

# SERVICE MANUAL



# FISHER<sup>®</sup>

# CA-880

## Stereo Amplifier



### NOTE:

The photograph on the cover shows the unit with a "BRUSHED ALUMINUM" front panel. The "BLACK" version is identical in all respects.

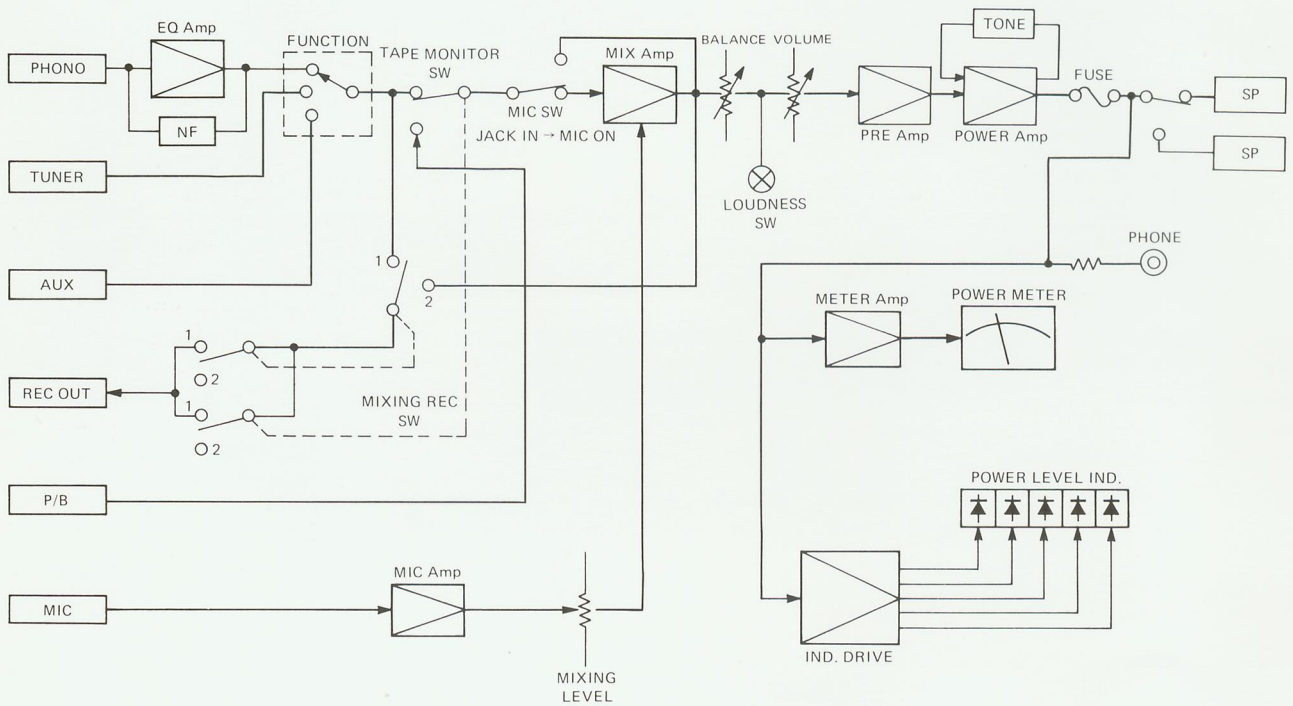
*The first name in high fidelity*

U.S.

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## BLOCK DIAGRAM



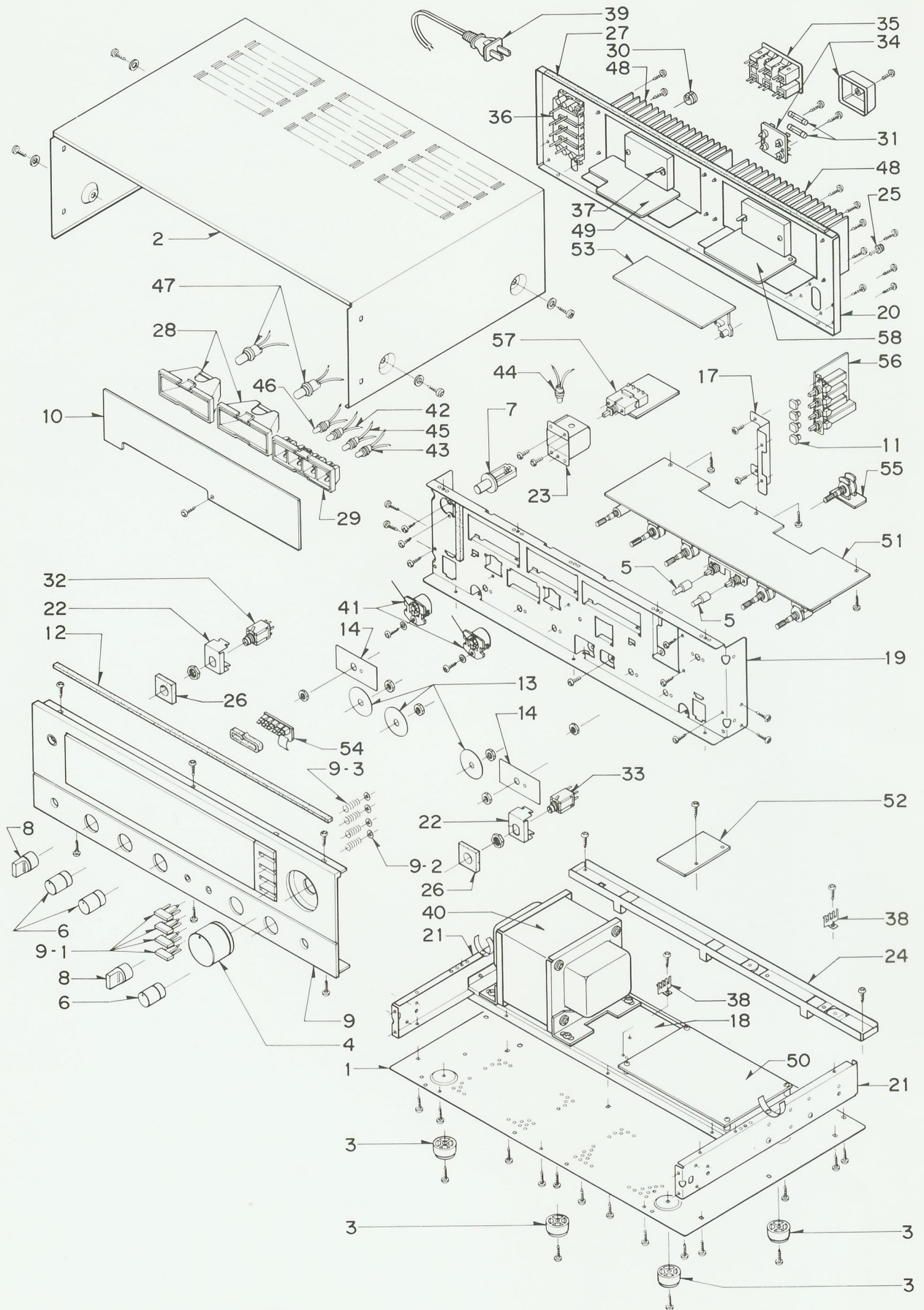


# SPECIFICATIONS

AMPLIFIER	CA-880	
<b>POWER AMPLIFIER SECTION</b>		
Continuous RMS sine wave power per channel within stated bandwidth at no more than stated distortion and with an 8 ohm load.	100 Watts	
Power Band Width	40 Hz - 20 kHz	
Total Harmonic Distortion	0.09 %	
I.M. Distortion	0.09 %	
Speaker Damping	>40	
<b>PREAMPLIFIER SECTION</b>		
Frequency Response	Phono (RIAA) (30 Hz - 15 kHz)	±0.5 dB
	Aux. (20 Hz - 20 kHz)	±0.5 dB
	Microphone (100 Hz - 12 kHz)	±6 dB
Input Sensitivity and Impedance	Phono	2.5 mV/50 kΩ
	Microphone	1.6 mV/5 kΩ
	Tape Monitor	150 mV/100 kΩ
	Tuner	150 mV/100 kΩ
	Auxiliary	150 mV/100 kΩ
Phono Max. Input Capability	Phono	150 mV
Tone Control	Bass (100 Hz)	±10 dB
	Treble (10 kHz)	±10 dB
Loudness Contour (100 Hz/10 kHz)		+8 dB/+4 dB
Hum and Noise (IHF Short Circuit, A Net Work)	Phono	70 dB
	Microphone	60 dB
	Tape Monitor	100 dB
	Tuner	100 dB
	Auxiliary	100 dB
Output Voltage and Impedance Tape Out		150 mV/330 Ω
<b>GENERAL</b>		
Power Requirements (50/60 Hz)	120 V AC ±10 % 400 W	
AC Outlets	3	
Dimensions (W x D x H)	17-1/3"x13-1/2"x5-1/4"	
Weight	25 lbs.	

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# CABINET & CHASSIS EXPLODED VIEW





# PARTS LIST

## PACKING PARTS LIST

Ref. No.	Parts Number	Description
	131 6 1139 78112	Box Corrugate-EXP
	131 6 2119 01362	Bag Polyethylene-EXP
	131 6 3009 28760	Pad (Right, Left)

## ACCESSORIES PARTS LIST

Ref. No.	Parts Number	Description
	131 6 2719 10801	Bag Fan
	131 6 4119 80704	Explanatory Booklet
	131 6 4159 31000	Notes
	131 6 4159 34100	Notes (Safety Instruction)
	131 6 4319 10802	Service Station List
	131 6 4519 14400	Guarantee Card
	131 6 4939 00200	Information Card

## CABINET PARTS LIST

Ref. No.	Parts Number	Description
1	131 2 1105 23600	Plate Bottom
2	131 2 1410 21700	Cover
3	131 2 1801 14100	Leg

## APPEARANCE PARTS LIST

Ref. No.	Parts Number	Description
4	131 0 1001 48201	Knob (Volume)
5	131 0 1001 49100	Knob (Push Switch)
6	131 0 1001 54500	Knob (Tone)
7	131 0 1001 54600	Knob (Power Switch)
8	131 0 1001 58500	Knob
9	131 0 1016 34505	Panel Decorate Assy
	131 2 1116 18300	Frame
	131 2 1203 47805	Panel Control
	131 2 1203 47900	Panel Control (Push)
	131 2 1205 23600	Decorate Plate Dial
	131 2 1407 12601	Cover Decorate
	131 2 1503 14300	Decorate Sign
9-1	131 2 1601 60600	Knob (Function Switch)
	131 2 3108 12300	Metal Stopper
9-2	131 2 4220 10501	Ring Snap
9-3	131 2 5101 17300	Spring (Function Switch)
	131 2 6111 22200	Bushing (Push Switch)
10	131 2 1201 34403	Plate Dial
11	131 2 1601 61900	Knob (Push Switch, Inside)
12	131 2 5205 15300	Cushion (Panel Control Top)
13	131 2 6113 31800	Shelter (Tone, Volume)
14	131 2 6113 35700	Shelter (SP, Mic. Knob)

## CHASSIS PARTS LIST

Ref. No.	Parts Number	Description
17	* 131 2 3101 68800	Metal Mount
18	* 131 2 3301 25400	Chassis
19	* 131 2 3305 27600	Panel Front
20	* 131 2 3306 33800	Panel Rear
21	* 131 2 3308 13400	Chassis Sub
22	* 131 2 3624 13300	Mount Headphone Jack
23	* 131 2 3701 25900	Mount Electric Part
24	* 131 2 3701 26000	Mount Electric Part
25	131 2 4201 17800	Screw (GND)
26	131 2 4208 34700	Spacer
27	131 2 5205 15300	Cushion (Panel Rear Top)
28	131 2 6110 28800	Shelter Light (Meter)
29	131 2 6110 28900	Shelter Light (Indicator)
30	131 2 6111 11300	Bushing (Line Cord)

## ELECTRICAL PARTS LIST

Ref. No.	Parts Number	Description
31	4 2342 00230	Fuse 4 A (SP Protector)
32	4 2352 00030	Headphone Jack
33	4 2352 00430	Microphone Jack
34	4 2359 22030	Fuse Holder 2P
35	4 2359 23420	AC Outlet
36	4 2372 00980	Terminal 8P
37	4 2379 21520	Terminal Lug 1P
38	4 2379 21840	Terminal
39	4 2439 20720	Line Cord
40	4 2512 16700	Power Transformer
41	4 5112 00481	Meter Unit
42	4 6122 01500	Pilot Lamp (Tuner 8V 200 mA)
43	4 6122 01510	Pilot Lamp (Tape 8V 200 mA)
44	4 6122 01520	Pilot Lamp (Power Ind. 8V 200 mA)
45	4 6122 01700	Pilot Lamp (Aux. 8V 200 mA)
46	4 6122 01710	Pilot Lamp (Phono 8V 200 mA)
47	4 6129 20771	Pilot Lamp (Meter 8V 300 mA)
48	131 2 6201 29700	Plate Heat Sink
C01	C2HYDP103A	Ceramic 0.01 $\mu$ F 500V +100,-0%
C02	C1JRE-105A	Electrolytic 1 $\mu$ F 63V
49	* 131 0 4001 07210	Power Amp (Left) P.C.B. Assy
50	* 131 0 4001 07200	Power Supply P.C.B. Assy
51	* 131 0 4001 04102	Tone P.C.B. Assy
52	* 131 0 4001 07230	Pre P.C.B. Assy
53	* 131 0 4001 04113	Input EQ P.C.B. Assy
54	* 131 0 4001 04121	Power Ind. P.C.B. Assy
55	* 131 0 4001 04141	Main Volume P.C.B. Assy
56	* 131 0 4001 04161	Switch P.C.B. Assy
57	* 131 0 4001 07240	Power Switch P.C.B. Assy
58	* 131 0 4001 07220	Power Amp (Right) P.C.B. Assy

\*—Not a service part.

## APPEARANCE PARTS LIST (Black Version)

Ref. No.	Parts Number	Description	Ref. No.	Parts Number	Description
4	131 0 1001 48206	Knob (Volume)	8	131 0 1001 58501	Knob (Selector Switch)
5	131 0 1001 49103	Knob (Push Switch)	9	131 0 1016 34506	Panel Decorate Assy
6	131 0 1001 54501	Knob (Tone)		131 2 1116 18301	Frame
7	131 0 1001 54602	Knob (Power Switch)		131 2 1203 47806	Panel Control
				131 2 1203 47904	Panel Control (Push)

# POWER LEVEL INDICATOR ADJUSTMENTS

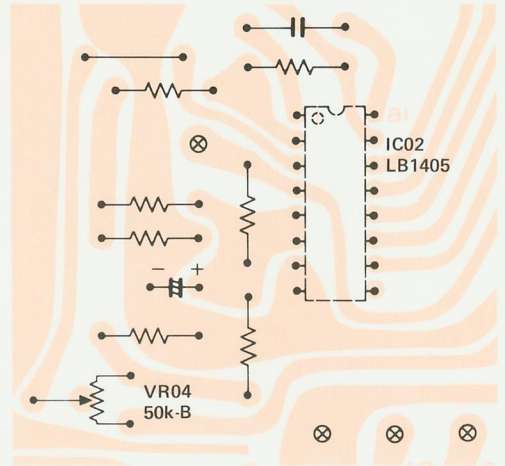
When the components in IC02 LB1405 and Power Amplifier Circuit have been replaced, perform the level adjustment as follows;

**\* Measuring Instruments**

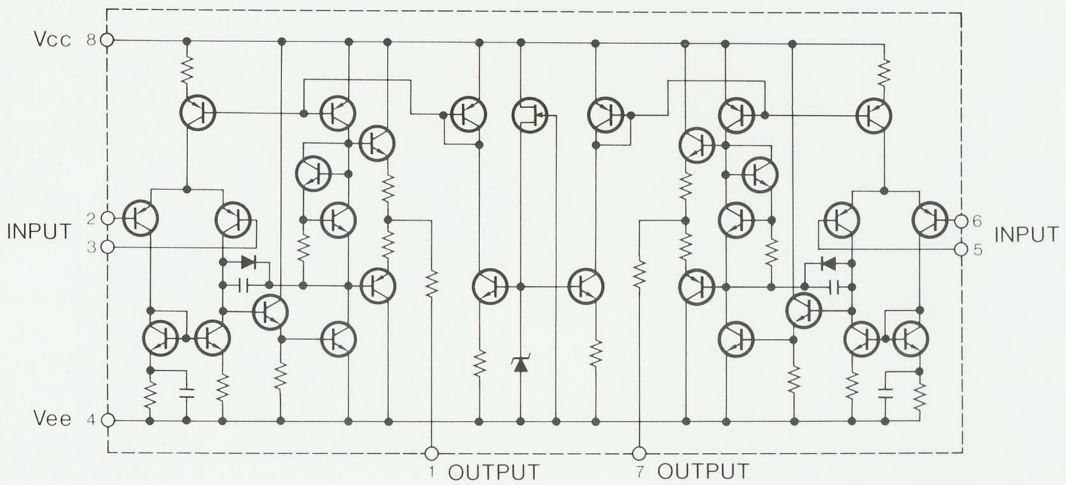
AF Oscillator, Oscilloscope, VTVM, and 8 ohm Dummy Load

1. Connect AF Oscillator to AUX terminal and connect Oscilloscope, VTVM, and 8 ohm dummy load to SP terminal.
2. Apply the input of 1 kHz to AUX terminal. Then, adjust Master VR until the output voltage of SP terminal becomes 10 V.
3. Adjust VR04 (50 kΩ) until the fifth LED of the level indicator is half-lit.

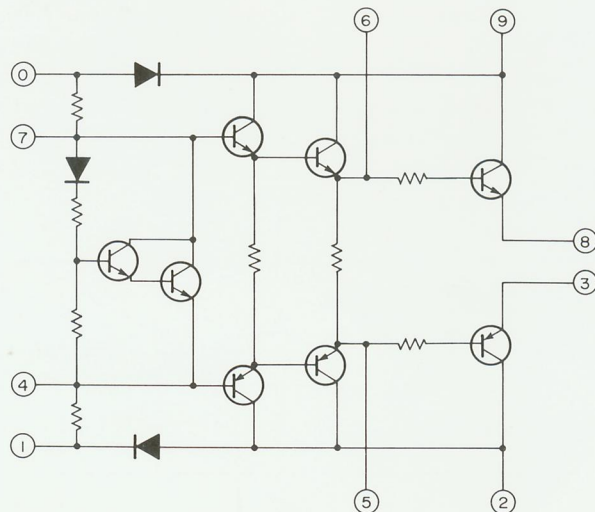
## PARTS LOCATION



# AF AMP IC NJM4559 EQUIVALENT CIRCUIT



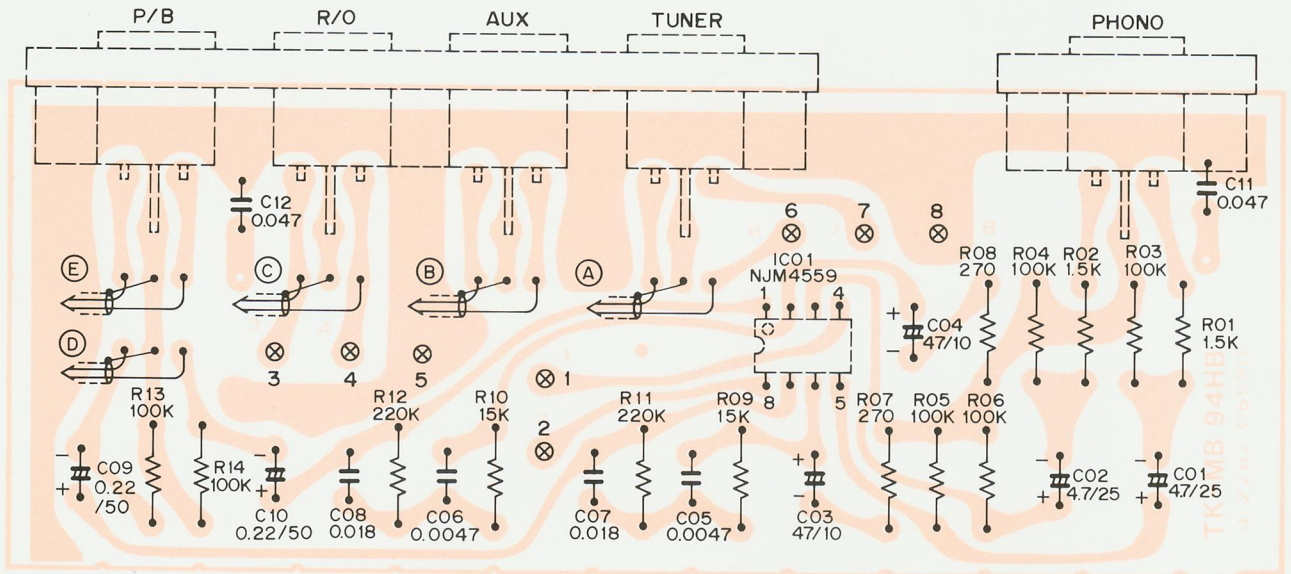
# POWER AMP IC STK0080A EQUIVALENT CIRCUIT





# INPUT EQ P.C.BOARD

## (BOTTOM VIEW)



IC PIN NUMBERS VOLTAGES									
SYMBOL No.	DEVICE	1	2	3	4	5	6	7	8
IC01	NJM4559	-1.9mV	3.0mV	2.4mV	-14.1V	2.4mV	3.9mV	-1.3mV	13.9V

## PARTS LIST

**INPUT EQ P.C.B. Assy**  
131 0 4001 04113

Ref. No.	Parts Number	Description
	4 2359 23170	Socket 2P
	4 2359 23180	Socket 4P

### CAPACITORS

C01,02	C1ERY-475LPA	Electrolytic	4.7 $\mu$ F	25V
C03,04	C1ARY-476APA	Electrolytic	47 $\mu$ F	10V
C05,06	C1HFYK472APA	Mylar	0.0047 $\mu$ F	50V $\pm$ 10%
C07,08	C1HFYK183APA	Mylar	0.018 $\mu$ F	50V $\pm$ 10%
C09,10	C1HRY-224LPA	Electrolytic	0.22 $\mu$ F	50V
C11,12	C1HYDZ473A	Ceramic	0.047 $\mu$ F	50V +80,-20%

Ref. No.	Parts Number	Description
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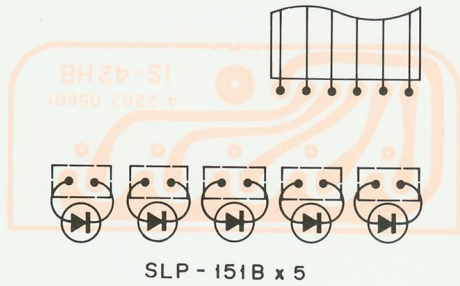
### SEMICONDUCTORS

IC01	IJJ-NJM4559DX	IC, NJM4559DX
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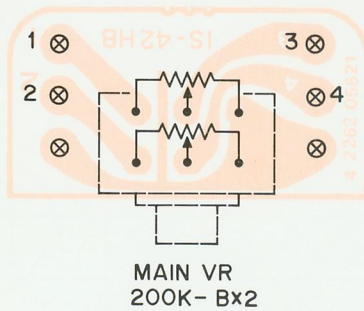
### RESISTORS

R01,02	R2EDZJ152APA	Carbon	1.5k	1/4W	$\pm$ 5%
R03,04	R2EDZJ104APA	Carbon	100k	1/4W	$\pm$ 5%
	05,06				
R07,08	R2EDZJ271APA	Carbon	270	1/4W	$\pm$ 5%
R09,10	R2EDZJ153APA	Carbon	15k	1/4W	$\pm$ 5%
R11,12	R2EDZJ224APA	Carbon	220k	1/4W	$\pm$ 5%
R13,14	R2EDZJ104APA	Carbon	100k	1/4W	$\pm$ 5%

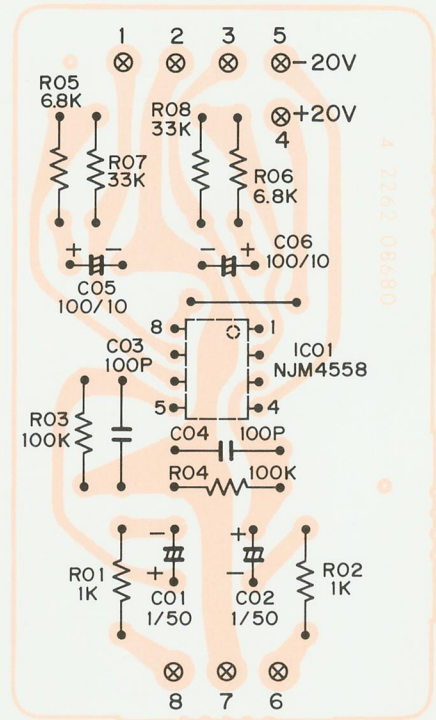
## POWER IND. P.C.BOARD (BOTTOM VIEW)



## MAIN VOLUME P.C.BOARD (BOTTOM VIEW)



## PRE AMP P.C.BOARD (BOTTOM VIEW)



## PARTS LIST

### POWER IND. P.C.B. Assy 131 0 4001 04121

Ref. No.	Parts Number	Description
	131 0 4006 22201	Cord Assy
	131 2 4208 32800	Spacer (L.E.D.)
	DOO-SLP-151B	SLP-151B (L.E.D.)

### MAIN VOLUME P.C.B. Assy 131 0 4001 04141

Ref. No.	Parts Number	Description
	4 2222 01690	VR 200k-Bx2
	111 2 6220 11100	Wire Wrap Terminal

### PRE AMP P.C.B. Assy 131 0 4001 07230

Ref. No.	Parts Number	Description
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#### CAPACITORS

C01,02	C1HRY-105LPA	Electrolytic	1 $\mu$ F	50V
C03,04	C1HCZJ101SPA	Ceramic	100 pF	50V $\pm$ 5%
C05	C1ARY-107APA	Electrolytic	100 $\mu$ F	10V
C06	C1ARE-107A	Electrolytic	100 $\mu$ F	10V

#### SEMICONDUCTORS

IC01	IJJ-NJM4558DX	IC, NJM4558DX
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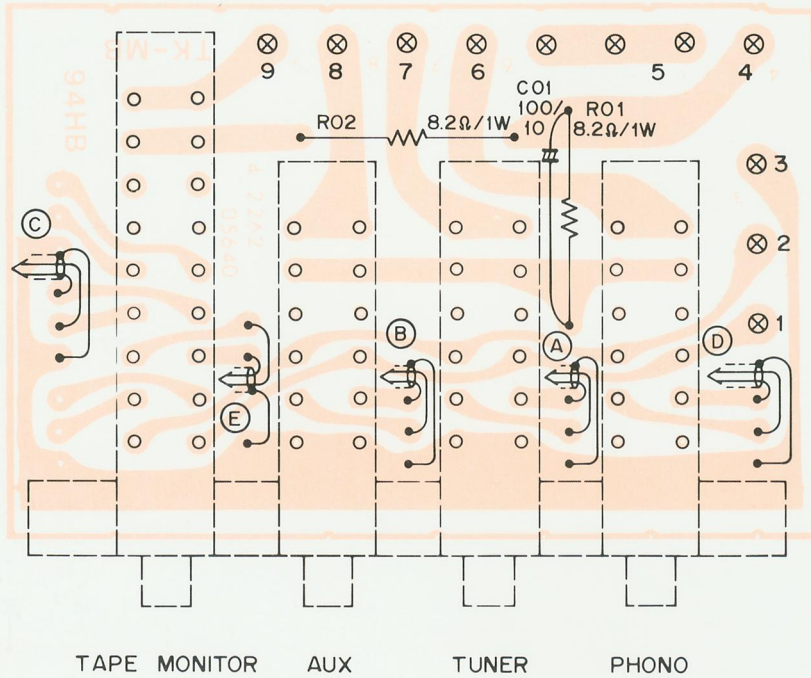
#### RESISTORS

R01,02	R2EDZJ102APA	Carbon	1k	1/4W	$\pm$ 5%
R03,04	R2EDZJ104APA	Carbon	100k	1/4W	$\pm$ 5%
R05,06	R2EDZJ682APA	Carbon	6.8k	1/4W	$\pm$ 5%
R07,08	R2EDZJ333APA	Carbon	33k	1/4W	$\pm$ 5%



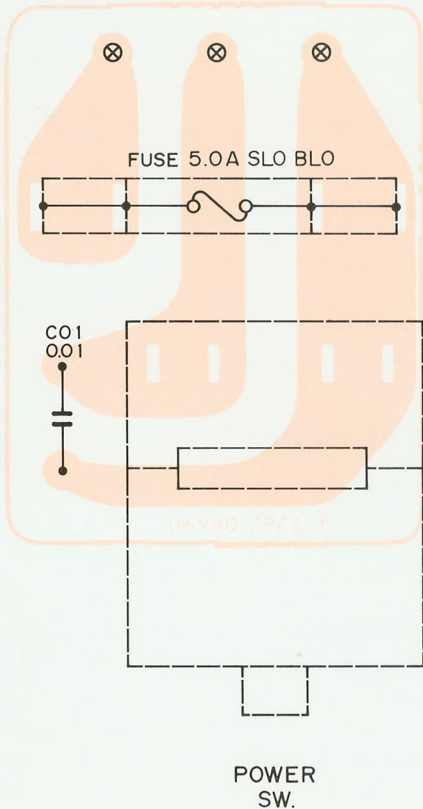
# PUSH SWITCH P.C.BOARD

(BOTTOM VIEW)



# POWER SWITCH P.C.BOARD

(BOTTOM VIEW)



# PARTS LIST

### SWITCH P.C.B. Assy 131 0 4001 04161

Ref. No.	Parts Number	Description
	4 2312 04120	Switch Push 4key
	111 2 6220 11100	Wire Wrap Terminal

### CAPACITORS

C01	C1AAEN107A	Electrolytic 100 μF 10V ±30%
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### RESISTORS

R01,02	R3AXBJ8R2A	Oxide Metal Film 8.2 1W ±5%
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### POWER SWITCH P.C.B. Assy 131 0 4001 07240

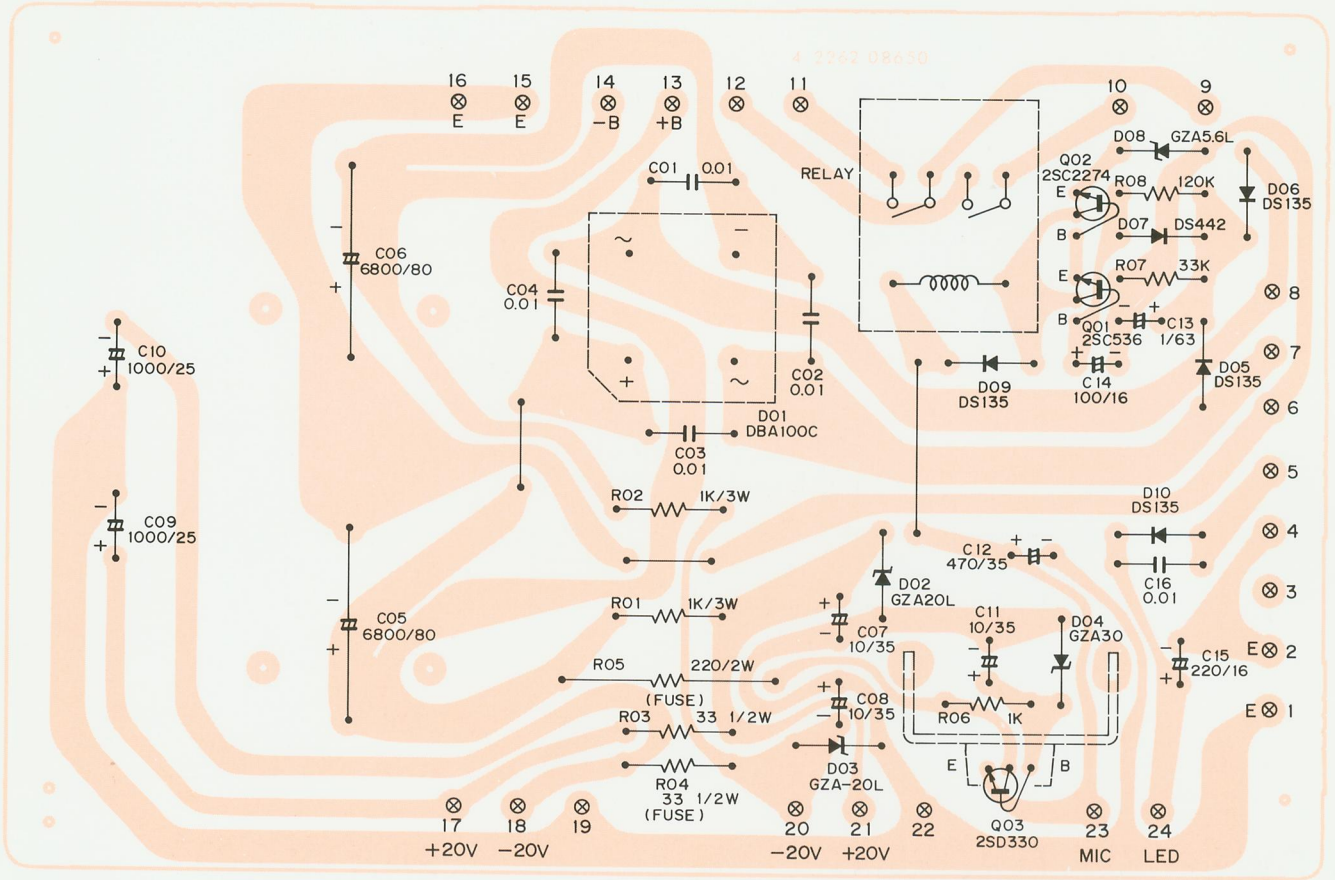
Ref. No.	Parts Number	Description
	4 2312 02170	Switch Push Power
	4 2349 20912	Fuse 5.0 A
	4 2379 21410	Fuse Hold Clip
	111 2 6220 11100	Wire Wrap Terminal

### CAPACITORS

C01	C2HYDP103A	Ceramic 0.01 μF 500V +100,-0%
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# POWER SUPPLY P.C.BOARD

## (BOTTOM VIEW)



IC PIN NUMBERS VOLTAGES											
SYMBOL No.	DEVICE	1	2	3	4	5	6	7	8	9	10
IC01,02	STK0080	-1.1V	-57.3V	39mV	-	-	-	-	58mV	57.3V	1.1V

## PARTS LIST

**POWER SUPPLY P.C.B. Assy**  
1310 4001 07200

**Ref. No. Parts Number Description**

4 2322 00010 Relay  
131 2 6201 21500 Plate Heat Sink

### CAPACITORS

C01,02 C2HYSY103A Ceramic 0.01  $\mu$ F 500V +100,-0%  
03,04  
C05,06 4 2232 00610 Electrolytic 6800  $\mu$ F 80V  
C07,08 C1VRY-106APA Electrolytic 10  $\mu$ F 35V  
C09,10 C1ERE-108A Electrolytic 1000  $\mu$ F 25V  
C11 C1VRY-106APA Electrolytic 10  $\mu$ F 35V  
C12 C1VRF-477A Electrolytic 470  $\mu$ F 35V  
C13 C1JRY-105APA Electrolytic 1  $\mu$ F 63V  
C14 C1CRY-107APA Electrolytic 100  $\mu$ F 16V  
C15 C1CRE-227A Electrolytic 220  $\mu$ F 16V  
C16 C2HYSY103A Ceramic 0.01  $\mu$ F 500V +100,-0%

**Ref. No. Parts Number Description**

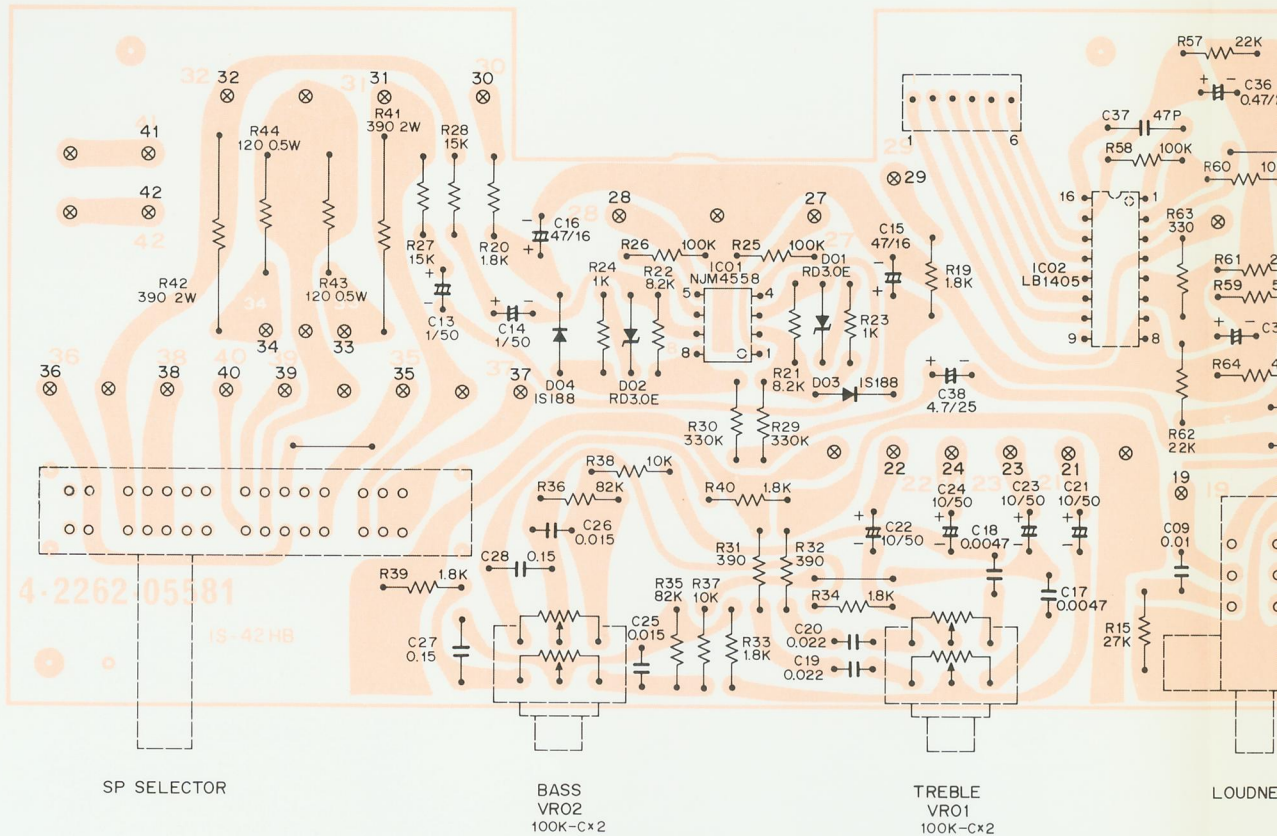
### SEMICONDUCTORS

D01 202 5 2780 10015 Diode, DBA-100C-K15  
D02,03 202 5 3210 20010 Diode, GZA20L  
D04 202 5 3220 30010 Diode, GZA30  
D05,06 202 5 2470 13540 Diode, DS135D  
D07 205 5 9040 44210 Diode, DS-442  
D08 202 5 3210 05610 Diode, GZA5.6L  
D09,10 202 5 2470 13540 Diode, DS135D  
Q01 203 5 5000 53660 TR 2SC536 F, G  
Q02 203 5 7252 27450 TR 2SC2274 E, F  
Q03 203 5 8210 33040 TR 2SD330 D, E

### RESISTORS

R01,02 R3WERK102A Cemen 1k 3W  $\pm$ 10%  
R03,04 R2HZPK330A Fuse 33 1/2W  $\pm$ 10%  
R05 R3DXBJ221A Oxide Metal Film 220 2W  $\pm$ 5%  
R06 R2EDZJ102APA Carbon 1k 1/4W  $\pm$ 5%  
R07 R2EDZJ333APA Carbon 33k 1/4W  $\pm$ 5%  
R08 R2EDZJ124APA Carbon 120k 1/4W  $\pm$ 5%





		IC PIN NUMBERS V C						
SYMBOL No.	DEVICE	1	2	3	4	5	6	7
IC01	NJM4558	3.3mV	3.7mV	4.7mV	-20V	4.8mV	5.4mV	5.2mV
IC02	LB1405	0.6V	80mV	61mV	11.4V	2.9V	2.9V	0V

TONE P.C.B. Assy  
131 0 4001 04102

## PARTS LIST

Ref. No.	Parts Number	Description
VR01	4 2222 01340	VR 100k-Cx2 (Treble)
VR02	4 2222 01340	VR 100k-Cx2 (Bass)
VR03	4 2222 01910	VR 250k-MNx2
VR04	4 2222 01010	VR 50k-B
VR05	4 2222 01360	VR 50k-Bx2 with Switch (Mixing Record)
	4 2312 03830	Switch Push 2key
	4 2312 04880	Switch Rotary Slide 6-4
	4 2362 00370	Plug 6P

### CAPACITORS

C01,02	C1HRY-105LPA	Electrolytic	1 $\mu$ F	50V
03,04				
05,06				
C07,08	C1HCZK221BPA	Ceramic	220 pF	50V $\pm$ 10%
C09,10	C1HFYK103APA	Mylar	0.01 $\mu$ F	50V $\pm$ 10%
C11,12	C1CRE-107A	Electrolytic	100 $\mu$ F	16V
C13,14	C1HRY-105APA	Electrolytic	1 $\mu$ F	50V
C15,16	C1CRY-476APA	Electrolytic	47 $\mu$ F	16V
C17,18	C1HFRK472A	Mylar	0.0047 $\mu$ F	50V $\pm$ 10%
C19,20	C1HFYK223APA	Mylar	0.022 $\mu$ F	50V $\pm$ 10%
C21,22	C1HRY-106APA	Electrolytic	10 $\mu$ F	50V
23,24				

Ref. No.	Parts Number	Description
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### CAPACITORS

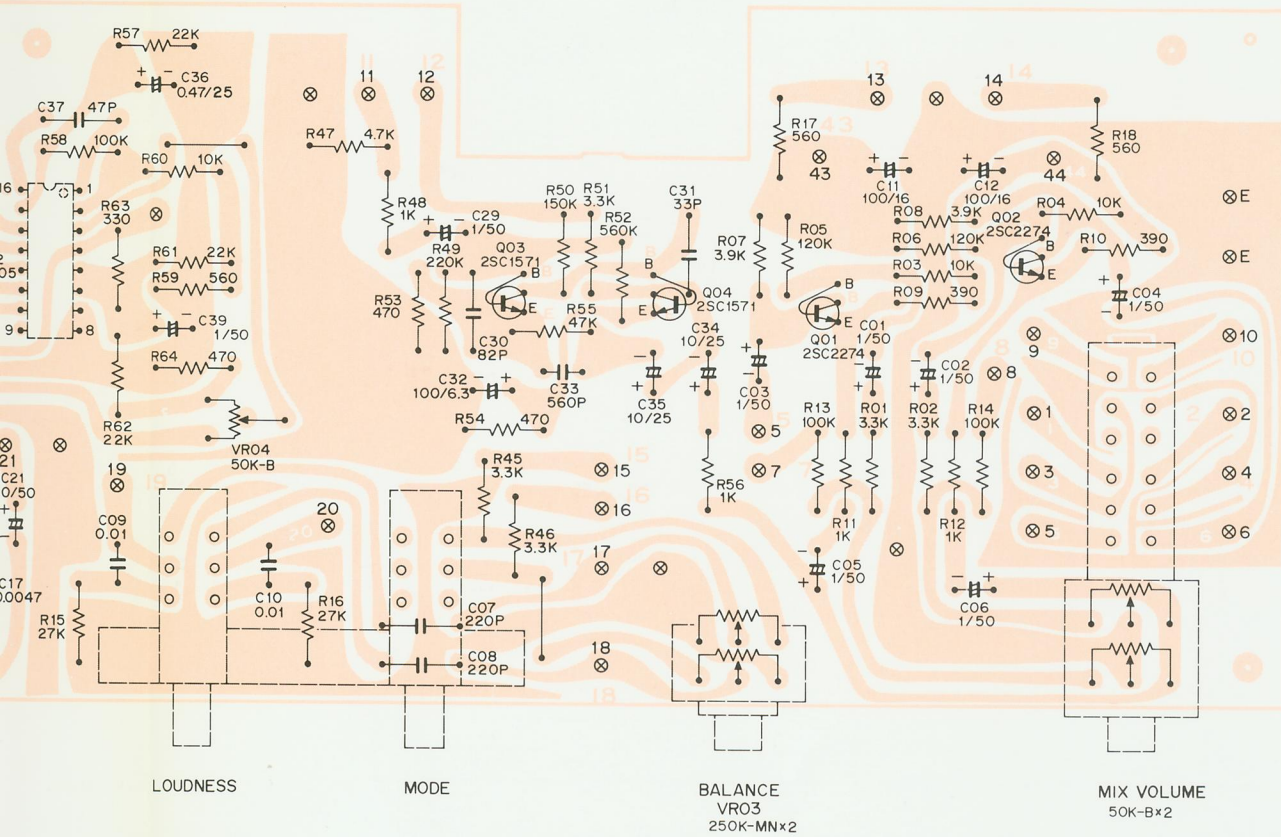
C25	C1HFRK153A	Mylar	0.015 $\mu$ F	50V $\pm$ 10%
C26	C1HFYK153APA	Mylar	0.015 $\mu$ F	50V $\pm$ 10%
C27,28	C1HFRK154A	Mylar	0.15 $\mu$ F	50V $\pm$ 10%
C29	C1HRY-105LPA	Electrolytic	1 $\mu$ F	50V
C30	C1HCZJ820SPA	Ceramic	82 pF	50V $\pm$ 5%
C31	C1HCZJ330SPA	Ceramic	33 pF	50V $\pm$ 5%
C32	C0JRY-107APA	Electrolytic	100 $\mu$ F	6.3V
C33	C1HYDK561R	Ceramic	560 pF	50V $\pm$ 10%
C34,35	C1ERY-106APA	Electrolytic	10 $\mu$ F	25V
C36	C1ERY-475APA	Electrolytic	4.7 $\mu$ F	25V
C37	C1HCZJ470SPA	Ceramic	47 pF	50V $\pm$ 5%
C38	C1ERY-475APA	Electrolytic	4.7 $\mu$ F	25V
C39	C1HRY-105APA	Electrolytic	1 $\mu$ F	50V

### SEMICONDUCTORS

D01,02	DNN-RD3R0E--BX	Diode, RD3.0EBX
D03,04	202 5 9110 18820	Diode, 1S188FM1
IC01	IJJ-NJM4558DX	IC, NJM4558D
IC02	206 5 2351 40510	IC, LB1405
Q01,02	203 5 7252 27450	TR 2SC2274 E, F
Q03,04	203 5 5251 57170	TR 2SC1571 G, H



# ONE P.C.BOARD (BOTTOM VIEW)



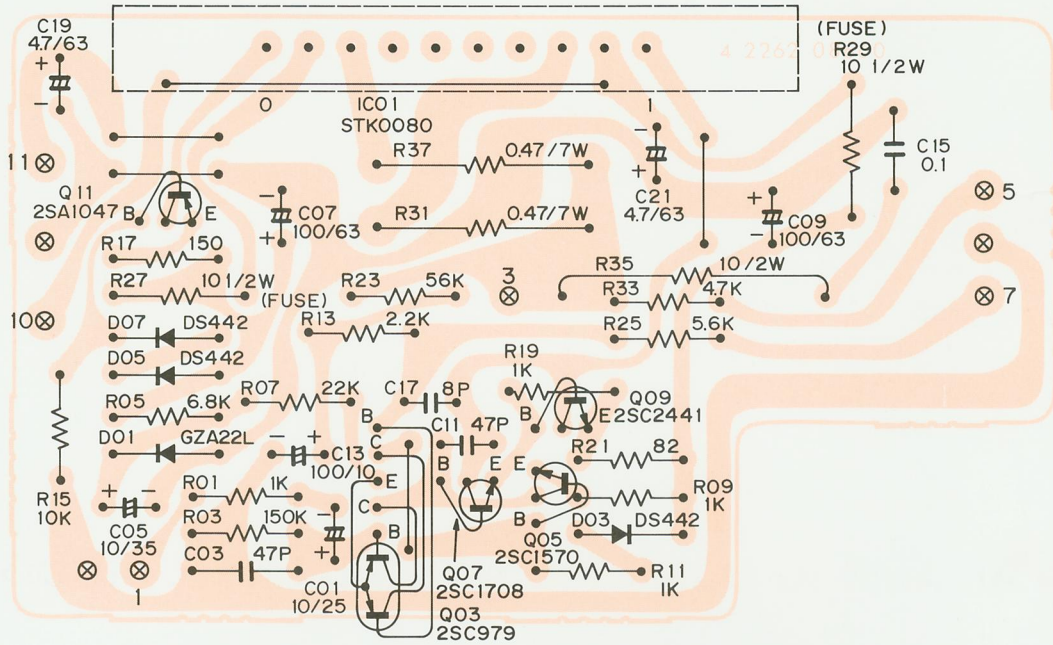
IC PIN NUMBERS VOLTAGES											
5	6	7	8	9	10	11	12	13	14	15	16
0.8mV	5.4mV	5.2mV	21.5V	-	-	-	-	-	-	-	-
2.9V	2.9V	0V	0V	-	9.8V	9.8V	9.8V	10V	9.8V	13.8mV	0.2V

## PARTS LIST (Continued)

Ref. No.	Parts Number	Description	Ref. No.	Parts Number	Description
<b>RESISTORS</b>					
R01,02	R2EDZJ332APA	Carbon 3.3k 1/4W ±5%	R38	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R03,04	R2EDZJ103APA	Carbon 10k 1/4W ±5%	R39,40	R2EDZJ182APA	Carbon 1.8k 1/4W ±5%
R05,06	R2EDZJ124APA	Carbon 120k 1/4W ±5%	R41,42	R3DXBJ391A	Oxide Metal Film 390 2W ±5%
R07,08	R2EDZJ392APA	Carbon 3.9k 1/4W ±5%	R43,44	R2HXB121A	Oxide Metal Film 120 1/2W ±5%
R09,10	R2EDZJ391APA	Carbon 390 1/4W ±5%	R45,46	R2EDZJ332APA	Carbon 3.3k 1/4W ±5%
R11,12	R2EDZJ102APA	Carbon 1k 1/4W ±5%	R47	R2EDZJ472APA	Carbon 4.7k 1/4W ±5%
R13,14	R2EDZJ104APA	Carbon 100k 1/4W ±5%	R48	R2EDZJ102APA	Carbon 1k 1/4W ±5%
R15,16	R2EDZJ273APA	Carbon 27k 1/4W ±5%	R49	R2EDZJ224APA	Carbon 220k 1/4W ±5%
R17,18	R2EDZJ561APA	Carbon 560 1/4W ±5%	R50	R2EDZJ154APA	Carbon 150k 1/4W ±5%
R19,20	R2EDZJ182APA	Carbon 1.8k 1/4W ±5%	R51	R2EDZJ332APA	Carbon 3.3k 1/4W ±5%
R21,22	R2EDZJ822APA	Carbon 8.2k 1/4W ±5%	R52	R2EDZJ564APA	Carbon 560k 1/4W ±5%
R23,24	R2EDZJ102APA	Carbon 1k 1/4W ±5%	R53,54	R2EDZJ471APA	Carbon 470 1/4W ±5%
R25,26	R2EDZJ104APA	Carbon 100k 1/4W ±5%	R55	R2EDZJ473APA	Carbon 47k 1/4W ±5%
R27,28	R2EDZJ153APA	Carbon 15k 1/4W ±5%	R56	R2EDZJ102APA	Carbon 1k 1/4W ±5%
R29,30	R2EDZJ334APA	Carbon 330k 1/4W ±5%	R57	R2EDZJ223APA	Carbon 22k 1/4W ±5%
R31,32	R2EDZJ391APA	Carbon 390 1/4W ±5%	R58	R2EDZJ104APA	Carbon 100k 1/4W ±5%
R33	R2EDPJ182A	Carbon 1.8k 1/4W ±5%	R59	R2EDZJ561APA	Carbon 560 1/4W ±5%
R34	R2EDZJ182APA	Carbon 1.8k 1/4W ±5%	R60	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R35	R2EDPJ823A	Carbon 82k 1/4W ±5%	R61,62	R2EDZJ223APA	Carbon 22k 1/4W ±5%
R36	R2EDZJ823APA	Carbon 82k 1/4W ±5%	R63	R2EDZJ331APA	Carbon 330 1/4W ±5%
R37	R2EDPJ103A	Carbon 10k 1/4W ±5%	R64	R2EDZJ471APA	Carbon 470 1/4W ±5%

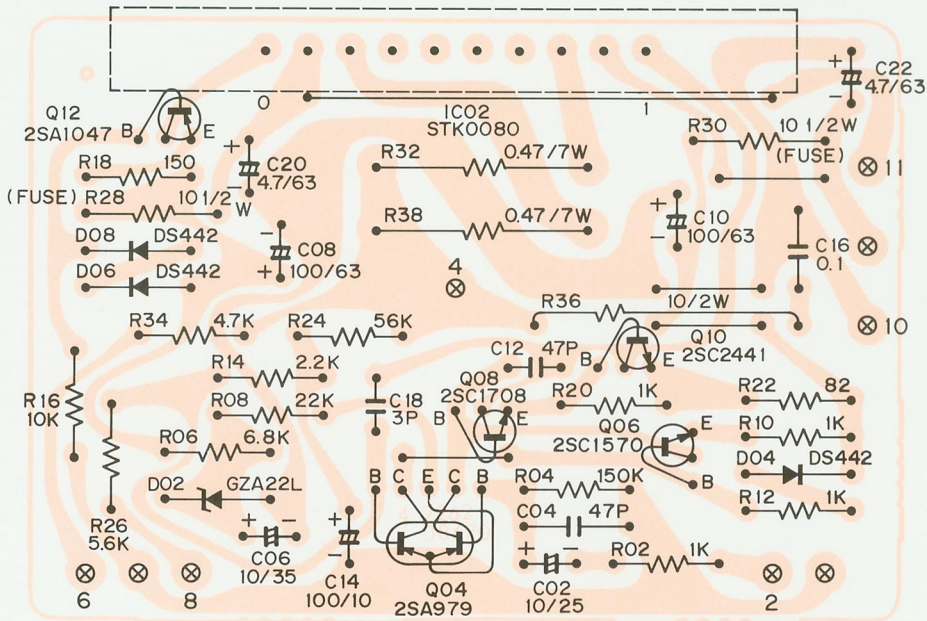


# POWER AMP (LEFT) P.C.BOARD (BOTTOM VIEW)



IC PIN NUMBERS DC VOLTAGES											
SYMBOL No.	DEVICE	1	2	3	4	5	6	7	8	9	10
IC01,02	STK0080	-1.1V	-57.3V	39mV	-	-	-	-	58mV	57.3V	1.1V

# POWER AMP (RIGHT) P.C.BOARD (BOTTOM VIEW)



TRANSISTOR DC VOLTAGES									
SYMBOL No.	DEVICE	B	C	E	SYMBOL No.	DEVICE	B	C	E
Q05,06	2SC1570	-55.2V	-55.6V	-56.6V	Q09,10	2SC2441	-55.2V	-1.1V	-56.7V
Q07,08	2SC1708	-55.6V	-1.1V	-55.2V	Q11,12	2SA1047	55.7V	1.1V	56.2V

# PARTS LIST

**POWER AMP (LEFT) P.C.B. Assy**  
**131 0 4001 07210**

Ref. No.	Parts Number	Description
<b>CAPACITORS</b>		
C01	C1ERY-106LPA	Electrolytic 10 $\mu$ F 25V
C03	C1HCZJ470SPA	Ceramic 47 pF 50V $\pm$ 5%
C05	C1VRY-106APA	Electrolytic 10 $\mu$ F 35V
C07,09	C1JRE-107A	Electrolytic 100 $\mu$ F 63V
C11	C1HCYK470APA	Ceramic 47 pF 50V $\pm$ 10%
C13	C1ARY-107APA	Electrolytic 100 $\mu$ F 10V
C15	C1HFRK104A	Mylar 0.1 $\mu$ F 50V $\pm$ 10%
C17	C1HCYD080APA	Ceramic 8 pF 50V $\pm$ 0.5%
C19,21	C1JRE-475A	Electrolytic 4.7 $\mu$ F 63V

## SEMICONDUCTORS

D01	202 5 3210 22010	Diode, GZA22L
D03,05 07	205 5 9040 44210	Diode, DS-442
IC01	206 5 7270 08010	IC, STK-0080A
Q03	TMM-2SA979--F	TR 2SA979 F, G
Q05	203 5 5251 57070	TR 2SC1570 G, H
Q07	TMM-2SC1708-F	TR 2SC1708
Q09	203 5 7512 44150	TR 2SC2441 E, F
Q11	203 5 7521 04750	TR 2SA1047 E, F

## RESISTORS

R01	R2EDZJ102APA	Carbon	1k	1/4W	$\pm$ 5%
R03	R2EDZJ154APA	Carbon	150k	1/4W	$\pm$ 5%
R05	R2EDZJ682APA	Carbon	6.8k	1/4W	$\pm$ 5%
R07	R2EDZJ223APA	Carbon	22k	1/4W	$\pm$ 5%
R09,11	R2EDZJ102APA	Carbon	1k	1/4W	$\pm$ 5%
R13	R2EDZJ222APA	Carbon	2.2k	1/4W	$\pm$ 5%
R15	R2EDZJ103APA	Carbon	10k	1/4W	$\pm$ 5%
R17	R2EDZJ151APA	Carbon	150	1/4W	$\pm$ 5%
R19	R2EDZJ102APA	Carbon	1k	1/4W	$\pm$ 5%
R21	R2EDZJ820APA	Carbon	82	1/4W	$\pm$ 5%
R23	R2EDZJ563APA	Carbon	56k	1/4W	$\pm$ 5%
R25	R2EDZJ562APA	Carbon	5.6k	1/4W	$\pm$ 5%
R27,29	R2HZPK100A	Fuse	10	1/2W	$\pm$ 10%
R31	4 2212 00170	Cemen	0.47	7W	$\pm$ 10%
R33	R2EDZJ472APA	Carbon	4.7k	1/4W	$\pm$ 5%
R35	R3DXBJ100A	Oxide Metal Film	10	2W	$\pm$ 5%
R37	4 2212 00170	Cemen	0.47	7W	$\pm$ 10%

**POWER AMP (RIGHT) P.C.B. Assy**  
**131 0 4001 07220**

Ref. No.	Parts Number	Description
<b>CAPACITORS</b>		
C02	C1ERY-106LPA	Electrolytic 10 $\mu$ F 25V
C04	C1HCZJ470SPA	Ceramic 47 pF 50V $\pm$ 5%
C06	C1VRY-106APA	Electrolytic 10 $\mu$ F 35V
C08,10	C1JRE-107A	Electrolytic 100 $\mu$ F 63V
C12	C1HCYK470APA	Ceramic 47 pF 50V $\pm$ 10%
C14	C1ARY-107APA	Electrolytic 100 $\mu$ F 10V
C16	C1HFRK104A	Mylar 0.1 $\mu$ F 50V $\pm$ 10%
C18	C1HCYD080APA	Ceramic 8 pF 50V $\pm$ 0.5%
C20,22	C1JRE-475A	Electrolytic 4.7 $\mu$ F 63V

## SEMICONDUCTORS

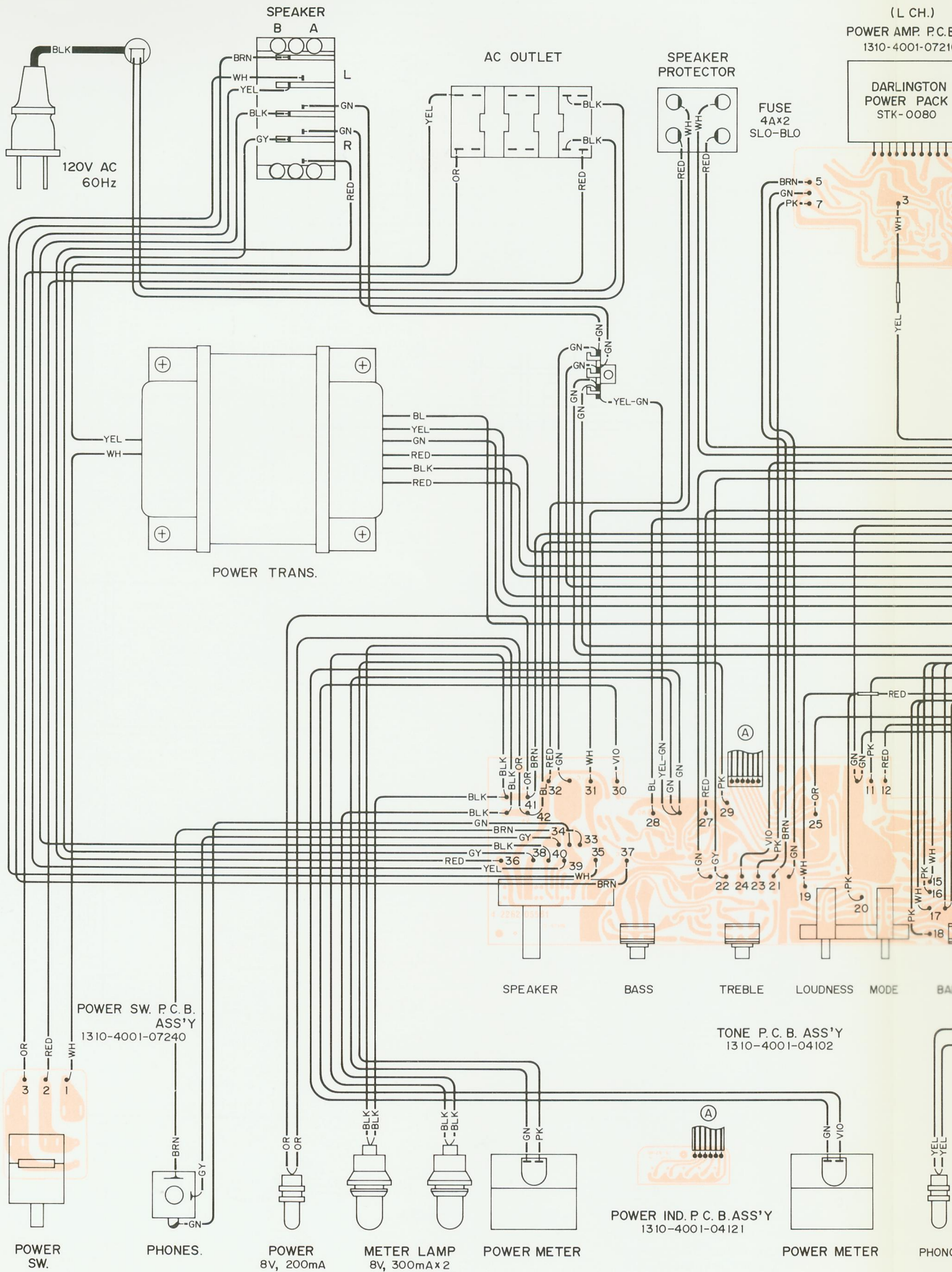
D02	202 5 3210 22010	Diode, GZA22L
D04,06 08	205 5 9040 44210	Diode, DS-442
IC02	206 5 7270 08010	IC, STK-0080A
Q04	TMM-2SA979--F	TR 2SA979 F, G
Q06	203 5 5251 57070	TR 2SC1570 G, H
Q08	TMM-2SC1708-F	TR 2SC1708
Q10	203 5 7512 44150	TR 2SC2441 E, F
Q12	203 5 7521 04750	TR 2SA1047 E, F

## RESISTORS

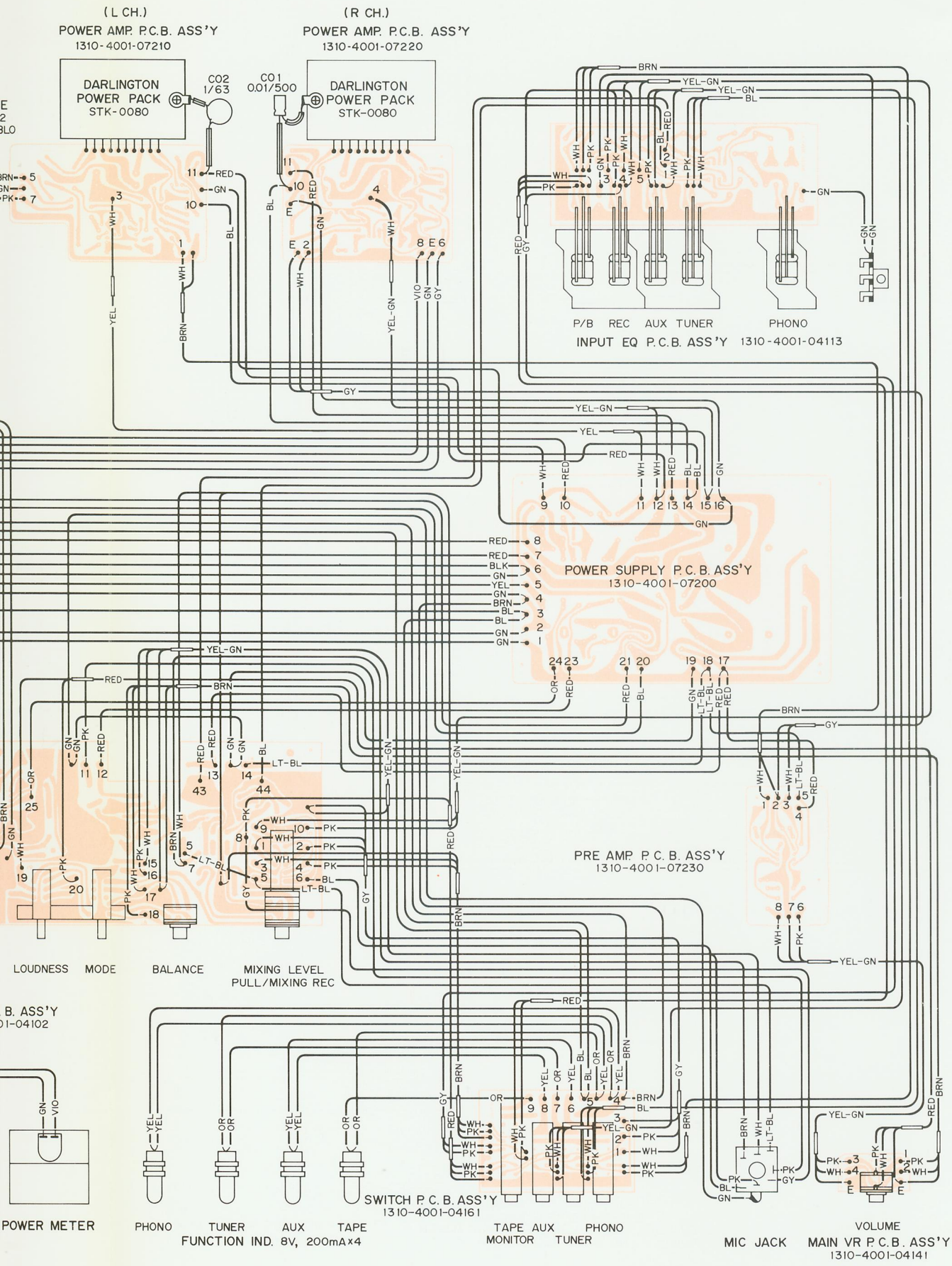
R02	R2EDZJ102APA	Carbon	1k	1/4W	$\pm$ 5%
R04	R2EDZJ154APA	Carbon	150k	1/4W	$\pm$ 5%
R06	R2EDZJ682APA	Carbon	6.8k	1/4W	$\pm$ 5%
R08	R2EDZJ223APA	Carbon	22k	1/4W	$\pm$ 5%
R10,12	R2EDZJ102APA	Carbon	1k	1/4W	$\pm$ 5%
R14	R2EDZJ222APA	Carbon	2.2k	1/4W	$\pm$ 5%
R16	R2EDZJ103APA	Carbon	10k	1/4W	$\pm$ 5%
R18	R2EDZJ151APA	Carbon	150	1/4W	$\pm$ 5%
R20	R2EDZJ102APA	Carbon	1k	1/4W	$\pm$ 5%
R22	R2EDZJ820APA	Carbon	82	1/4W	$\pm$ 5%
R24	R2EDZJ563APA	Carbon	56k	1/4W	$\pm$ 5%
R26	R2EDZJ562APA	Carbon	5.6k	1/4W	$\pm$ 5%
R28,30	R2HZPK100A	Fuse	10	1/2W	$\pm$ 10%
R32	4 2212 00170	Cemen	0.47	7W	$\pm$ 10%
R34	R2EDZJ472APA	Carbon	4.7k	1/4W	$\pm$ 5%
R36	R3DXBJ100A	Oxide Metal Film	10	2W	$\pm$ 5%
R38	4 2212 00170	Cemen	0.47	7W	$\pm$ 10%



# POINT TO POINT WIRING

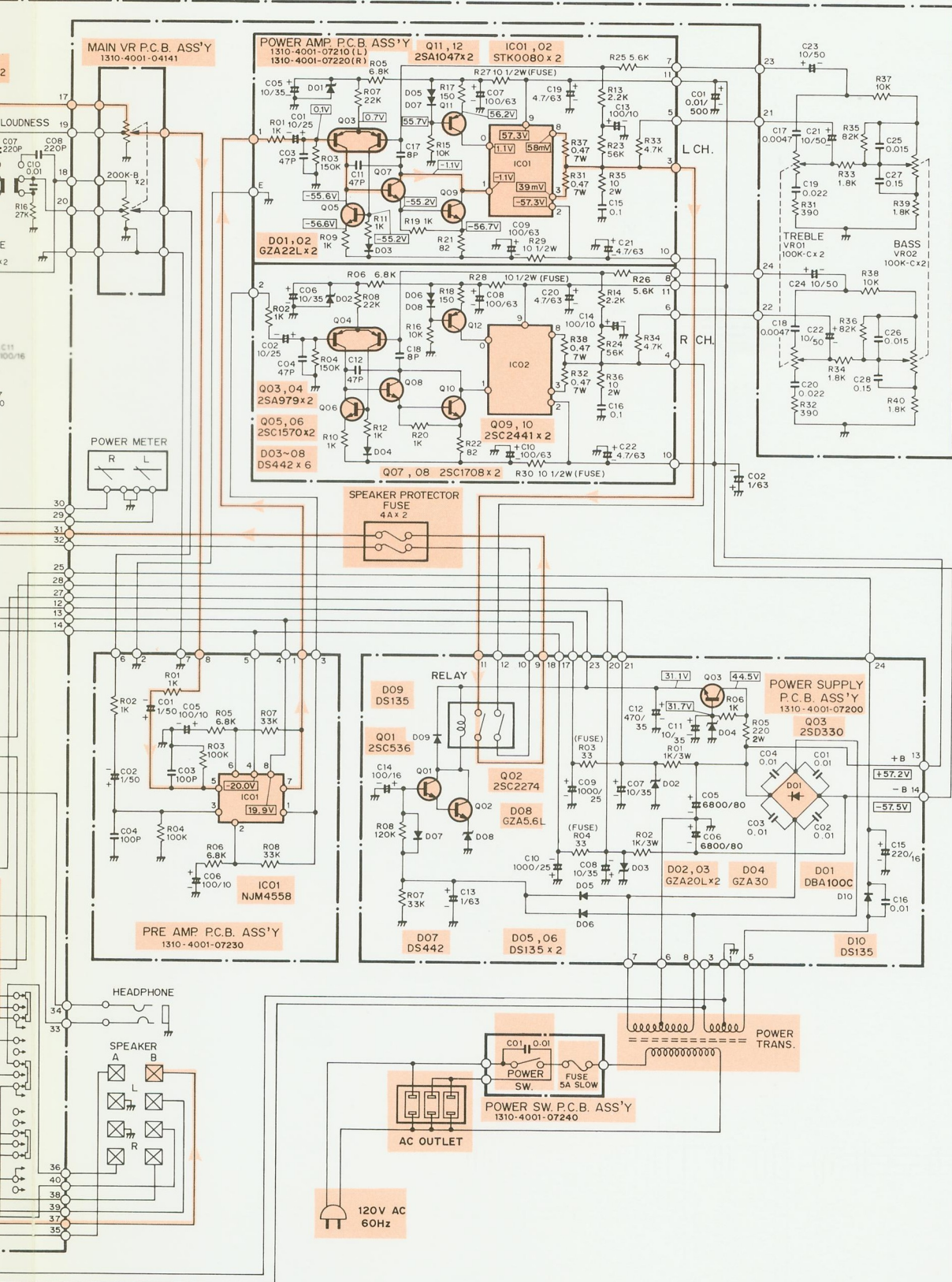


# POINT WIRING DIAGRAM





# SCHEMATIC DIAGRAM



10°.

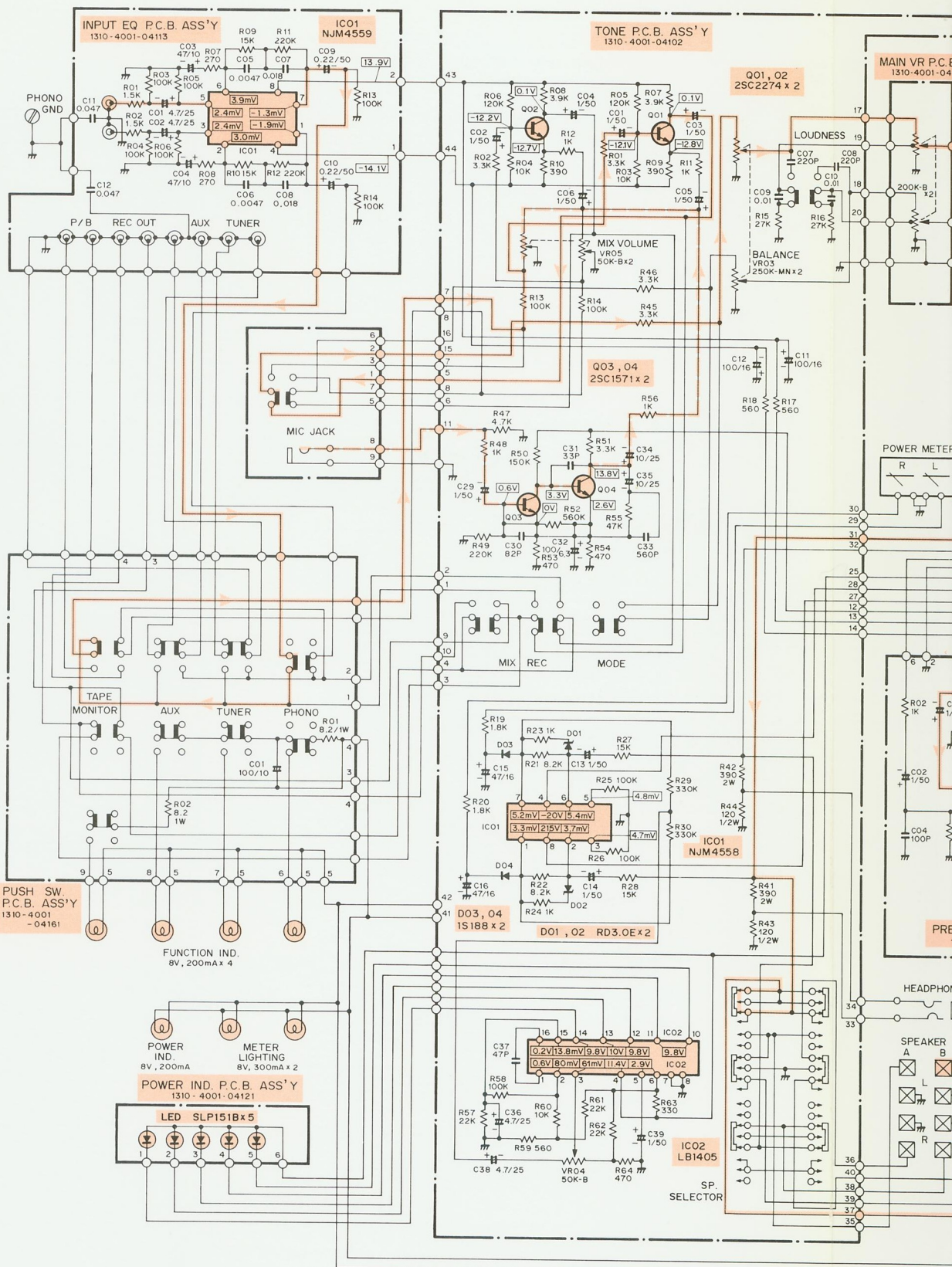
under the

- b. All voltages  $\pm 10\%$  with respect to chassis ground
  - c. No signals at input terminals
  - d. AC input at 120 volts 50Hz/60Hz
4. This is a basic schematic diagram.

ement, Fisher Corporation reserves the right to make any changes or



# SCHEMATIC DIAGRAM



**NOTES:**

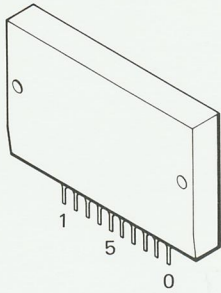
1. All resistors values are indicated in "ohm" ( $K=10^3, M=10^6$ ).
2. All capacitors values are indicated in " $\mu F$ " ( $P=10^{-12}$ ).
3. All voltages indicated on the schematics are measured under the following conditions.
  - a. Use a V.T.V.M.

Because Fisher products are subject to continuous improvement, Fisher Corporation reserves the right to make modifications without notice.

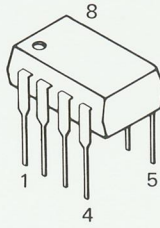


# SEMICONDUCTOR LEAD IDENTIFICATION

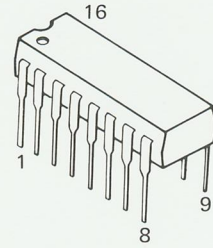
## INTEGRATED CIRCUITS



- STK-0080A



- NJM4558
- NJM4559



- LB1405

## TRANSISTORS



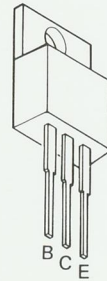
- 2SC2441
- 2SA1047



- 2SC1708



- 2SC1570
- 2SC1571
- 2SC536
- 2SC2274

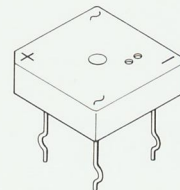
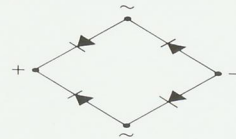


- 2SD330

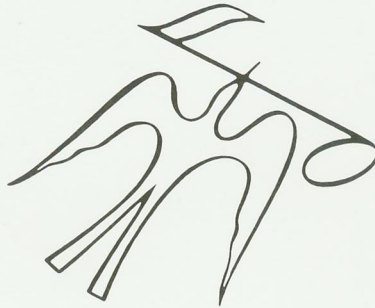
## DIODES



- DS-442
- RD3.0E
- 1S188
- GZA5.6L
- GZA20L
- GZA22L
- GZA30
- DS-135D



- DBA-100C-K15



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