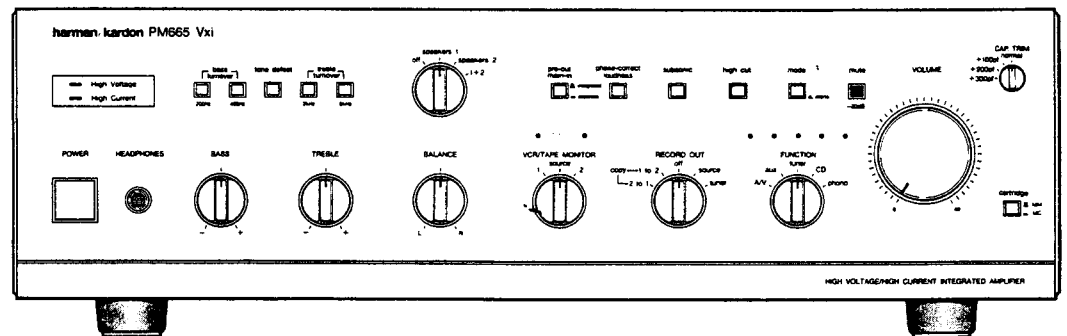


The Harman Kardon Model PM665 Vxi STEREO INTEGRATED AMPLIFIER

Manual 115A

Technical Manual



The following marks found in the parts list of this manual identify the models as follows.

- **UA** : North America area model
- **BK** : North America area model Black version
- **G** : General model
- **GB** : General model Black version
- **N** : Japan model

harman/kardon

240 Crossways Park West, Woodbury, N. Y. 11797
1112-3152115A9 P-088710

SPECIFICATIONS

	Nominal	Limit
RMS Output Power		
8Ω, 1kHz THD 0.08%	169W	≧ 150W
4Ω, 1kHz THD 0.1%	175W	≧ 150W
High Instantaneous Current Capability (HCC)	80A	≧ 65A
Half Power Bandwidth	10Hz ~ 100kHz	
Frequency Response at -3dB	0.22Hz ~ 180kHz	
Input Sensitivity		
Video/CD	135mV ± 25mV	
Phono(MM)	2.2mV ± 0.3mV *	
Phono(MC)	120μV ± 20μV *	
Signal to Noise Ratio		
Video/CD	76dB	≧ 74dB
Phono(MM)	76dB	≧ 73dB
Phono(MC)	74dB	≧ 71dB
Channel Separation at 10kHz		
Video/CD	54dB	≧ 45dB
Phono(MM)	61dB	≧ 45dB
Phono(MC)	65dB	≧ 45dB
IM Distortion Ratio	0.022%	≧ 0.1%
Damping Factor at 1kHz	76	≧ 60
Tone Control Characteristics		
Bass Turnover Frequency (200Hz/400Hz)		
Bass at 50Hz/100Hz		
Boost	10dB	± 2dB
Cut	10dB	± 2dB
Treble Turnover Frequency (2kHz/6kHz)		
Treble at 10kHz/30kHz		
Boost	10dB	± 2dB
Cut	10dB	± 2dB

	Nominal	Limit
Filters		
Subsonic	15Hz,	-3.5dB ± 1dB/Octave
High Cut	6kHz,	-3dB ± 1dB/Octave
DC Output Voltage		
L channel		0mV ± 60mV
R channel		0mV ± 60mV
RIAA Equalization at Tape Out (20Hz/20kHz) (No load)	0.1dB ± 0.5dB/	-0.2dB ± 0.5dB
Phono Over Load (No load)		
Phono (MM)	220mV	≧ 190mV
Phono (MC)	12.9mV	≧ 8mV
Dimensions (W × H × D)	17-1/2" × 5-5/16" × 15-11/16"	
	(443 × 134 × 398mm)	
Weight	29lbs. 12oz.	(13.5kg)
Power Supplies		
North America area model	AC 120V,	60Hz
General model	AC 220/240V,	50/60Hz
Japan model	AC 100V,	50/60Hz
Power Consumption		
North America area model	600W	
General model	350VA	
Japan model	600W	

* Input Sensitivity for General model are 2.3mV ± 0.3mV (MM) and 145μV ± 20μV (MC).

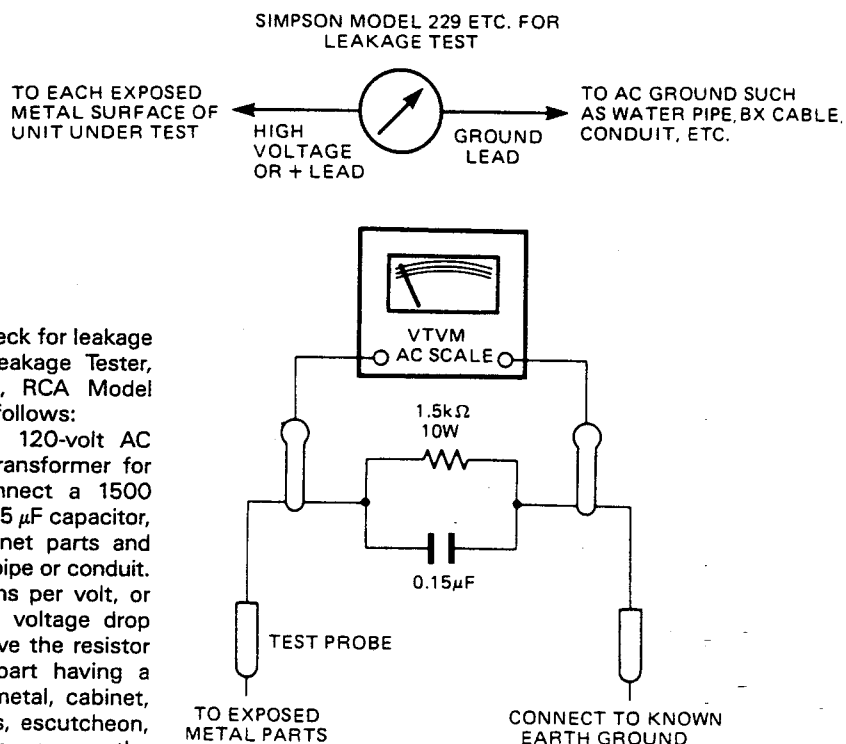
This specification is the target of servicing. But, there is a care that the specification is not applicable to the measurement condition and instrument.

Specifications and components subject to change without notice. Overall performance will be maintained or improved.

LEAKAGE TEST (FOR SERVICE ENGINEERS IN THE U.S.A.)

Before returning the unit to the user, perform the following safety checks:

- Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the unit.
- Be sure that any protective devices such as nonmetallic control knobs, insulating fishpapers, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc. which were removed for servicing are properly reinstalled.
- Be sure that no shock hazard exists; check for leakage current using Simpson Model 229 Leakage Tester, standard equipment item No. 21641, RCA Model WT540A or use alternate method as follows: Plug the power cord directly into a 120-volt AC receptacle (do not use an Isolation Transformer for this test). Using two clip leads, connect a 1500 Ohm, 10-watt resistor paralleled by a 0.15 μF capacitor, in series with all exposed metal cabinet parts and a known earth ground, such as a water pipe or conduit. Use a VTVM or VOM with 1000 Ohms per volt, or higher sensitivity to measure the AC voltage drop across the resistor. (See Diagram.) Move the resistor connection to each exposed metal part having a return path to the chassis (antenna, metal, cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor. (This test should be performed with the power switch in both the On and Off positions.) A reading of 0.35 volt RMS or more is excessive and indicates a potential shock hazard which must be corrected before returning the unit to the owner.



DISASSEMBLY PROCEDURES (REFER TO PAGES 5 AND 21)

① CABINET TOP (131) REMOVAL

Remove 8 screws (A) and then remove the Cabinet Top (131).

② FRONT PANEL ASS'Y (AA) REMOVAL

1. Remove the Cabinet Top (131), referring to the previous step ①.
2. Remove 5 screws (B) and then remove the Front Panel Ass'y (AA).

③ MAIN P. C. BOARD (PCB-2) REMOVAL

1. Remove 10 screws (C) and then remove the Cabinet Bottom Ass'y (AC).
2. Remove the Front Panel Ass'y (AA), referring to the previous step ②.
3. Loosen 4 hexagon-socket-head screws (D) and pull out the Shaft Ass'y (BB) with the Rotary Knob Ass'y (AD).
4. Remove 24 screws (E) and a plastic rivet (F) and then remove the Cabinet Back Ass'y (AB).
If necessary, unsolder the lead wires from the Power Transformers (T1 and T2).
5. Open the lid of connectors (CN101 and CN102) on the Main P. C. Board (PCB-2) and then disconnect the lead wires.
6. Remove 4 screws (G) and then remove the Main P. C. Board (PCB-2) with the Heat Sinks (177). At this time, unsolder the lead wires connected to the Main P. C. Board (PCB-2).

④ POWER SWITCH P. C. BOARD (PCB-3) REMOVAL

1. Remove the Front Panel Ass'y (AA), referring to the previous step ②.
2. Pull out the Push Button (146) and Shaft (214).
3. Remove 3 screws (H) and then remove the Power Switch P. C. Board (PCB-3). If necessary unsolder the lead wires.

⑤ MAIN DRIVER P. C. BOARD (PCB-1) REMOVAL

1. Remove the Main P. C. Board (PCB-2), referring to the previous step ③.
2. Remove 2 screws (I) and then remove the Main Driver P. C. Board (PCB-1).
If necessary unsolder the lead wires.

⑥ EQUALIZER P. C. BOARD (PCB-11) REMOVAL

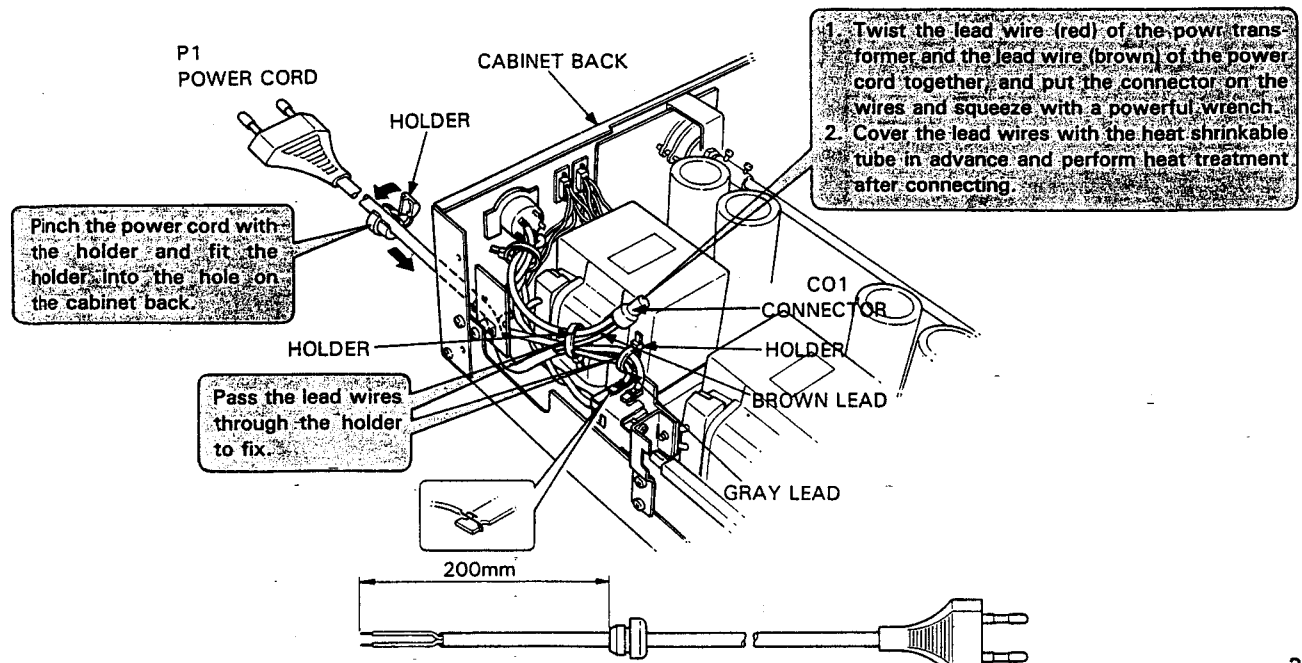
1. Remove the Cabinet Back Ass'y (AB), referring to the previous step ③.
2. Remove a screw (J) and a plastic rivet (K) and then remove the Equalizer P. C. Board (PCB-11).
If necessary unsolder the lead wires.

⑦ TONE 1 P. C. BOARD (PCB-5) REMOVAL

1. Remove the Cabinet Bottom Ass'y (AC), referring to the previous step ③-1.
2. Remove the Front Panel Ass'y (AA), referring to the previous step ②.
3. Pull out the Cap. Trim Rotary Knob (151) and remove 4 hexagon-nuts (L) and then remove the Capacitance Trim P. C. Board (PCB-8).
4. Pull out Volume Rotary Knob (150) and remove a hexagon-nut (M) and then remove the Volume P. C. Board (PCB-7).
5. Remove 2 screws (N) and then remove the Push Switch (SW9, cartridge).
6. Straighten the catches fixing the 4/8Ω LED P. C. Board (PCB-9) and then remove it.
7. Remove the metal fixture (O) fixing the Headphone P. C. Board (PCB-12) and then remove it.
8. Pull out the Push Button (146) and Shaft (214).
9. Pull out the Push Button Ass'y (AE).
10. Pull out the 6 Rotary Knob Ass'ys (AD).
11. Loosen 4 hexagon-socket-head screws (D) and pull out the Shaft Ass'y (BB) with the Rotary Knob Ass'y (AD).
12. Remove 8 screws (P) and then remove the Chassis Ass'y (BA) with the Tone 1 and Tone 2 P. C. Board (PCB-5 and PCB-6).
13. Remove 4 screws (Q) and then remove the Tone 2 P. C. Board (PCB-6).
If necessary unsolder the lead wires.
14. Remove 6 hexagon-nuts (R) and then remove the Tone 1 P. C. Board (PCB-5).
If necessary unsolder the lead wires.

POWER CORD REPLACEMENT (FOR SERVICE ENGINEERS OTHER THAN NOTRH AMERICA)

In order to prevent fire or shock hazard when replacing the power cord, follow the procedure below to replace the parts with the standard supply parts.



ALIGNMENT PROCEDURES (REFER TO PAGE 8 THROUGH 11 AND 20)

- Conditions:
- Set the Function selector to the "aux" position.
 - Set the Volume control to minimum.
 - Set the Speaker selector to the "1 + 2" position.
 - Set the Speaker Operating Mode switch to the "8Ω" position.
 - Make the adjustment at a room temperature of 77°F (25°C).
 - After the Power switch is pushed on, wait for 30 minutes before measuring to be sure of the most stable operation.

■ DC BALANCE ADJUSTMENT

Step	Connection Equipments	Adjustment	For
1	Connect the Digital Volt Meter to speaker terminal (L ch).	VR401	0 ± 10mV
2	Connect the Digital Volt Meter to speaker terminal (R ch).	VR402	0 ± 10mV

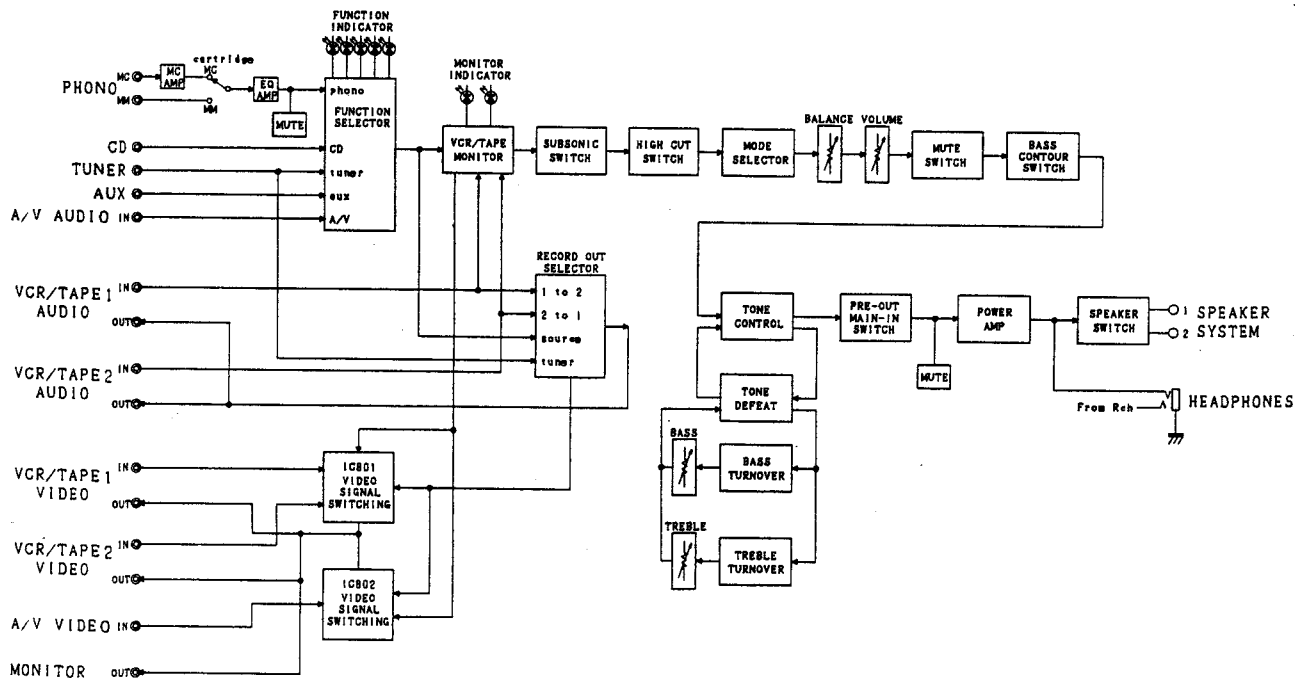
■ IDLING CURRENT ADJUSTMENT

Step	Connection Equipments	Adjustment	For
1	Connect the Digital Volt Meter to TP1 and TP2.	VR403	28mV
2	Connect the Digital Volt Meter to TP3 and TP4.	VR404	28mV

■ IDLING CURRENT CONFIRMATION

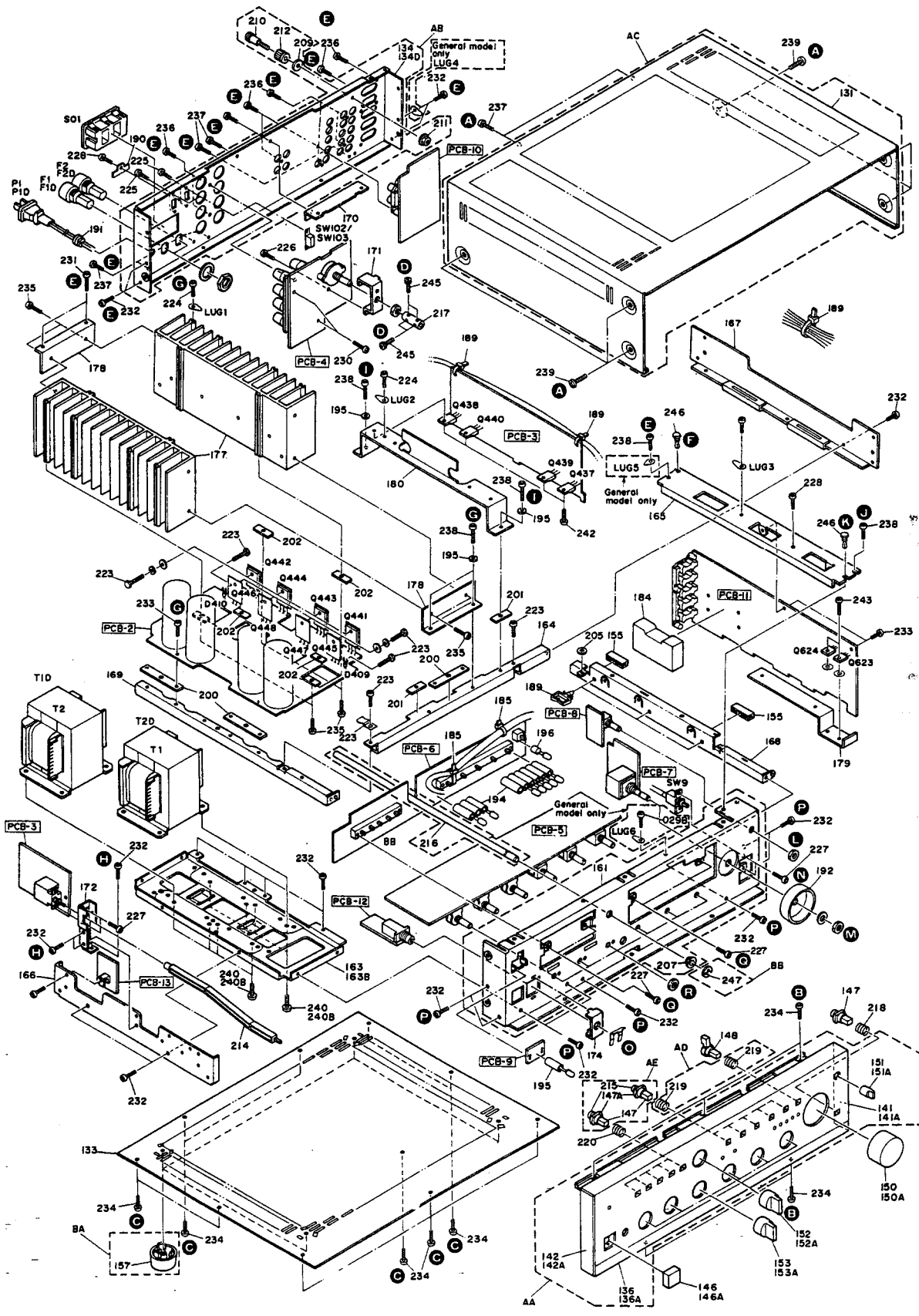
Step	Connection Equipments	For
1	Connect the Digital Volt Meter to TP5 and TP6.	50mV ± 5mV
2	Connect the Digital Volt Meter to TP7 and TP8.	50mV ± 5mV
3	Connect the Digital Volt Meter to TP9 and TP10.	50mV ± 5mV
4	Connect the Digital Volt Meter to TP11 and TP12.	50mV ± 5mV

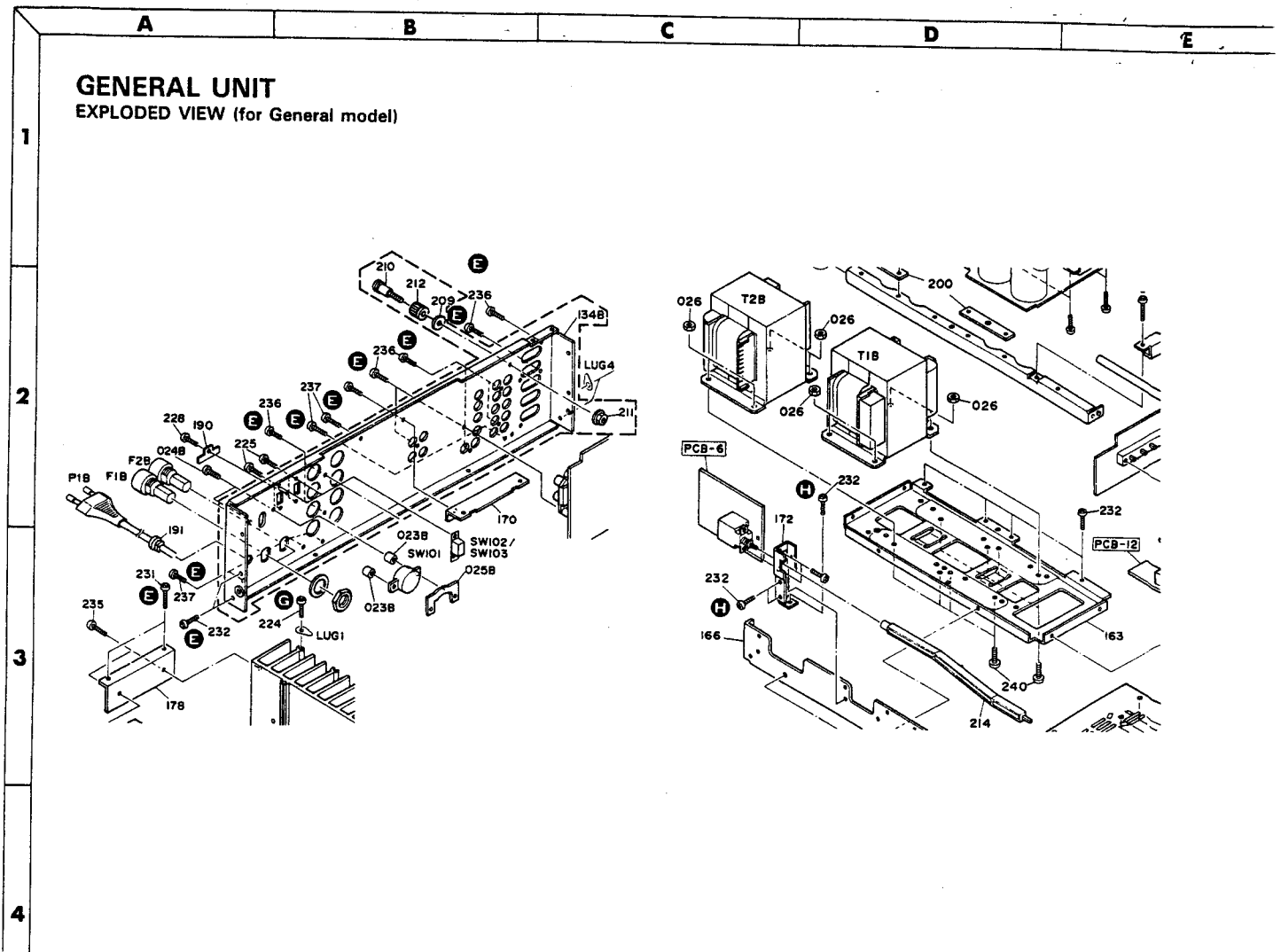
BLOCK DIAGRAM



GENERAL UNIT EXPLODED VIEW

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PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
AA	A443-PM665S2A	FRONT PANEL ASS'Y (UA) (G)	131	1414-10401	CABINET TOP
AAA	A443-PM665S2B	FRONT PANEL ASS'Y (BK)	133	1423-03101	CABINET BOTTOM
AAC	A443-PM665S2C	FRONT PANEL ASS'Y (GB)	134	1424-22804	CABINET BACK (UA) (BK)
AAD	A443-PM665S2D	FRONT PANEL ASS'Y (N)	134B	1424-22806	CABINET BACK (G) (GB)
AB	A424-PM665S2A	CABINET BACK ASS'Y (UA) (BK)	134D	1424-22805	CABINET BACK (N)
ABB	A424-PM665S2B	CABINET BACK ASS'Y (G)	136	1443-10903	FRONT PANEL (UA) (G)
ABC	A424-PM665S2C	CABINET BACK ASS'Y (GB)	136A	1443-10904	FRONT PANEL (BK) (GB) (N)
ABD	A424-PM665S2D	CABINET BACK ASS'Y (N)	138	1513-09501	PANEL, PLATE
AC	A423-PM665S2A	CABINET BOTTOM ASS'Y (UA) (BK) (N)	139	1531-11301	PANEL, WINDOW
ACB	A423-PM665S2B	CABINET BOTTOM ASS'Y (G)	141	1562-01602	FRAME RIGHT (UA) (G)
ACC	A423-PM665S2C	CABINET BOTTOM ASS'Y (GB)	141A	1562-01603	FRAME RIGHT (BK) (GB) (N)
AD	A630-PM665S2A	ROTARY KNOB ASS'Y (UA) (G)	142	1562-01702	FRAME LEFT (UA) (G)
ADA	A630-PM665S2B	ROTARY KNOB ASS'Y (BK)	142A	1562-01703	FRAME LEFT (BK) (GB) (N)
ADC	A630-PM665S2C	ROTARY KNOB ASS'Y (GB)	144	1732-02401	INDICATOR
ADD	A630-PM665S2D	ROTARY KNOB ASS'Y (N)	146	1660-00401	PUSH BUTTON, POWER (UA) (G)
AE	A662-PM665S2A	PUSH BUTTON ASS'Y (UA) (G)	146A	1660-00403	PUSH BUTTON, POWER (BK) (GB) (N)
AEA	A662-PM665S2B	PUSH BUTTON ASS'Y (BK)	147	1662-05701VN	PUSH BUTTON (UA) (G)
AEC	A662-PM665S2C	PUSH BUTTON ASS'Y (GB)	147A	1662-05702	PUSH BUTTON (BK) (GB) (N)
AED	A662-PM665S2D	PUSH BUTTON ASS'Y (N)	148	1662-18101	PUSH BUTTON, MUTE
BA	B211-PM665S2A	CHASSIS ASS'Y	150	1630-02901	ROTARY KNOB, VOLUME (UA) (G)
BB	B601-PM665S2A	SHAFT ASS'Y	150A	1630-02903	ROTARY KNOB, VOLUME (BK) (GB) (N)
022B	1756-03108	LABEL (G) (GB)	151	1634-04501	ROTARY KNOB, CAPTRIM (UA) (G)
023B	2132-71116	SPACER (G) (GB)	151A	1634-04503	ROTARY KNOB, CAPTRIM (BK) (GB) (N)
023D	2440-60	SPECIAL NUT (G) (GB)	152	1630-02801	ROTARY KNOB, FUCTION SWITCH (UA) (G)
024B	2327-R0130124	SCREW (G) (GB)	152A	1630-02803	ROTARY KNOB, FUCTION SWITCH (BK) (GB) (N)
025B	2440-7017	SPECIAL NUT (G) (GB)	153	1630-02801	ROTARY KNOB (UA) (G)
026B	2440-60	SPECIAL NUT (G) (GB)	153A	1630-02803	ROTARY KNOB (BK) (GB) (N)
029B	2347-300526	SCREW (G) (GB)			
113	1751-01018	SERIAL LABEL			
115	1751-01018	LABEL (UA) (BK)			
117	1756-CSA	LABEL (UA) (BK)			

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
155	1568-00301	FRAME	242	2557-301029	SCREW
157	1319-0139	LEG	243	2557-301029	SCREW
161	2211-7294	CHASSIS	245	2396-300549	SCREW
163	2219-8036	METAL FITTG, TRANS UA BK	246	2459-3003511	PLASTIC RIVET
163B	2219-8007	METAL FITTG, TRANS G GB N	247	2461-501	STOPPER, E
164	2219-8037	METAL FITTG, H.CENTER	248	2440-7016	SPECIAL NUT
165	2219-8009	METAL FITTG, EQ	ΔPI	4161-71151	CORD W/PLUG UA BK
166	2219-8010	METAL FITTG, TRANS SIDE	ΔPIB	4161-7256	CORD W/PLUG G GB
167	2219-8011	METAL FITTG, EQ SIDE	ΔPID	4161-71148	CORD W/PLUG N
168	2219-8038	METAL FITTG, EQ CENTER	ΔFI	5732-502029	FUSE, (5A) UA BK
169	2219-8013	METAL FITTG, TRANS CENTER	ΔFIB	5732-252030	FUSE, (5A) G GB
170	2219-8040	METAL FITTG, MAIN HEAT	ΔFID	5732-502050	FUSE, (5A) N
171	2219-8039	METAL FITTG	ΔF2	5732-502029	FUSE, (5A) UA BK
172	2219-8034	METAL FITTG, POWER SWITCH	ΔF2B	5732-252030	FUSE, (5A) G GB
174	2219-7879	METAL FITTG, H/P	ΔF2D	5732-502050	FUSE, (5A) N
175	2219-7879	METAL FITTG, 4/8Ω PCB	ΔSO1	4474-156	SOCKET UA BK N
177	2222-7180	HEAT SINK, MAIN	ΔTI	5584-S05	XFORMER, POWER UA BK
178	2222-7182	HEAT SINK, MAIN PCB	ΔTIB	5584-S06	XFORMER, POWER G GB
179	2222-7183	HEAT SINK, EQ	ΔTID	5584-S07	XFORMER, POWER N
180	2222-7181	HEAT SINK, DRIVER	ΔT2	5584-S05	XFORMER, POWER UA BK
181	2222-7229	HEAT SINK, AV PCB	ΔT2B	5584-S06	XFORMER, POWER G GB
183	2240-7141	HOLDER UA G	ΔT2D	5584-S07	XFORMER, POWER N
183A	2240-7202	HOLDER BK GB N	ΔSW101	4411-102729	ROTARY SWITCH, VOLTAGE SELECTOR G GB
184	2240-7183	HOLDER, MC	SW9	4422-70211	REMOTE SWITCH
185	2240-7120	HOLDER, WIRING	LUG1	4211-5005	LUG
186	2240-7209	HOLDER, POWER	LUG2	4211-5005	LUG
187	2240-7315	HOLDER, LED	LUG3	4211-5005	LUG
188	2240-7316	HOLDER, PANEL	LUG4	4211-5005	LUG G GB
189	2240-7239	HOLDER, WIRING	LUG5	4211-5005	LUG G GB
190	2240-7311	HOLDER, 4/8 SWITCH HOLD	LUG6	4211-5005	LUG G GB
191	2240-364	HOLDER, AC CORD	Q437	5611-1306(O)or(Y)	XISTOR, PNP R
192	2240-7240	HOLDER, VOLUME	Q438	5611-1306(O)or(Y)	XISTOR, PNP R
193	2111-11758	FELT	Q439	5613-3928(O)or(Y)	XISTOR, NPN R
194	2132-7126	SPACER, LED	Q440	5613-3928(O)or(Y)	XISTOR, NPN R
195	2132-7136	SPACER, HEAT SINK	Q441	5613-3281(O)or(R)	XISTOR, NPN R
196	2132-01702	SPACER, MUTE LED	Q442	5613-3281(O)or(R)	XISTOR, NPN R
198	2112-0040	SPONGE, LED	Q443	5613-3281(O)or(R)	XISTOR, NPN R
199	2224-7120	INSULATOR, AV HEAT	Q444	5613-3281(O)or(R)	XISTOR, NPN R
200	2224-7100	INSULATOR, MAIN PCB	Q445	5611-1302(O)or(R)	XISTOR, PNP R
201	2224-7101	INSULATOR, DRIVER MAIN	Q446	5611-1302(O)or(R)	XISTOR, PNP R
202	2224-7101	INSULATOR, MAIN PCB	Q447	5611-1302(O)or(R)	XISTOR, PNP R
203	2224-7118	INSULATOR, AV PCB	Q448	5611-1302(O)or(R)	XISTOR, PNP R
204	2402-0374	WASHER	Q623	5613-3928(O)or(Y)	XISTOR, NPN R
205	2402-0374	WASHER	Q624	5611-1306(O)or(Y)	XISTOR, PNP R
207	2410-100	SPECIAL WASHER	D409	5641-MV12YM	VARISTOR
209	2410-7005	SPECIAL WASHER	D410	5641-MV12YM	VARISTOR
210	2440-7011	SPECIAL NUT			
211	2440-7016	SPECIAL NUT			
212	2310-7015	SPECIAL SCREW			
214	2601-7150	SHAFT, POWER			
215	2601-7077	SHAFT			
216	2601-7151	SHAFT, SP(AL)			
217	2601-7153	SHAFT, SP			
218	2651-2101710	SPRING			
219	2651-110518	SPRING			
220	2651-210189	SPRING			
222	2459-3005511	PRASTIC RIVET			
223	2320-34	SPECIAL SCREW			
224	2340-7003	SPECIAL SCREW			
225	2327-260549	SCREW			
226	2327-R0130064	SCREW			
227	2327-R0130064	SCREW			
228	2327-R0130064	SCREW			
229	2327-R0130022	SCREW			
230	2343-300826	SCREW			
232	2347-R0130062	SCREW			
233	2347-R0130062	SCREW			
234	2347-R0130062	SCREW			
235	2347-R0130084	SCREW			
236	2347-R0130084	SCREW			
237	2347-R0130084	SCREW			
238	2347-R0130104	SCREW			
239	2347-R0140064	SCREW			
240	2347-R0140082	SCREW UA BK			
240B	2347-R0140102	SCREW G GB N			

A B C D E

P. C. BOARDS

PCB-1 Main Driver P. C. Board

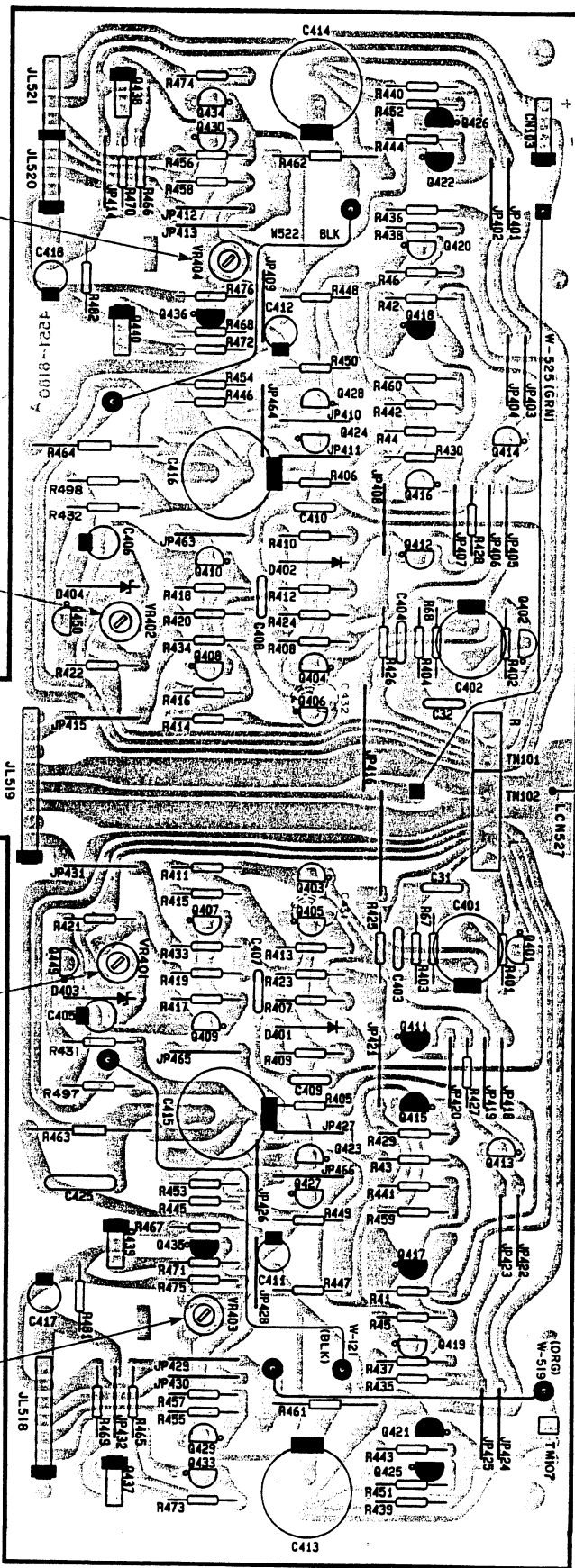
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IDLING CURRENT ADJ.
(R ch)

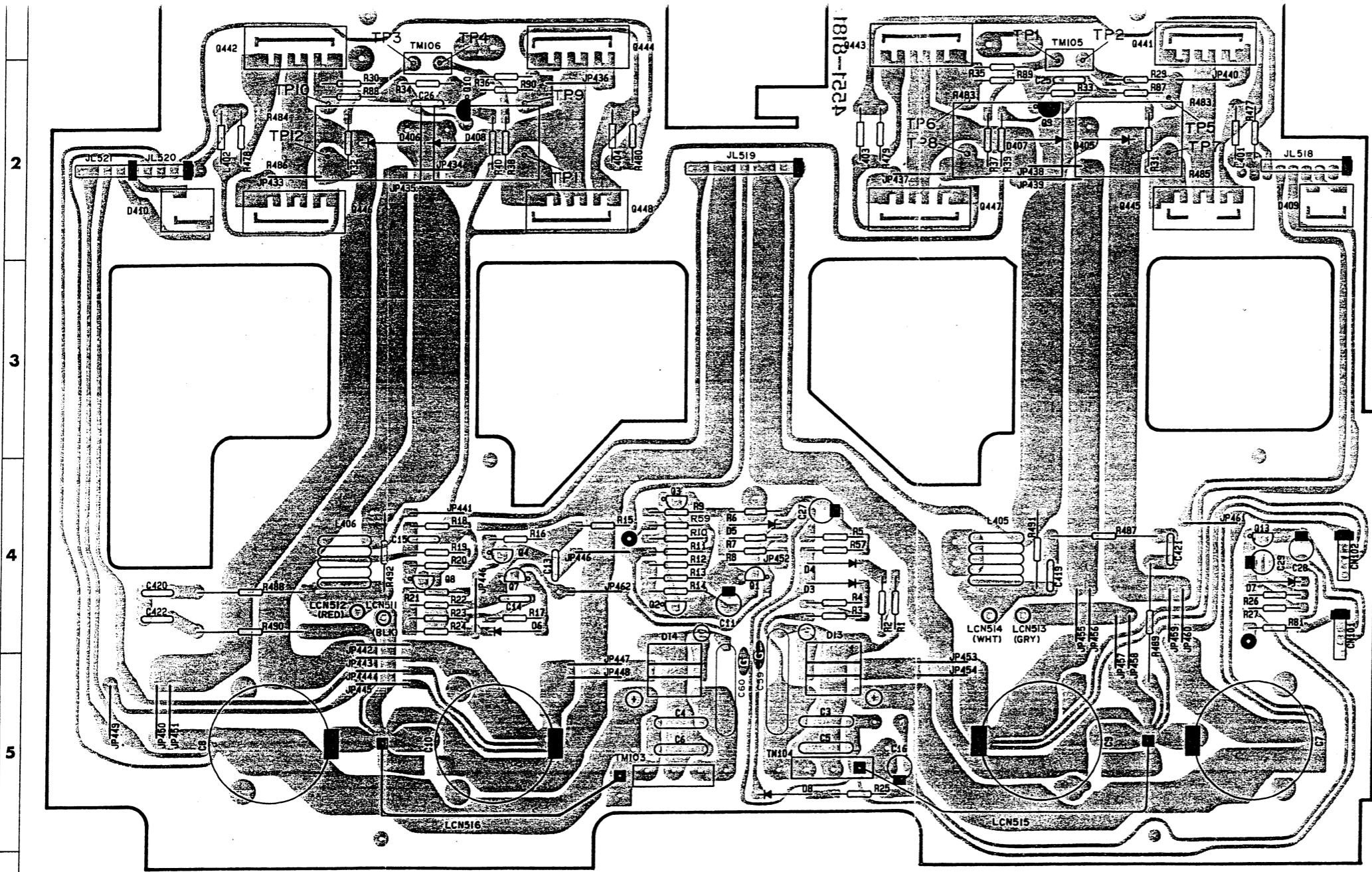
DC BALANCE ADJ.
(R ch)

DC BALANCE ADJ.
(L ch)

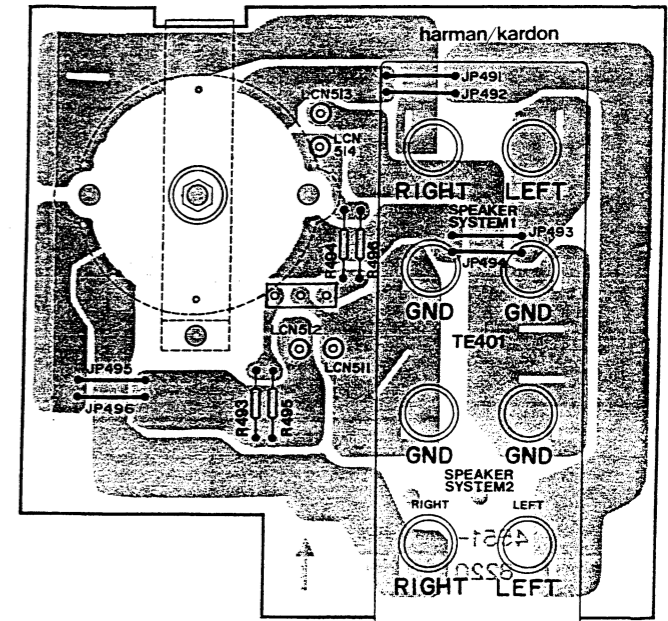
IDLING CURRENT ADJ.
(L ch)



A B C D E F G H I J



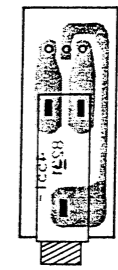
SW401
speakers 1 / off
speakers 2 / 1+2



SPEAKER SYSTEM 1

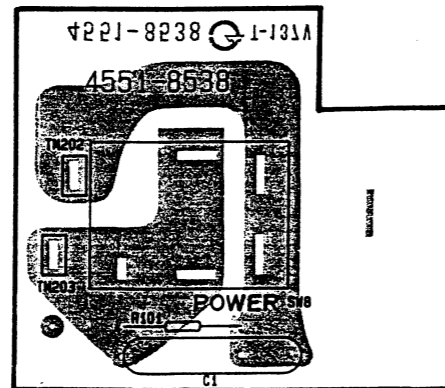
SPEAKER SYSTEM 2

PCB-12 Headphone P. C Board



HEADPHONES

PCB-3 Power Switch P. C. Board



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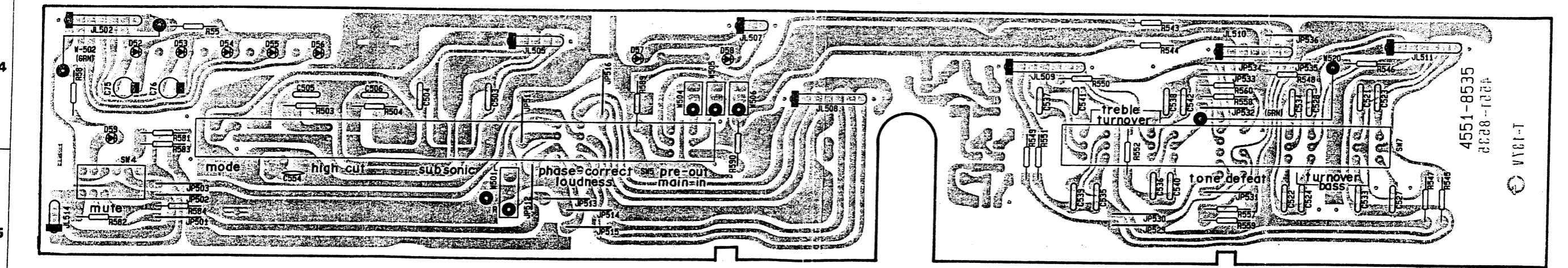
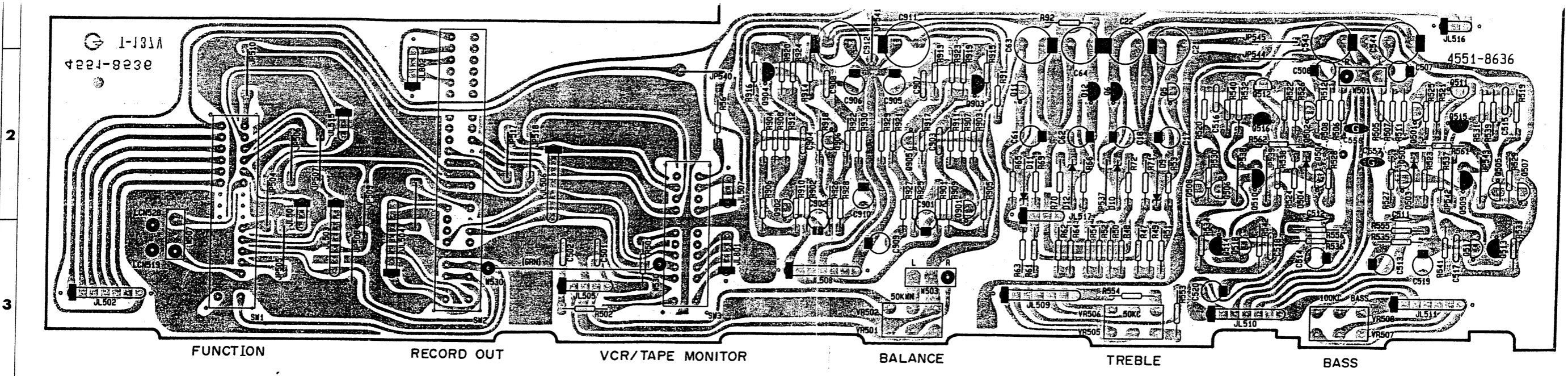
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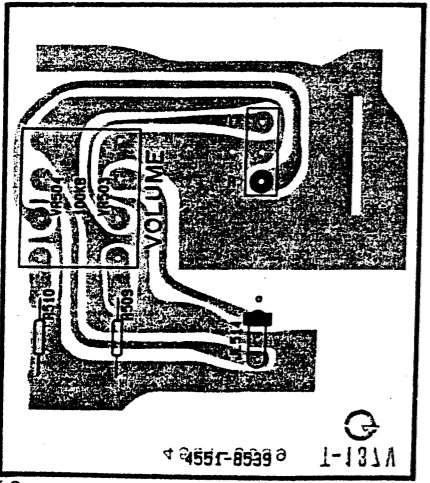
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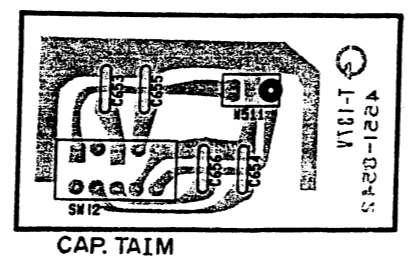
A B C D E F G H I J



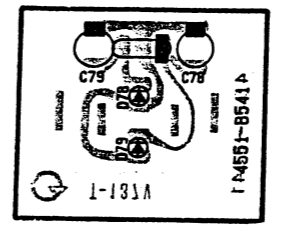
PCB-7 Volume P. C. Board



PCB-8 Capacitance Trim P. C. Board



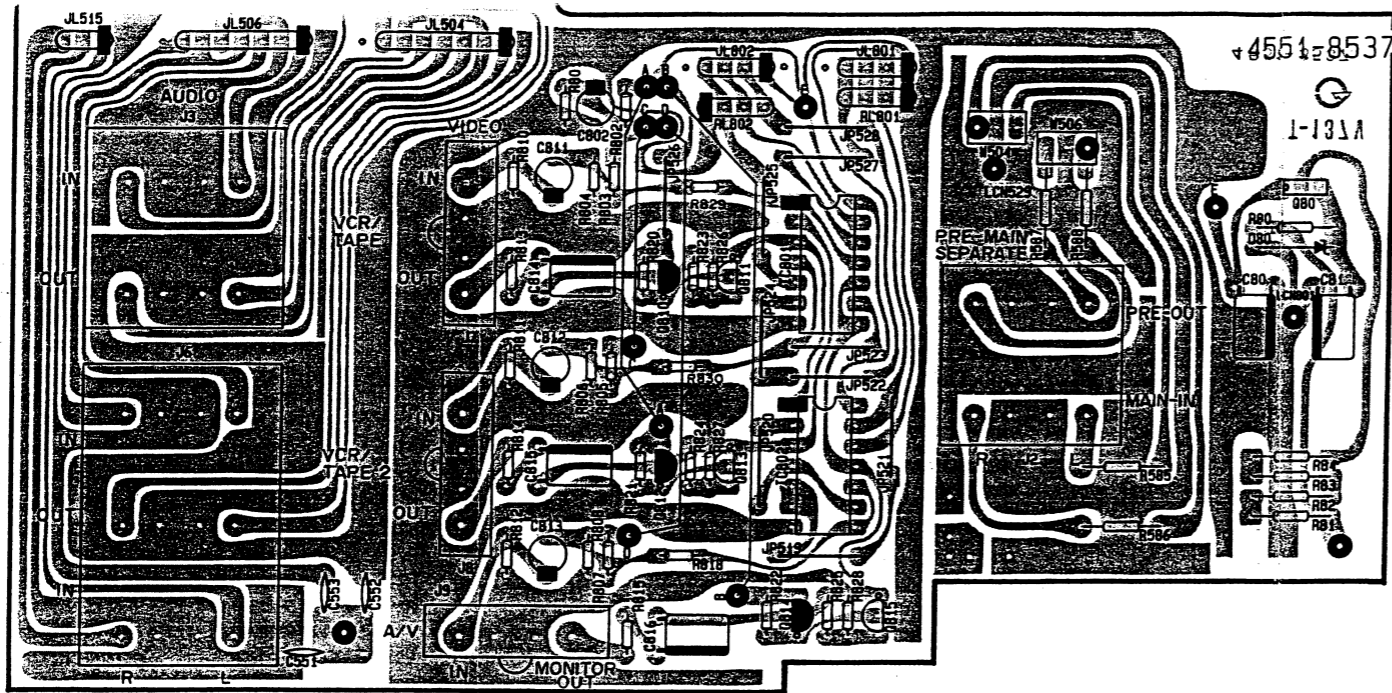
PCB-9 4/8Ω LED P. C. Board



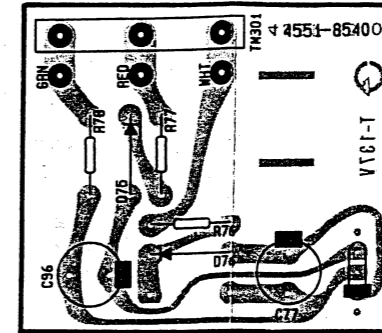
A B C D E F G H I J

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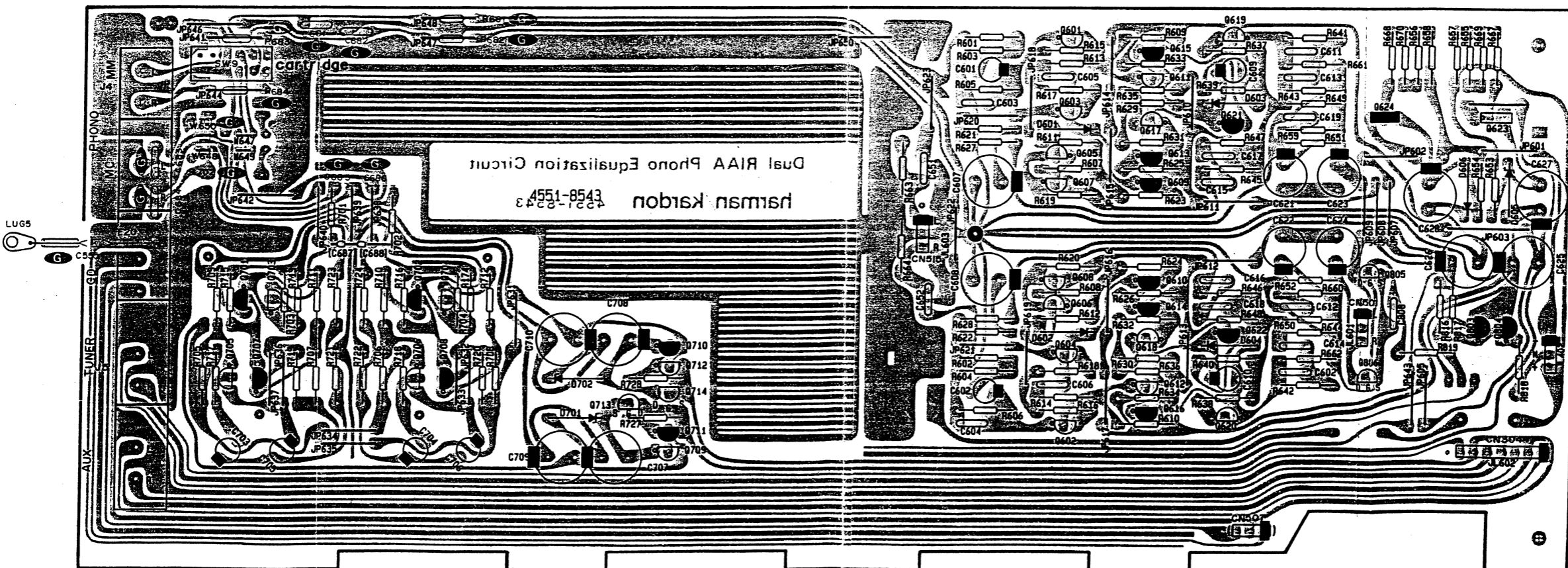
PCB-13 4/8Ω P. C. Board



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PCB-11 Equalizer P. C. Board

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Ser. No.	Ref. No.	Part No.	Description
760	Q443	5611-1302(O)or(R)	XISTOR, PNP R
760	Q444	5611-1302(O)or(R)	XISTOR, PNP R
758	Q445	5613-3281(O)or(R)	XISTOR, NPN R
758	Q446	5613-3281(O)or(R)	XISTOR, NPN R
760	Q447	5611-1302(O)or(R)	XISTOR, PNP R
760	Q448	5611-1302(O)or(R)	XISTOR, PNP R
DIODES			
836	D3	5632-DS135E	DIODE, RECT
836	D4	5632-DS135E	DIODE, RECT
835	D5	5635-HZ6A-2L	DIODE, ZENER
837	D6	5631-IS2473	DIODE, DET
874	D7	5635-HZ15-2L	DIODE, ZENER
872	D8	5631-IS2473	DIODE, DET
869	ΔD13	5685-D5FB20F1	SILICON, BRIG
869	ΔD14	5685-D5FB20F1	SILICON, BRIG
765	D405	5632-10DF2	DIODE, RECT
765	D406	5632-10DF2	DIODE, RECT
765	D407	5632-10DF2	DIODE, RECT
765	D408	5632-10DF2	DIODE, RECT
762	D409	5641-MV12YM	VARISTOR
762	D410	5641-MV12YM	VARISTOR
COILS			
769	L401	5597-45502	CORE, BEADS
769	L402	5597-45502	CORE, BEADS
769	L403	5597-45502	CORE, BEADS
769	L404	5597-45502	CORE, BEADS
768	L405	5991-7165	SPRING COIL
768	L406	5991-7165	SPRING COIL
MISCELLANEOUS			
779	LCN511	4163-0145024	CONNECTOR W/W
782	LCN512	4163-0145025	CONNECTOR W/W
783	LCN513	4163-0145026	CONNECTOR W/W
784	LCN514	4163-0145027	CONNECTOR W/W
788	LCN515	4163-0110024	CONNECTOR W/W
788	LCN516	4163-0110024	CONNECTOR W/W
945	CN101	4443-030185	CONNECTOR
945	CN102	4443-030185	CONNECTOR
949	TM103	4214-11033	TERMINAL
949	TM104	4214-11033	TERMINAL
946	TM105	4214-11021	TERMINAL
946	TM106	4214-11021	TERMINAL

PCB-3 POWER SWITCH P.C. BOARD

Ser. No.	Ref. No.	Part No.	Description
CAPACITORS			
863	ΔC1	5352-1030959	CAP, MTL .01μ U BK
863B	ΔC1	5352-1030958	CAP, MTL .01μ G GB
863D	ΔC1	5352-1030961	CAP, MTL .01μ N
RESISTORS			
042B	ΔR101	5135-335J50P	RES, CBN 1/2P 3.3M G GB
MISCELLANEOUS			
891	ΔSW8	4431-A027160	SWITCH, PUSH
928	TM202	4214-122	TERMINAL
928	TM203	4214-122	TERMINAL

Ser. No.	Ref. No.	Part No.	Description
PCB-4 SPEAKER P.C. BOARD			
RESISTORS			
826	R493	5134-102J25P	RES, CBN 1/4P 1K
826	R494	5134-102J25P	RES, CBN 1/4P 1K
826	R495	5134-102J25P	RES, CBN 1/4P 1K
826	R496	5134-102J25P	RES, CBN 1/4P 1K

Ser. No.	Ref. No.	Part No.	Description
927	TM901	4214-156	TERMINAL

PCB-5 TONE I P.C. BOARD

Ser. No.	Ref. No.	Part No.	Description
CAPACITORS			
729	C17	5345-337D041	CAP, MINI ELE 330μ/25V
729	C18	5345-337D041	CAP, MINI ELE 330μ/25V
730	C21	5345-227D041	CAP, MINI ELE 220μ/25V
730	C22	5345-227D041	CAP, MINI ELE 220μ/25V
731	C61	5345-107C041	CAP, MINI ELE 100μ/16V
731	C62	5345-107C041	CAP, MINI ELE 100μ/16V
730	C63	5345-227D041	CAP, MINI ELE 220μ/25V
730	C64	5345-227D041	CAP, MINI ELE 220μ/25V
664	C501	5353-181534	CAP, MCA 180p
664	C502	5353-181534	CAP, MCA 180p
660	C508	5345-106C0951	CAP, MINI ELE 10μ/16V
667	C511	5353-010934	CAP, MCA 1p
667	C512	5353-010934	CAP, MCA 1p
661	C513	5345-226D0951	CAP, MINI ELE 22μ/25V
661	C514	5345-226D0951	CAP, MINI ELE 22μ/25V
668	C515	5353-330534	CAP, MCA 33p
668	C516	5353-330534	CAP, MCA 33p
668	C517	5353-330534	CAP, MCA 33p
668	C518	5353-330534	CAP, MCA 33p
662	C519	5345-476C0951	CAP, MINI ELE 47μ/16V
662	C520	5345-476C0951	CAP, MINI ELE 47μ/16V
659	C543	5345-227D041	CAP, MINI ELE 220μ/25V
659	C544	5345-227D041	CAP, MINI ELE 220μ/25V
066B	C557	5361-101KB	CAP, CER 100p
066C	C557	5361-101KB	CAP, CER 100p
066B	C558	5361-101KB	CAP, CER 100p
066C	C558	5361-101KB	CAP, CER 100p
660	C507	5345-106C0951	CAP, MINI ELE 10μ/16V
625	C901	5345-104F0951	CAP, MINI ELE .1μ/50V
625	C902	5345-104F0951	CAP, MINI ELE .1μ/50V
629	C903	5354-154593	CAP, MYL .15μ
629	C904	5354-154593	CAP, MYL .15μ
627	C905	5345-107D045	CAP, MINI ELE 100μ/25V
627	C906	5345-107D045	CAP, MINI ELE 100μ/25V
630	C907	5354-334593	CAP, MYL .33μ
630	C908	5354-334593	CAP, MYL .33μ
626	C909	5345-224F0951	CAP, MINI ELE .22μ/50V
626	C910	5345-224F0951	CAP, MINI ELE .22μ/50V
624	C911	5345-227D041	CAP, MINI ELE 220μ/25V
624	C912	5345-227D041	CAP, MINI ELE 220μ/25V

Ser. No.	Ref. No.	Part No.	Description
RESISTORS			
732	ΔR47	5102-1214715	RES, FUSE 120
732	ΔR48	5102-1214715	RES, FUSE 120
734	R49	5176-S010J271	RES, MTL 1/2 270
734	R50	5176-S010J271	RES, MTL 1/2 270
734	R51	5176-S010J271	RES, MTL 1/2 270
734	R52	5176-S010J271	RES, MTL 1/2 270
734	R53	5176-S010J271	RES, MTL 1/2 270
734	R54	5176-S010J271	RES, MTL 1/2 270
940	R56	5134-152J25P	RES, CBN 1/4P 1.5K
733	ΔR61	5102-3914715	RES, FUSE 390
733	ΔR62	5102-3914715	RES, FUSE 390
735	R63	5176-S010J391	RES, MTL 1/2 390
735	R64	5176-S010J391	RES, MTL 1/2 390
735	R65	5176-S010J391	RES, MTL 1/2 390
735	R66	5176-S010J391	RES, MTL 1/2 390
737	R69	5134-153J25P	RES, CBN 1/4P 15K

PCB-6 TONE 2 P.C.BOARD

Ser. No.	Ref. No.	Part No.	Description
CAPACITORS			
933	C75	5345-106C0951	CAP, MINI ELE 10μ/16V
933	ΔC76	5345-106C0951	CAP, MINI ELE 10μ/16V
643	C503	5354-394593	CAP, MYL .39μ
643	C504	5354-394593	CAP, MYL .39μ
644	C505	5354-183J1HM	CAP, MYL .018μ
644	C506	5354-183J1HM	CAP, MYL .018μ
669	C521	5354-224593	CAP, MYL .22μ
669	C522	5354-224593	CAP, MYL .22μ
679	C523	5354-393J1HM	CAP, MYL .039μ
679	C524	5354-393J1HM	CAP, MYL .039μ
672	C527	5354-183J1HM	CAP, MYL .018μ
672	C528	5354-183J1HM	CAP, MYL .018μ
674	C533	5354-104593	CAP, MYL .1μ
674	C534	5354-104593	CAP, MYL .1μ
677	C535	5354-682J1HM	CAP, MYL 6800p
677	C536	5354-682J1HM	CAP, MYL 6800p
679	C537	5354-393J1HM	CAP, MYL .039μ
679	C538	5354-393J1HM	CAP, MYL .039μ
665	C539	5359-2025851	CAP, PPP 2000p
665	C540	5359-2025851	CAP, PPP 2000p
678	C541	5354-123J1HM	CAP, MYL .012μ
678	C542	5354-123J1HM	CAP, MYL .012μ
0598	C554	5361-223ZF	CAP, CER .022μ G GB

Ser. No.	Ref. No.	Part No.	Description
RESISTORS			
938	R55	5134-152J25P	RES, CBN 1/4P 1.5K
939	R58	5134-122J25P	RES, CBN 1/4P 1.2K
646	R503	5134-105J25P	RES, CBN 1/4P 1M
646	R504	5134-105J25P	RES, CBN 1/4P 1M
702	R543	5134-102J25P	RES, CBN 1/4P 1K
702	R544	5134-102J25P	RES, CBN 1/4P 1K
697	R545	5134-153J25P	RES, CBN 1/4P 15K
697	R546	5134-153J25P	RES, CBN 1/4P 15K
692	R547	5134-272J25P	RES, CBN 1/4P 2.7K
692	R548	5134-272J25P	RES, CBN 1/4P 2.7K
693	R549	5134-331J25P	RES, CBN 1/4P 330
693	R550	5134-331J25P	RES, CBN 1/4P 330
699	R551	5134-122J25P	RES, CBN 1/4P 1.2K
699	R552	5134-122J25P	RES, CBN 1/4P 1.2K
697	R557	5134-153J25P	RES, CBN 1/4P 15K
697	R558	5134-153J25P	RES, CBN 1/4P 15K
698	R559	5134-272J25P	RES, CBN 1/4P 2.7K
698	R560	5134-272J25P	RES, CBN 1/4P 2.7K
695	R581	5134-184J25P	RES, CBN 1/4P 180K
695	R582	5134-184J25P	RES, CBN 1/4P 180K
696	R583	5134-223J25P	RES, CBN 1/4P 22K
696	R584	5134-223J25P	RES, CBN 1/4P 22K
701	R589	5134-391J25P	RES, CBN 1/4P 390
701	R590	5134-391J25P	RES, CBN 1/4P 390

Ser. No.	Ref. No.	Part No.	Description
DIODES			
936	D52	5637-GL5HD10	LED
936	D53	5637-GL5HD10	LED
936	D54	5637-GL5HD10	LED
936	D55	5637-GL5HD10	LED
936	D56	5637-GL5HD10	LED
936	D57	5637-GL5HD10	LED
936	D58	5637-GL5HD10	LED
937	D59	5637-5NG510(C)	LED

Ser. No.	Ref. No.	Part No.	Description
MISCELLANEOUS			
983	JL514	4242-R0403101	JUMPER LEAD
894	SW4	4431-A027161	SWITCH, PUSH
893	SW5	4431-05127259	SWITCH, PUSH
892	SW7	4431-05127159	SWITCH, PUSH

PCB-7 VOLUME P.C.BOARD

Ser. No.	Ref. No.	Part No.	Description
RESISTORS			
703	R509	5134-472J25P	RES, CBN 1/4P 4.7K
703	R510	5134-472J25P	RES, CBN 1/4P 4.7K
CONTROLS			
907	VR503	5113-10472147	RES, V CBN 16 100K
907	VR504	5113-10472147	RES, V CBN 16 100K
MISCELLANEOUS			
942	CN514	4443-030185	CONNECTOR

PCB-8 CAPACITANCE TRIM P.C.BOARD

Ser. No.	Ref. No.	Part No.	Description
CAPACITORS			
558	C653	5359-1515851	CAP, PPP 150p
558	C654	5359-1515851	CAP, PPP 150p
559	C655	5359-5115851	CAP, PPP 510p
559	C656	5359-5115851	CAP, PPP 510p
901	SW12	4411-204714	SWITCH, ROTARY

PCB-9 4/8Ω LED P.C.BOARD

Ser. No.	Ref. No.	Part No.	Description
CAPACITORS			
934	C78	5345-106C0356	CAP, MINI ELE 10μ/16V
934	C79	5345-106C0356	CAP, MINI ELE 10μ/16V
DIODES			
935	D78	5637-SLP965B	LED
935	D79	5637-SLP965B	LED

PCB-10 PIN JACK P.C.BOARD

Ser. No.	Ref. No.	Part No.	Description
CAPACITORS			
613	C80	5345-337C041	CAP, MINI ELE 330μ/16V
613	C81	5345-337C041	CAP, MINI ELE 330μ/16V
060B	C551	5361-223ZF	CAP, CER .022μ G GB
060B	C552	5361-223ZF	CAP, CER .022μ G GB
060B	C553	5361-223ZF	CAP, CER .022μ G GB
598	C802	5345-106C041	CAP, MINI ELE 10μ/16V
596	C811	5345-107B041	CAP, MINI ELE 100μ/10V
596	C812	5345-107B041	CAP, MINI ELE 100μ/10V
596	C813	5345-107B041	CAP, MINI ELE 100μ/10V
597	C814	5345-337B041	CAP, MINI ELE 330μ/10V
597	C815	5345-337B041	CAP, MINI ELE 330μ/10V
597	C816	5345-337B041	CAP, MINI ELE 330μ/10V

Ser. No.	Ref. No.	Part No.	Description
RESISTORS			
618	R80	5134-153J25P	RES, CBN 1/4P 15K
615	ΔR81	5102-3304715	RES, FUSE 33
617	R82	5176-S010J680	RES, MTL 1/2 68
617	R83	5176-S010J680	RES, MTL 1/2 68
617	R84	5176-S010J680	RES, MTL 1/2 68
649	R585	5134-102J25P	RES, CBN 1/4P 1K
649	R586	5134-102J25P	RES, CBN 1/4P 1K
648	R587	5134-471J25P	RES, CBN 1/4P 470
648	R588	5134-471J25P	RES, CBN 1/4P 470
601	R801	5232-272J16P	RES, CBN 1/6P 2.7K
600	R802	5232-122J16P	RES, CBN 1/6P 1.2K
603	R803	5232-393J16P	RES, CBN 1/6P 39K
603	R804	5232-393J16P	RES, CBN 1/6P 39K
603	R805	5232-393J16P	RES, CBN 1/6P 39K
603	R806	5232-393J16P	RES, CBN 1/6P 39K
603	R807	5232-393J16P	RES, CBN 1/6P 39K
603	R808	5232-393J16P	RES, CBN 1/6P 39K
602	R810	5232-750J16P	RES, CBN 1/6P 75
602	R811	5232-750J16P	RES, CBN 1/6P 75
602	R812	5232-750J16P	RES, CBN 1/6P 75
602	R813	5232-750J16P	RES, CBN 1/6P 75
602	R814	5232-750J16P	RES, CBN 1/6P 75
602	R815	5232-750J16P	RES, CBN 1/6P 75

Ser. No.	Ref. No.	Part No.	Description
604	R820	5232-271J16P	RES, CBN 1/6P 270
604	R821	5232-271J16P	RES, CBN 1/6P 270
604	R822	5232-271J16P	RES, CBN 1/6P 270
605	R823	5232-221J16P	RES, CBN 1/6P 220
605	R824	5232-221J16P	RES, CBN 1/6P 220
605	R825	5232-221J16P	RES, CBN 1/6P 220
605	R826	5232-221J16P	RES, CBN 1/6P 220
605	R827	5232-221J16P	RES, CBN 1/6P 220
605	R828	5232-221J16P	RES, CBN 1/6P 220
606	R829	5232-331J16P	RES, CBN 1/6P 330
606	R830	5232-331J16P	RES, CBN 1/6P 330
606	R831	5232-331J16P	RES, CBN 1/6P 330

TRANSISTORS

609	Q80	5613-3422(O)or(Y)	XISTOR, NPN R
593	Q810	5611-1115(E)or(F)	XISTOR, PNP R
594	Q811	5613-2603(E)or(F)	XISTOR, NPN R
593	Q812	5611-1115(E)or(F)	XISTOR, PNP R
594	Q813	5613-2603(E)or(F)	XISTOR, NPN R
593	Q814	5611-1115(E)or(F)	XISTOR, PNP R
594	Q815	5613-2603(E)or(F)	XISTOR, NPN R

DIODE

611	D80	5635-HZ12C-2L	DIODE, ZENER
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INTEGRATED CIRCUITS

591	IC801	5654-TC4066BP	IC, DIGITAL
591	IC802	5654-TC4066BP	IC, DIGITAL

MISCELLANEOUS

921	J2	4484-47	PIN JACK, 4P
921D	J2	4489-00201004	PIN JACK, MLT
921	J3	4484-47	PIN JACK, 4P
921D	J3	4489-00201004	PIN JACK, MLT
924	J6	4486-16	PIN JACK, 6P
924D	J6	4489-00401006	PIN JACK, MLT
925	J7	4489-00101002	PIN JACK, MLT
925D	J7	4489-00102002	PIN JACK, MLT
925	J8	4489-00101002	PIN JACK, MLT
925D	J8	4489-00102002	PIN JACK, MLT
925	J9	4489-00101002	PIN JACK, MLT
925D	J9	4489-00102002	PIN JACK, MLT
592	RL801	5212-473J0301	R COMPOSITE
592	RL802	5212-473J0301	R COMPOSITE
710	LCN529	4163-0130020	CONNECTOR W/W
707	LCN801	4163-0140020	CONNECTOR W/W

PCB-11 EQUALIZER P.C. BOARD

CAPACITORS

061B	C555	5361-223ZF	CAP, CER .022μ
545	C601	5345-106D0951	CAP, MINI ELE 10μ/25V
545	C602	5345-106D0951	CAP, MINI ELE 10μ/25V
555	C603	5353-121534	CAP, MCA 120p
555	C604	5353-121534	CAP, MCA 120p
554	C605	5359-1015851	CAP, PPP 100p
554	C606	5359-1015851	CAP, PPP 100p
546	C607	5345-477B0952	CAP, MINI ELE 470μ/10V
546	C608	5345-477B0952	CAP, MINI ELE 470μ/10V
548	C609	5345-226C041	CAP, MINI ELE 22μ/16V
548	C610	5345-226C041	CAP, MINI ELE 22μ/16V
551	C611	5354-822J1HM	CAP, MYL 8200p
551	C612	5354-822J1HM	CAP, MYL 8200p
552	C613	5354-223J1HM	CAP, MYL .022μ
552	C614	5354-223J1HM	CAP, MYL .022μ
550	C615	5354-562J1HM	CAP, MYL 5600p
550	C616	5354-562J1HM	CAP, MYL 5600p
556	C617	5359-2025851	CAP, PPP 2000p
556	C618	5359-2025851	CAP, PPP 2000p
556	C619	5359-2025851	CAP, PPP 2000p
556	C620	5359-2025851	CAP, PPP 2000p
547	C623	5345-106F0951	CAP, MINI ELE 10μ/50V
547	C624	5345-106F0951	CAP, MINI ELE 10μ/50V
716	C625	5345-337D041	CAP, MINI ELE 330μ/25V

Ser. No.	Ref. No.	Part No.	Description
716	C626	5345-337D041	CAP, MINI ELE 330μ/25V
716	C627	5345-337D041	CAP, MINI ELE 330μ/25V
716	C628	5345-337D041	CAP, MINI ELE 330μ/25V
557	C651	5359-3315851	CAP, PPP 330p
557	C652	5359-3315851	CAP, PPP 330p
053B	C681	5353-330534	CAP, MCA 33p
053B	C682	5353-330534	CAP, MCA 33p
052B	C683	5354-473593	CAP, MYL .047μ
052B	C684	5354-473593	CAP, MYL .047μ
051B	C685	5359-6815851	CAP, PPP 680p
051B	C686	5359-6815851	CAP, PPP 680p
512	C703	5345-106F0951	CAP, MINI ELE 10μ/50V
512	C704	5345-106F0951	CAP, MINI ELE 10μ/50V
512	C705	5345-106F0951	CAP, MINI ELE 10μ/50V
512	C706	5345-106F0951	CAP, MINI ELE 10μ/50V
511	C707	5345-337C041	CAP, MINI ELE 330μ/16V
511	C708	5345-337C041	CAP, MINI ELE 330μ/16V
511	C709	5345-337C041	CAP, MINI ELE 330μ/16V
511	C710	5345-337C041	CAP, MINI ELE 330μ/16V
587	C808	5354-102J1HM	CAP, MYL 1000p

RESISTORS

567	R601	5134-470J25P	RES, CBN 1/4P 47
567	R602	5134-470J25P	RES, CBN 1/4P 47
580	R603	5134-823J25P	RES, CBN 1/4P 82K
580	R604	5134-823J25P	RES, CBN 1/4P 82K
568	R605	5134-124J25P	RES, CBN 1/4P 120K
568	R606	5134-124J25P	RES, CBN 1/4P 120K
569	R607	5134-473J25P	RES, CBN 1/4P 47K
569	R608	5134-473J25P	RES, CBN 1/4P 47K
570	R609	5134-332J25P	RES, CBN 1/4P 3.3K
570	R610	5134-332J25P	RES, CBN 1/4P 3.3K
570	R611	5134-332J25P	RES, CBN 1/4P 3.3K
570	R612	5134-332J25P	RES, CBN 1/4P 3.3K
581	R613	5134-331J25P	RES, CBN 1/4P 330
581	R614	5134-331J25P	RES, CBN 1/4P 330
581	R615	5134-331J25P	RES, CBN 1/4P 330
581	R616	5134-331J25P	RES, CBN 1/4P 330
581	R617	5134-331J25P	RES, CBN 1/4P 330
581	R618	5134-331J25P	RES, CBN 1/4P 330
581	R619	5134-331J25P	RES, CBN 1/4P 330
581	R620	5134-331J25P	RES, CBN 1/4P 330
561	R621	5174-Z634038	RES, MTL 1/4P 634
561	R622	5174-Z634038	RES, MTL 1/4P 634
571	R623	5134-222J25P	RES, CBN 1/4P 2.2K
571	R624	5134-222J25P	RES, CBN 1/4P 2.2K
571	R625	5134-222J25P	RES, CBN 1/4P 2.2K
571	R626	5134-222J25P	RES, CBN 1/4P 2.2K
565	R627	5174-102381	RES, MTL 1/4P 1K
565	R628	5174-102381	RES, MTL 1/4P 1K
572	R629	5134-682J25P	RES, CBN 1/4P 6.8K
572	R630	5134-682J25P	RES, CBN 1/4P 6.8K
572	R631	5134-682J25P	RES, CBN 1/4P 6.8K
572	R632	5134-682J25P	RES, CBN 1/4P 6.8K
573	R633	5134-471J25P	RES, CBN 1/4P 470
573	R634	5134-471J25P	RES, CBN 1/4P 470
573	R635	5134-471J25P	RES, CBN 1/4P 470
573	R636	5134-471J25P	RES, CBN 1/4P 470
576	R637	5134-330J25P	RES, CBN 1/4P 33
576	R638	5134-330J25P	RES, CBN 1/4P 33
576	R639	5134-330J25P	RES, CBN 1/4P 33
576	R640	5134-330J25P	RES, CBN 1/4P 33
574	R641	5134-103J25P	RES, CBN 1/4P 10K
574	R642	5134-103J25P	RES, CBN 1/4P 10K
575	R643	5134-122J25P	RES, CBN 1/4P 1.2K
575	R644	5134-122J25P	RES, CBN 1/4P 1.2K
564	R645	5174-Z549338	RES, MTL 1/4P 549K
564	R646	5174-Z549338	RES, MTL 1/4P 549K
563	R647	5174-Z412238	RES, MTL 1/4P 41.2K
563	R648	5174-Z412238	RES, MTL 1/4P 41.2K
577	R649	5134-102J25P	RES, CBN 1/4P 1K
577	R650	5134-102J25P	RES, CBN 1/4P 1K
579	R651	5134-104J25P	RES, CBN 1/4P 100K
579	R652	5134-104J25P	RES, CBN 1/4P 100K

Ser. No.	Ref. No.	Part No.	Description
719	R653	5134-103J25P	RES, CBN 1/4P 10K
719	R654	5134-103J25P	RES, CBN 1/4P 10K
718	R655	5176-S010J470	RES, MTL 1/2 47
718	R656	5176-S010J470	RES, MTL 1/2 47
717	△R657	5102-2204715	RES, FUSE 22
717	△R658	5102-2204715	RES, FUSE 22
578	R659	5134-471J25P	RES, CBN 1/4P 470
578	R660	5134-471J25P	RES, CBN 1/4P 470
562	R661	5174-Z169338	RES, MTL 1/4 169K
562	R662	5174-Z169338	RES, MTL 1/4 169K
582	R663	5134-105J25P	RES, CBN 1/4P 1M
582	R664	5134-105J25P	RES, CBN 1/4P 1M
718	R667	5176-S010J470	RES, MTL 1/2 47
718	R668	5176-S010J470	RES, MTL 1/2 47
718	R669	5176-S010J470	RES, MTL 1/2 47
718	R670	5176-S010J470	RES, MTL 1/2 47
055B	R681	5134-102J25P	RES, CBN 1/4P 1K G GB
055B	R682	5134-102J25P	RES, CBN 1/4P 1K G GB
055B	R683	5134-102J25P	RES, CBN 1/4P 1K G GB
055B	R684	5134-102J25P	RES, CBN 1/4P 1K G GB
516	R701	5134-1R0J25P	RES, CBN 1/4P 1 UA BK N
516B	R701	5134-5R6J25P	RES, CBN 1/4P 5.6 G GB
516	R702	5134-1R0J25P	RES, CBN 1/4P 1 UA BK N
516B	R702	5134-5R6J25P	RES, CBN 1/4P 5.6 G GB
519	R703	5134-560J25P	RES, CBN 1/4P 56
519	R704	5134-560J25P	RES, CBN 1/4P 56
521	R705	5134-472J25P	RES, CBN 1/4P 4.7K
521	R706	5134-472J25P	RES, CBN 1/4P 4.7K
521	R707	5134-472J25P	RES, CBN 1/4P 4.7K
521	R708	5134-472J25P	RES, CBN 1/4P 4.7K
517	R709	5134-100J25P	RES, CBN 1/4P 10
517	R710	5134-100J25P	RES, CBN 1/4P 10
517	R711	5134-100J25P	RES, CBN 1/4P 10
517	R712	5134-100J25P	RES, CBN 1/4P 10
518	R713	5134-220J25P	RES, CBN 1/4P 22
518	R714	5134-220J25P	RES, CBN 1/4P 22
518	R715	5134-220J25P	RES, CBN 1/4P 22
518	R716	5134-220J25P	RES, CBN 1/4P 22
515	R717	5174-561381	RES, MTL 1/4 560
515	R718	5174-561381	RES, MTL 1/4 560
515	R719	5174-561381	RES, MTL 1/4 560
515	R720	5174-561381	RES, MTL 1/4 560
520	R721	5134-392J25P	RES, CBN 1/4P 3.9K
520	R722	5134-392J25P	RES, CBN 1/4P 3.9K
522	R723	5134-681J25P	RES, CBN 1/4P 680
522	R724	5134-681J25P	RES, CBN 1/4P 680
523	R727	5134-331J25P	RES, CBN 1/4P 330
523	R728	5134-331J25P	RES, CBN 1/4P 330
588	R816	5134-104J25P	RES, CBN 1/4P 100K
588	R817	5134-104J25P	RES, CBN 1/4P 100K
589	R818	5134-103J25P	RES, CBN 1/4P 10K
590	R819	5134-105J25P	RES, CBN 1/4P 1M
TRANSISTORS			
531	Q601	5613-2240(BL)	XISTOR, NPN R
531	Q602	5613-2240(BL)	XISTOR, NPN R
531	Q603	5613-2240(BL)	XISTOR, NPN R
531	Q604	5613-2240(BL)	XISTOR, NPN R
532	Q605	5613-2603(E)or(F)	XISTOR, NPN R
532	Q606	5613-2603(E)or(F)	XISTOR, NPN R
532	Q607	5613-2603(E)or(F)	XISTOR, NPN R
532	Q608	5613-2603(E)or(F)	XISTOR, NPN R
533	Q609	5611-999L(F)	XISTOR, PNP R
533	Q610	5611-999L(F)	XISTOR, PNP R
538	Q611	5613-2320L(F)	XISTOR, NPN R
538	Q612	5613-2320L(F)	XISTOR, NPN R
533	Q613	5611-999L(F)	XISTOR, PNP R
533	Q614	5611-999L(F)	XISTOR, PNP R
535	Q615	5612-646(C)	XISTOR, PNP A
535	Q616	5612-646(C)	XISTOR, PNP A
534	Q617	5614-666(C)	XISTOR, NPN A
534	Q618	5614-666(C)	XISTOR, NPN A
536	Q619	5614-667(C)	XISTOR, NPN A
536	Q620	5614-667(C)	XISTOR, NPN A

Ser. No.	Ref. No.	Part No.	Description
537	Q621	5612-647(C)	XISTOR, PNP A
537	Q622	5612-647(C)	XISTOR, PNP A
711	Q623	5613-3298(O)or(Y)	XISTOR, NPN R
713	Q624	5611-1306(O)or(Y)	XISTOR, PNP R
502	Q701	5611-1190(E)	XISTOR, PNP R
502	Q702	5611-1190(E)	XISTOR, PNP R
501	Q703	5613-2855(D)	XISTOR, NPN R
501	Q704	5613-2855(D)	XISTOR, NPN R
501	Q705	5613-2855(D)	XISTOR, NPN R
501	Q706	5613-2855(D)	XISTOR, NPN R
502	Q707	5611-1190(E)	XISTOR, PNP R
502	Q708	5611-1190(E)	XISTOR, PNP R
503	Q709	5613-2603(E)or(F)	XISTOR, NPN R
504	Q710	5611-1115(E)or(F)	XISTOR, PNP R
504	Q711	5611-1115(E)or(F)	XISTOR, PNP R
503	Q712	5613-2603(E)or(F)	XISTOR, NPN R
505	Q713	5616-2SK373GR	FET, N-CH
505	Q714	5616-2SK373GR	FET, N-CH
585	Q803	5611-1115(E)	XISTOR, PNP R
585	Q804	5611-1115(E)	XISTOR, PNP R
586	Q805	5616-2SK364(V)or(BL)	FET, N-CH
586	Q806	5616-2SK364(V)or(BL)	FET, N-CH
DIODES			
541	D601	5631-1S2473	DIODE, DET
541	D602	5631-1S2473	DIODE, DET
542	D603	5641-MV103	VARIATOR
542	D604	5641-MV103	VARIATOR
715	D605	5635-HZ24-2L	DIODE, ZENER
715	D606	5635-HZ24-2L	DIODE, ZENER
508	D701	5635-HZ15-1L	DIODE, ZENER
508	D702	5635-HZ15-1L	DIODE, ZENER
COILS			
056B	L701	5597-3	CORE, BEADS G GB
056B	L702	5597-3	CORE, BEADS G GB
056B	L703	5597-3	CORE, BEADS G GB
056B	L704	5597-3	CORE, BEADS G GB
MISCELLANEOUS			
922	J4	4484-31	PIN JACK, 4P
922D	J4	4484-36	PIN JACK, 4P
923	J5	4486-9	PIN JACK, 6P
923D	J5	4486-00301006	PIN JACK, 6P
982	JL402	4242-R0403501	JUMPER LEAD
895	SW9	4422-70211	SWITCH, REMOTE
583	LCN517	4163-0110020	CONNECTOR W/W
944	CN304	4443-070185	CONNECTOR
941	CN501	4443-030185	CONNECTOR
941	CN507	4443-030185	CONNECTOR
941	CN515	4443-030185	CONNECTOR

PCB-12 HEADPHONE P.C.BOARD

916	J1	4451-00159	JACK, 1P
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PCB-13 4/8Ω P.C.BOARD

CAPACITORS			
886	△C77	5345-107D041	CAP, MINI ELE 100μ/25V
885	C96	5345-476C041	CAP, MINI ELE 47μ/16V
RESISTORS			
888	△R76	5102-2714713	RES, FUSE 270
889	△R77	5102-2714715	RES, FUSE 270
890	△R78	5102-5R64713	RES, FUSE 5.6
DIODES			
884	△D75	5632-S5566B	DIODE, RECT
884	△D76	5632-S5566B	DIODE, RECT
MISCELLANEOUS			
985	JL804	4242-R0303451	JUMPER LEAD
951	TM301	4214-11034	TERMINAL

Ser. No.	Ref. No.	Part No.	Description
CHASSIS MISCELLANEOUS			
044B	ΔCO1	4443-712	CONNECTOR (G)
866	ΔF1	5732-502029	FUSE (UA) (BK)
866B	ΔF1	5732-252030	FUSE (G)
866D	ΔF1	5732-502050	FUSE (N)
866	ΔF2	5732-502029	FUSE (UA) (BK)
866B	ΔF2	5732-252030	FUSE (G)
866D	ΔF2	5732-502050	FUSE (N)
861	ΔT1	5584-S05	XFORMER, POWER (UA) (BK)
861B	ΔT1	5584-S06	XFORMER, POWER (C) (GB)
861D	ΔT1	5584-S07	XFORMER, POWER (N)
861	ΔT2	5584-S05	XFORMER, POWER (UA) (BK)
861B	ΔT2	5584-S06	XFORMER, POWER (G) (GB)
861D	ΔT2	5584-S07	XFORMER, POWER (N)
926	ΔSO1	4474-156	SOCKET (UA) (BK) (N)
930	ΔP1	4161-71151	CORD W/PLUG (UA) (BK)
930B	ΔP1	4161-7256	CORD W/PLUG (G)
930D	ΔP1	4161-71148	CORD W/PLUG (N)
896	SW102	4421-0227230	SWITCH, SLIDE
896	SW103	4421-0227230	SWITCH, SLIDE
249	LUG1	4211-5005	LUG
249	LUG2	4211-5005	LUG
249	LUG3	4211-5005	LUG
065B	LUG4	4211-4	LUG (G)
065B	LUG5	4211-4	LUG (G)
065B	LUG6	4211-4	LUG (G)
867		4472-014	HOLDER, FUSE (UA) (BK)
867B		4472-7118	HOLDER, FUSE (G)
932		4442-14	PIN PLUG

PACKAGE PARTS LIST			
021B		1756-06303	LABEL (G) (GB)
022B		1756-03108	LABEL (G) (GB)
022D		1756-03113	LABEL (N)
028B		1119-026	ATTACH SHEET (G) (GB)
106		1111-J90195	OWNER GUIDE (UA) (BK)
107		1111-J30273	OWNER GUIDE (UA) (BK)
107B		1111-J30274	OWNER GUIDE (G) (GB)
107D		1111-J2040	OWNER GUIDE (N)
108		1113-717004	OWNER CARD (UA) (BK)
108D		1113-0C	OWNER CARD (N)
109		1119-047	ATTACH SHEET (UA) (BK)
109D		1116-GC	ATTACH SHEET (N)
110		1119-0137	ATTACH SHEET (UA) (BK)
121		1241-C12732	POLYETHYLENE BAG
122		1241-C1492	POLYETHYLENE BAG
124		1221-807143	CARTON BOX (UA) (G)
124A		1221-817143	CARTON BOX (BK) (GB) (N)
125		1222-7225	CUSHION R
126		1222-7226	CUSHION L
127		1223-11729	SOFT SHEET

ABBREVIATIONS IN PARTS LIST

CAPACITORS	RESISTORS
CAP, MINI ELE : Electrolytic	RES, CBN 1/6P : Carbon 1/6W
CAP, CER : Ceramic	RES, FUSE : Fuse
CAP, PPP : Polypropylene	RES, CEM 5P : Cement 5W
CAP, MYL : Mylar	RES, MTL 1P : Metal 1W
CAP, MCA : Mica	2.2K : 2.2kΩ
CAP, MINI BP : Bipolar	220 : 220Ω
CAP, ELE BP : Electrolytic Bipolar	TRANSISTORS
CAP, STY : Polystyrene Film	XISTOR : Transistor
CAP, SPE : Special	FET : Field Effect Transistor
CAP, TAN : Tantalum	CONTROLS
470μ : 470μF	RES, V CBN : Variable Carbon Resistor
6800p : 6800pF	RES, SEMI FIX : Semi-fixed Resistor
.047μ : 0.047μF	

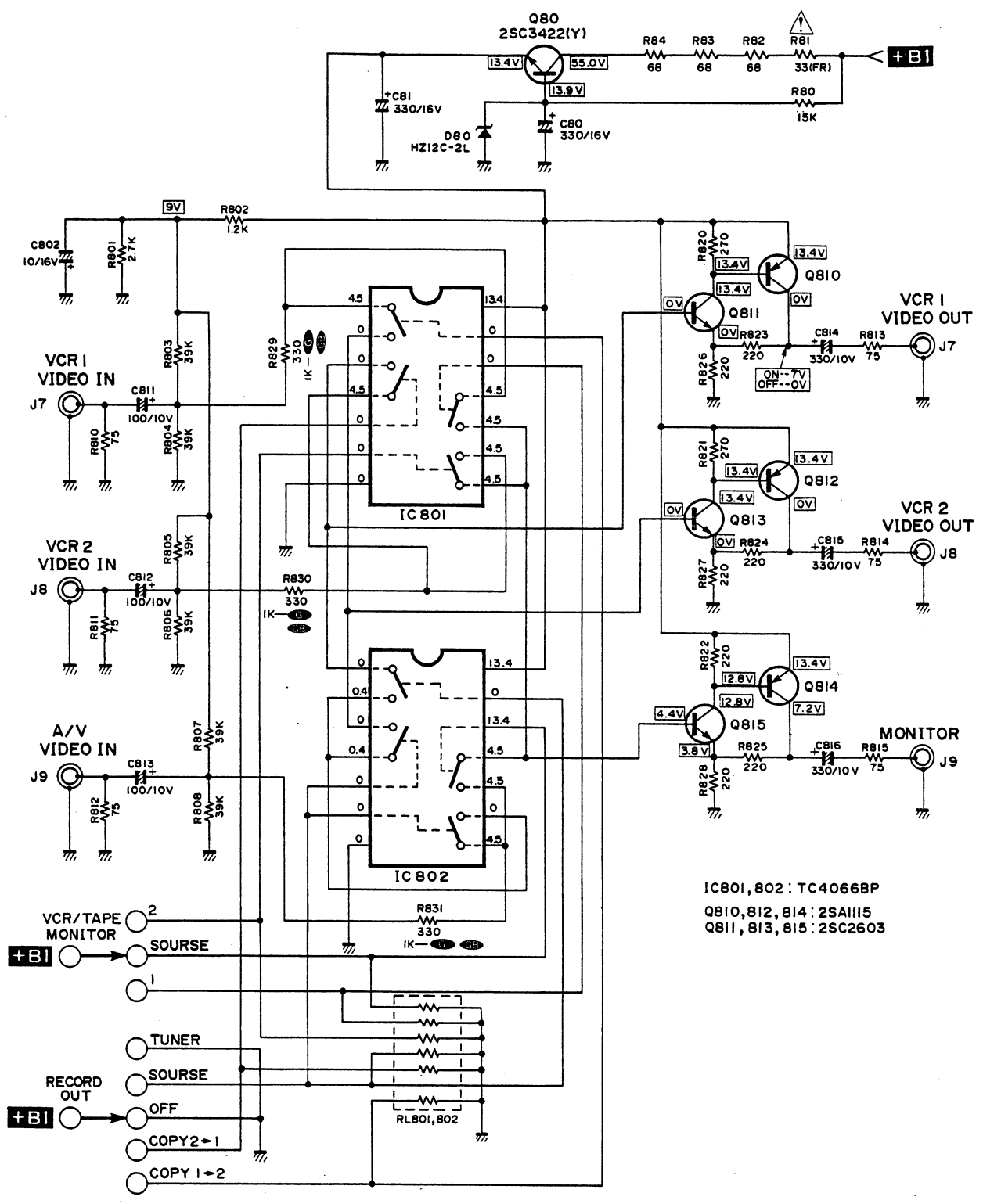
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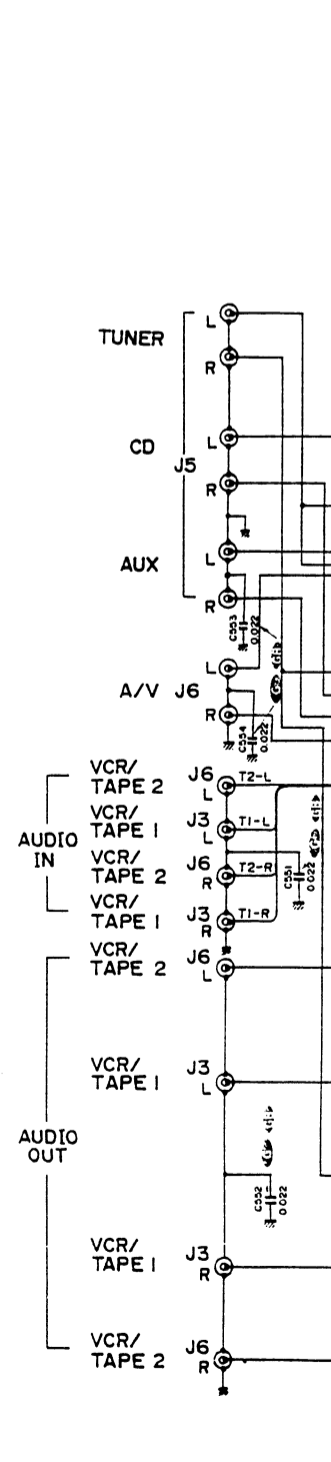
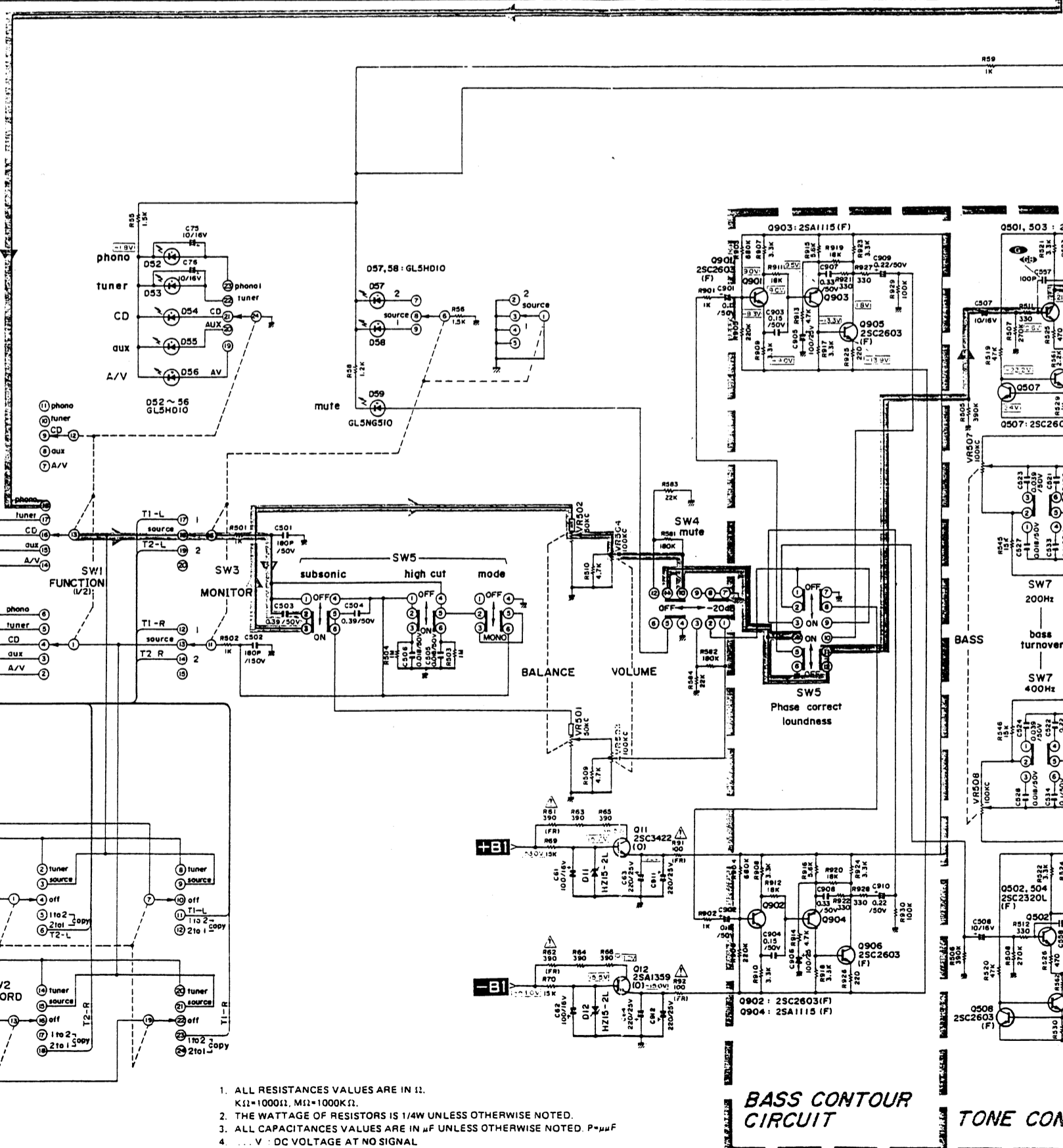
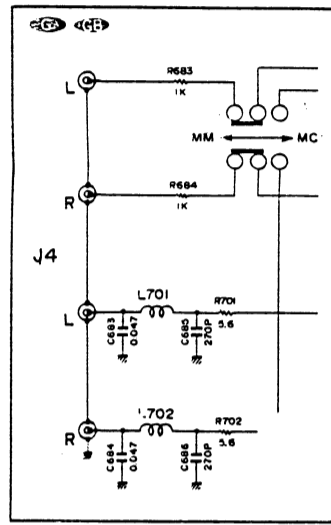
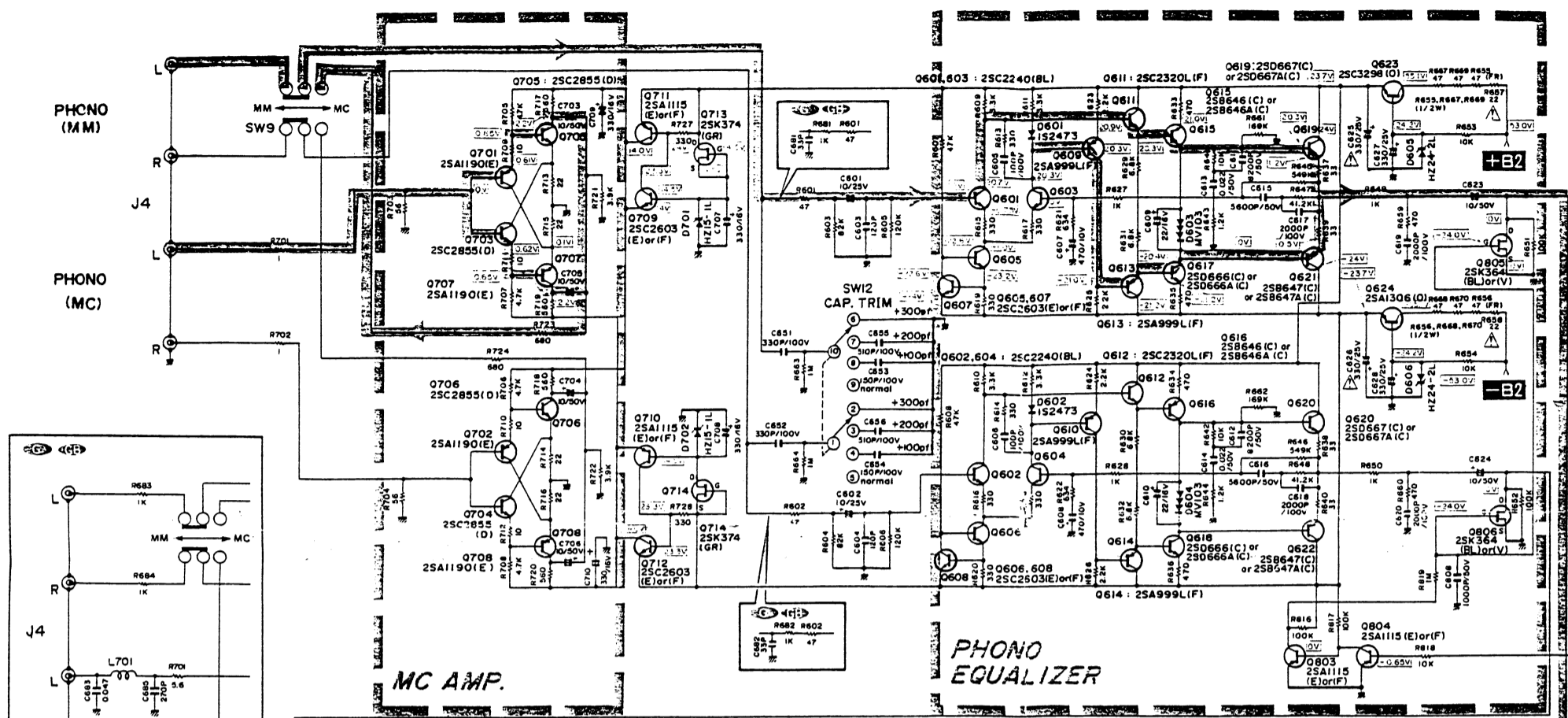
SAFETY RELATED COMPONENT. USE ONLY EXACT REPLACEMENT PART AS SPECIFIED.

SCHEMATIC DIAGRAM

1
2
3
4
5
6
7



SCHEMATIC DIAGRAM



1. ALL RESISTANCES VALUES ARE IN Ω .
K Ω =1000 Ω , M Ω =1000K Ω .
2. THE WATTAGE OF RESISTORS IS 1/4W UNLESS OTHERWISE NOTED.
3. ALL CAPACITANCES VALUES ARE IN μ F UNLESS OTHERWISE NOTED. P= μ F
4. \ominus V = DC VOLTAGE AT NO SIGNAL
5. SAFETY-REQUIREMENTS COMPONENTS IN ACCORDANCE WITH PRESEN' SAFETY REGULATIONS. THESE COMPONENTS MUST ONLY BE REPLACED BY ORIGINAL PARTS.

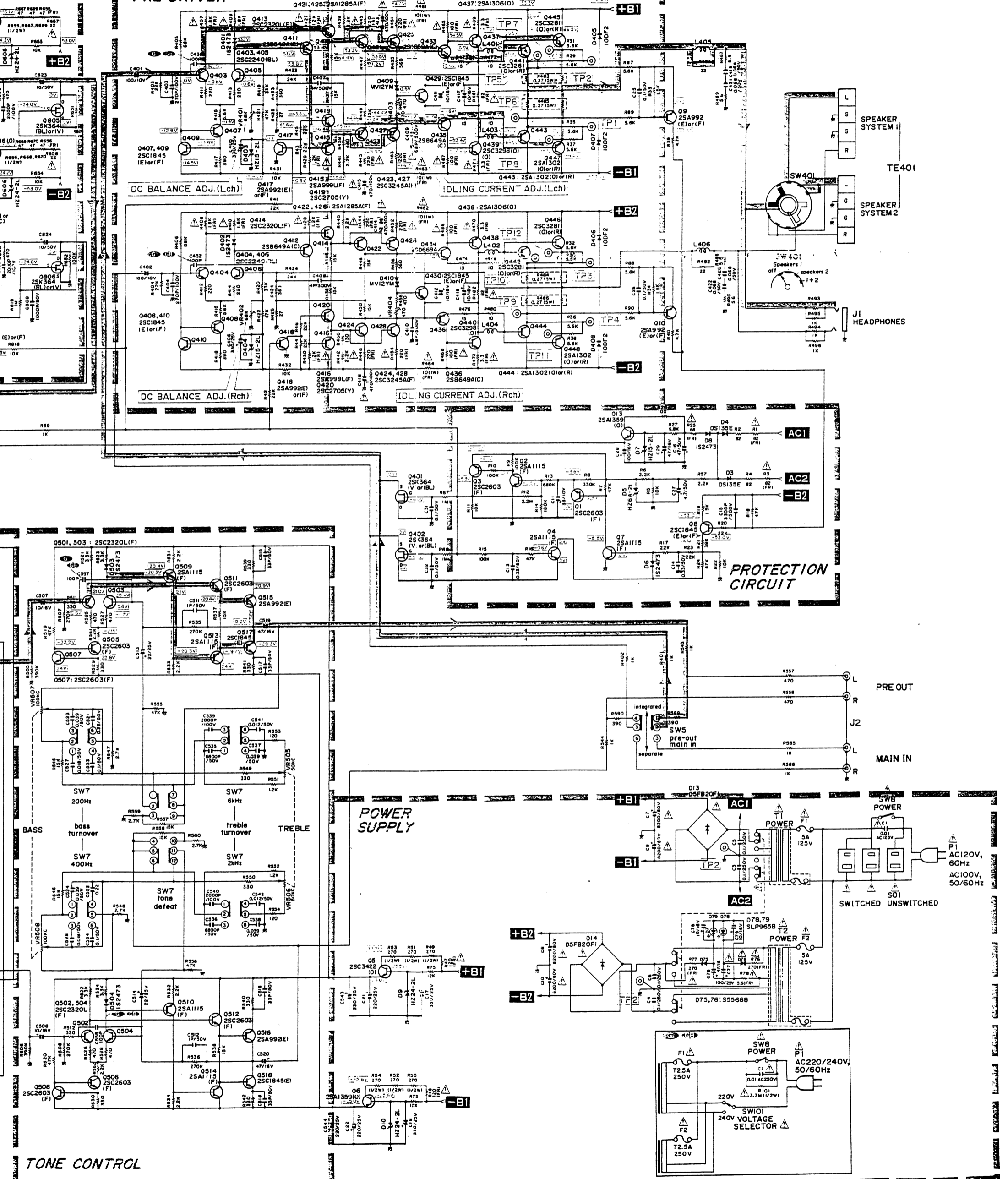
BASS CONTOUR CIRCUIT

TONE CON

F G H I J K

PRE DRIVER

POWER DRIVER



DC BALANCE ADJ. (Lch)

IDLING CURRENT ADJ. (Lch)

DC BALANCE ADJ. (Rch)

IDLING CURRENT ADJ. (Rch)

PROTECTION CIRCUIT

POWER SUPPLY

TONE CONTROL

SPEAKER SYSTEM I
TE401
SPEAKER SYSTEM 2

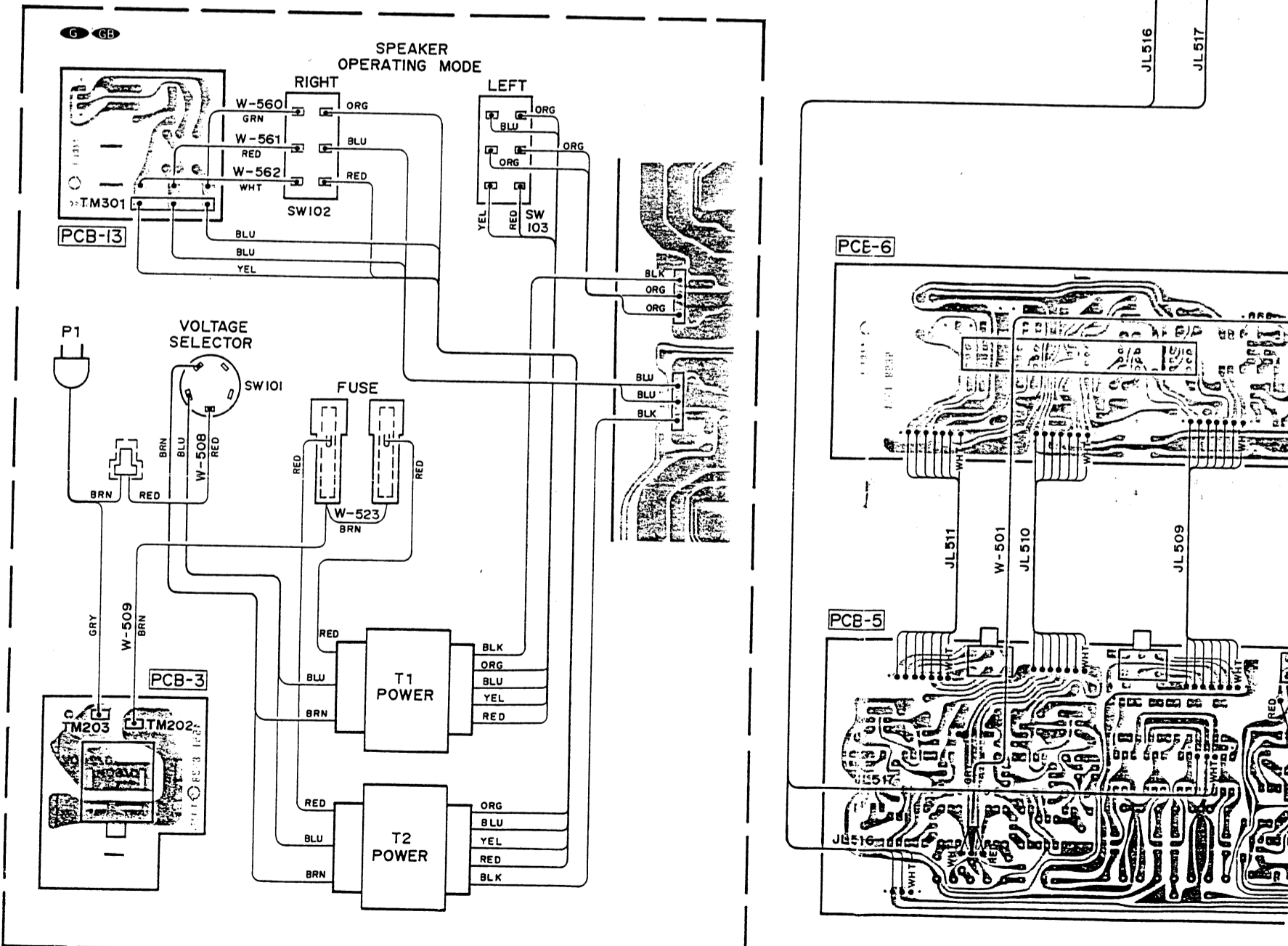
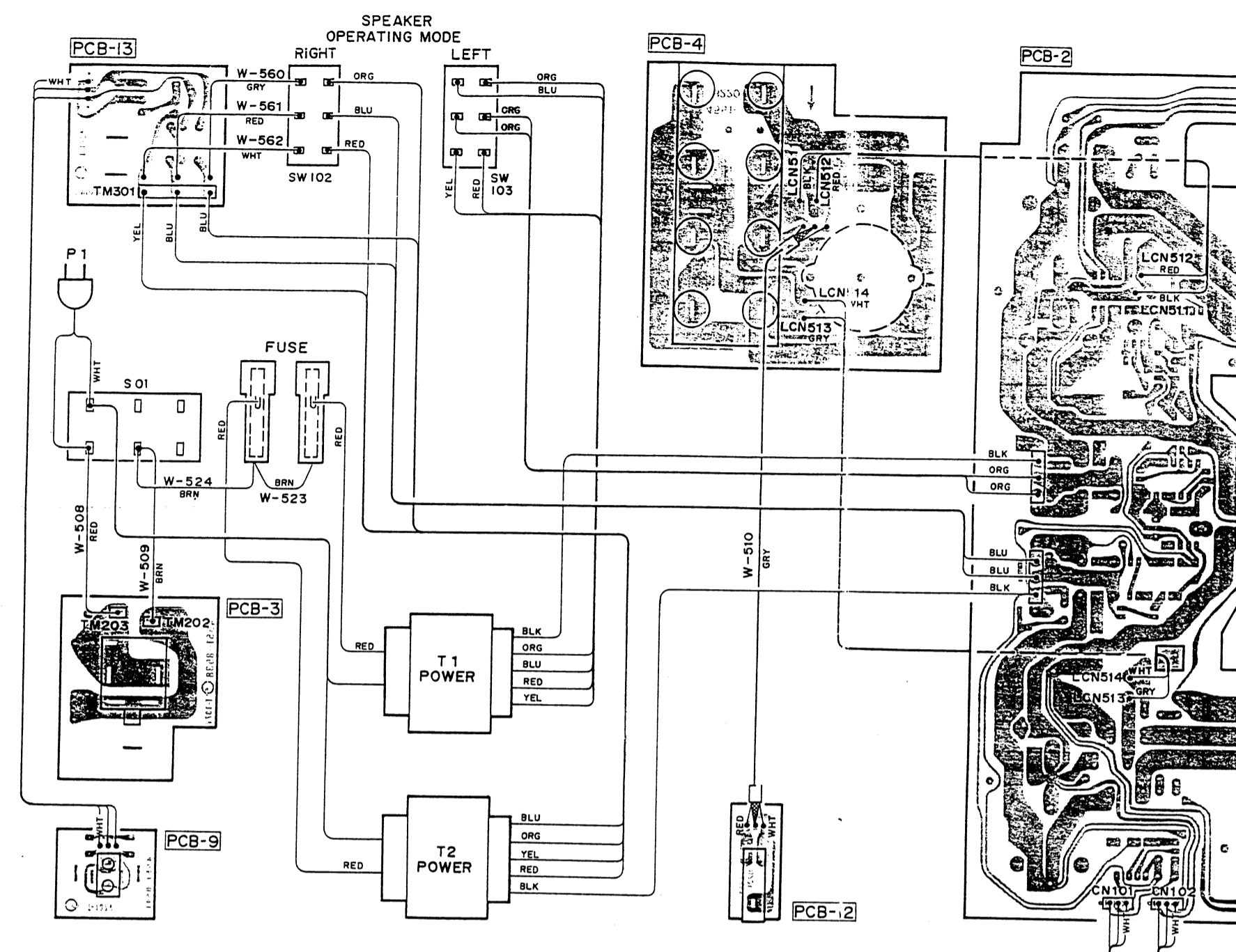
J1 HEADPHONES

PRE OUT
MAIN IN

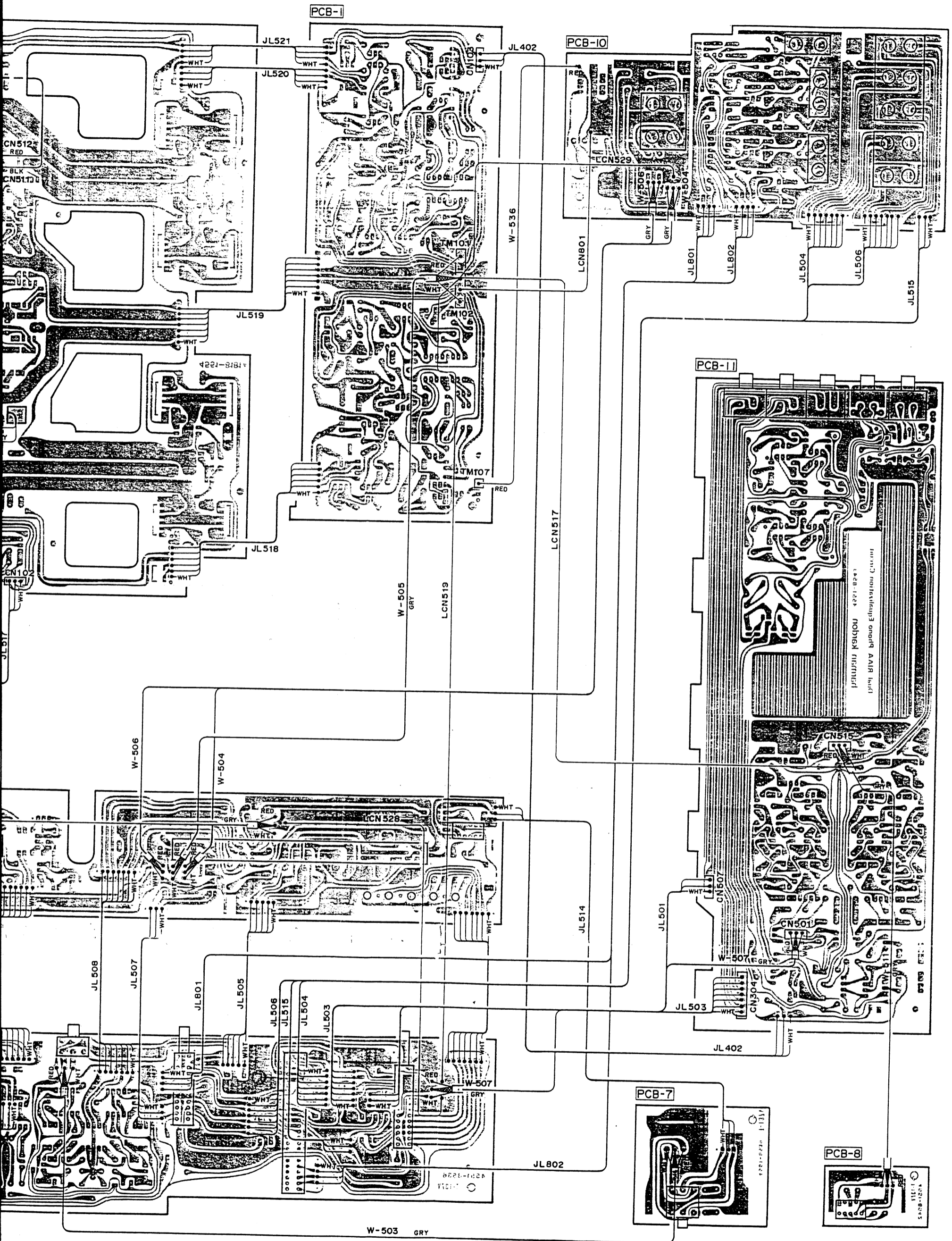
SWB POWER
SW5 pre-out main in
SW1 VOLTAGE SELECTOR
AC1 AC2
P1 AC120V, 60Hz
AC100V, 50/60Hz

WIRING DIAGRAM

1
2
3
4
5
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7
8



- WIRE COLOR ABBREVIATIONS
- RED : Red YEL : Yellow
- ORG : Orange PUP : Purple
- BLU : Blue PIK : Pink
- WHT : White GRY : Gray
- GRN : Green BRN : Brown
- BLK : Black



W-503 GRY

PCB-7

PCB-8

PCB-10

PCB-1

PCB-11