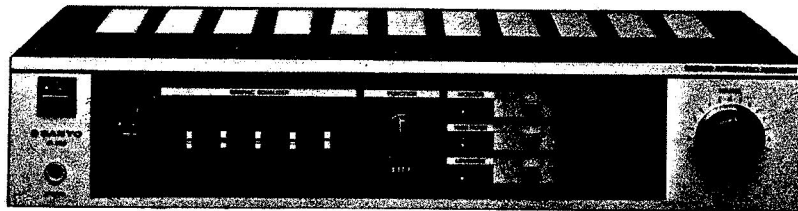
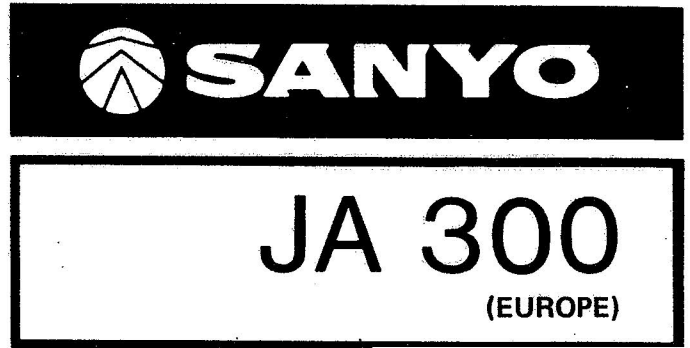


SERVICE MANUAL

POWER AMPLIFIER



SPECIFICATIONS

NOTE:

The below mentioned specifications are mainly based on the IHF measurements standard. They can therefore not directly be compared with specifications based on the DIN standard or other standards.

Continuous output power	25W x 2 (at 8 ohms, 0.3% distortion)	Graphic equalizer controls	±10 dB (63/250/1000/4000/16000 Hz)
Total harmonic distortion	0.1% (20 W output, 8 ohms)	High filter response	7 kHz (-6 dB/oct.)
Input sensitivity and impedance		Loudness control response	
PHONO	2.5 mV/47 kohms	100 Hz/10 kHz	+8 dB/+4 dB
AUX/TUNER/TAPE PLAY	150 mV/47 kohms	Signal to noise ratio	90 dB
Phono overload level	130 mV RMS (at 1kHz)	Power requirements	AC: 220V, 50Hz
Output level		Power consumption	130 W
TAPE REC	150mV	AC output socket	AC: 18 V, 300 mA
Frequency response	20 - 20000 Hz	Dimensions (Approx.)	420 (W) x 220 (D) x 85 (H) mm (16-1/2" x 8-5/8" x 3-3/8")
		Weight (Approx.)	4 kg (9 lbs.)

* Specifications subject to change without notice.

DISMOUNTING OF CABINET AND FRONT PANEL

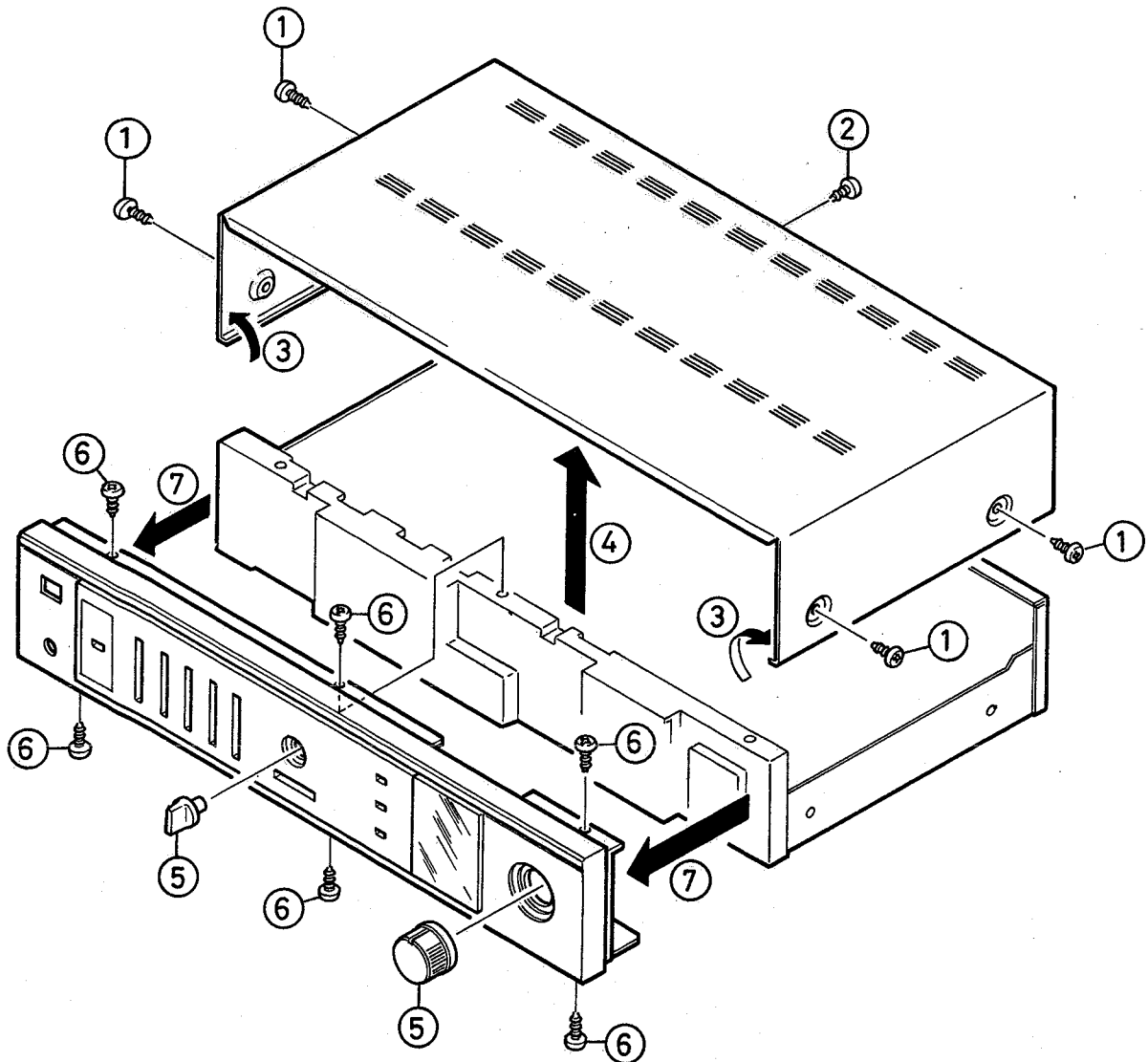
- Perform disassembly of amplifier after removing the power supply cord with out fail.
- Remove parts in order of disassembly as numbered.

1. TO DISMOUNT CABINET

- (1). Take out total 4 screws (Binding head tapping 4 x 8mm 1) from cabinet.
- (2). Take out 1 screw (Binding head tapping 3 x 6mm 2) from cabinet.

2. TO DISMOUNT FRONT – PANEL

- (1). Remove volume control knob and function select knob.
- (2). Take out total 6 screws (Binding head tapping 3 x 12mm 6) from front panel.

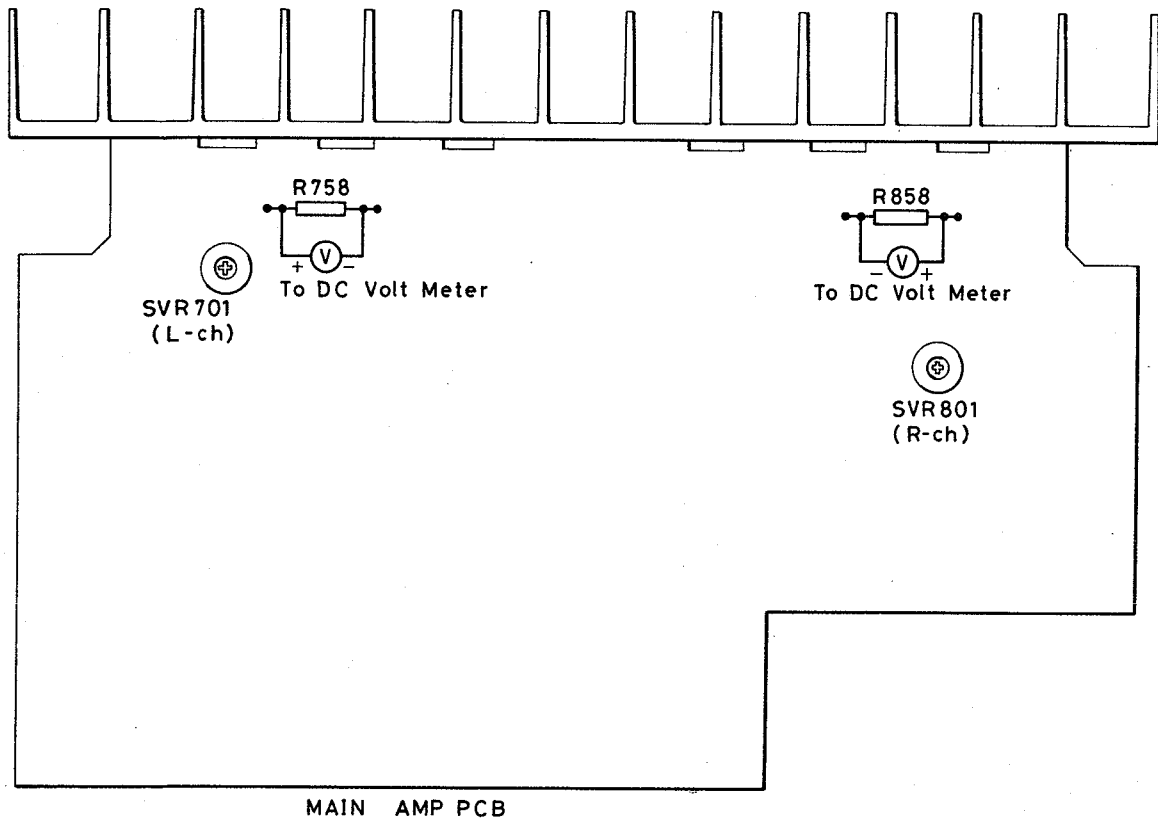


ADJUSTMENT OF BIAS

* CONDITIONS

VOLUME KNOB	:	"0" (Minimum)
GRAPHIC EQUALIZER KNOB	:	"0" (Center)
BALANCE KNOB	:	"0" (Center)
FUNCTION KNOB	:	"aux"
MONITOR BUTTON	:	"source"
HI - FILTER BUTTON	:	"off"
LOUDNESS BUTTON	:	"off"
SPEAKER BUTTON	:	"on"

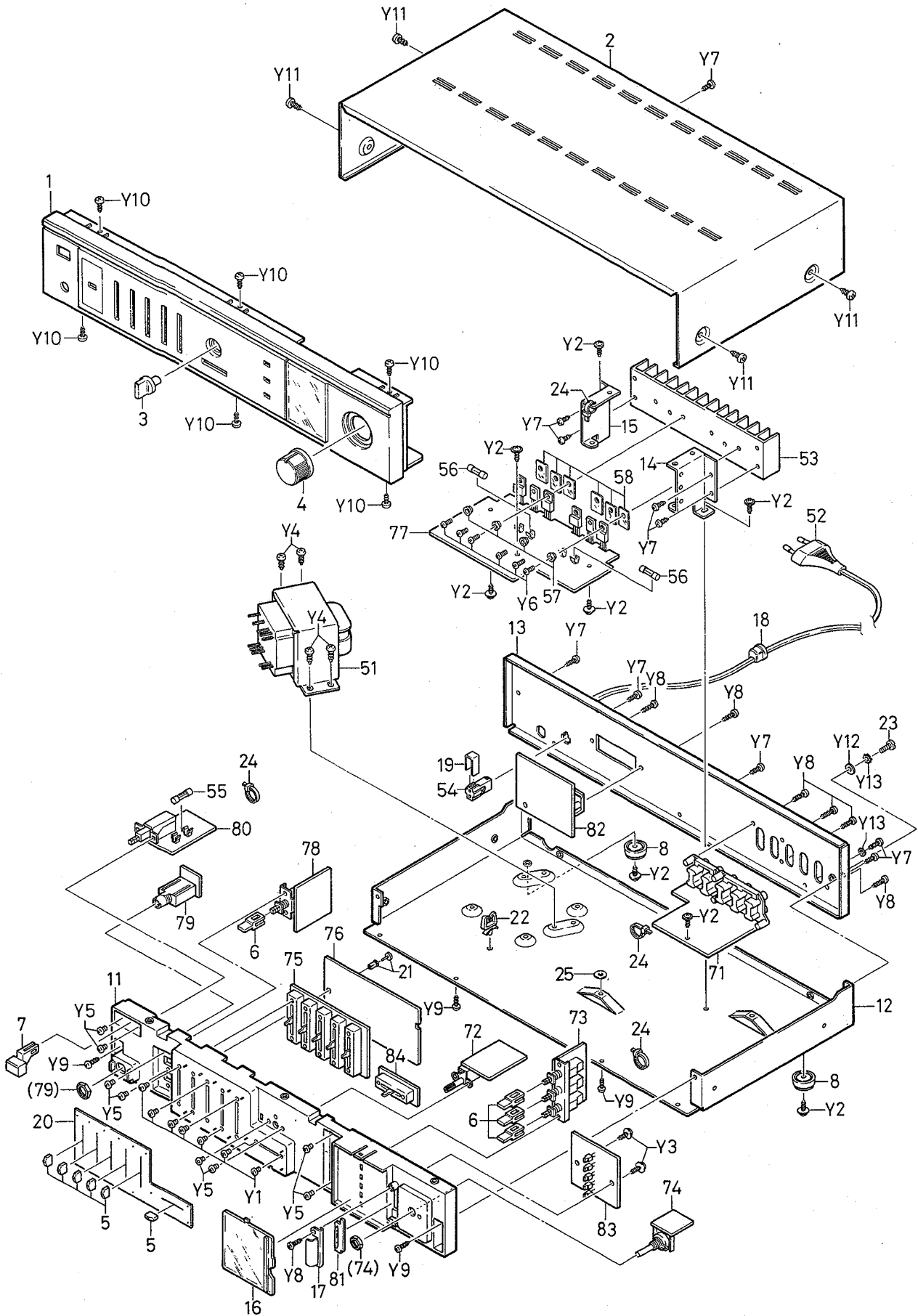
Note : No-Input • No-Load



After the power switch is turned on, adjust SVR701 and SVR801 respectively as follows.

- L - Channel : SVR701 for $3\text{mV} \pm 0.5\text{mV}$ reading between the both leads of R758.
- R - Channel : SVR801 for $3\text{mV} \pm 0.5\text{mV}$ reading between the both leads of R858.

EXPLODED VIEW



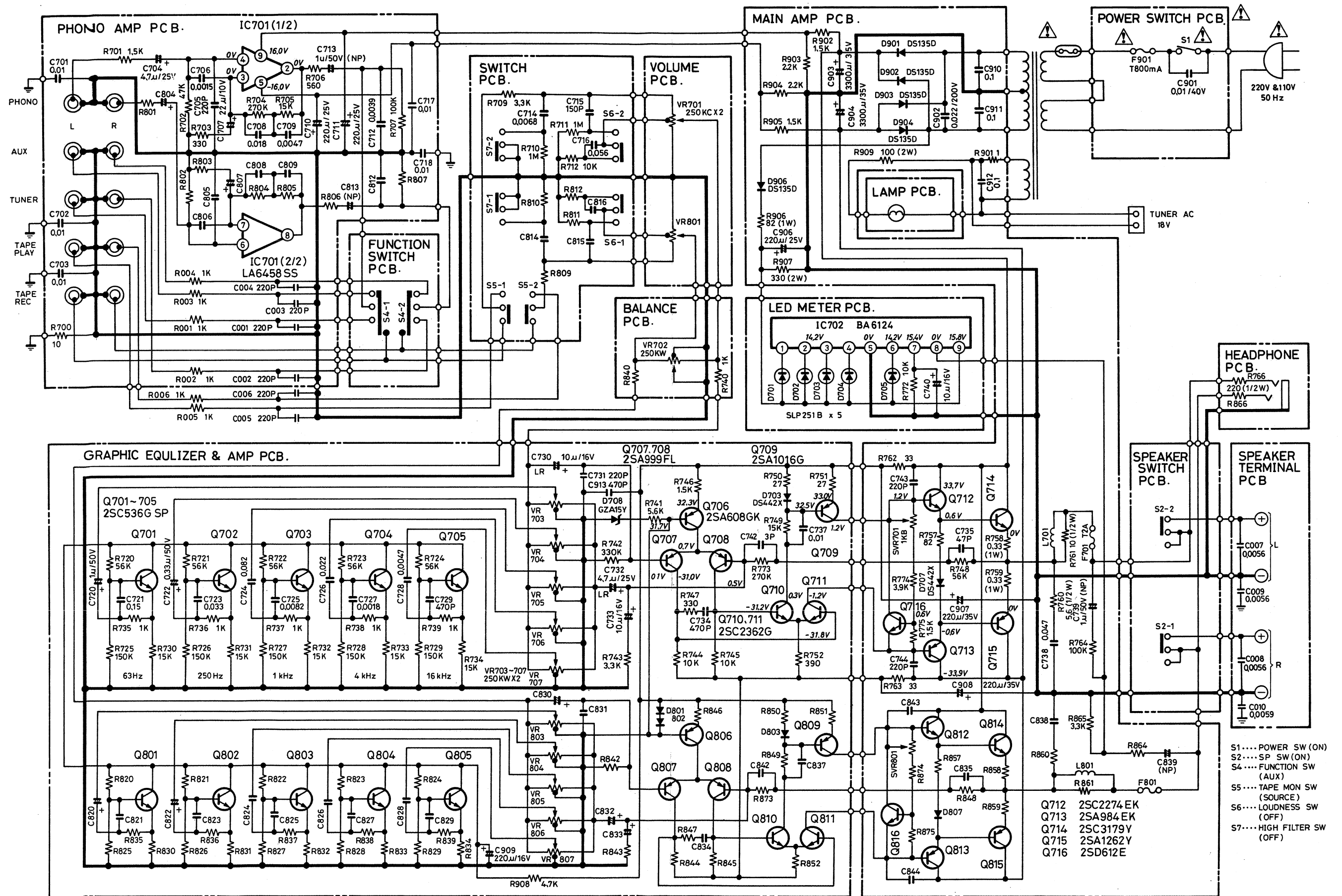
PARTS LIST

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
PACKING & ACCESSORY				PHONO AMP C. C. B. ASS'Y			
	141-6-133T-38802	Individual Carton	1	71	141-4-250T-61671	P.C.B. Ass'y, Phono Amp	1
	141-6-144T-85000	Foam Plastic Case	2		4-240T-06900	Socket, 4p RCA	1
	141-6-331T-11600	Protector Sheet	1		4-240T-07000	Socket, 6p RCA	1
	141-6-231T-35600	Inner Poly Cover	1	IC701		IC LA6458SS	1
	141-6-410T-81802	Instruction Manual	1	CAPACITORS			
	141-6-415T-32300	Notic, FTZ	1	C704,804		Electrolytic 4.7μF 25V	2
CABINET				C713,813		Electrolytic 1μF (Nonpolar) 50V	2
1	141-0-122T-46500	Front Panel Ass'y	1	C710,711		Electrolytic 220μF 25V	2
2	141-0-111T-54901	Cabinet Ass'y	1	C707,807		Electrolytic 22μF 10V	2
3	141-2-163T-91900	Rotary Knob	1	C708,808		Mylar 0.018μF ±5% 50V	2
4	141-2-163T-81730	Rotary Knob	1	C709,809		Mylar 0.0047μF ±5% 50V	2
5	141-2-164T-30700	Slide Knob	6	C712,812		Mylar 0.0039μF ±10% 50V	2
6	141-2-160T-09700	Push Button	4	C706,806		Mylar 0.0015μF ±10% 50V	2
7	141-2-160T-16500	Push Button, Power SW	1	C705,805		Ceramic 220pF ±10% 50V	2
8	141-2-174T-11200	Stand	2	C702,703,701		Ceramic 0.01μF +80-20% 50V	3
CHASSIS				C717,718		Ceramic 0.01μF ±10% 50V	2
11	141-2-311T-43800	Chassis	1	C001,002,003,004,005,006		Ceramic 220pF ±10% 50V	6
12	141-2-125T-29600	Bottom Lid	1	RESISTORS			
13	141-2-126T-41302	Back Lid	1	All Resistors are Carbon T-type ±5% ¼W, unless otherwise noted.			
14	141-2-310T-68400	Bracket, Heat Sink, Right	1	R703,803		330 ohm	2
15	141-2-310T-68500	Bracket, Heat Sink, Left	1	R706,806		560 ohm	2
16	141-2-143T-92601	Marking Plate	1	R701,801		1.5K ohm	2
17	141-2-329T-08700	Reflector	1	R705,805		15K ohm	2
18	141-2-464T-14400	Fixer, AC Cord	1	R702,802		47K ohm	2
19	141-2-310T-69700	Bracket	1	R707,807		100K ohm	2
20	141-2-135T-86702	Cover	1	R704,804		270K ohm	2
21	141-2-464T-40500	Fixer	1	R700		10 ohm	1
22	141-2-464T-29900	Fixer	1	R001,002,003,004,005,006		1K ohm	6
23	141-2-421T-28800	Special Screw	1	FUNCTION SWITCH P. C. B. ASS'Y			
24	141-2-464T-20600	Fixer	5	72	141-4-250T-61771	P.C.B. Ass'y, Function Switch	1
25	141-2-453T-01701	Washer 3 x 10 x 1mm	1	S4	4-238T-56000	Rotary Switch	1
FIXING PARTS				SWITCH P. C. B. ASS'Y			
Y 1		Pan Hd. Screw 2 x 4mm	7	73	141-4-250T-61871	P.C.B. Ass'y, Switch	1
Y 2		Pan. Hd. Tapping Screw W/Washer 3 x 6mm	8	S5,6,7	4-238T-56100	Push Switch	1
Y 3		Pan. Hd. Tapping Screw W/Washer 3 x 8mm	2	CAPACITORS			
Y 4		Pan. Hd. Tapping Screw W/Washer 4 x 8mm	4	C716,816		Mylar 0.056μF ±10% 50V	2
Y 5		Binding Hd. Screw 3 x 6mm	8	C714,814		Mylar 0.0068μF ±10% 50V	2
Y 6		Binding Hd. Screw 3 x 8mm	6	C715,815		Ceramic 150pF ±10% 50V	2
Y 7		Binding Hd. Tapping Screw 3 x 6mm	10	RESISTORS			
Y 8		Binding Hd. Tapping Screw 3 x 8mm	9	R710,711,810,811		1M ohm	4
Y 9		Binding Hd. Tapping Screw 3 x 10mm	4	R712,812		10K ohm	2
Y10		Binding Hd. Tapping Screw 3 x 12mm	6	R709,809		3.3K ohm	2
Y11		Binding Hd. Tapping Screw 4 x 8mm	4	VOLUME P. C. B. ASS'Y			
Y12		Spring Washer 3 x 10 x 1t	1	74	141-4-250T-61971	P.C.B. Ass'y, Volume	1
Y13		External Tooth Lock Washer 3 x 6.5t x 0.45t	2	VR701,801	4-220T-03400	Variable Resistors	1
ELECTRICAL PARTS				GRAPHIC EQUALIZER CONTROL P. C. B. ASS'Y			
51	4-300T-60600	Power Transformer	1	75	141-4-250T-62071	P.C.B. Ass'y, Graphic Equalizer	1
52	4-243T-84971	Power Cord	1	VR703,704,705,706,707	4-220T-03500	Control Variable Resistor	5
53	141-2-368T-26100	Heat Sink	1	CAPACITORS			
54	4-240T-16571	Socket, TUNER AC	1	C720,820		Electrolytic 1μF 50V	2
55	4-234T-10583	Fuse, T800mA 250V (F901)	1	C722,822		Electrolytic 0.33μF 50V	2
56	4-234T-10588	Fuse, T2.0A 250V (F701,801)	2	C724,824		Mylar 0.082μF ±10% 50V	2
57	141-2-243T-09800	Base	4	C726,826		Mylar 0.022μF ±10% 50V	2
58	141-2-327T-26100	Insulator	6	C728,828		Mylar 0.0047μF ±10% 50V	2

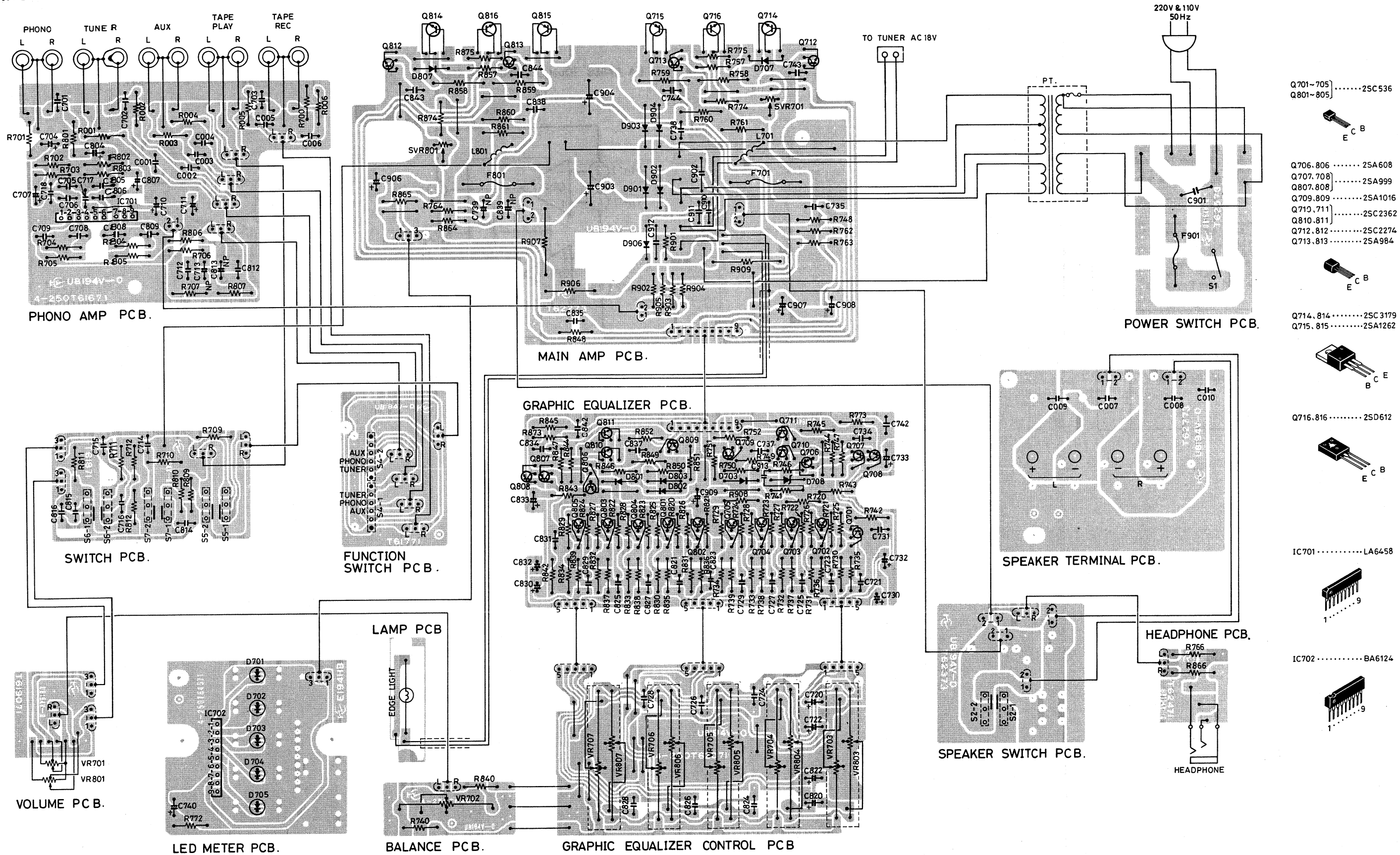
PARTS LIST

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty				
GRAPHIC EQUALIZER AMP P. C. B. ASS'Y				MAIN AMP P. C. B. ASS'Y							
76	141-4-250T-62102	P.C.B. Ass'y, Graphic Equalizer Amp P. C. B.	1	77	141-4-250T-62273	P.C.B. Ass'y, Main Amp PCB	1				
Q709,809		Transistor 2SA1016	2		4-240T-11276	Socket, 9p	1				
Q710,711,810,811		Transistor 2SC2362	4		141-2-381T-04200	Bracket Fuse	4				
Q706,806		Transistor 2SA608K	2	SVR701,801	4-222T-73573	Semi-Variable Resistor 1K ohm	2				
Q701,702,703,704,705		Transistor 2SC536 AUD SP	5	L701,801	4-265T-07930	VHF Coil	2				
Q801,802,803,804,805		Transistor 2SC536 AUD SP	5		4-240T-11200	Socket, 3p	1				
Q707,708,807,808		Transistor 2SA999 NF	4	Q714,814		Transistor 2SC3179	2				
D703,801,802,803		Diode DS442X	4	Q715,815		Transistor 2SA1262	2				
D708		Zener Diode GZA15Y	1	Q712,812		Transistor 2SC2274K	2				
CAPACITORS				Q713,813		Transistor 2SA984K	2				
C909		Electrolytic 220μF 16V	1	Q716,816		Transistor 2SD612	2				
C733,833		Electrolytic 10μF 16V	2	D707,807		Diode DS442 X	2				
C730,830		Electrolytic 10μF 16V	2	D901,902		Diode DS135 D	4				
C732,832		Electrolytic 4.7μF 25V	2	D906		Diode DS135D	1				
C721,821		Mylar 0.15μF ±10% 50V	2	CAPACITORS							
C723,823		Mylar 0.33μF ±10% 50V	2	C903,904	4-163T-10100	Electrolytic 3300μF 35V	2				
C725,825		Mylar 0.0082μF ±10% 50V	2	C907,908		Electrolytic 220μF 35V	2				
C727,827		Mylar 0.0018μF ±10% 50V	2	C906		Electrolytic 220μF 25V	1				
C729,829		Mylar 470pF ±10% 50V	2	C739,839		Electrolytic 1μF (Nonpolar) 50V	2				
C734,834		Mylar 470pF ±10% 50V	2	C902	4-223T-13771	Capacitor 0.022μF ±20% 200V	1				
C737,837		Mylar 0.01μF ±10% 50V	2	C738,838		Mylar 0.047μF ±10% 50V	2				
C731,831		Ceramic 220pF ±10% 50V	2	C910,911		Mylar 0.1μF ±20% 100V	2				
C742,842		Ceramic 3pF ±10% 50V	2	C912		Ceramic 0.1μF ±10% 50V	1				
C913		Mylar 470pF ±10% 50V	1	C735,835		Ceramic 47pF ±10% 50V	2				
RESISTORS				C743,744,843,844		Ceramic 220pF ±10% 50V	4				
All Resistors are Carbon T-type ±5% ¼W, unless otherwise noted.				C903		Ceramic 0.1μF +80-20% 50V	1				
R752,852		FP-Carbon 390 ohm P-type	2	RESISTORS							
R908		FP-Carbon 4.7K ohm P-type	1	All Resistors are Carbon T-type ±5%, ¼W unless otherwise noted.							
R749,849		15K ohm	2	R758,759,858,859		Metal 0.33 ohm P-type 1W	4				
R742,842		330K ohm	2	R760,860		FP-Carbon 5.6 ohm P-type ¼W	2				
R725,726,727,728,729		150K ohm	5	R901		FP-Carbon 1 ohm P-type	1				
R825,826,827,828		150K ohm	5	R757,857		FP-Carbon 82 ohm P-type	2				
829		56K ohm	5	R762,763		FP-Carbon 33 ohm P-type	2				
R720,721,722,723,724		56K ohm	5	R906		Metal 82 ohm P-type 1W	1				
R820,821,822,823,824		15K ohm	5	R909		Metal 100 ohm P-type 2W	1				
R730,731,732,733,734		15K ohm	5	R748,848		56K ohm	2				
R830,831,832,833,834		15K ohm	5	R764,864		100K ohm	2				
R744,745,844,845		10K ohm	4	R903,904		2.2K ohm	2				
R735,736,737,738,739		1K ohm	5	R775,875		1.5K ohm	2				
R835,836,837,838,839		1K ohm	5	R774,874		3.9K ohm	2				
R746,846		1.5K ohm	2	R865		3.3K ohm	1				
R747,847		330 ohm	2	R907		Metal 330 ohm P-type 2W	1				
R750,751,850,851		27 ohm	4	R902,905		FP-Carbon 1.5K ohm P-type	2				
R733,873		270K ohm	2	R761,861		FP-Carbon 10 ohm P-type ¼W	2				
R743,843		3.3K ohm	2	SPEAKER SWITCH P. C. B. ASS'Y							
R741,		5.6K ohm	1	78	141-4-250T-62373	P.C.B. Ass'y, Speaker Switch	1				
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:5%;">S2</td> <td style="width:25%;">4-238T-49700</td> <td style="width:50%;">Switch</td> <td style="width:5%;">1</td> </tr> </table>								S2	4-238T-49700	Switch	1
S2	4-238T-49700	Switch	1								
HEADPHONE P. C. B. ASS'Y				AC POWER SWITCH P. C. B. ASS'Y							
79	141-4-250T-62402	P.C.B. Ass'y, Headphone	1	80	141-4-250T-62573	P.C.B. Ass'y, AC Power Switch	1				
R766,866	4-240T-29971	Socket	1	S1	4-238T-30100	Switch, Power	1				
		FP-Carbon 270 ohm P-type ¼W	2	C901	4-223T-12100	Capacitor 0.01μF 400V	1				
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:5%;"></td> <td style="width:25%;">141-4-381T-04200</td> <td style="width:50%;">Bracket Fuse.</td> <td style="width:5%;">2</td> </tr> </table>									141-4-381T-04200	Bracket Fuse.	2
	141-4-381T-04200	Bracket Fuse.	2								

SCHEMATIC DIAGRAM



WIRING DIAGRAM



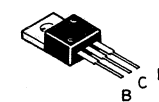
Q701-705 2SC536
Q801-805



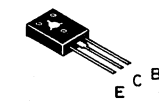
Q706, 806 2SA608
Q707, 708 2SA999
Q807, 808 2SA1016
Q709, 809 2SA1016
Q710, 711 2SC2362
Q712, 812 2SC2274
Q713, 813 2SA984



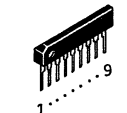
Q714, 814 2SC3179
Q715, 815 2SA1262



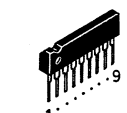
Q716, 816 2SD612



IC701 LA6458



IC702 BA6124

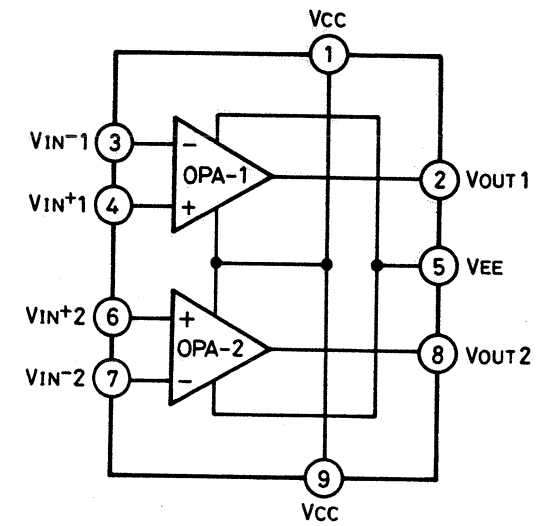


PARTS LIST

Ref. No.	Part No.	Description	Q'ty
LAMP P. C. B. ASS'Y			
81	141-4-250T-6267 4-612T-1740	P.C.B. Ass'y, Lamp Lamp 12V, 100mA	1 1
SPEAKER TERMINAL P. C. B. ASS'Y			
82	141-4-250T-6277 4-237T-1107	P.C.B. Ass'y, Speaker Terminal Terminal Board Mylar 0.0056 μ F \pm 10% 50V	1 1 4
LED METER P. C. B. ASS'Y			
83	141-4-250T-6457	P.C.B. Ass'y, LED Meter	1
IC702		IC LB1403 IC BA6124 or	1
C740		LED SLP251B Green	5
R772		Electrolytic 10 μ F 16V Carbon 10K ohm T-type $\frac{1}{4}$ W	1 1
BALANCE P. C. B. ASS'Y			
84	141-4-250T-6467 4-220T-0360	P.C.B. Ass'y, Balance	1
VR702		Variable Resistor	1
R840		Carbon 1K ohm T-type $\frac{1}{4}$ W	1
R740		Carbon 1K ohm P-type $\frac{1}{4}$ W	1

IC BLOCK DIAGRAM

LA 6458S (Dual Operation Amplifier)



BA6124 (LED Level Meter)

