± 1%
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%	ERG3ANJ271	Metal Oxide,	270Ω,	3W,	± 5%
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
X2	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%	ER025CKF4701	Metal Film,	4.7kΩ,	1/4W,	± 1%
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%	ER025CKF6801	Metal Film,	6.8kΩ,	1/4W,	± 1%
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%	ERG3ANJ271	Metal Oxide,	270Ω,	3W,	± 5%
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
X2	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%	ER025CKF4701	Metal Film,	4.7kΩ,	1/4W,	± 1%
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%	ER025CKF6801	Metal Film,	6.8kΩ,	1/4W,	± 1%
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%	ERG3ANJ271	Metal Oxide,	270Ω,	3W,	± 5%
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
X2	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%	ER025CKF4701	Metal Film,	4.7kΩ,	1/4W,	± 1%
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%	ER025CKF6801	Metal Film,	6.8kΩ,	1/4W,	± 1%
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%	ERG3ANJ271	Metal Oxide,	270Ω,	3W,	± 5%
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
X2	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%	ER025CKF4701	Metal Film,	4.7kΩ,	1/4W,	± 1%
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%	ER025CKF6801	Metal Film,	6.8kΩ,	1/4W,	± 1%
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%	ERG3ANJ271	Metal Oxide,	270Ω,	3W,	± 5%
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
X2	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%	ER025CKF4701	Metal Film,	4.7kΩ,	1/4W,	± 1%
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%	ER025CKF6801	Metal Film,	6.8kΩ,	1/4W,	± 1%
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%	ERG3ANJ271	Metal Oxide,	270Ω,	3W,	± 5%
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
X2	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%	ER025CKF4701	Metal Film,	4.7kΩ,	1/4W,	± 1%
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%	ER025CKF6801	Metal Film,	6.8kΩ,	1/4W,	± 1%
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%	ERG3ANJ271	Metal Oxide,	270Ω,	3W,	± 5%
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
X2	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%	ER025CKF4701	Metal Film,	4.7kΩ,	1/4W,	± 1%
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%	ER025CKF6801	Metal Film,	6.8kΩ,	1/4W,	± 1%
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%	ERG3ANJ271	Metal Oxide,	270Ω,	3W,	± 5%
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
X2	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%	ER025CKF4701	Metal Film,	4.7kΩ,	1/4W,	± 1%
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%	ER025CKF6801	Metal Film,	6.8kΩ,	1/4W,	± 1%
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%	ERG3ANJ271	Metal Oxide,	270Ω,	3W,	± 5%
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					
	ERD25FJ3R3	Fuse Type Carbon,	330Ω,	1/4W,	± 5%					
	ERD25FCJ121	Fuse Type Carbon,	1.2kΩ,	1W,	± 1%					





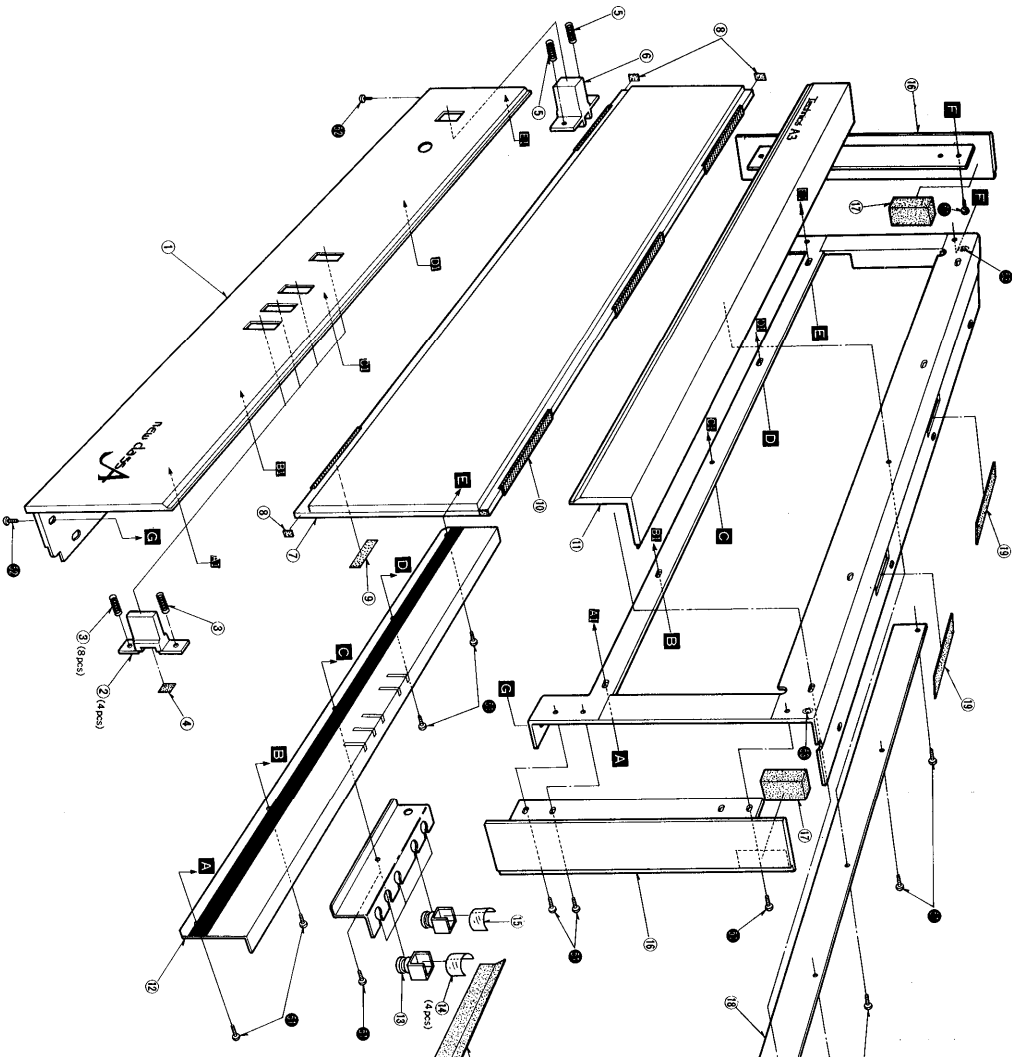


SWEM DEDDPLX3

SE-A3K SE-A3K

EXPLODED VIEWS

Front Panel



REPLACEMENT PARTS LIST (Cabinet and Chassis Parts)

Notes: 1. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.  
2. Δ indicates that only parts specified by the manufacture be used for safety.  
3. Bracketed indications in Ref. No. columns specify the area. Parts without these indications can be used for all areas.

\* [M] is available in U.S.A.  
\* [MC] is available in Canada.

Ref. No.	Part No.	Part Name & Description
<b>CABINET and CHASSIS PARTS</b>		
1	SGWEA3N	Panel, Front Asy (Bottom)
2	SDC219-1	Button, Push Switches (Speaker)
3	SUS199	Spring, Push Switches (Speaker)
4	SUS195	Spring, Push Switch (Speaker)
5	SUS195	Spring, Push Switch (Power)
6	SGU46	Glass Plate, Front Panel
7	SHG6123	Rubber, Glass Plate
8	SHR081	Spacer, Glass Plate
9	SHCA971	Rubber Cushion, Glass Plate
10		
11	SGW2310B8	Panel, Front Panel (Top)
12	SGEEA3N	Ornament, Indicator Board
13	SGU655	Rubber Bracket, Indicator Lamp
14	SGU69	Filter, Indicator Lamp (Yellow)
15	SGW23508	Panel, Front Panel (Side)
16	SHG6A629	Rubber, Front Panel
17	SUW1651	Reflector Plate
18		
19	SHSA27-1	Fiber, Front Panel

Ref. No.	Part No.	Part Name & Description
20	SHF39	Paper, Reflector Plate
21	SKU8270	Bottom Board
22	SKU238	Foot, Set Bottom Side
23	SHG1191	Rubber Cushion, Chassis Side
24	SDC219	Button, Push Switches (Speaker)
25	SUS199	Spring, Push Switches (Speaker)
26	SUS195	Spring, Push Switch (Speaker)
27	SGP27150-1A	Terminal Speakers
28	SKL241	Rear Panel
29	SKL241	Front, Rear Panel Side
30	SKN613	Knob, Input Level
31	SUV475	Cover, Speaker Terminals
32	Δ SJA109	AC Cord, Power Source
33	SUSA66-2	Bushing, AC Cord
34	SGU4115	Socket, AC Outlet
35	SKC308	Label, Techniques
36	SHS1009	Fiber, Cabinet
37	SHG6089	Rubber Cushion, Cabinet
38	XCA9721B-A	Jack, Headphones
39	SMX51-3	Spacer, Diodes

Ref. No.	Part No.	Part Name & Description
<b>SCREWS, NUTS and WASHERS</b>		
①	XTB3+8BFZ	Screw, Tapping, ⌀ 3 x 8 (Front Panel)
②	XTB4+8BFZ	Screw, Tapping, ⌀ 4 x 8 (Front Panel)
③	XWE3FZ	Washer, Plain, ⌀ 3
④	XWN3+6S	Washer, Spring, ⌀ 3 x 6
⑤	XNA38	Washer, Spring, ⌀ 3 x 7
⑥	XNA38BFZ	Washer, Spring, ⌀ 3 x 8
⑦	XTB3+8BFZ	Screw, Tapping, ⌀ 3 x 8
⑧	XMC3B	Washer, Toothed Lock, ⌀ 3
⑨	XSN3+6S	Washer, Spring, ⌀ 3 x 6
⑩	XNA38	Washer, Spring, ⌀ 3
⑪	SNE59-1	Nut, M12 (Headphones Jack)
⑫	XNA38FZ	Washer, Spring, ⌀ 3 (Meter)
⑬	XTB3+8BFZ	Screw, Tapping, ⌀ 3 x 8
⑭	XTB3+8BFZ	Screw, Tapping, ⌀ 3 x 16
⑮	XSS9+8FZS	Screw, ⌀ 5 x 8 (Cabinet)
⑯	SNE4033	Washer (Cabinet)
⑰	XMC8B	Washer, Toothed Lock, ⌀ 8

Ref. No.	Part No.	Part Name & Description
⑱	XNS8	Nut, M8
⑲	XTB4+30BFN	Screw, Tapping, ⌀ 4 x 30

Ref. No.	Part No.	Part Name & Description
<b>ACCESSORIES</b>		
A1	SJP2237-1	Cord, Stereo Pin-1 Type Connection

Ref. No.	Part No.	Part Name & Description
<b>PACKING PARTS</b>		
P1	SPH6279	Polyethylene Bag
P2	SPH6281	Polyethylene Bag
P3	SPS2605-1	Pad, Bottom Side
P4	SPS2607	Pad, Top Side
P5	SPS2789	Pad, Rear Side
P6 [M]	SPS2599	Carton Box
P7 [M]	SPC10569	Instructions Book, Printed Matter
P7 [MC]	SDI10571	Instructions Book, Printed Matter