

SERVICE MANUAL

STEREO AMPLIFIER



DCA 611

(USA)



SPECIFICATIONS (Nominal)

POWER AMPLIFIER SECTION

Power	60 watts per channel RMS minimum continuous power, with maximum total harmonic distortion of 0.08 % at 8 ohms.
Frequency Response	20 Hz — 20 kHz

PRE AMPLIFIER SECTION

Frequency Response	
Phono (20 Hz — 20 kHz)	±0.5 dB
Aux (20 Hz — 20 kHz)	±0.5 dB
Input Sensitivity and Impedance	
Phono	2.5 mV/50k ohms
Tape	150 mV/30k ohms
Tuner	150 mV/30k ohms
Auxiliary	150 mV/30k ohms
Tone Controls	
Bass (100 Hz)	±10 dB
Treble (10 kHz)	±10 dB
Middle (1 kHz)	±10 dB

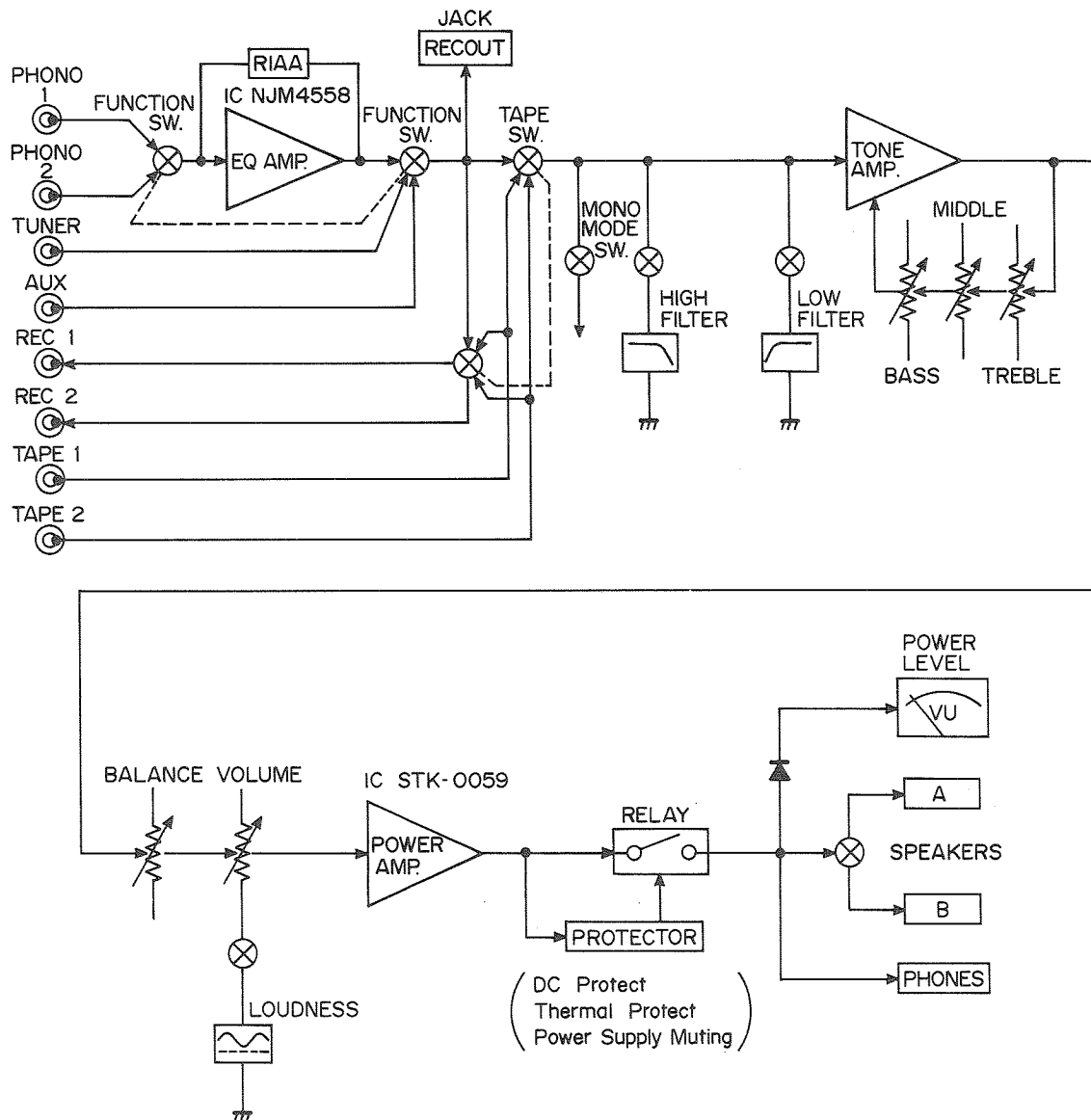
High Filter	at 6 kHz (6 dB/Oct.)	-6 dB
Low Filter	at 60 Hz (6 dB/Oct.)	-6 dB
Loudness Control	(100 Hz/10 kHz)	+8 dB/+4 dB
Hum and Noise	(IHF Short Circuit, A Net Work)	
Phono		70 dB
Tape		100 dB
Tuner		100 dB
Auxiliary		100 dB
Output Level		
Tape Rec.		150 mV

GENERAL SECTION

Power Source	AC: 120V, 60 Hz
Power Consumption	280 W
Dimensions (W) x (D) x (H)	16-1/2" x 13-3/4" x 5-7/8"
Weight	22 lbs. (approx.)

* Specifications are subject to change without notice.

FUNCTIONAL BLOCK DIAGRAM



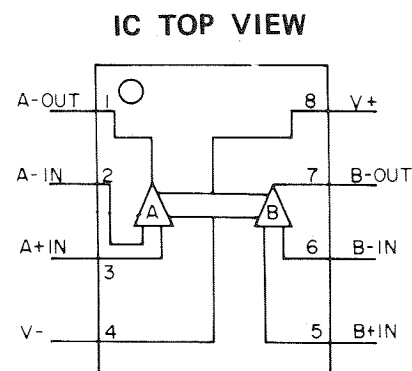
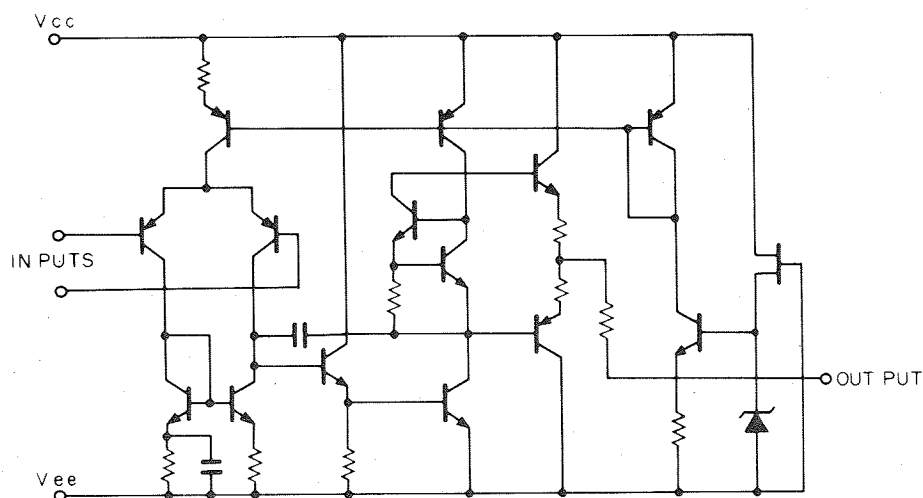
EXPLANATION OF PROTECTIVE CIRCUITS

*For about two seconds after the power switch is turned on, the speakers remain silent because the power muting circuit operates during this time.

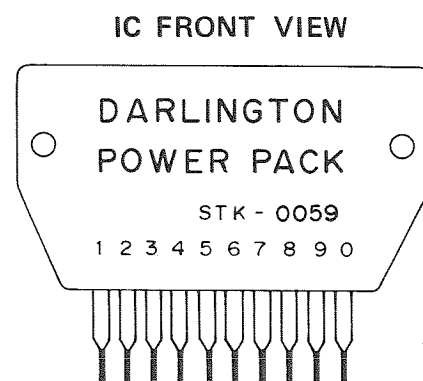
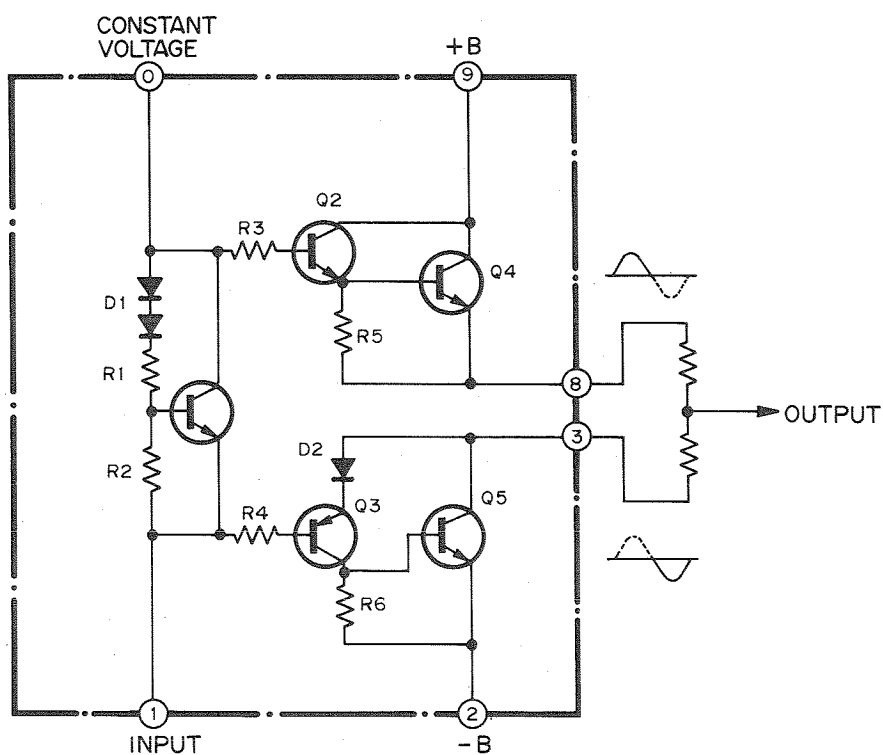
*If this unit is operated with speakers of 4 ohm or less, or by being operated to drive two pairs of speakers of 8 ohm or less simultaneously, its power limiter will start to operate. If under these conditions the volume is raised to a high level the sound from the speakers may be distorted.

*If the speaker terminals are short-circuited or the ventilation holes at the cabinet top are blocked during long periods of operation, the internal temperature may rise abnormally. At about 90° C, the thermal sensor (temperature detection) circuit becomes activated and will interrupt the signal. If the cause is removed and the internal temperature is back to normal, the unit automatically resets itself to restore normal operation.

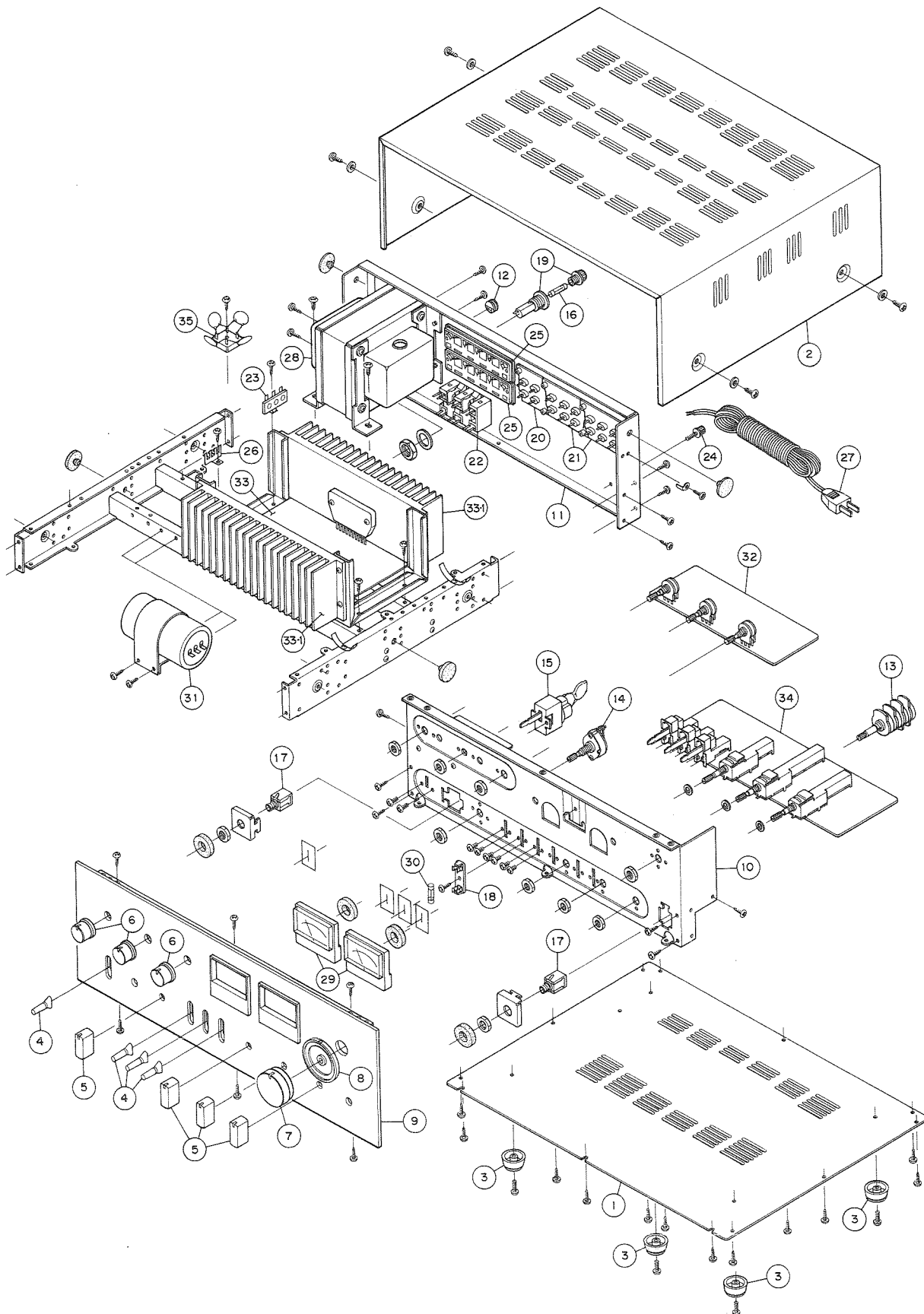
EQ AMP IC NJM 4558D BLOCK DIAGRAM & EQUIVALENT CIRCUIT



MAIN AMP IC STK-0059 EQUIVALENT CIRCUIT



EXPLODED VIEW OF CABINET AND CHASSIS



PARTS LIST

Ref.No.	Parts No.	Description	Q'ty
PACKING PARTS LIST			
	131 6 1139 58027	Box Corrugate-EXP	1
	131 6 2119 01441	Bag Polyethylene-EXP	1
	131 6 3009 20560	Pad (Right & Left)	2
ACCESSORY PARTS LIST			
	131 6 2719 10600	Bag Fan	1
	131 6 4119 66401	Explanatory Booklet	1
CABINET PARTS LIST			
1	131 2 1105 16300	Plate Bottom	1
2	131 2 1410 14502	Cover	1
3	131 2 1801 13200	Leg (Plate Bottom)	4
APPEARANCE PARTS LIST			
4	131 0 1001 37605	Knob Assy, Lever Switches (Power, Low, High, Loudness)	4
5	131 0 1001 42501	Knob Assy (Function, Tape, Mode, Speakers)	4
6	131 0 1001 44401	Knob Assy (Treble, Middle, Bass)	3
7	131 0 1001 44501	Knob Assy (Volume)	1
8	131 0 1001 45100	Knob Assy (Balance)	1
9	131 0 1016 27201	Panel Decorate Assy (Dress Panel)	1
CHASSIS PARTS LIST			
10	131 2 3305 23500	Panel Front	1
11	131 2 3306 25905	Panel Rear	1
12	131 2 6111 11300	Bushing	1
ELECTRICAL PARTS LIST			
13	4 2222 00010	VR 250k MNx2, 50k Ax2	1
14	4 2312 00670	Volume, Balance	1
15	4 2319 24383	Switch Rotary	1
16	4 2349 20912	Switch Lever 2P (AC Line)	1
17	4 2352 00030	Fuse 5.0A (AC Line)	2
18	4 2359 20160	Jack Headphone (Headphone, Rec. Out)	1
19	4 2359 21110	Lamp Holder (Power IND)	1
20	4 2359 22710	Fuse Holder (AC Line)	1
21	4 2359 22920	Socket 4P (Accessory Jack)	1
22	4 2359 22920	Socket 6P (Accessory Jack)	2
23	4 2359 23420	Socket (AC Outlet)	1
24	4 2379 20140	Terminal Lug 2P	1
25	4 2379 21650	Terminal 1P (GND)	1
26	4 2379 21801	Terminal 4P (Speakers)	2
27	4 2379 21840	Terminal (GND)	1
28	4 2439 20600	Power Cord	1
29	4 2512 03410	Power Transformer	1
30	4 5112 00030	Meter VU (Power Level)	2
31	4 6129 20282	Pilot Lamp, Power IND (6.3V 0.25A)	1
31(C03)	4 2232 00010	Electrolytic 8000 μ Fx2 63V	1
32	131 0 4001 91001	Pre, Tone Control AMP P.C.B. Assy	1
33	131 0 4001 90405	Main AMP P.C.B. Assy	1
33-1	131 2 6201 24700	Plate Heat Sink	2
34	131 0 4001 90703	EQ AMP Switches P.C.B. Assy	1
	4 2362 00010	Conversion Plug	1
35(D03)	DDD-S5VB20---	Diode S5VB20 (200V 3.5A)	1
C01,05	C2HYDP103A--	Ceramic 0.01 μ F 500V +100,-0%	5
06,07			
08			
C04	C1CRB-107A--	Electrolytic 100 μ F 16V	1
C09,10	C1HYDZ473A--	Ceramic 0.047 μ F 50V +80,-20%	3
11			
D01	DCC-10D1----N	Diode 10D1	1
R01,02	R3DXPK331A	Oxide Metal Film 330 2W $\pm$ 10%	2

Ref.No.	Parts No.	Description	Q'ty
PRE, TONE CONTROL AMP P.C.B ASSY			
VR01,02	131 0 4001 91001	PRE, Tone Control AMP P.C.B. Assy	1
03	4 2222 00030	VR 100k Bx2 Bass, Middle, Treble	3
CAPACITORS			
C01,02	C1EUBM225A--	Alsicon 2.2 μ F 25V $\pm$ 20%	2
C03,04	C1HCSK220SL-	Ceramic 22pF 50V $\pm$ 10%	4
05,06			
C07,08	C1ERB-106A--	Electrolytic 10 μ F 25V	2
C09,10	C1HFAK183A--	Mylar 0.018 μ F 50V $\pm$ 10%	4
11,12			
C13,14	C1HFAK472A--	Mylar 0.0047 μ F 50V $\pm$ 10%	2
C15,16	C1HFAK332A--	Mylar 0.0033 μ F 50V $\pm$ 10%	2
C17,18	C1HFAK682A--	Mylar 0.0068 μ F 50V $\pm$ 10%	2
C19,20	C1ERB-226A--	Electrolytic 22 μ F 25V	2
C21,22	C1ERB-225A--	Electrolytic 2.2 μ F 25V	2
C23,24	C1ERB-107A--	Electrolytic 100 μ F 25V	2
C25,26	C1ERB-106A--	Electrolytic 10 μ F 25V	2
C27,28	C1VRB-107A--	Electrolytic 100 μ F 25V	2
C29,30	C1HRB-105A--	Electrolytic 1 μ F 50V	2
C31,32	C1HCSK221SL-	Ceramic 220pF 50V $\pm$ 10%	2
C33,34	C1HFAK273A--	Mylar 0.027 μ F 50V $\pm$ 10%	2
SEMICONDUCTORS			
D01,02	DJJ-WZ-210---	Diode WZ-210	2
D03,04	DCC-10D1----N	Diode 10D1	4
05,06			
D07,08	202 5 9110 18820	Diode IS188FM1	2
Q01,02	203 5 5151 57170	TR 2SC1571G	4
05,06			
Q03,04	TMM-2SA798--F	TR 2SA798F	2
Q07	203 5 6800 65950	TR 2SA659E	1
Q08	203 5 6701 17550	TR 2SC1175E	1
RESISTORS			
R01,02	R2EDZJ224APA	Carbon 220k 1/4W $\pm$ 5%	2
R03,04	R2EDZJ472APA	Carbon 4.7k 1/4W $\pm$ 5%	2
R05,06	R2EDZJ563APA	Carbon 56k 1/4W $\pm$ 5%	2
R07,08	R2EDZJ223APA	Carbon 22k 1/4W $\pm$ 5%	2
R09,10	R2EDZJ184APA	Carbon 180k 1/4W $\pm$ 5%	2
R11,12	R2EDZJ105APA	Carbon 1M 1/4W $\pm$ 5%	2
R13,14	R2EDZJ472APA	Carbon 4.7k 1/4W $\pm$ 5%	2
R15,16	R2EDZJ101APA	Carbon 100 1/4W $\pm$ 5%	2
R17,18	R2EDZJ224APA	Carbon 220k 1/4W $\pm$ 5%	2
R19,20	R2EDZJ153APA	Carbon 15k 1/4W $\pm$ 5%	4
21,22			
R23,24	R2EDZJ273APA	Carbon 27k 1/4W $\pm$ 5%	2
R25,26	R2EDZJ562APA	Carbon 5.6k 1/4W $\pm$ 5%	6
27,28			
29,30			
R31,32	R2EDZJ682APA	Carbon 6.8k 1/4W $\pm$ 5%	4
33,34			
R35,36	R2EDZJ561APA	Carbon 560 1/4W $\pm$ 5%	2
R37,38	R2HZPK821A	Fuse Resistor 820 1/2W $\pm$ 10%	2
R39,40	R2EDZJ272APA	Carbon 2.7k 1/4W $\pm$ 5%	2
R41,42	R2EDZJ470APA	Carbon 47 1/4W $\pm$ 5%	2
R43,44	R2EDZJ102APA	Carbon 1k 1/4W $\pm$ 5%	2

NOTES:

- Part orders must contain Model Number, Part Number and Description.
- Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

PARTS LIST

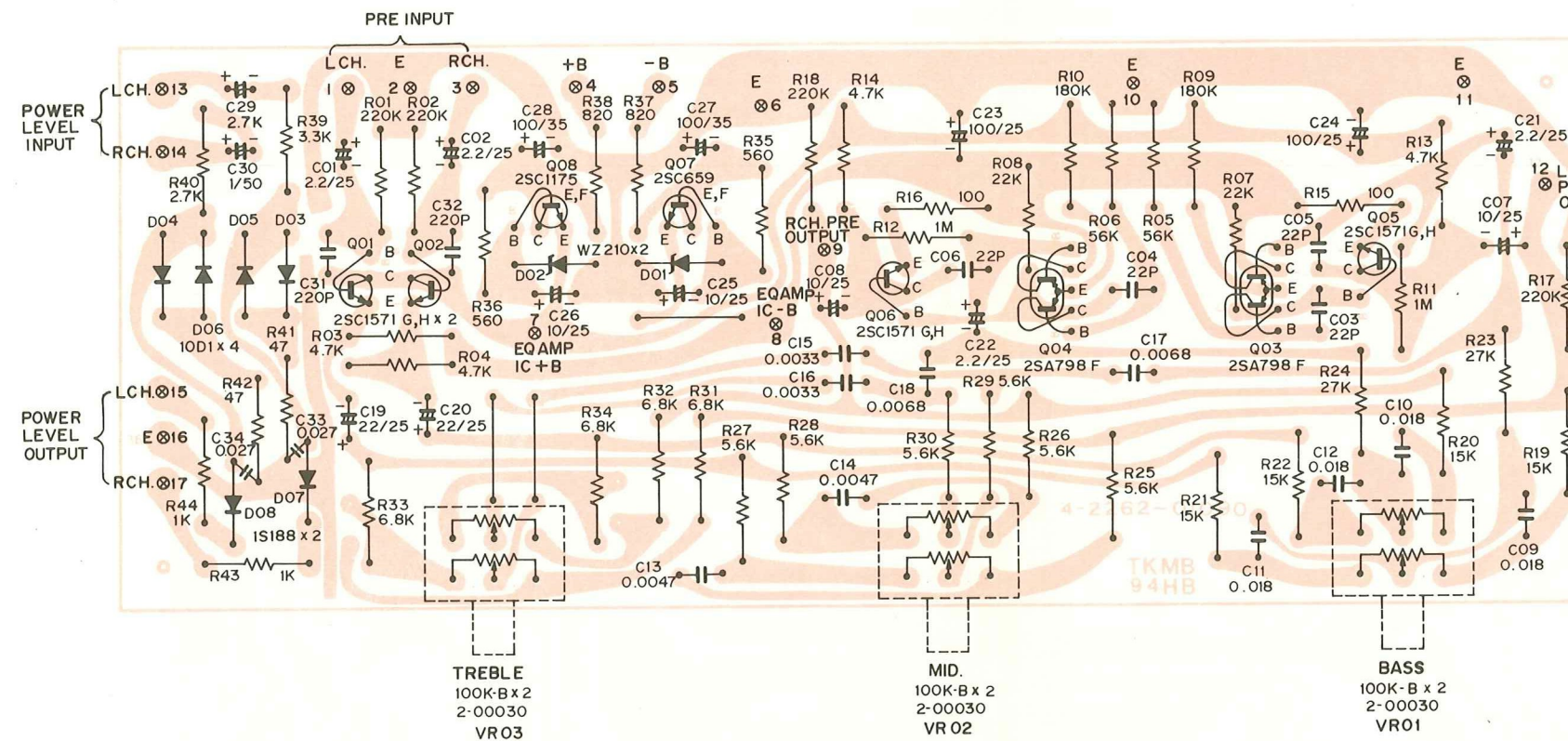
Ref.No.	Parts No.	Description	Q'ty
EQ AMP SWITCHES P.C.B. ASSY			
S01	131 0 4001 90703	EQ AMP Switches P.C.B. Assy	1
S02	4 2312 00650	SW Rotary Slide 164 (Function)	1
S03	4 2312 00640	SW Rotary Slide 165 (Tape)	1
S04	4 2312 00630	SW Rotary Slide 145 (Mode)	1
S05	4 2312 00620	SW Lever, High Filter	1
S06	4 2312 00620	SW Lever, Loudness	1
	4 2312 00620	SW Lever, Low Filter	1
CAPACITORS			
C01,02	C1ETRM475A--	Tantalum 4.7 μ F 25V $\pm$ 20%	2
C03,04	C1ARB-476A--	Electrolytic 47 μ F 10V	2
C05,06	C1HFAJ472A--	Mylar 0.0047 μ F 50V $\pm$ 5%	2
C07,08	C1HFAJ183A--	Mylar 0.018 μ F 50V $\pm$ 5%	2
C09,10	C1EUEM105A--	Alsicon 1 μ F 25V $\pm$ 20%	2
C11,12	C1ERB-107A--	Electrolytic 100 μ F 25V	2
C13,14	C1HFAK822A--	Mylar 0.0082 μ F 50V $\pm$ 10%	2
C15,16	C1HYSK681R--	Ceramic 680pF 50V $\pm$ 10%	2
C17,18	C1HFAK224A--	Mylar 0.22 μ F 50V $\pm$ 10%	2
C19,20	C1HFAK153A--	Mylar 0.015 μ F 50V $\pm$ 10%	2
SEMICONDUCTORS			
IC01	IJJ-NJM4558D	IC NJM4558D-D	1
RESISTORS			
R01,02	R2EDZJ152APA	Carbon 1.5k 1/4W $\pm$ 5%	2
R03,04	R2EDZJ104APA	Carbon 100k 1/4W $\pm$ 5%	4
05,06			
R07,08	R2EDZJ271APA	Carbon 270 1/4W $\pm$ 5%	2
R09,10	R2EDZJ153APA	Carbon 15k 1/4W $\pm$ 5%	2
R11,12	R2EDZJ224APA	Carbon 220k 1/4W $\pm$ 5%	2
R13,14	R2EDZJ272APA	Carbon 2.7k 1/4W $\pm$ 5%	2
R15,16	R2EDZJ152APA	Carbon 1.5k 1/4W $\pm$ 5%	2
R17,18	R2EDZJ332APA	Carbon 3.3k 1/4W $\pm$ 5%	2
R19,20	R2EDZJ105APA	Carbon 1M 1/4W $\pm$ 5%	2
R21,22	R2EDZJ182APA	Carbon 1.8k 1/4W $\pm$ 5%	2
R25,26	R2EDZJ102APA	Carbon 1k 1/4W $\pm$ 5%	2
R27,28	R2EDZJ224APA	Carbon 220k 1/4W $\pm$ 5%	2
R29,30	R2EDZJ105APA	Carbon 1M 1/4W $\pm$ 5%	2
MAIN AMP P.C.B. ASSY			
	131 0 4001 90405	Main AMP P.C.B. Assy	1
	4 2322 00010	Relay	1
	HLL-PTH487A-B	Posistor PTH487A (90°)	2
	131 2 6201 24700	Plate Heat Sink	2
CAPACITORS			
C01,02	C1ERB-106A--	Electrolytic 10 μ F 25V	2
C03,04	C1HCSK471SL-	Ceramic 470pF 50V $\pm$ 10%	2
C05,06	C1VRB-106A--	Electrolytic 10 μ F 35V	2
C07,08	C1HRB-107A--	Electrolytic 100 μ F 50V	4
09,10			
C11,12	C1HCSK470SL-	Ceramic 47pF 50V $\pm$ 10%	2
C19,20	C1HFAK153A--	Mylar 0.015 μ F 50V $\pm$ 10%	4
21,22			
C23,24	C1ARB-476A--	Electrolytic 47 μ F 10V	2
C25,26	C1HFAK104A--	Mylar 0.1 μ F 50V $\pm$ 10%	2
C27,28	C1EAEN107A--	Electrolytic 100 μ F 25V $\pm$ 30%	2
C29	C1CRB-226A--	Electrolytic 22 μ F 16V	1
C31,32	C1HCDC030SL-	Ceramic 3pF 50V $\pm$ 0.25%	2

Ref.No.	Parts No.	Description	Q'ty
SEMICONDUCTORS			
D01,02	DJJ-WZ-210---	Diode WZ-210	2
D03,04	205 5 9040 44210	Diode DS-442	16
05,06			
07,08			
13,14			
15,16			
17,18			
19,20			
21,22			
D23,24	DNN-RD6.2E---	Zener Diode RD-6.2E	2
D25,26	205 5 9040 44210	Diode DS-442	2
D27	202 5 2310 13020	Diode DS-130YD	1
IC01,02	206 5 6440 05919	IC 0059S	2
Q03,04	TMM-2SA798F--	TR 2SA798F	2
Q05,06	203 5 5151 57170	TR 2SC1571G	4
07,08			
Q09,10	203 5 6920 43840	TR 2SD438	2
Q11,12	203 5 6930 56040	TR 2SB560D	2
Q15,16	203 5 6800 65950	TR 2SA659E	2
Q17,18	203 5 6701 17550	TR 2SC1175E	2
Q19,20	203 5 5100 53660	TR 2SC536F	2
Q21	203 5 6701 17550	TR 2SC1175E	1
RESISTORS			
R01,02	R2EDZJ102APA	Carbon 1k 1/4W $\pm$ 5%	2
R03,04	R2EDZJ154APA	Carbon 150k 1/4W $\pm$ 5%	2
R05,06	R2EDZJ222APA	Carbon 2.2k 1/4W $\pm$ 5%	2
R07,08	R2EDZJ223APA	Carbon 22k 1/4W $\pm$ 5%	2
R09,10	R2EDZJ102APA	Carbon 1k 1/4W $\pm$ 5%	4
11,12			
R15,16	R2EDZJ103APA	Carbon 10k 1/4W $\pm$ 5%	2
R17,18	R2EDSJ680A	Carbon 68 1/4W $\pm$ 5%	2
R19,20	R2EDZJ102APA	Carbon 1k 1/4W $\pm$ 5%	2
R21,22	R2EDZJ221APA	Carbon 220 1/4W $\pm$ 5%	2
R23,24	R2EDZJ563APA	Carbon 56k 1/4W $\pm$ 5%	2
R25,26	R2EDZJ391APA	Carbon 390 1/4W $\pm$ 5%	2
R27,28	R2HZPK100A	Fuse Resistor 10 1/2W $\pm$ 10%	4
29,30			
R31,32	R3HEIKR47A	Cement 0.47 5W $\pm$ 10%	4
33,34			
R43,44	R2EDZJ393APA	Carbon 39k 1/4W $\pm$ 5%	4
45,46			
R47,48	R2EDZJ681APA	Carbon 680 1/4W $\pm$ 5%	4
49,50			
R51,52	R2EDZJ331APA	Carbon 330 1/4W $\pm$ 5%	4
53,54			
R55,56	R2EDZJ562APA	Carbon 5.6k 1/4W $\pm$ 5%	2
R57,58	R3DXBJ100A	Oxide Metal Film 10 2W $\pm$ 5%	2
R59	R2EDZJ103APA	Carbon 10k 1/4W $\pm$ 5%	1
R60	R2EDZJ122APA	Carbon 1.2k 1/4W $\pm$ 5%	1
R61	R2EDZJ563APA	Carbon 56k 1/4W $\pm$ 5%	1
R62	R2EDZJ681APA	Carbon 680 1/4W $\pm$ 5%	1
R63	R2EDZJ472APA	Carbon 4.7k 1/4W $\pm$ 5%	1
R64	R2EDZJ103APA	Carbon 10k 1/4W $\pm$ 5%	1
R65	R3DXBJ561A	Oxide Metal Film 560 2W $\pm$ 5%	1

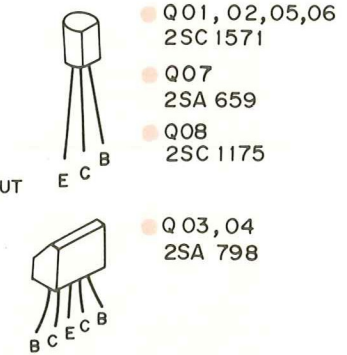
NOTES:

1. Part orders must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

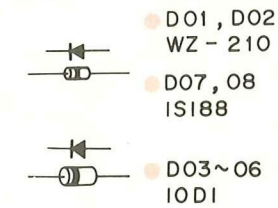
PRE TONE CONTROL AMP P.C. BOARD (BOTTOM VIEW)



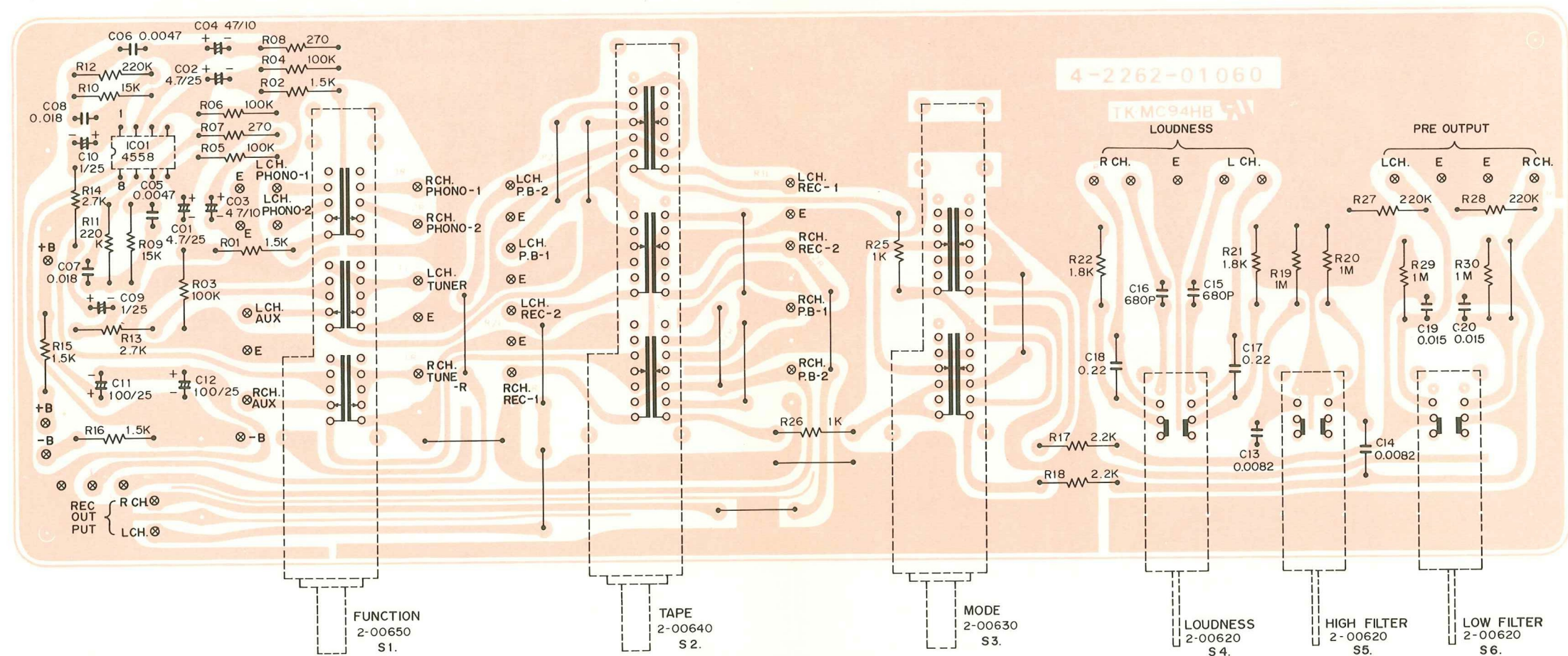
TRANSISTOR FRONT VIEW



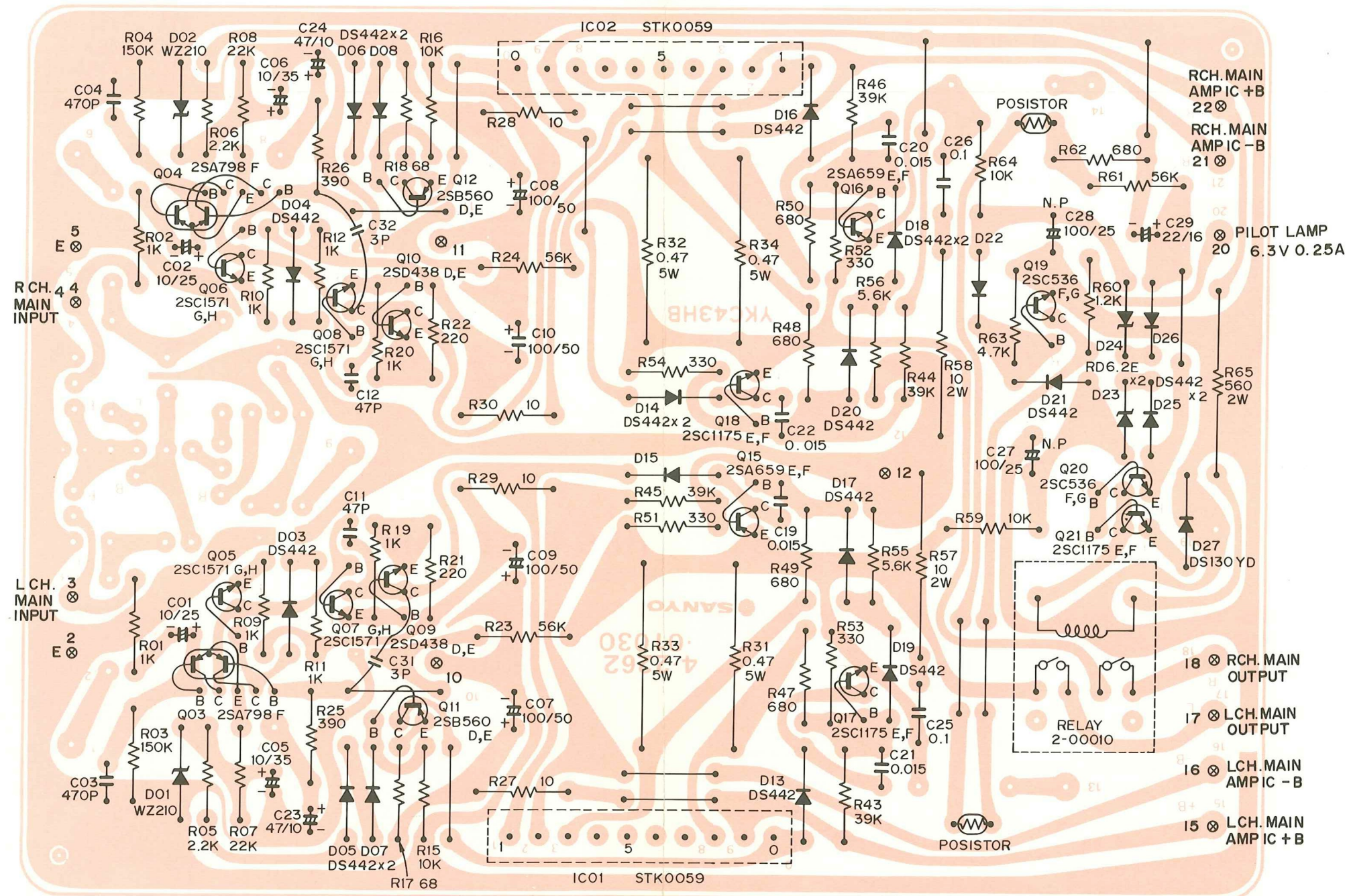
DIODE FRONT VIEW



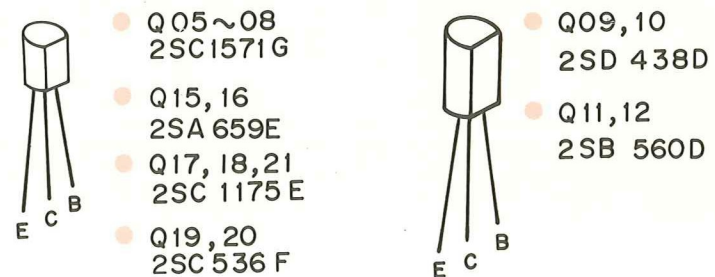
EQ AMP SWITCHES P.C. BOARD (BOTTOM VIEW)



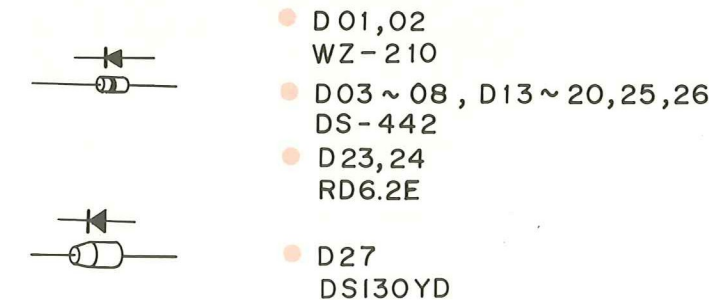
MAIN AMP P.C. BOARD (BOTTOM VIEW)



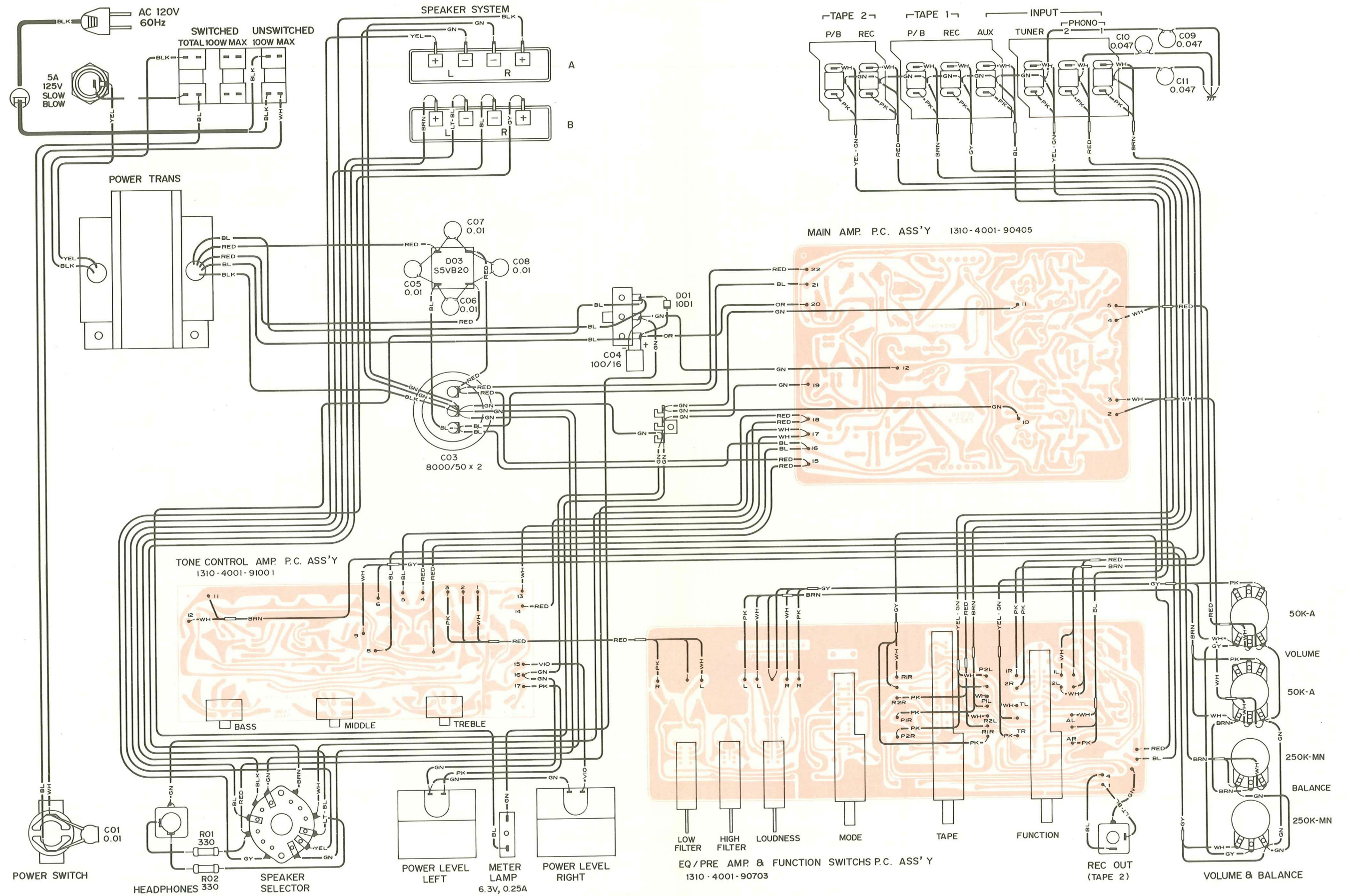
TRANSISTOR FRONT VIEW



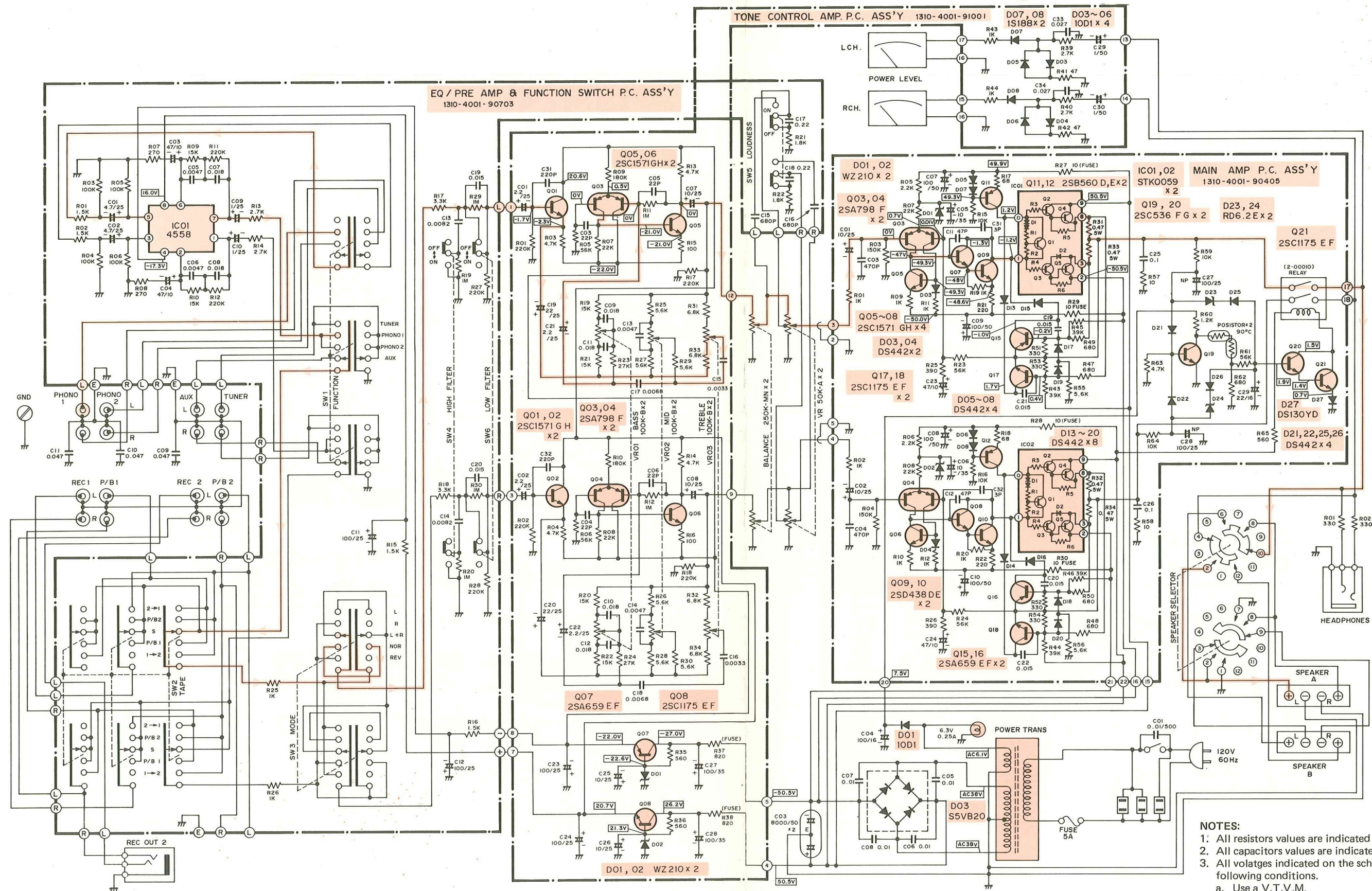
DIODE FRONT VIEW



POINT TO POINT WIRING DIAGRAM



SCHEMATIC DIAGRAM



NOTES:

- 1: All resistors values are indicated in "ohm" ($K=10^3$, $M=10^6$)
- 2: All capacitors values are indicated in " μF " ($P=10^{-6}$)
- 3: All volages indicated on the schematics are measured under the following conditions.
 - a. Use a V.T.V.M.
 - b. All voltages 10% with respect chassis ground
 - c. No signals at input terminals
 - d. AC input at 120 volts 60Hz
- 4: This is a fundamental schematics diagram. Some products may be modified without notice.

NOTES

SANYO ELECTRIC INC.,
1200 West Artesia Blvd., P.O. Box 5177 Compton, California 90220

Jan./'78/7100 Printed in Japan