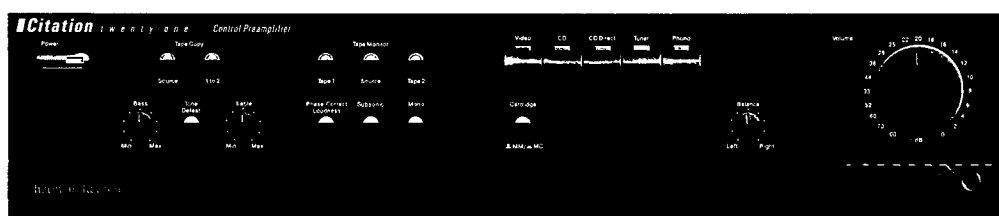


The Harman Kardon Model Citation21

Manual 112A

STEREO PREAMPLIFIER

Technical Manual



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

- JA : North America area model
- G : General model
- N : Japan model

harman/kardon

240 Crossways Park West, Woodbury, N. Y. 11797
1112-3152112A6 P-088706 1500 Printed in Japan

SPECIFICATIONS

	Nominal	Limit		Nominal	Limit
Input Sensitivity/Impedance			THD at 1V Output (1kHz)		
Phono(MM)	2.2mV/47k Ω		Tuner, CD, Video, Tape	0.005% \leq	0.01%
(MC)	125 μ V/56 Ω		Frequency Response at -3dB	0.25Hz ~ 245kHz	
Tuner, CD, Video, Tape	130mV/23k Ω		Subsonic Filter at 20Hz	-3dB \pm 1dB	
Ham and Noise Ratio			Tone Control Characteristics		
Phono(MM)	78dB \geq	74dB	Bass at 50Hz		
(MC)	73dB \geq	69dB	Boost	9.5dB \pm 1dB	
Tuner, CD, Video, Tape	84dB \geq	80dB	Cut	11dB \pm 1dB	
Signal to Noise Ratio (IHF-A)			Treble at 10kHz		
Phono(MM)	84dB \geq	80dB	Boost	9dB \pm 1dB	
(MC)	78dB \geq	74dB	Cut	9dB \pm 1dB	
Tuner, CD, Video, Tape	94dB \geq	90dB	Dimensions (W x H x D)	17-3/8" x 3-1/2" x 13-5/8" (440 x 90 x 345mm)	
Channel Separation			Weight		
Phono(MM)	54dB \geq	50dB	Power Supply		
(MC)	55dB \geq	50dB	North America area model	AC 120V, 60Hz	
Tuner, CD, Video, Tape	56dB \geq	50dB	General model	AC220/240V, 50/60Hz	
Overload (20 ~ 20kHz)			Japan model	AC100V, 50/60Hz	
Phono(MM)	165mV \geq	150mV	Power Consumption	25W	
(MC)	9.2mV \geq	5mV			

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

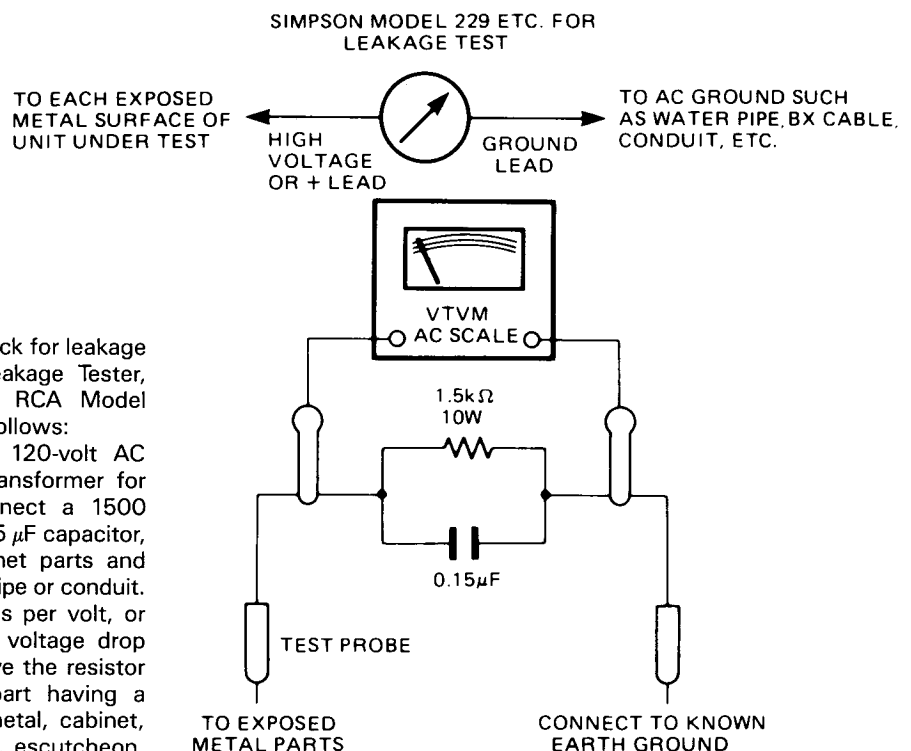
This specification is the target of servicing. But, there is a case that the specification is not applicable to the measurement condition and instrument.

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

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

1. 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.
2. 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.
3. 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 μ F 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 4, 5, 6, 7 AND 15)

1 CABINET TOP REMOVAL

Remove 6 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-1) REMOVAL

1. Remove the Front Panel Ass'y (AA), referring to the previous step 2.
2. Open the lid of connectors (CN107, CN108, CN109 and CN110) on the Tape Switches P.C.Board (PCB-2) and then disconnect the lead wires.
3. Remove 4 screws (C) and then remove the Tape Switches P.C.Board (PCB-2).
4. Open the lid of connector (CN112) on the EQ Amp. P.C.Board (PCB-4) and then disconnect the lead wires.

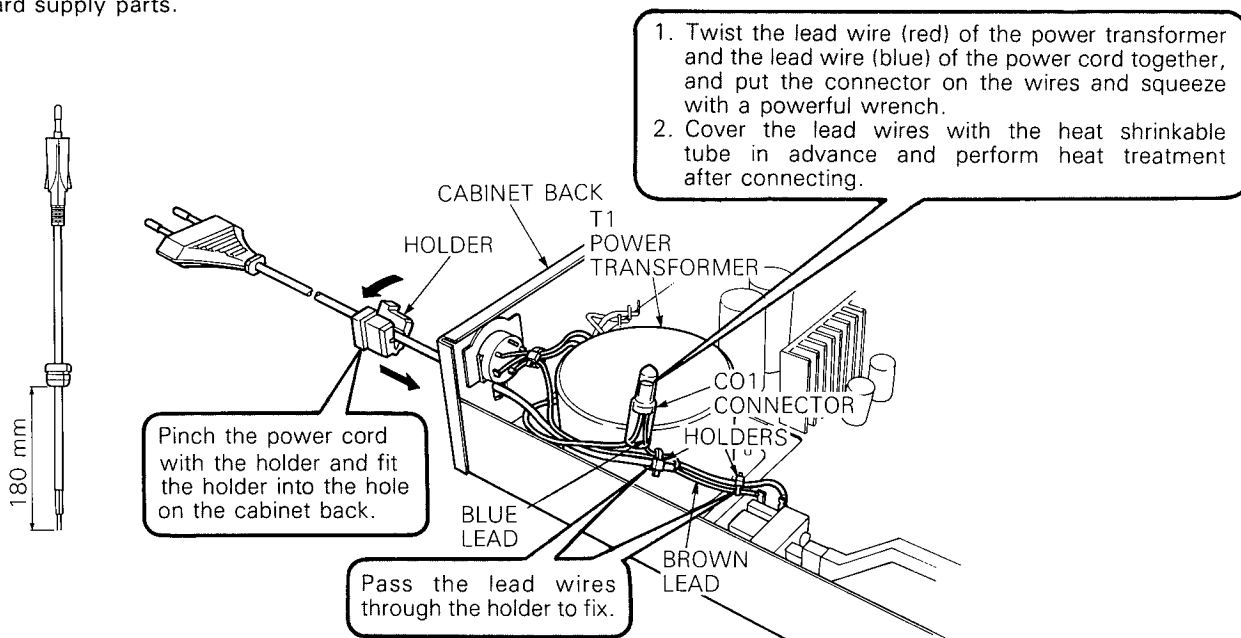
5. Pull off Volume, Bass, Treble and Balance kobs (142 and 147).
6. Remove 15 screws (D) and 4 hexagon nut (E) and then remove the Front Chassis (161) with the Indicators P.C.Board (PCB-3).
7. Open the lid of connectors (CN101, CN102, CN103, CN104 and CN105) on the EQ Amp. P.C.Board (PCB-4) and then disconnect the lead wires.
8. Remove 4 screws (F) and then remove the Main P.C. Board (PCB-1).
If necessary, unsolder the lead wires connected to the PCB-1.

4 EQ AMP. P.C.BOARD (PCB-4) REMOVAL

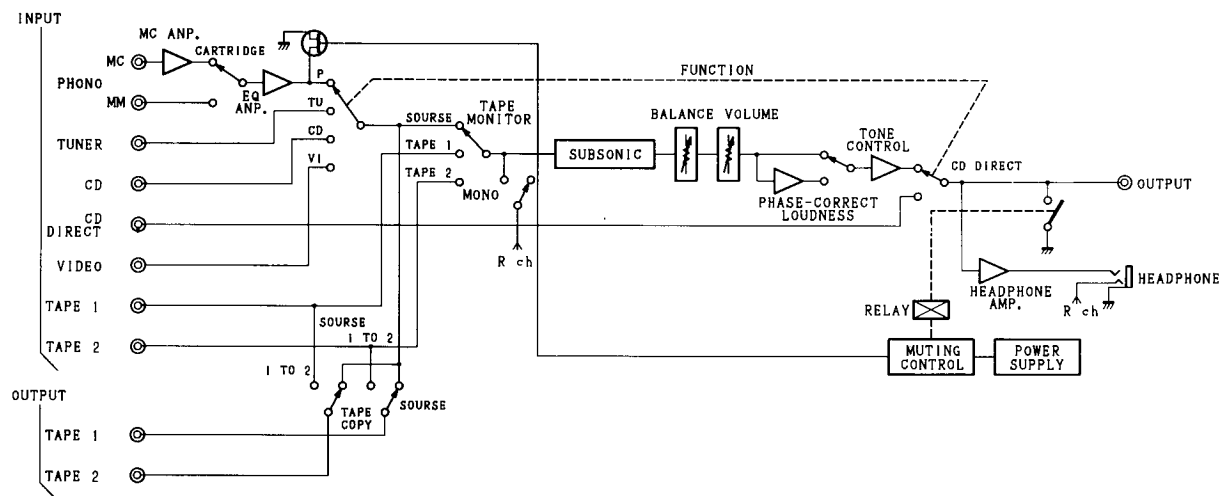
1. Remove the Front Chassis (161), referring to the previous step 3.
2. Open the lid of connectors (CN101, CN102, CN103, CN104 and CN105) on the EQ Amp. P.C.Board (PCB-4) and then disconnect the lead wires.
3. Remove 6 screws (G) and then remove the EQ Amp. P.C.Board (PCB-4).

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

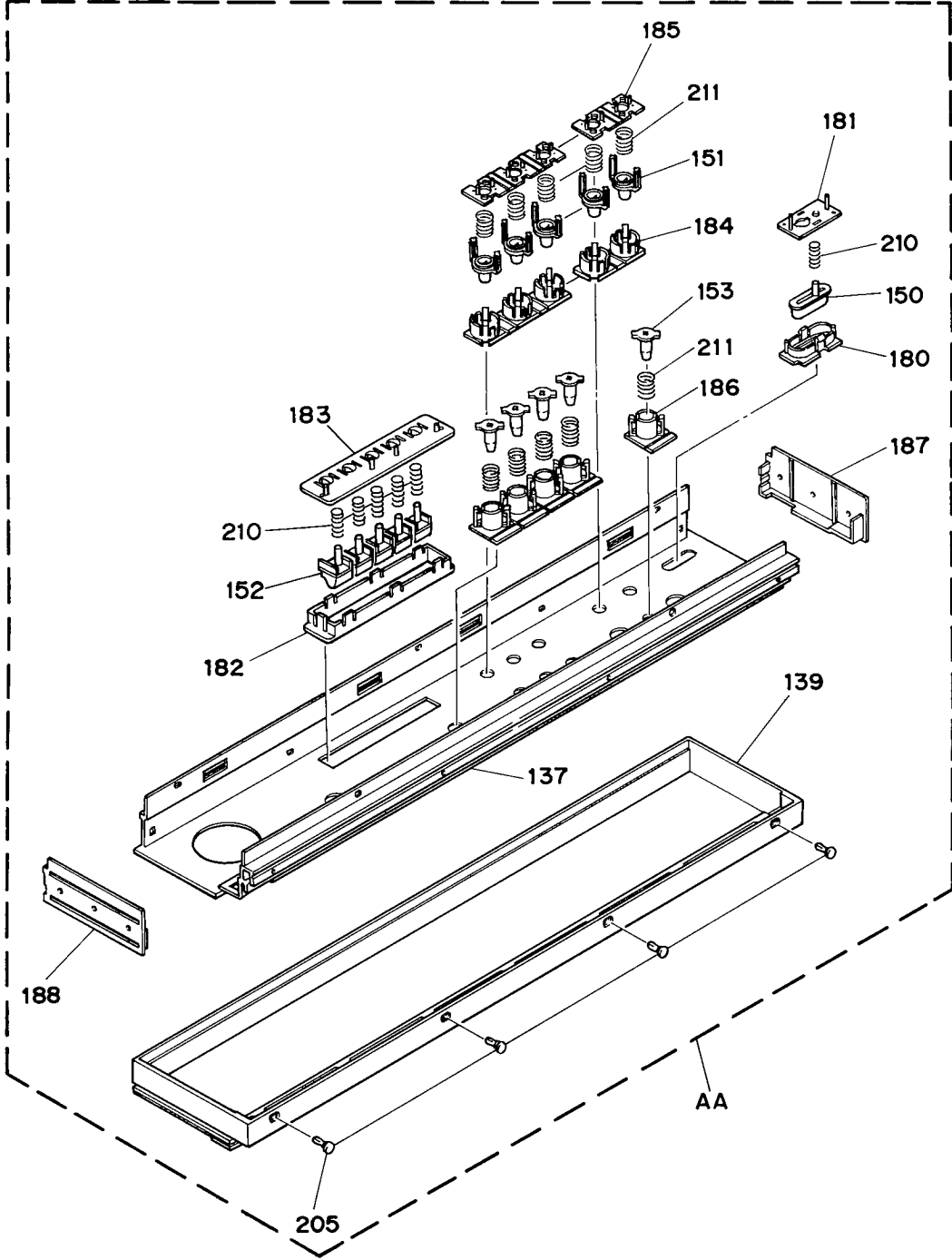
In order to prevent fire or shock hazard when replacing the power cord, follow the procedure below to replace the part with the standard supply parts.



BLOCK DIAGRAM



GENERAL UNIT
EXPLODED VIEW (FRONT PANEL ASS'Y)



PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
AA	A443-H202A	FRONT PANEL ASS'Y	183	2240-7301	HOLDER, FUNCTION
137	1443-10701	PANEL	184	2240-7302	HOLDER
139	1562-05501	FRAME	185	2240-7303	HOLDER
150	1662-30401	PUSH BUTTON	186	2240-7304	HOLDER
151	1662-30701	PUSH BUTTON	187	2240-7305	HOLDER, L SIDE
152	1662-30801	PUSH BUTTON	188	2240-7306	HOLDER, R SIDE
153	1662-30901	PUSH BUTTON	205	2459-3005511	PLASTIC RIVET, FRAME
180	2240-7290	HOLDER, POWER	210	2651-2101727	SPRING
181	2240-7291	HOLDER, POWER	211	2651-210189	SPRING
182	2240-7300	HOLDER, FUNCTION			

A

B

C

D

E

GENERAL UNIT EXPLODED VIEW

1

2

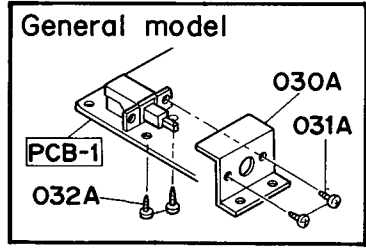
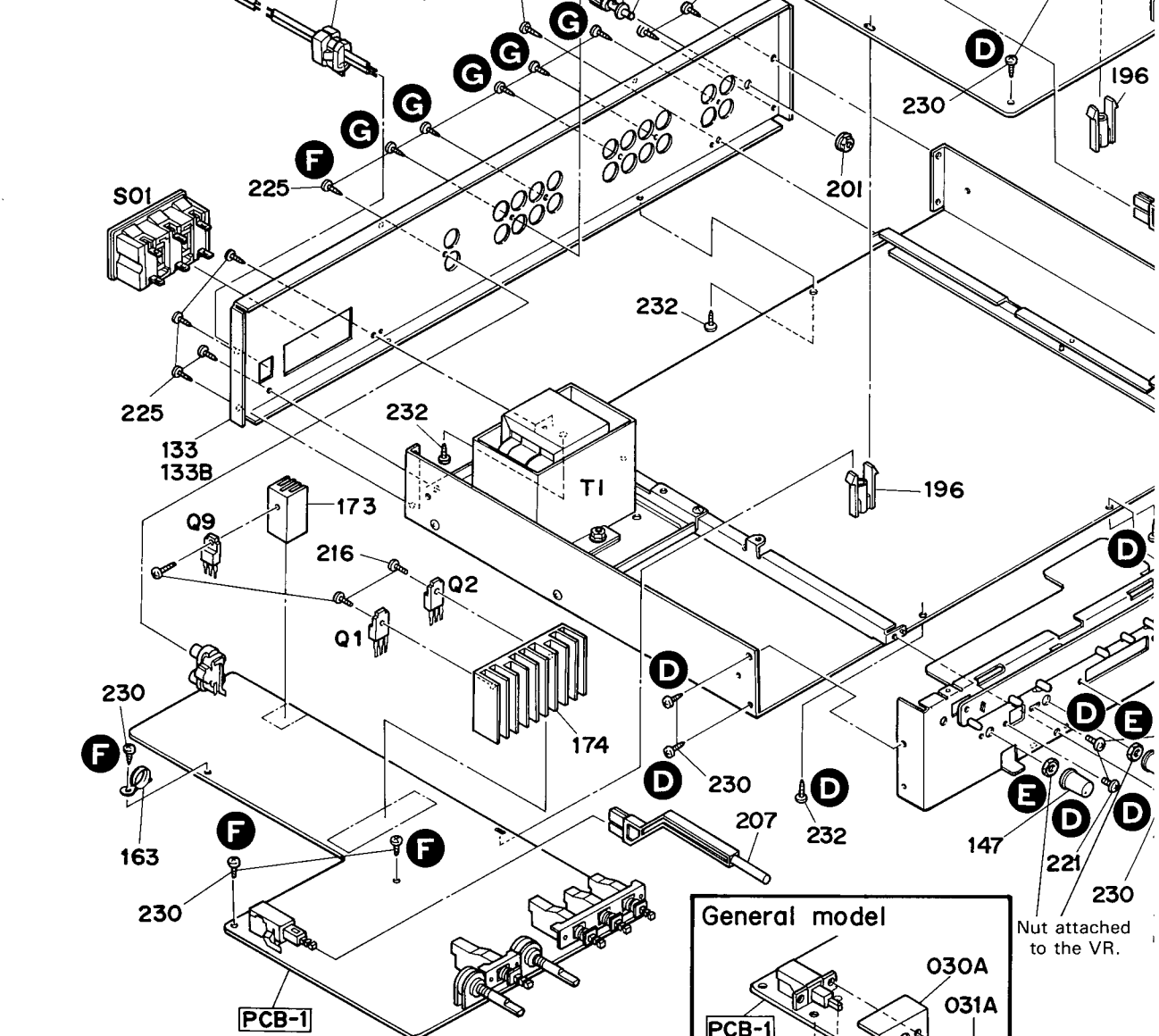
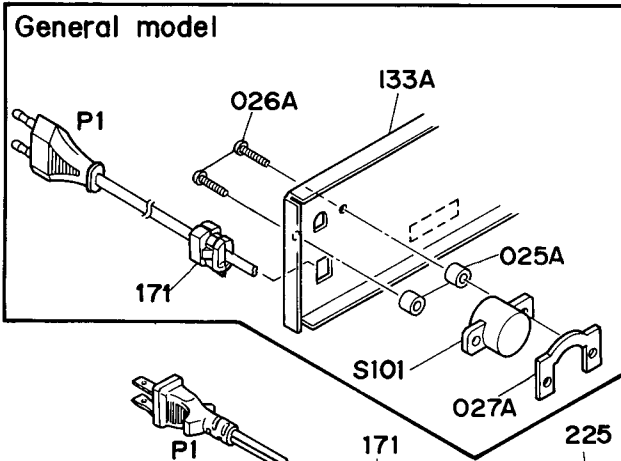
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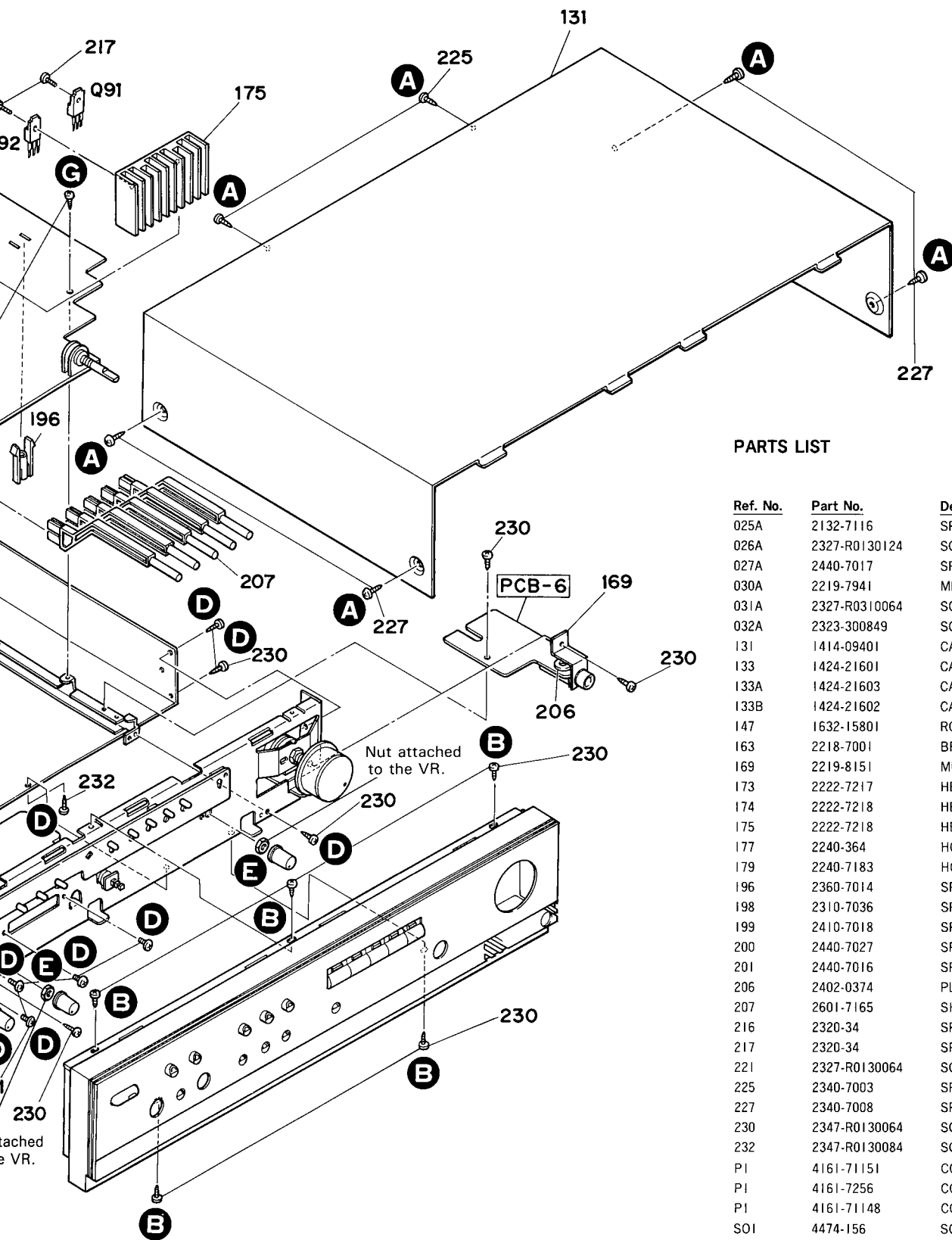
6

7



Nut attached to the VR.

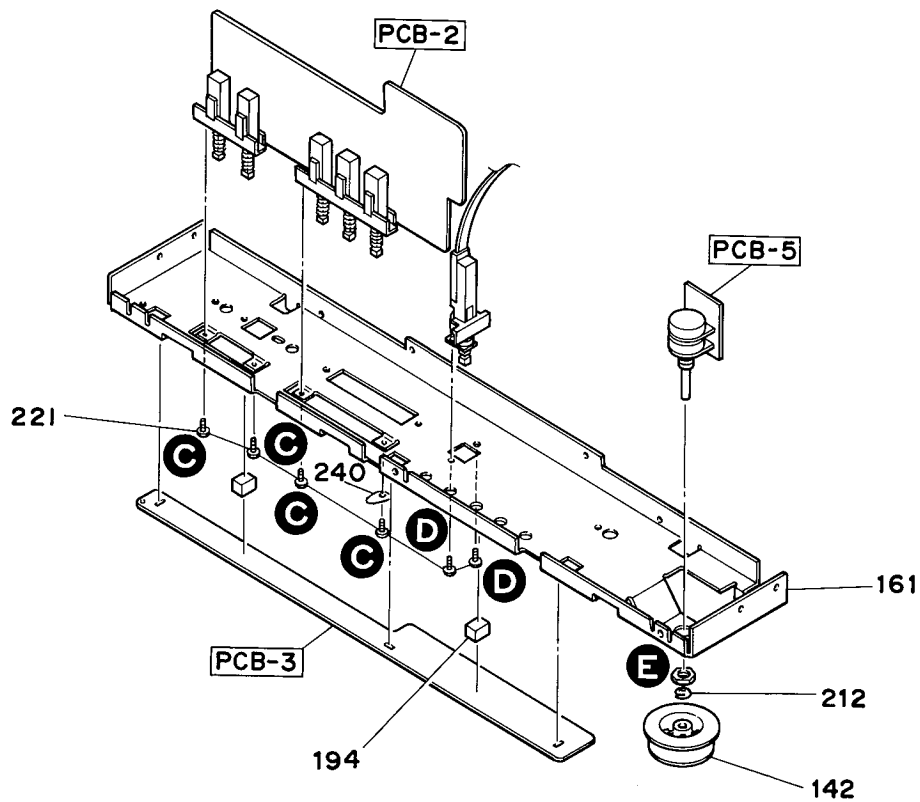
E F G H I J



PARTS LIST

Ref. No.	Part No.	Description
025A	2132-7116	SPACER, VOLT SELECT (G)
026A	2327-R0130124	SCREW, VOLT SELECT (G)
027A	2440-7017	SPECIAL NUT, VOLT SELECT (G)
030A	2219-7941	METAL FITTG, POWER SW (G)
031A	2327-R0310064	SCREW, POWER SW (G)
032A	2323-300849	SCREW, POWER SW (G)
131	1414-09401	CABINET TOP
133	1424-21601	CABI BACK, REAR (UA)
133A	1424-21603	CABI BACK, REAR (G)
133B	1424-21602	CABI BACK, REAR (N)
147	1632-15801	ROTARY KNOB
163	2218-7001	BRACKET, WIRING
169	2219-8151	METAL FITTG, HEADPHONE
173	2222-7217	HEAT SINK
174	2222-7218	HEAT SINK
175	2222-7218	HEAT SINK
177	2240-364	HOLDER, AC CORD
179	2240-7183	HOLDER, MC
196	2360-7014	SPECIAL BOSS
198	2310-7036	SPECIAL SCREW, GND
199	2410-7018	SPECIAL WASHER, GND
200	2440-7027	SPECIAL NUT, GND
201	2440-7016	SPECIAL NUT, GND
206	2402-0374	PLASTIC WASHER, HEADPHONE
207	2601-7165	SHAFT
216	2320-34	SPECIAL SCREW, Tr
217	2320-34	SPECIAL SCREW, Tr
221	2327-R0130064	SCREW, S5/S6
225	2340-7003	SPECIAL SCREW
227	2340-7008	SPECIAL SCREW, TOP COVER
230	2347-R0130064	SCREW
232	2347-R0130084	SCREW, CABI BACK
P1	4161-71151	CORD W/PLUG, AC CORD (UA)
P1	4161-7256	CORD W/PLUG, AC CORD (G)
P1	4161-71148	CORD W/PLUG, AC CORD (N)
SO1	4474-156	SOCKET, AC OUTLET (UA, N)
S101	4411-102729	ROTARY SWITCH, VOLT SELECT (G)
T1	5584-701554	XFORMER, POWER (UA)
T1	5584-702453	XFORMER, POWER (G)
T1	5584-703453	XFORMER, POWER (N)
Q1	5612-1015(O)or(Y)	XISTOR, PNP A
Q2	5614-1406(O)	XISTOR, NPN A
Q9	5612-1015(O)or(Y)	XISTOR, PNP A
Q91	5612-1015(O)or(Y)	XISTOR, PNP A
Q92	5614-1406(O)or(Y)	XISTOR, NPN A

GENERAL UNIT
EXPLODED VIEW (FRONT CHASSIS)



PARTS LIST

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
142	1630-03501	ROTARY KNOB
161	2211-7288	CHASSIS
194	2112-11755	SPONGE, PCB-3
212	2651-110518	SPRING, VOLUME
221	2327-R0130064	SCREW, PCB-2/S7
240	4211-5005	LUG, GND

A

B

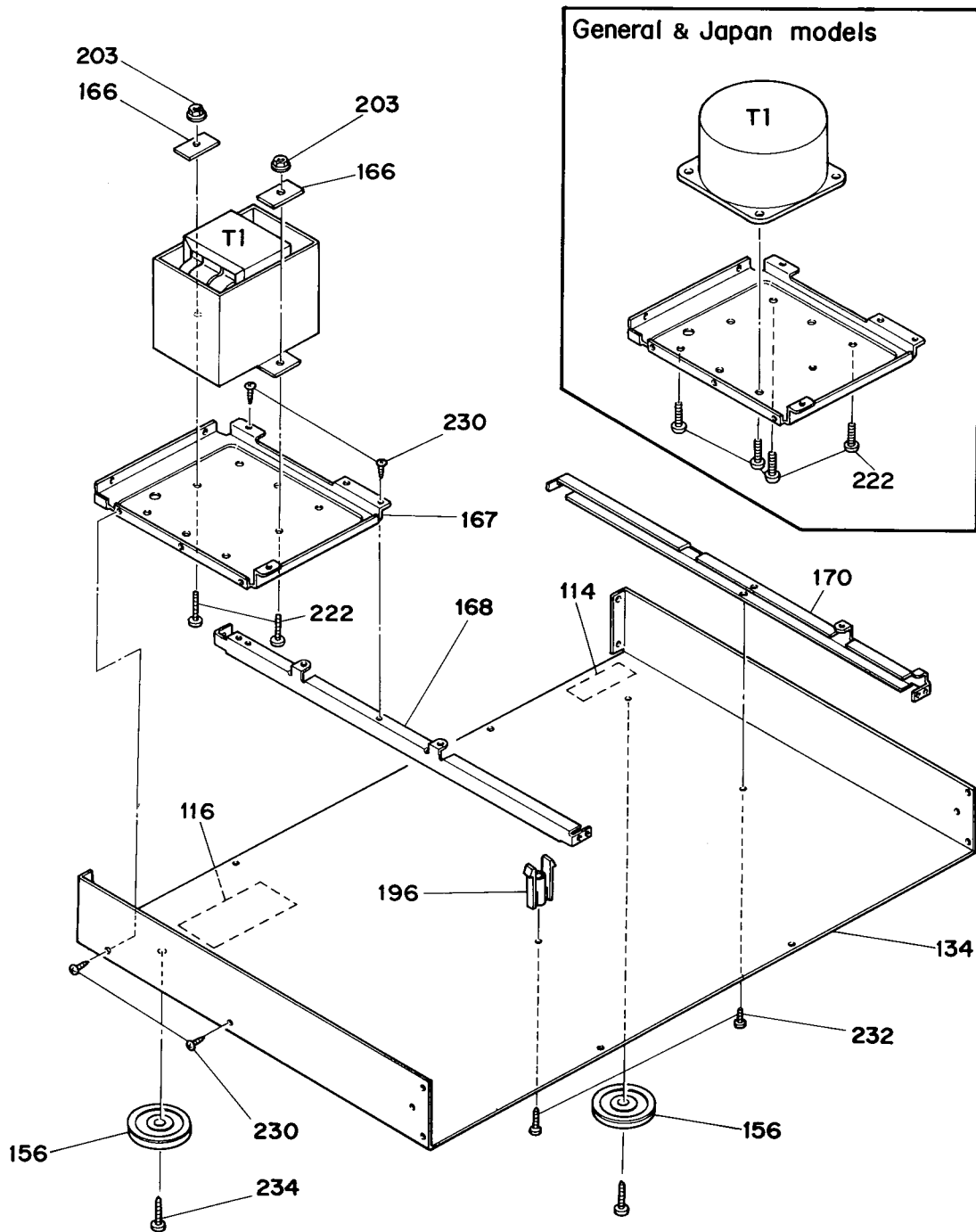
C

D

E

GENERAL UNIT

EXPLODED VIEW (CABINET BOTTOM)



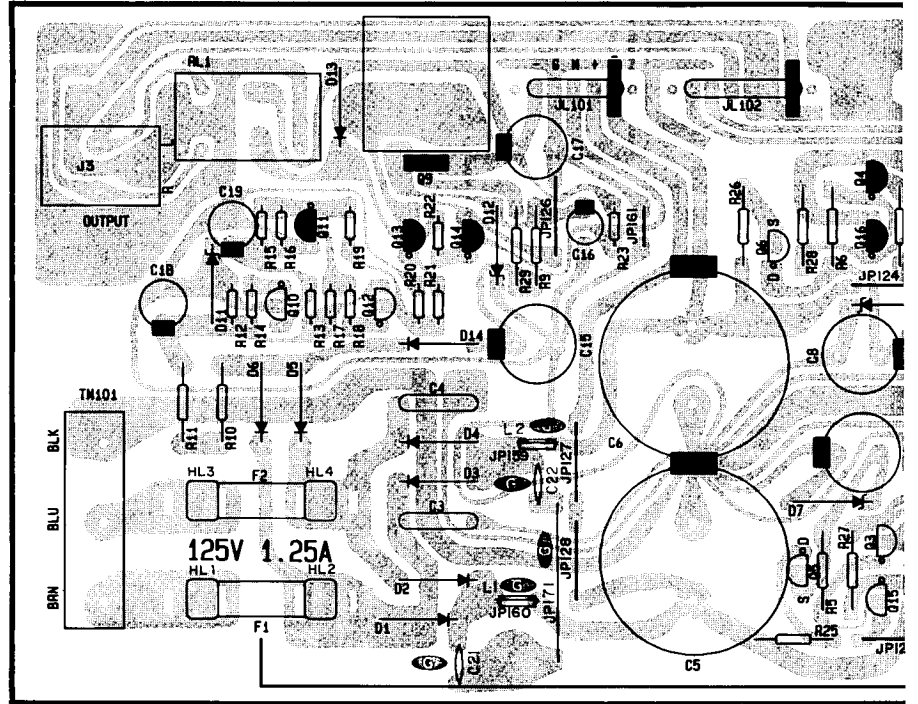
PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
114	1117-78	SERIAL LABEL, BOTTOM	203	2440-7019	SPECIAL NUT, TRANS
116	1756-CSA	LABEL, CSA UA	222	2327-R0140104	SCREW, TRANS
134	1424-21701	CABI BACK BOTTOM	230	2347-R0130064	SCREW
156	1319-7181	LEG	232	2347-R0130084	SCREW, CABI BACK
166	2219-7093	METAL FITTG, TRANS	234	2347-R0140124	SCREW, LEG
167	2219-8149	METAL FITTG, TRANS	TI	5584-701554	XFORMER, POWER UA
168	2219-8150	METAL FITTG	TI	5584-702453	XFORMER, POWER G
170	2219-8180	METAL FITTG	TI	5584-703453	XFORMER, POWER N
196	2360-7014	SPECIAL BOSS			

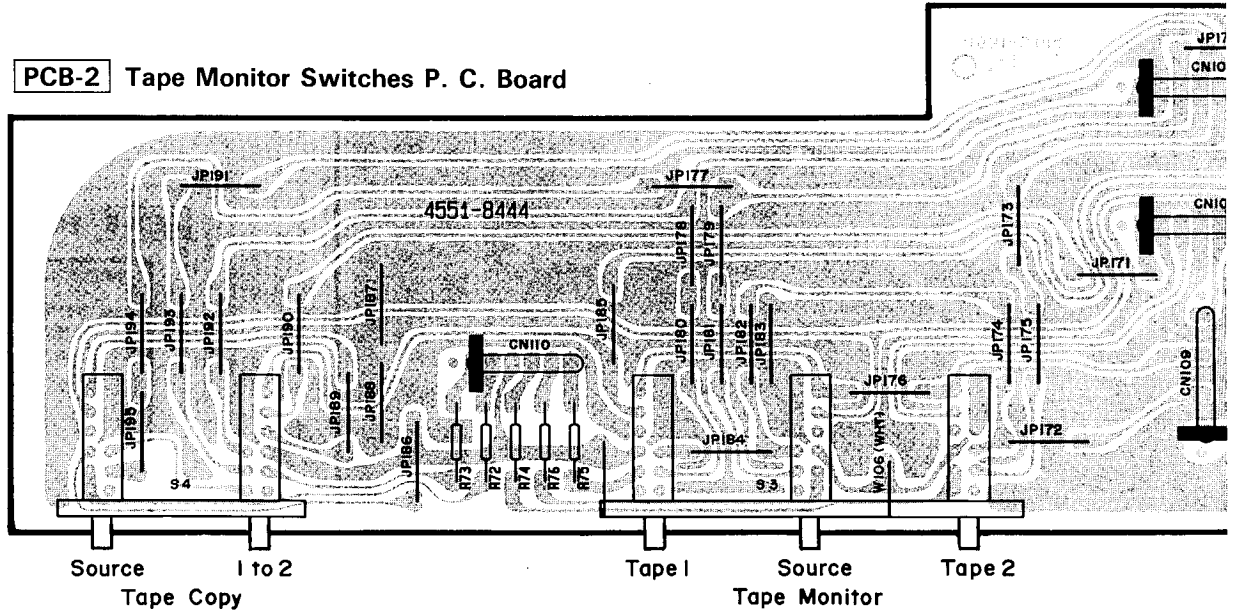
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P. C. BOARDS

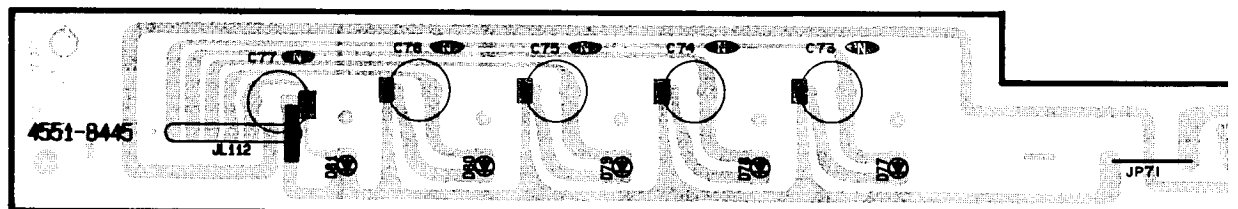
PCB-1 Power Supply P. C. Board



PCB-2 Tape Monitor Switches P. C. Board



PCB-3 Function Indicators P. C. Board



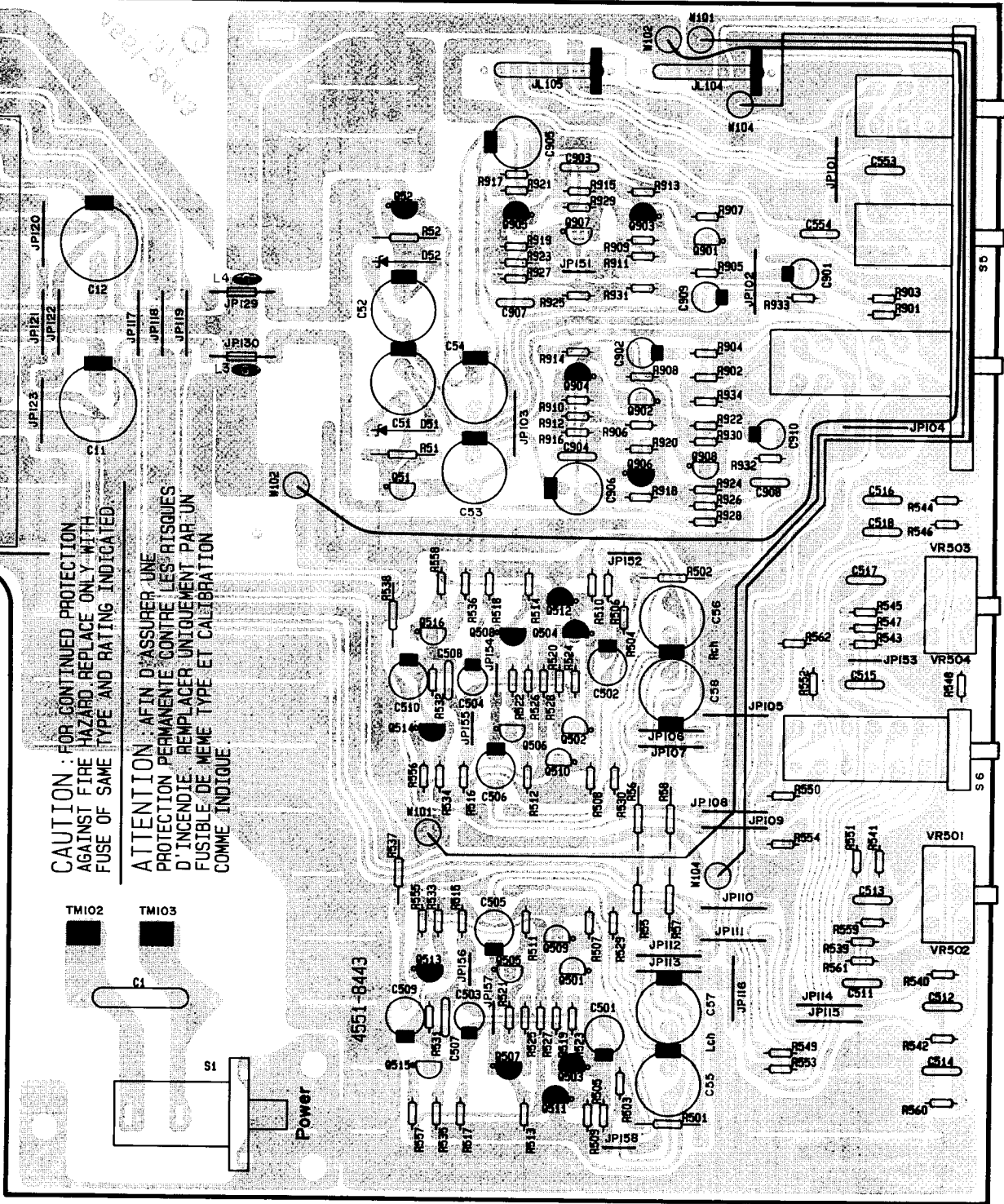
F

G

H

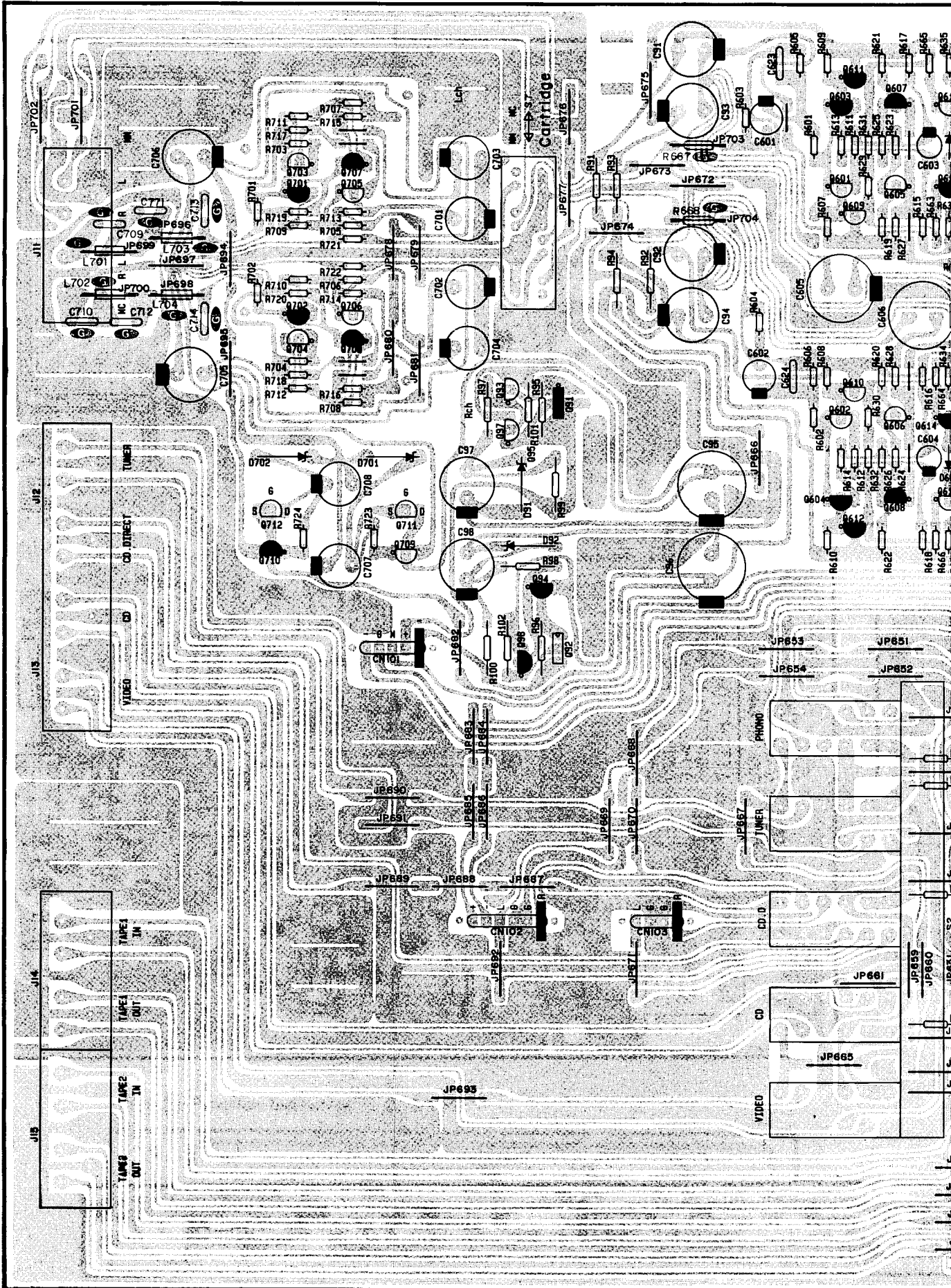
I

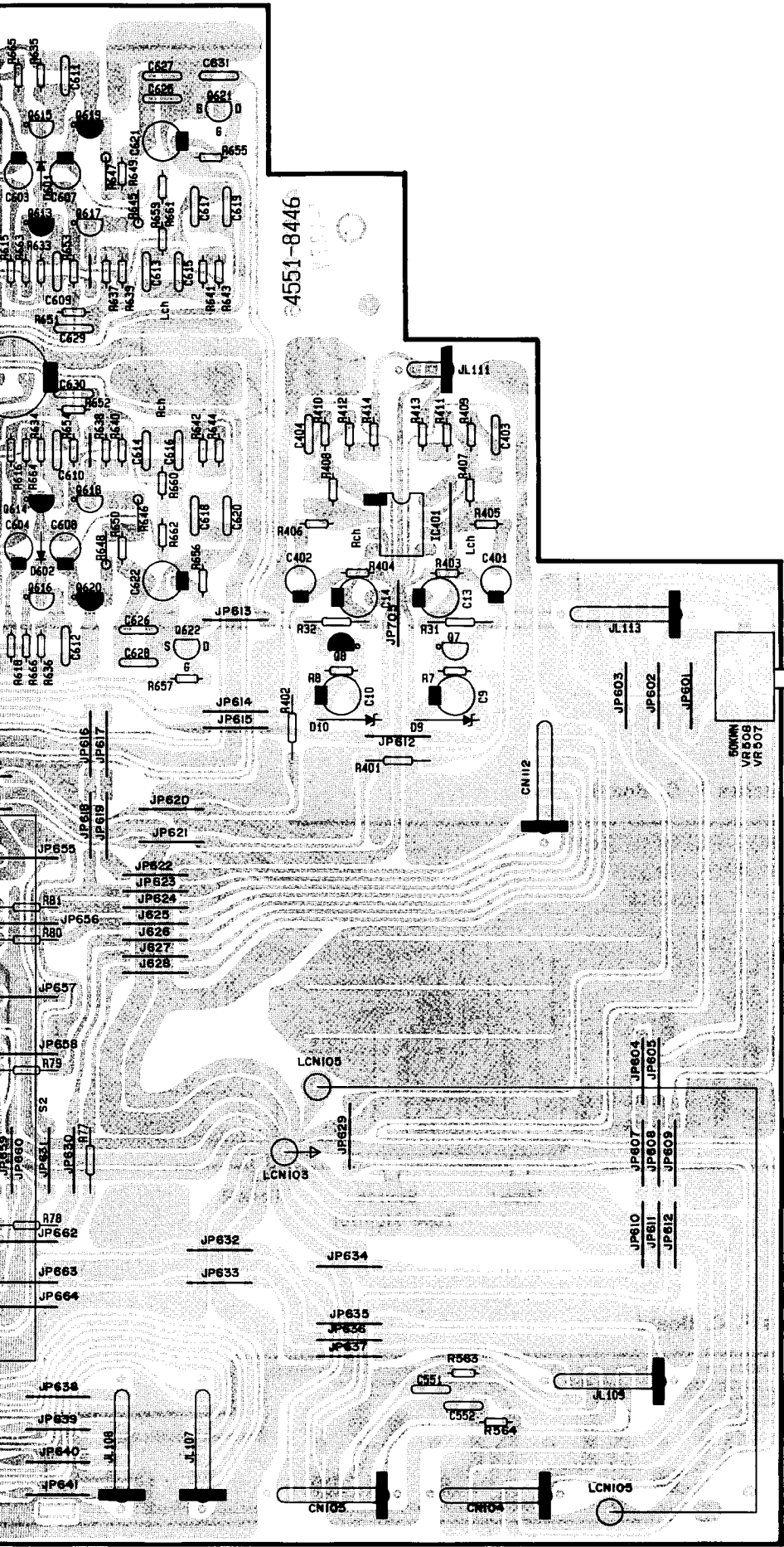
J



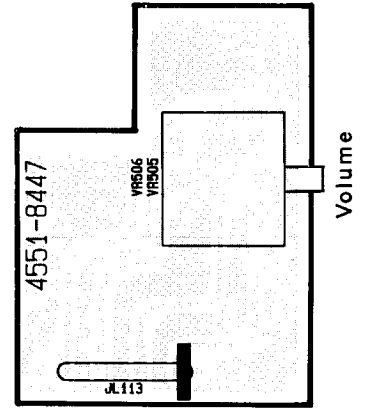
P. C. BOARDS

PCB-4 Pre Amp. P. C. Board

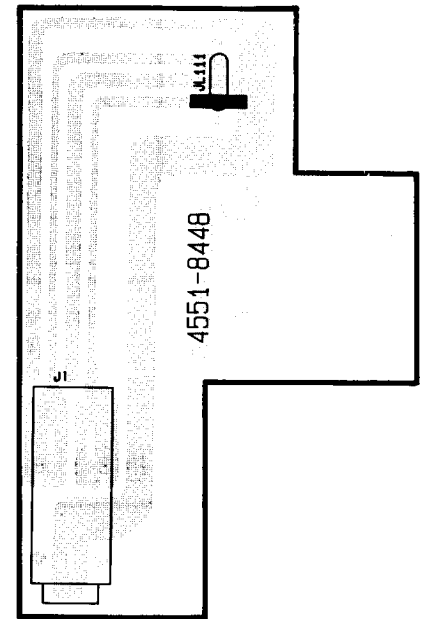




PCB-5 Volume P. C. Board



PCB-6 Headphone Jack P. C. Board



ELECTRICAL PARTS LIST

Ser. No.	Ref. No.	Part No.	Description	Ser. No.	Ref. No.	Part No.	Description
PCB-I POWER SUPPLY P. C. BOARD				729	R18	5232-104J16P	RES, CBN 1/6P 100K
CAPACITORS				730	R19	5232-225J16P	RES, CBN 1/6P 2.2M
794	C1	5352-1030961	CAP, MTL .01 μ JA N	724	R20	5232-103J16P	RES, CBN 1/6P 10K
794A	C1	5352-1030958	CAP, MTL .01 μ G	731	R21	5232-222J16P	RES, CBN 1/6P 2.2K
795	C3	5352-1041957	CAP, MTL .1 μ	732	R22	5232-223J16P	RES, CBN 1/6P 22K
795	C4	5352-1041957	CAP, MTL .1 μ	732	R23	5232-223J16P	RES, CBN 1/6P 22K
792	C5	5341-478F0955	CAP, ELE 4700 μ /50V	769	R25	5135-331522	RES, CBN 1/2P 330
792	C6	5341-478F0955	CAP, ELE 4700 μ /50V	769	R26	5135-331522	RES, CBN 1/2P 330
765	C7	5345-337D041	CAP, MINI ELE 330 μ /25V	767	R27	5135-2R2522	RES, CBN 1/2P 2.2
765	C8	5345-337D041	CAP, MINI ELE 330 μ /25V	767	R28	5135-2R2522	RES, CBN 1/2P 2.2
766	C11	5345-477D041	CAP, MINI ELE 470 μ /25V	781	Δ R29	5102-1004713	RES, FUSE 10
766	C12	5345-477D041	CAP, MINI ELE 470 μ /25V	615	R51	5135-182522	RES, CBN 1/2P 1.8K
777	C15	5345-227E041	CAP, MINI ELE 220 μ /35V	615	R52	5135-182522	RES, CBN 1/2P 1.8K
778	C16	5345-476D041	CAP, MINI ELE 47 μ /25V	770	Δ R55	5102-2204715	RES, FUSE 22
779	C17	5345-107D041	CAP, MINI ELE 100 μ /25V	770	Δ R56	5102-2204715	RES, FUSE 22
720	C18	5345-106D041	CAP, MINI ELE 10 μ /25V	770	Δ R57	5102-2204715	RES, FUSE 22
721	C19	5345-336B0951	CAP, MINI ELE 33 μ /10V	770	Δ R58	5102-2204715	RES, FUSE 22
047A	C21	5361-473ZF	CAP, CER .047 μ G	668	R501	5135-331522	RES, CBN 1/2P 330
047A	C22	5361-473ZF	CAP, CER .047 μ G	668	R502	5135-331522	RES, CBN 1/2P 330
601	C51	5345-337C041	CAP, MINI ELE 330 μ /16V	653	R503	5232-224J16P	RES, CBN 1/6P 220K
601	C52	5345-337C041	CAP, MINI ELE 330 μ /16V	653	R504	5232-224J16P	RES, CBN 1/6P 220K
601	C53	5345-337C041	CAP, MINI ELE 330 μ /16V	654	R505	5232-394J16P	RES, CBN 1/6P 390K
601	C54	5345-337C041	CAP, MINI ELE 330 μ /16V	654	R506	5232-394J16P	RES, CBN 1/6P 390K
764	C55	5345-337D041	CAP, MINI ELE 330 μ /25V	652	R507	5232-182J16P	RES, CBN 1/6P 1.8K
764	C56	5345-337D041	CAP, MINI ELE 330 μ /25V	652	R508	5232-182J16P	RES, CBN 1/6P 1.8K
764	C57	5345-337D041	CAP, MINI ELE 330 μ /25V	652	R509	5232-182J16P	RES, CBN 1/6P 1.8K
764	C58	5345-337D041	CAP, MINI ELE 330 μ /25V	652	R510	5232-182J16P	RES, CBN 1/6P 1.8K
629	C501	5345-106C0951	CAP, MINI ELE 10 μ /16V	652	R511	5232-182J16P	RES, CBN 1/6P 1.8K
629	C502	5345-106C0951	CAP, MINI ELE 10 μ /16V	652	R512	5232-182J16P	RES, CBN 1/6P 1.8K
632	C503	5345-107B041	CAP, MINI ELE 100 μ /10V	652	R513	5232-182J16P	RES, CBN 1/6P 1.8K
632	C504	5345-107B041	CAP, MINI ELE 100 μ /10V	652	R514	5232-182J16P	RES, CBN 1/6P 1.8K
630	C505	5345-226D0951	CAP, MINI ELE 22 μ /25V	656	R515	5232-103J16P	RES, CBN 1/6P 10K
630	C506	5345-226D0951	CAP, MINI ELE 22 μ /25V	656	R516	5232-103J16P	RES, CBN 1/6P 10K
637	C507	5353-010934	CAP, MCA 1p	656	R517	5232-103J16P	RES, CBN 1/6P 10K
637	C508	5353-010934	CAP, MCA 1p	656	R518	5232-103J16P	RES, CBN 1/6P 10K
631	C509	5345-476C0951	CAP, MINI ELE 47 μ /16V	655	R519	5232-271J16P	RES, CBN 1/6P 270
631	C510	5345-476C0951	CAP, MINI ELE 47 μ /16V	655	R520	5232-271J16P	RES, CBN 1/6P 270
640	C511	5354-273J1HM	CAP, MYL .027 μ	655	R521	5232-271J16P	RES, CBN 1/6P 270
640	C512	5354-273J1HM	CAP, MYL .027 μ	655	R522	5232-271J16P	RES, CBN 1/6P 270
639	C513	5354-154593	CAP, MYL .15 μ	655	R523	5232-271J16P	RES, CBN 1/6P 270
639	C514	5354-154593	CAP, MYL .15 μ	655	R524	5232-271J16P	RES, CBN 1/6P 270
642	C515	5354-682J1HM	CAP, MYL 6800p	655	R525	5232-271J16P	RES, CBN 1/6P 270
642	C516	5354-682J1HM	CAP, MYL 6800p	655	R526	5232-271J16P	RES, CBN 1/6P 270
641	C517	5354-393J1HM	CAP, MYL .039 μ	657	R527	5232-153J16P	RES, CBN 1/6P 15K
641	C518	5354-393J1HM	CAP, MYL .039 μ	657	R528	5232-153J16P	RES, CBN 1/6P 15K
645	C553	5354-394593	CAP, MYL .39 μ	658	R529	5232-473J16P	RES, CBN 1/6P 47K
645	C554	5354-394593	CAP, MYL .39 μ	658	R530	5232-473J16P	RES, CBN 1/6P 47K
598	C901	5345-104F0951	CAP, MINI ELE .1 μ /50V	659	R531	5232-274J16P	RES, CBN 1/6P 270K
598	C902	5345-104F0951	CAP, MINI ELE .1 μ /50V	659	R532	5232-274J16P	RES, CBN 1/6P 270K
603	C903	5354-154593	CAP, MYL .15 μ	664	R533	5232-181J16P	RES, CBN 1/6P 180
603	C904	5354-154593	CAP, MYL .15 μ	664	R534	5232-181J16P	RES, CBN 1/6P 180
600	C905	5345-476D041	CAP, MINI ELE 47 μ /25V	664	R535	5232-181J16P	RES, CBN 1/6P 180
600	C906	5345-476D041	CAP, MINI ELE 47 μ /25V	664	R536	5232-181J16P	RES, CBN 1/6P 180
604	C907	5354-334593	CAP, MYL .33 μ	668	R537	5135-331522	RES, CBN 1/2P 330
604	C908	5354-334593	CAP, MYL .33 μ	668	R538	5135-331522	RES, CBN 1/2P 330
599	C909	5345-224F0951	CAP, MINI ELE .22 μ /50V	657	R539	5232-153J16P	RES, CBN 1/6P 15K
599	C910	5345-224F0951	CAP, MINI ELE .22 μ /50V	657	R540	5232-153J16P	RES, CBN 1/6P 15K
RESISTORS				660	R541	5232-272J16P	RES, CBN 1/6P 2.7K
769	R3	5135-331522	RES, CBN 1/2P 330	660	R542	5232-272J16P	RES, CBN 1/6P 2.7K
769	R4	5135-331522	RES, CBN 1/2P 330	661	R543	5232-122J16P	RES, CBN 1/6P 1.2K
768	R5	5135-101522	RES, CBN 1/2P 100	661	R544	5232-122J16P	RES, CBN 1/6P 1.2K
768	R6	5135-101522	RES, CBN 1/2P 100	662	R545	5232-121J16P	RES, CBN 1/6P 120
782	R9	5135-222522	RES, CBN 1/2P 2.2K	662	R546	5232-121J16P	RES, CBN 1/6P 120
723	R10	5135-182522	RES, CBN 1/2P 1.8K	651	R547	5232-331J16P	RES, CBN 1/6P 330
723	R11	5135-182522	RES, CBN 1/2P 1.8K	651	R548	5232-331J16P	RES, CBN 1/6P 330
724	R12	5232-103J16P	RES, CBN 1/6P 10K	657	R549	5232-153J16P	RES, CBN 1/6P 15K
726	R13	5232-334J16P	RES, CBN 1/6P 330K	657	R550	5232-153J16P	RES, CBN 1/6P 15K
725	R14	5232-472J16P	RES, CBN 1/6P 4.7K	663	R551	5232-122J16P	RES, CBN 1/6P 1.2K
727	R15	5232-684J16P	RES, CBN 1/6P 680K	663	R552	5232-122J16P	RES, CBN 1/6P 1.2K
728	R16	5232-224J16P	RES, CBN 1/6P 220K	665	R553	5232-202J16P	RES, CBN 1/6P 2K
729	R17	5232-104J16P	RES, CBN 1/6P 100K	665	R554	5232-202J16P	RES, CBN 1/6P 2K
				667	R555	5232-121J16P	RES, CBN 1/6P 120

Ser. No.	Ref. No.	Part No.	Description
667	R556	5232-121J16P	RES, CBN 1/6P 120
667	R557	5232-121J16P	RES, CBN 1/6P 120
667	R558	5232-121J16P	RES, CBN 1/6P 120
669	R559	5232-683J16P	RES, CBN 1/6P 68K
669	R560	5232-683J16P	RES, CBN 1/6P 68K
666	R561	5232-392J16P	RES, CBN 1/6P 3.9K
666	R562	5232-392J16P	RES, CBN 1/6P 3.9K
606	R901	5232-224J16P	RES, CBN 1/6P 220K
606	R902	5232-224J16P	RES, CBN 1/6P 220K
607	R903	5232-102J16P	RES, CBN 1/6P 1K
607	R904	5232-102J16P	RES, CBN 1/6P 1K
608	R905	5232-684J16P	RES, CBN 1/6P 680K
608	R906	5232-684J16P	RES, CBN 1/6P 680K
606	R907	5232-224J16P	RES, CBN 1/6P 220K
606	R908	5232-224J16P	RES, CBN 1/6P 220K
607	R909	5232-102J16P	RES, CBN 1/6P 1K
607	R910	5232-102J16P	RES, CBN 1/6P 1K
609	R911	5232-332J16P	RES, CBN 1/6P 3.3K
609	R912	5232-332J16P	RES, CBN 1/6P 3.3K
609	R913	5232-332J16P	RES, CBN 1/6P 3.3K
609	R914	5232-332J16P	RES, CBN 1/6P 3.3K
610	R915	5232-183J16P	RES, CBN 1/6P 18K
610	R916	5232-183J16P	RES, CBN 1/6P 18K
616	R917	5232-472J16P	RES, CBN 1/6P 4.7K
616	R918	5232-472J16P	RES, CBN 1/6P 4.7K
611	R919	5232-562J16P	RES, CBN 1/6P 5.6K
611	R920	5232-562J16P	RES, CBN 1/6P 5.6K
609	R921	5232-332J16P	RES, CBN 1/6P 3.3K
609	R922	5232-332J16P	RES, CBN 1/6P 3.3K
610	R923	5232-183J16P	RES, CBN 1/6P 18K
610	R924	5232-183J16P	RES, CBN 1/6P 18K
612	R925	5232-331J16P	RES, CBN 1/6P 330
612	R926	5232-331J16P	RES, CBN 1/6P 330
609	R927	5232-332J16P	RES, CBN 1/6P 3.3K
609	R928	5232-332J16P	RES, CBN 1/6P 3.3K
613	R929	5232-221J16P	RES, CBN 1/6P 220
613	R930	5232-221J16P	RES, CBN 1/6P 220
612	R931	5232-331J16P	RES, CBN 1/6P 330
612	R932	5232-331J16P	RES, CBN 1/6P 330
614	R933	5232-104J16P	RES, CBN 1/6P 100K
614	R934	5232-104J16P	RES, CBN 1/6P 100K

TRANSISTORS

758	Q1	5612-1015(O)or(Y)	XISTOR, PNP A
757	Q2	5614-1406(O)	XISTOR, NPN A
759	Q3	5613-2603(F)or(E)	XISTOR, NPN R
760	Q4	5611-1115(F)or(E)	XISTOR, PNP R
761	Q5	5616-2SK246GR	FET, N-CH
761	Q6	5616-2SK246GR	FET, N-CH
771	Q9	5612-1015(O)or(Y)	XISTOR, PNP A
713	Q10	5613-2603(F)or(E)	XISTOR, NPN R
712	Q11	5611-1115(F)or(E)	XISTOR, PNP R
713	Q12	5613-2603(F)or(E)	XISTOR, NPN R
711	Q13	5612-647(C)	XISTOR, PNP A
712	Q14	5611-1115(F)or(E)	XISTOR, PNP R
759	Q15	5613-2603(F)or(E)	XISTOR, NPN R
760	Q16	5611-1115(F)or(E)	XISTOR, PNP R
593	Q51	5614-667(C)	XISTOR, NPN A
594	Q52	5612-647(C)	XISTOR, PNP A
621	Q501	5613-2240(BL)	XISTOR, NPN R
621	Q502	5613-2240(BL)	XISTOR, NPN R
622	Q503	5611-970(BL)	XISTOR, PNP R
622	Q504	5611-970(BL)	XISTOR, PNP R
621	Q505	5613-2240(BL)	XISTOR, NPN R
621	Q506	5613-2240(BL)	XISTOR, NPN R
622	Q507	5611-970(BL)	XISTOR, PNP R
622	Q508	5611-970(BL)	XISTOR, PNP R
623	Q509	5613-2320L(F)	XISTOR, NPN R
623	Q510	5613-2320L(F)	XISTOR, NPN R
624	Q511	5611-999L(F)	XISTOR, PNP R
624	Q512	5611-999L(F)	XISTOR, PNP R
625	Q513	5612-646(C)	XISTOR, PNP A
625	Q514	5612-646(C)	XISTOR, PNP A
626	Q515	5614-666(C)	XISTOR, NPN A
626	Q516	5614-666(C)	XISTOR, NPN A
591	Q901	5613-2603(F)or(E)	XISTOR, NPN R
591	Q902	5613-2603(F)or(E)	XISTOR, NPN R

Ser. No.	Ref. No.	Part No.	Description
592	Q903	5611-1115(F)or(E)	XISTOR, PNP R
592	Q904	5611-1115(F)or(E)	XISTOR, PNP R
592	Q905	5611-1115(F)or(E)	XISTOR, PNP R
592	Q906	5611-1115(F)or(E)	XISTOR, PNP R
591	Q907	5613-2603(F)or(E)	XISTOR, NPN R
591	Q908	5613-2603(F)otr(E)	XISTOR, NPN R

DIODES

790	D1	5632-10DF2	DIODE, RECT
790	D2	5632-10DF2	DIODE, RECT
790	D3	5632-10DF2	DIODE, RECT
790	D4	5632-10DF2	DIODE, RECT
773	D5	5632-10DF2	DIODE, RECT
773	D6	5632-10DF2	DIODE, RECT
763	D7	5635-HZ24-1L	DIODE, ZEER
763	D8	5635-HZ24-1L	DIODE, ZEER
715	D11	5635-RD5R6EB2	DIODE, ZENER
775	D12	5635-HZ24-1L	DIODE, ZENER
716	D13	5636-1S247I	DIODE, SWITCH
773	D14	5632-10DF2	DIODE, RECT
596	D51	5635-HZ15-1L	DIODE, ZENER
596	D52	5635-HZ15-1L	DIODE, ZENER

COILS

046A	L1	5597-45502	CORE, BEADS G
046A	L2	5597-45502	CORE, BEADS G
046A	L3	5597-45502	CORE, BEADS G
046A	L4	5597-45502	CORE, BEADS G

CONTROLS

814	VR501	5113-10445122	RES, V CBN 16 100K
814	VR502	5113-10445122	RES, V CBN 16 100K
816	VR503	5113-50344122	RES, V CBN 16 50K
816	VR504	5113-50344122	RES, V CBN 16 50K

MISCELLANEOUS

832	J3	4482-7136	PIN JACK, 2P
801	△S1	4431-A017191	PUSH SWITCH, POWER UA N
801A	△S1	4431-A017291	PUSH SWITCH, POWER G
805	S5	4431-03087167	PUSH SWITCH
806	S6	4431-A047153	PUSH SWITCH
798	△	4472-0131	HOLDER, FUSE
798	△	4472-0131	HOLDER, FUSE
798	△	4472-0131	HOLDER, FUSE
798	△	4472-0131	HOLDER, FUSE
884	JL101	4242-R0405141	JUMPER LEAD
883	JL102	4242-R0406101	JUMPER LEAD
885	JL103	4242-R0404101	JUMPER LEAD
882	JL104	4242-R0407500	JUMPER LEAD
882	JL105	4242-R0407500	JUMPER LEAD
718	△RL1	4331-2024736	RELAY
800	TM101	4214-11033	TERMINAL
799	TM102	4214-122	TERMINAL
799	TM103	4214-122	TERMINAL
908	LCN104	4163-0122024	CONNECTOR W/W

PCB-2 TAPE MONITOR SWITCHES P. C. BOARD

RESISTORS

784	R72	5135-152522	RES, CBN 1/2P 1.5K
784	R73	5135-152522	RES, CBN 1/2P 1.5K
784	R74	5135-152522	RES, CBN 1/2P 1.5K
784	R75	5135-152522	RES, CBN 1/2P 1.5K
784	R76	5135-152522	RES, CBN 1/2P 1.5K

MISCELLANEOUS

803	S3	4431-03127164	PUSH SWITCH
804	S4	4431-02087163	PUSH SWITCH
861	CN107	4443-070185	CONNECTOR
861	CN108	4443-070185	CONNECTOR
861	CN109	4443-070185	CONNECTOR
862	CN110	4443-060185	CONNECTOR

PCB-3 FUNCTION INDICATORS P. C. BOARD

CAPACITORS

041B	C70	5345-106C0951	CAP, MINI ELE 10μ/16V N
041B	C71	5345-106C0951	CAP, MINI ELE 10μ/16V N

Ser. No.	Ref. No.	Part No.	Description	Ser. No.	Ref. No.	Part No.	Description
041B	C72	5345-106C095I	CAP, MINI ELE 10μ/16V (N)	551	C629	5353-010934	CAP, MCA 1p
042B	C73	5345-106C095I	CAP, MINI ELE 10μ/16V (N)	551	C630	5353-010934	CAP, MCA 1p
042B	C74	5345-106C095I	CAP, MINI ELE 10μ/16V (N)	558	C631	5354-102K1HM	CAP, MYL 1000p
042B	C75	5345-106C095I	CAP, MINI ELE 10μ/16V (N)	504	C701	5345-106F095I	CAP, MINI ELE 10μ/50V
042B	C76	5345-106C095I	CAP, MINI ELE 10μ/16V (N)	504	C702	5345-106F095I	CAP, MINI ELE 10μ/50V
042B	C77	5345-106C095I	CAP, MINI ELE 10μ/16V (N)	504	C703	5345-106F095I	CAP, MINI ELE 10μ/50V
RESISTORS				504	C704	5345-106F095I	CAP, MINI ELE 10μ/50V
786	R71	5135-182522	RES, CBN 1/2P 1.8K	522	C705	5345-337C04I	CAP, MINI ELE 330μ/16V
DIODES				522	C706	5345-337C04I	CAP, MINI ELE 330μ/16V
822	D71	5637-GL5EG2I	LED	522	C707	5345-337C04I	CAP, MINI ELE 330μ/16V
822	D72	5637-GL5EG2I	LED	522	C708	5345-337C04I	CAP, MINI ELE 330μ/16V
822	D73	5637-GL5EG2I	LED	042A	C709	5359-101585I	CAP, PPP 100p (G)
822	D74	5637-GL5EG2I	LED	042A	C710	5359-101585I	CAP, PPP 100p (G)
822	D75	5637-GL5EG2I	LED	043A	C711	5359-102585I	CAP, PPP 1000p (G)
822	D76	5637-GL5EG2I	LED	043A	C712	5359-102585I	CAP, PPP 1000p (G)
822	D77	5637-GL5EG2I	LED	044A	C713	5354-473J1HM	CAP, MYL .047μ (G)
822	D78	5637-GL5EG2I	LED	044A	C714	5354-473J1HM	CAP, MYL .047μ (G)
822	D79	5637-GL5EG2I	LED	RESISTORS			
822	D80	5637-GL5EG2I	LED	701	R7	5232-182J16P	RES, CBN 1/6P 1.8K
822	D81	5637-GL5EG2I	LED	701	R8	5232-182J16P	RES, CBN 1/6P 1.8K
MISCELLANEOUS				702	R31	5135-221522	RES, CBN 1/2P 220
887	JL110	4242-R0206600	JUMPER LEAD	702	R32	5135-221522	RES, CBN 1/2P 220
886	JL112	4242-R0207101	JUMPER LEAD	785	R77	5135-182522	RES, CBN 1/2P 1.8K
PCB-4 PRE AMP. P. C. BOARD				785	R78	5135-182522	RES, CBN 1/2P 1.8K
CAPACITORS				785	R79	5135-182522	RES, CBN 1/2P 1.8K
699	C9	5345-107C04I	CAP, MINI ELE 100μ/16V	785	R80	5135-182522	RES, CBN 1/2P 1.8K
699	C10	5345-107C04I	CAP, MINI ELE 100μ/16V	785	R81	5135-182522	RES, CBN 1/2P 1.8K
699	C13	5345-107C04I	CAP, MINI ELE 100μ/16V	756	△R91	5102-2204715	RES, FUSE 22
699	C14	5345-107C04I	CAP, MINI ELE 100μ/16V	756	△R92	5102-2204715	RES, FUSE 22
750	C91	5345-337D04I	CAP, MINI ELE 330μ/25V	756	△R93	5102-2204715	RES, FUSE 22
750	C92	5345-337D04I	CAP, MINI ELE 330μ/25V	756	△R94	5102-2204715	RES, FUSE 22
750	C93	5345-337D04I	CAP, MINI ELE 330μ/25V	754	R95	5135-331522	RES, CBN 1/2P 330
750	C94	5345-337D04I	CAP, MINI ELE 330μ/25V	754	R96	5135-331522	RES, CBN 1/2P 330
749	C95	5345-477D04I	CAP, MINI ELE 470μ/25V	753	R97	5135-101522	RES, CBN 1/2P 100
749	C96	5345-477D04I	CAP, MINI ELE 470μ/25V	753	R98	5135-101522	RES, CBN 1/2P 100
750	C97	5345-337D04I	CAP, MINI ELE 330μ/25V	755	R99	5135-562522	RES, CBN 1/2P 5.6K
750	C98	5345-337D04I	CAP, MINI ELE 330μ/25V	755	R100	5135-562522	RES, CBN 1/2P 5.6K
683	C401	5345-475F095I	CAP, MINI ELE 4.7μ/50V	752	R101	5135-2R2522	RES, CBN 1/2P 2.2
683	C402	5345-475F095I	CAP, MINI ELE 4.7μ/50V	752	R102	5135-2R2522	RES, CBN 1/2P 2.2
685	C403	5359-151585I	CAP, PPP 150p	692	R401	5135-563522	RES, CBN 1/2P 56K
685	C404	5359-151585I	CAP, PPP 150p	692	R402	5135-563522	RES, CBN 1/2P 56K
635	C551	5353-101534	CAP, MCA 100p	691	R403	5232-273J16P	RES, CBN 1/6P 27K
635	C552	5353-101534	CAP, MCA 100p	691	R404	5232-273J16P	RES, CBN 1/6P 27K
543	C601	5345-106D095I	CAP, MINI ELE 10μ/25V	687	R405	5232-683J16P	RES, CBN 1/6P 68K
543	C602	5345-106D095I	CAP, MINI ELE 10μ/25V	687	R406	5232-683J16P	RES, CBN 1/6P 68K
546	C603	5345-107B04I	CAP, MINI ELE 100μ/10V	688	R407	5232-154J16P	RES, CBN 1/6P 150K
546	C604	5345-107B04I	CAP, MINI ELE 100μ/10V	688	R408	5232-154J16P	RES, CBN 1/6P 150K
545	C605	5345-477B0952	CAP, MINI ELE 470μ/10V	689	R409	5232-331J16P	RES, CBN 1/6P 330
545	C606	5345-477B0952	CAP, MINI ELE 470μ/10V	689	R410	5232-331J16P	RES, CBN 1/6P 330
547	C607	5345-226C04I	CAP, MINI ELE 22μ/16V	690	R411	5232-8R2J16P	RES, CBN 1/6P 8.2
547	C608	5345-226C04I	CAP, MINI ELE 22μ/16V	690	R412	5232-8R2J16P	RES, CBN 1/6P 8.2
550	C609	5353-100934	CAP, MCA 10p	690	R413	5232-8R2J16P	RES, CBN 1/6P 8.2
550	C610	5353-100934	CAP, MCA 10p	690	R414	5232-8R2J16P	RES, CBN 1/6P 8.2
550	C611	5353-100934	CAP, MCA 10p	670	R563	5232-102J16P	RES, CBN 1/6P 1K
550	C612	5353-100934	CAP, MCA 10p	670	R564	5232-102J16P	RES, CBN 1/6P 1K
554	C613	5359-472585I	CAP, PPP 4700p	581	R601	5232-470J16P	RES, CBN 1/6P 47
554	C614	5359-472585I	CAP, PPP 4700p	581	R602	5232-470J16P	RES, CBN 1/6P 47
556	C615	5359-102585I	CAP, PPP 1000p	563	R603	5232-823J16P	RES, CBN 1/6P 82K
556	C616	5359-102585I	CAP, PPP 1000p	563	R604	5232-823J16P	RES, CBN 1/6P 82K
553	C617	5359-182585I	CAP, PPP 1800p	564	R605	5232-124J16P	RES, CBN 1/6P 120K
553	C618	5359-182585I	CAP, PPP 1800p	564	R606	5232-124J16P	RES, CBN 1/6P 120K
552	C619	5359-181585I	CAP, PPP 180p	561	R607	5232-272J16P	RES, CBN 1/6P 2.7K
552	C620	5359-181585I	CAP, PPP 180p	561	R608	5232-272J16P	RES, CBN 1/6P 2.7K
544	C621	5345-336D095I	CAP, MINI ELE 33μ/25V	561	R609	5232-272J16P	RES, CBN 1/6P 2.7K
544	C622	5345-336D095I	CAP, MINI ELE 33μ/25V	561	R610	5232-272J16P	RES, CBN 1/6P 2.7K
549	C623	5353-121534	CAP, MCA 120p (UA) (N)	566	R611	5232-331J16P	RES, CBN 1/6P 330
549A	C623	5359-331585I	CAP, PPP 330p (G)	566	R612	5232-331J16P	RES, CBN 1/6P 330
549	C624	5353-121534	CAP, MCA 120p (UA) (N)	566	R613	5232-331J16P	RES, CBN 1/6P 330
549A	C624	5359-331585I	CAP, PPP 330p (G)	566	R614	5232-331J16P	RES, CBN 1/6P 330
555	C625	5359-222585I	CAP, PPP 2200p	567	R615	5232-123J16P	RES, CBN 1/6P 12K
555	C626	5359-222585I	CAP, PPP 2200p	567	R616	5232-123J16P	RES, CBN 1/6P 12K
557	C627	5359-331585I	CAP, PPP 330p	567	R617	5232-123J16P	RES, CBN 1/6P 12K
557	C628	5359-331585I	CAP, PPP 330p	561	R618	5232-123J16P	RES, CBN 1/6P 12K
				561	R619	5232-272J16P	RES, CBN 1/6P 2.7K
				561	R620	5232-272J16P	RES, CBN 1/6P 2.7K
				561	R621	5232-272J16P	RES, CBN 1/6P 2.7K

Ser. No.	Ref. No.	Part No.	Description	Ser. No.	Ref. No.	Part No.	Description
561	R622	5232-272J16P	RES, CBN 1/6P 2.7K	TRANSISTORS			
566	R623	5232-331J16P	RES, CBN 1/6P 330	694	Q7	5614-667(C)	XISTOR, NPN A
566	R624	5232-331J16P	RES, CBN 1/6P 330	695	Q8	5612-647(C)	XISTOR, PNP A
566	R625	5232-331J16P	RES, CBN 1/6P 330	742	Q91	5612-1015(O)or(Y)	XISTOR, PNP A
566	R626	5232-331J16P	RES, CBN 1/6P 330	741	Q92	5614-1406(O)or(Y)	XISTOR, NPN A
568	R627	5232-821J16P	RES, CBN 1/6P 820	743	Q93	5613-2603(F)or(E)	XISTOR, NPN R
568	R628	5232-821J16P	RES, CBN 1/6P 820	744	Q94	5611-1115(F)or(E)	XISTOR, PNP R
570	R629	5232-682J16P	RES, CBN 1/6P 6.8K	743	Q97	5613-2603(F)or(E)	XISTOR, NPN R
570	R630	5232-682J16P	RES, CBN 1/6P 6.8K	744	Q98	5611-1115(F)or(E)	XISTOR, PNP R
570	R631	5232-682J16P	RES, CBN 1/6P 6.8K	531	Q601	5613-2240(BL)	XISTOR, NPN R
570	R632	5232-682J16P	RES, CBN 1/6P 6.8K	531	Q602	5613-2240(BL)	XISTOR, NPN R
562	R633	5232-471J16P	RES, CBN 1/6P 470	532	Q603	5611-970(BL)	XISTOR, PNP R
562	R634	5232-471J16P	RES, CBN 1/6P 470	532	Q604	5611-970(BL)	XISTOR, PNP R
562	R635	5232-471J16P	RES, CBN 1/6P 470	531	Q605	5613-2240(BL)	XISTOR, NPN R
562	R636	5232-471J16P	RES, CBN 1/6P 470	531	Q606	5613-2240(BL)	XISTOR, NPN R
571	R637	5232-125J16P	RES, CBN 1/6P 1.2M	532	Q607	5611-970(BL)	XISTOR, PNP R
571	R638	5232-125J16P	RES, CBN 1/6P 1.2M	532	Q608	5611-970(BL)	XISTOR, PNP R
572	R639	5232-563J16P	RES, CBN 1/6P 56K	533	Q609	5613-2320L(F)	XISTOR, NPN R
572	R640	5232-563J16P	RES, CBN 1/6P 56K	533	Q610	5613-2320L(F)	XISTOR, NPN R
573	R641	5232-393J16P	RES, CBN 1/6P 39K	534	Q611	5611-999L(F)	XISTOR, PNP R
573	R642	5232-393J16P	RES, CBN 1/6P 39K	534	Q612	5611-999L(F)	XISTOR, PNP R
574	R643	5232-222J16P	RES, CBN 1/6P 2.2K	535	Q613	5612-646(C)	XISTOR, PNP A
574	R644	5232-222J16P	RES, CBN 1/6P 2.2K	535	Q614	5612-646(C)	XISTOR, PNP A
579	R645	5154-330J25R	RES, CBN 1/4P 33	536	Q615	5614-666(C)	XISTOR, NPN A
579	R646	5154-330J25R	RES, CBN 1/4P 33	536	Q616	5614-666(C)	XISTOR, NPN A
579	R647	5154-330J25R	RES, CBN 1/4P 33	537	Q617	5614-667(C)	XISTOR, NPN A
579	R648	5154-330J25R	RES, CBN 1/4P 33	537	Q618	5614-667(C)	XISTOR, NPN A
569	R649	5232-102J16P	RES, CBN 1/6P 1K	538	Q619	5612-647(C)	XISTOR, PNP A
569	R650	5232-102J16P	RES, CBN 1/6P 1K	538	Q620	5612-647(C)	XISTOR, PNP A
569	R651	5232-102J16P	RES, CBN 1/6P 1K	539	Q621	5616-2SK364(BL)or(V)	FET, N-CH
569	R652	5232-102J16P	RES, CBN 1/6P 1K	539	Q622	5616-2SK364(BL)or(V)	FET, N-CH
578	R653	5232-474J16P	RES, CBN 1/6P 470K	502	Q701	5611-1190(E)	XISTOR, PNP R
578	R654	5232-474J16P	RES, CBN 1/6P 470K	502	Q702	5611-1190(E)	XISTOR, PNP R
576	R655	5232-104J16P	RES, CBN 1/6P 100K	501	Q703	5613-2855(D)	XISTOR, NPN R
576	R656	5232-104J16P	RES, CBN 1/6P 100K	501	Q704	5613-2855(D)	XISTOR, NPN R
577	R657	5232-105J16P	RES, CBN 1/6P 1M	501	Q705	5613-2855(D)	XISTOR, NPN R
571	R659	5232-125J16P	RES, CBN 1/6P 1.2M	501	Q706	5613-2855(D)	XISTOR, NPN R
571	R660	5232-125J16P	RES, CBN 1/6P 1.2M	502	Q707	5611-1190(E)	XISTOR, PNP R
572	R661	5232-563J16P	RES, CBN 1/6P 56K	502	Q708	5611-1190(E)	XISTOR, PNP R
572	R662	5232-563J16P	RES, CBN 1/6P 56K	517	Q709	5613-2603(F)or(E)	XISTOR, NPN R
575	R663	5232-121J16P	RES, CBN 1/6P 120	518	Q710	5611-1115(F)or(E)	XISTOR, PNP R
575	R664	5232-121J16P	RES, CBN 1/6P 120	519	Q711	5616-2SK246GR	FET, N-CH
575	R665	5232-121J16P	RES, CBN 1/6P 120	519	Q712	5616-2SK246GR	FET, N-CH
575	R666	5232-121J16P	RES, CBN 1/6P 120	DIODES			
048A	R667	5135-102522	RES, CBN 1/2P 1K	697	D9	5635-HZ15-1L	DIODE, ZENER
048A	R668	5135-102522	RES, CBN 1/2P 1K	697	D10	5635-HZ15-1L	DIODE, ZENER
514	R701	5232-1R0J16P	RES, CBN 1/6P 1	747	D91	5635-HZ24-1L	DIODE, ZENER
514A	R701	5232-100J16P	RES, CBN 1/6P 10	747	D92	5635-HZ24-1L	DIODE, ZENER
514	R702	5232-1R0J16P	RES, CBN 1/6P 1	541	D601	5641-MV103	VARIATOR
514A	R702	5232-100J16P	RES, CBN 1/6P 10	541	D602	5641-MV103	VARIATOR
515	R703	5232-560J16P	RES, CBN 1/6P 56	520	D701	5635-HZ15-1L	DIODE, ZENER
515A	R703	5232-470J16P	RES, CBN 1/6P 47	520	D702	5635-HZ15-1L	DIODE, ZENER
515	R704	5232-560J16P	RES, CBN 1/6P 56	COILS			
515A	R704	5232-470J16P	RES, CBN 1/6P 47	045A	L701	5597-45502	CORE, BEADS
512	R705	5232-472J16P	RES, CBN 1/6P 4.7K	045A	L702	5597-45502	CORE, BEADS
512	R706	5232-472J16P	RES, CBN 1/6P 4.7K	045A	L703	5597-45502	CORE, BEADS
512	R707	5232-472J16P	RES, CBN 1/6P 4.7K	045A	L704	5597-45502	CORE, BEADS
512	R708	5232-472J16P	RES, CBN 1/6P 4.7K	CONTROLS			
509	R709	5232-100J16P	RES, CBN 1/6P 10	812	VR507	5113-50343122	RES, V CBN 16 50K
509	R710	5232-100J16P	RES, CBN 1/6P 10	812	VR508	5113-50343122	RES, V CBN 16 50K
509	R711	5232-100J16P	RES, CBN 1/6P 10	MISCELLANEOUS			
509	R712	5232-100J16P	RES, CBN 1/6P 10	831	J11	4484-49	PIN JACK, 4P
506	R713	5232-561J16P	RES, CBN 1/6P 560	831	J12	4484-49	PIN JACK, 4P
506	R714	5232-561J16P	RES, CBN 1/6P 560	831	J13	4484-49	PIN JACK, 4P
506	R715	5232-561J16P	RES, CBN 1/6P 560	831	J14	4484-49	PIN JACK, 4P
506	R716	5232-561J16P	RES, CBN 1/6P 560	831	J15	4484-49	PIN JACK, 4P
510	R717	5232-220J16P	RES, CBN 1/6P 22	802	S2	4431-05207156	PUSH SWITCH
510	R718	5232-220J16P	RES, CBN 1/6P 22	808	S7	4422-70114	REMOTE SWITCH
510	R719	5232-220J16P	RES, CBN 1/6P 22	865	CN101	4443-050185	CONNECTOR
510	R720	5232-220J16P	RES, CBN 1/6P 22	864	CN102	4443-060185	CONNECTOR
511	R721	5232-392J16P	RES, CBN 1/6P 3.9K	866	CN103	4443-040185	CONNECTOR
511	R722	5232-392J16P	RES, CBN 1/6P 3.9K	863	CN104	4443-070185	CONNECTOR
507	R723	5232-101J16P	RES, CBN 1/6P 100	863	CN105	4443-070185	CONNECTOR
507	R724	5232-101J16P	RES, CBN 1/6P 100	863	CN112	4443-070185	CONNECTOR
INTEGRATED CIRCUITS							
681	IC401	5653-UPC4556C	IC, LINEAR				

Ser. No.	Ref. No.	Part No.	Description
880	JL107	4242-R0407800	JUMPER LEAD
879	JL108	4242-R0407121	JUMPER LEAD
881	JL109	4242-R0407800	JUMPER LEAD
889	JL111	4242-R0303101	JUMPER LEAD
888	JL113	4242-R0307800	JUMPER LEAD
913	TM104	4214-11013	TERMINAL
910	LCN103	4163-0114020	CONNECTOR W/W

PCB-5 VOLUME P. C. BOARD

810	VR505	5118-503741	RES, V CBN 40 50K
810	VR506	5118-503741	RES, V CBN 40 50K

PCB-6 HEADPHONE JACK P. C. BOARD

820	J1	4451-00161	JACK, IP
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CHASSIS MISCELLANEOUS PARTS LIST

049A	ΔC01	4443-712	CONNECTOR G
797	ΔF1	5732-122031	FUSE UA
797A	ΔF1	5732-122030	FUSE G
797B	ΔF1	5732-122036	FUSE N
797	ΔF2	5732-122031	FUSE UA
797A	ΔF2	5732-122030	FUSE G
797B	ΔF2	5732-122036	FUSE N
837	ΔP1	4161-71151	CORD W/PLUG, AC CORD UA
837A	ΔP1	4161-7256	CORD W/PLUG, AC CORD G
837B	ΔP1	4161-71148	CORD W/PLUG, AC CORD N
041A	ΔS101	4411-102729	ROTARY SWITCH, VOLT SELECT G
834	ΔS01	4474-156	SOCKET, AC OUTLET UA N
788	ΔT1	5584-701554	XFORMER, POWER UA
788A	ΔT1	5584-702453	XFORMER, POWER G
788B	ΔT1	5584-703453	XFORMER, POWER N
911	LCN110	4163-0119020	CONNECTOR W/W
050A		4150-8	SPECIAL TUBING G
029A		2132-5049	SPACER, D12 G

PACKAGE PARTS LIST

021A		1756-06303	LABEL, 220V/50Hz G
021B		1756-03113	LABEL N
022A		1756-03108	LABEL, INT G
024A		1119-026	ATTACH SHEET, FTZ SHEET G
105		1111-J90195	OWNER GUIDE, UL UA
106		1111-J30255	OWNER GUIDE, OG UA
106A		1111-J30256	OWNER GUIDE, OG G
106B		1111-J2034	OWNER GUIDE, OG N
107		1113-717005	OWNER CARD, REPLY CARD UA
107B		1113-0C	OWNER CARD, REPLY CARD N
108		1119-057	ATTACH SHEET, WARRANTY UA
108B		1116-GC	GUARANT CARD, WARRANTY N
109		1119-0137	ATTACH SHEET UA
111		1241-C12732	POLYETHY BAG, OG UA G
111B		1241-C12729	POLYETHY BAG, OG N
120		1221-717199	CARTON BOX
121		1222-7309	CUSHION, R
122		1222-7310	CUSHION, L
123		1223-11748	SOFT SHEET, SET
125		1241-C1491	POLYETHY BAG, SET
839		4442-14	PIN PLUG, SHORT PIN
905		4161-71174	CORD W/PLUG, CONNECT

ABBREVIATIONS IN PARTS LIST

CAPACITORS

CAP, MINI ELE : Electrolytic
 CAP, CER : Ceramic
 CAP, PPP : Polypropylene
 CAP, MYL : Mylar
 CAP, MCA : Mica
 CAP, MINI BP : Bipolar
 CAP, ELE BP : Electrolytic Bipolar

RESISTORS

RES, CBN 1/6P : Carbon 1/6W
 RES, FUSE : Fuse
 RES, CEM 5P : Cement 5W
 RES, MTL 1W : Metal 1W
 2.2K : 2.2kΩ
 220 : 220Ω

TRANSISTORS

XISTOR : Transistor
 FET : Field Effect Transistor

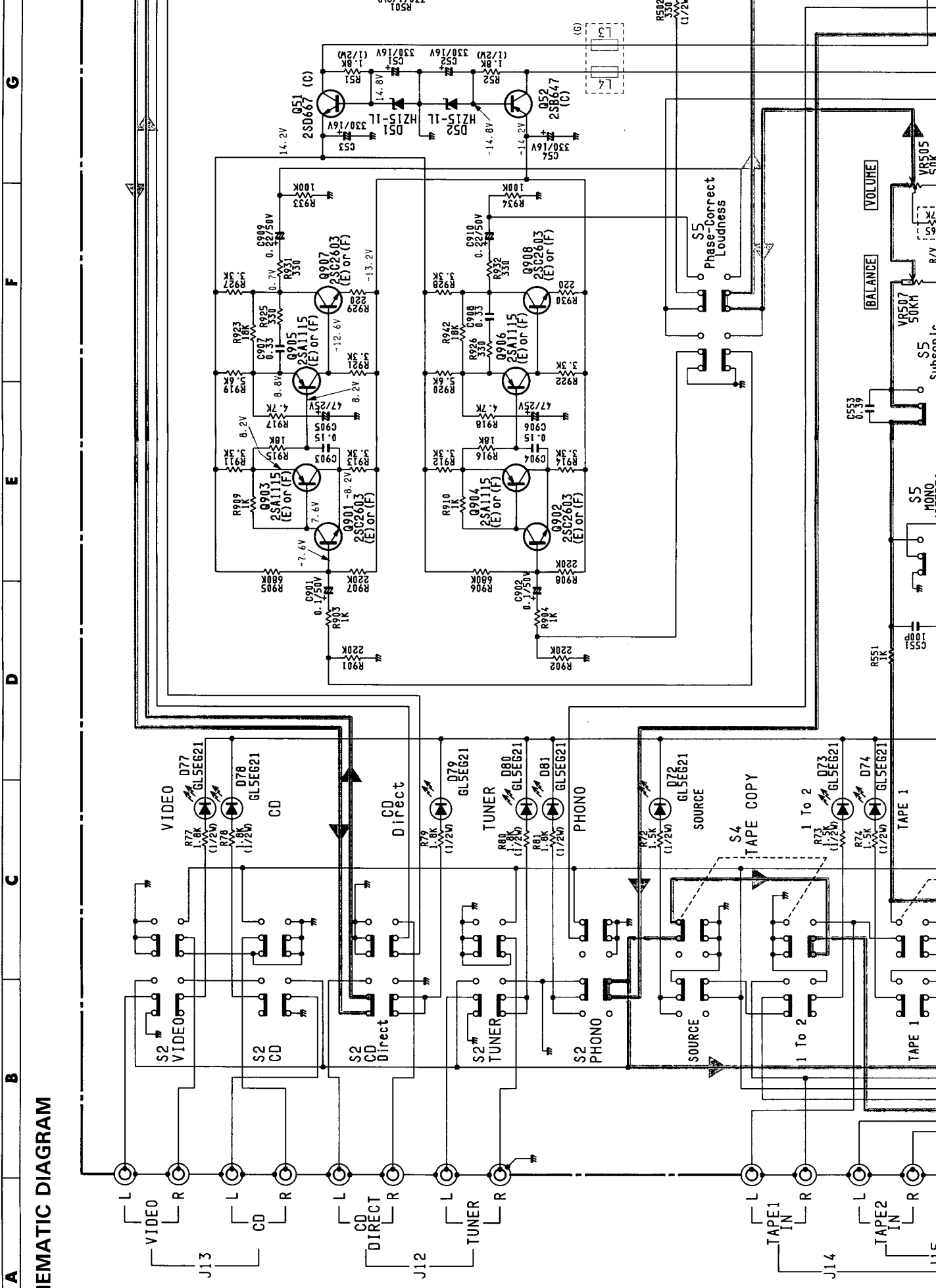
CONTROLS

RES, V CBN : Variable Carbon Resistor

NOTE



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

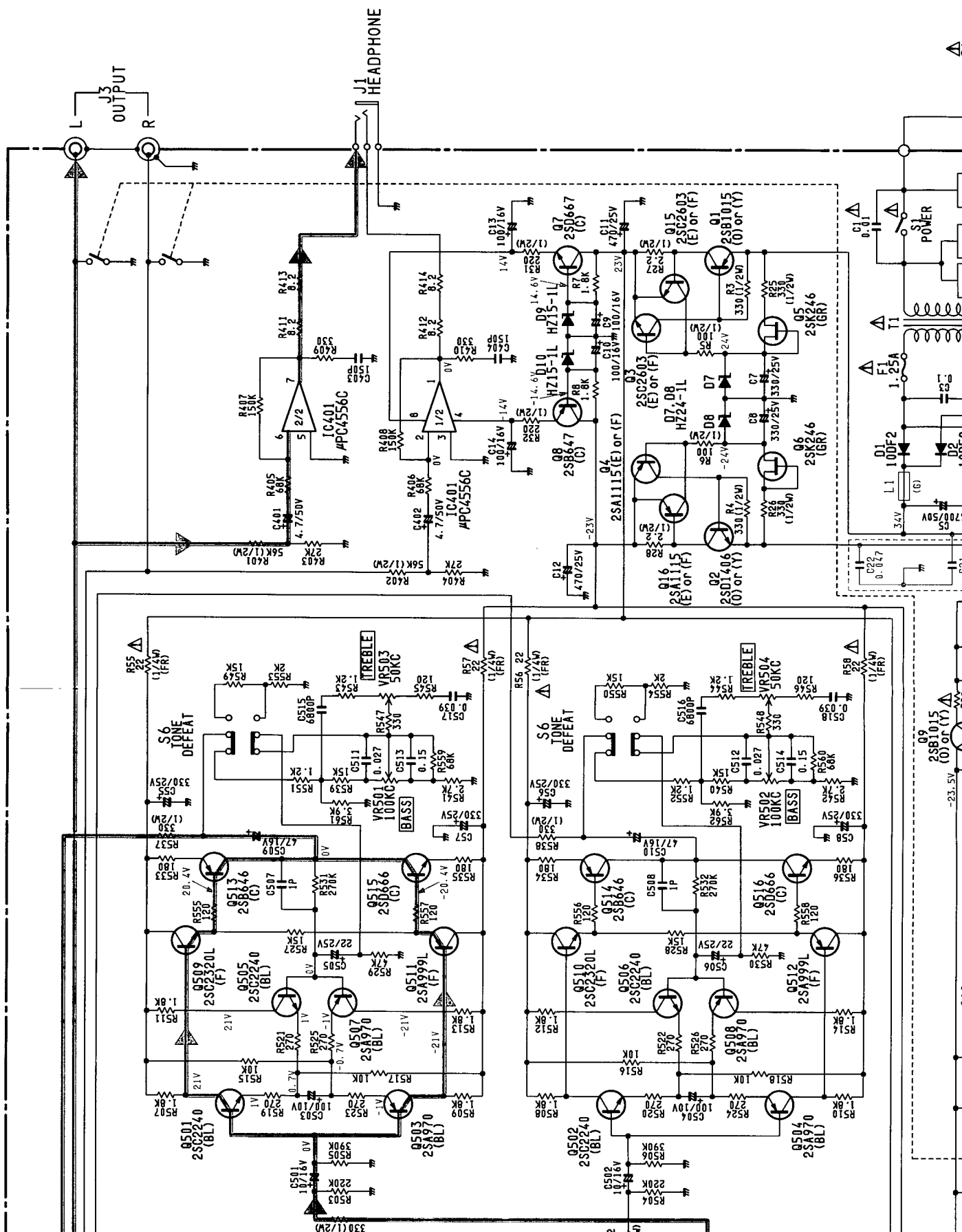


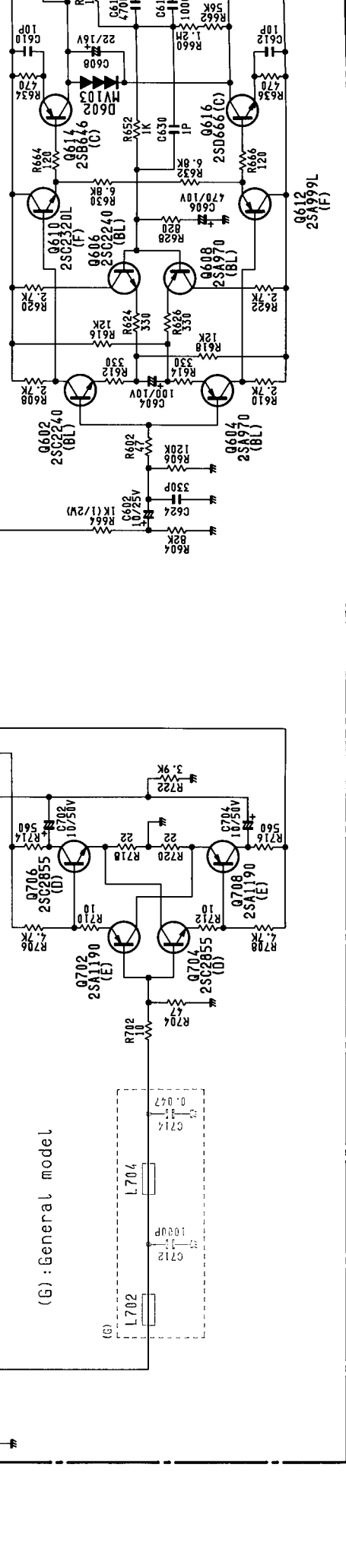
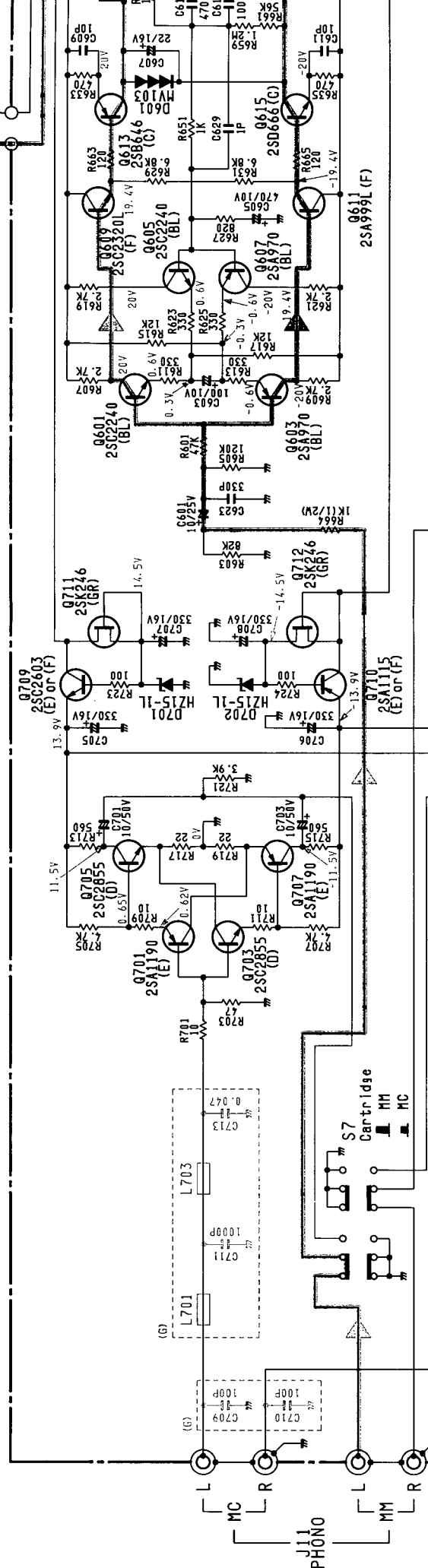
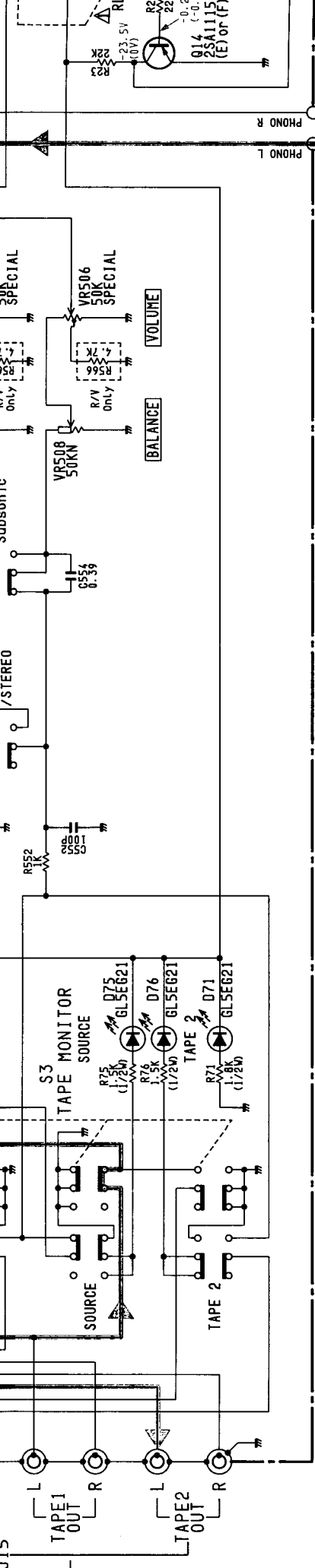
SCHEMATIC DIAGRAM

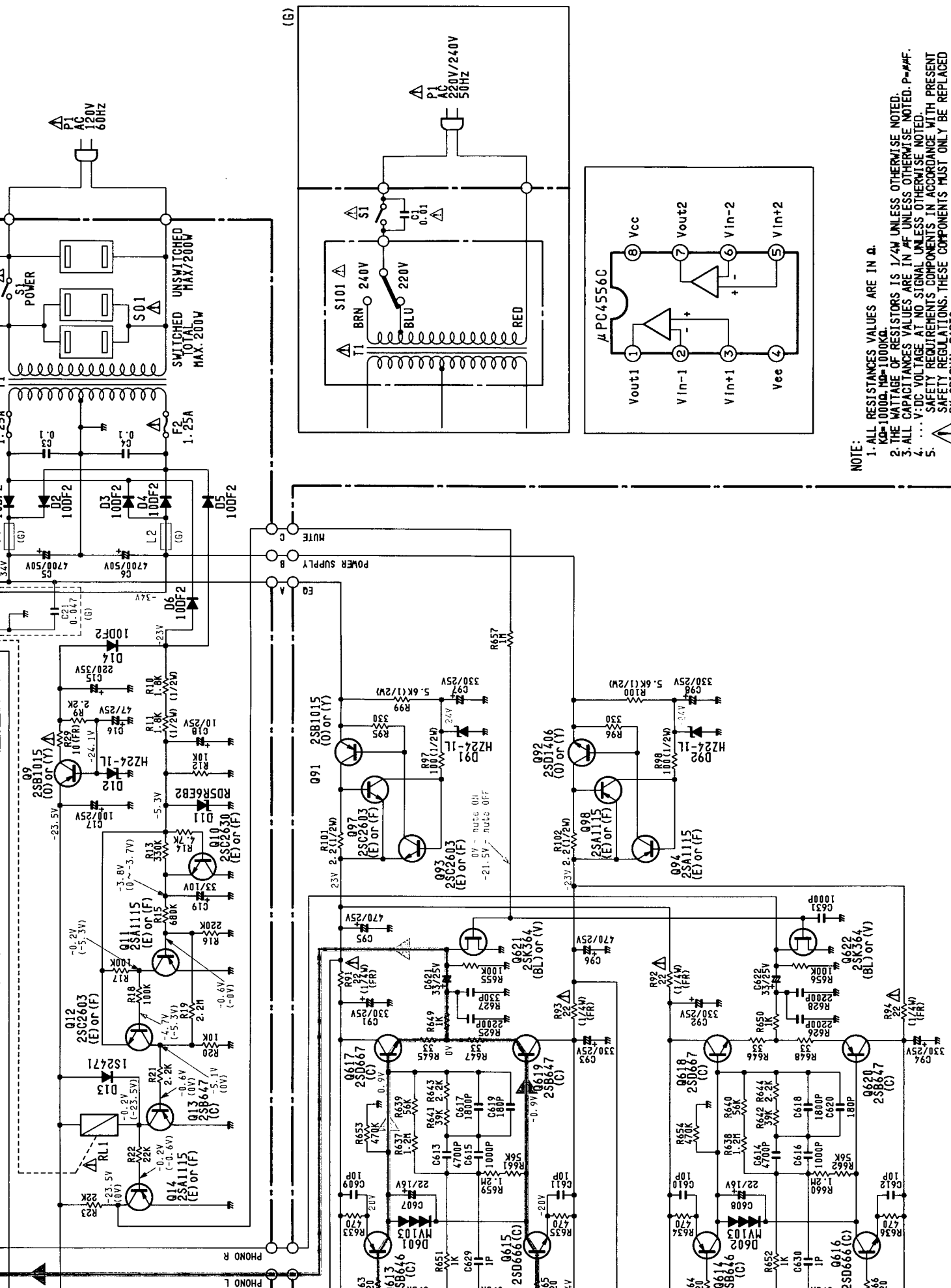
A B C D E F G

1 2 3 4 5

N M L K J I H







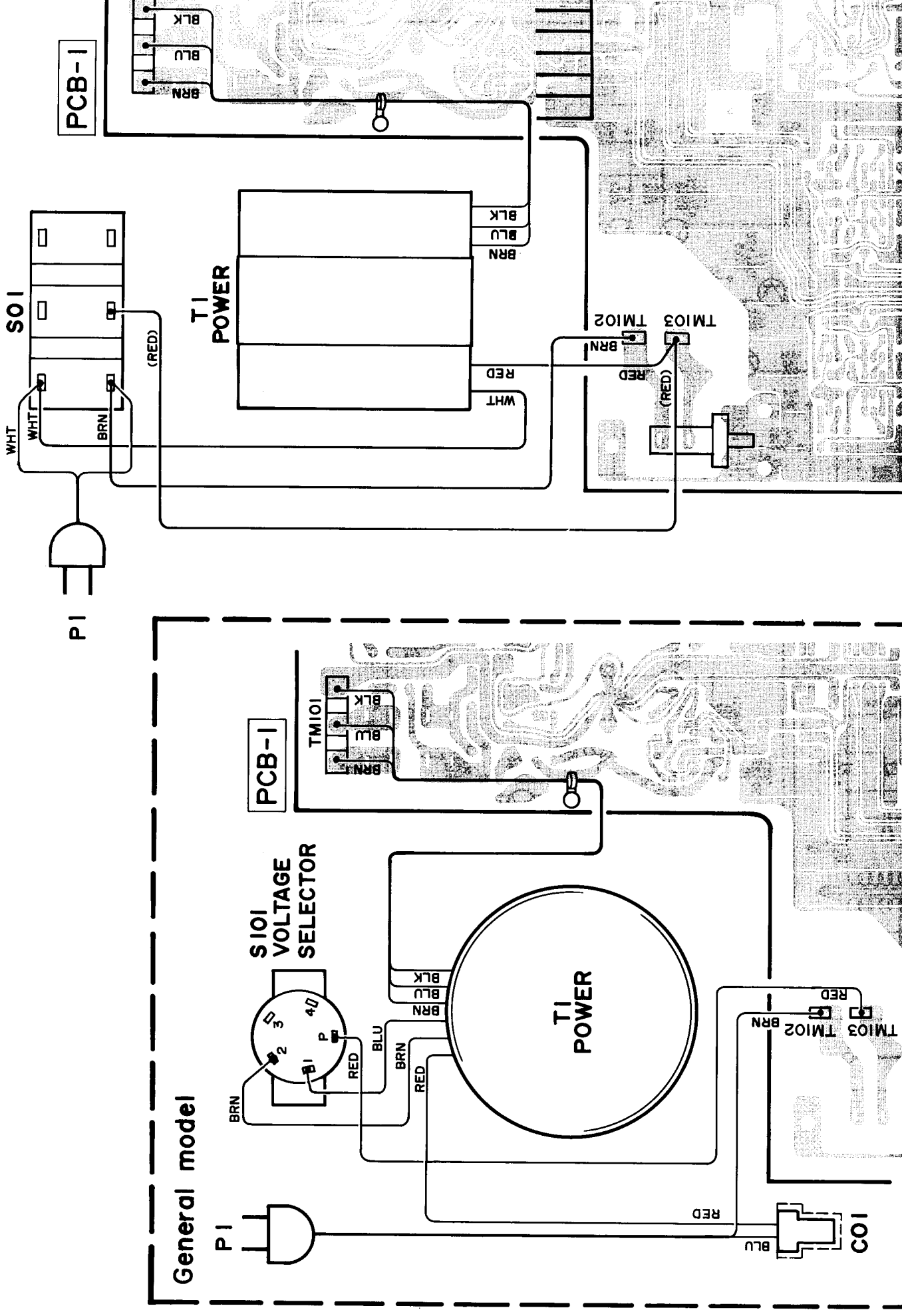
NOTE:

1. ALL RESISTANCE VALUES ARE IN Ω .
2. THE WATTAGE OF RESISTORS IS 1/4W UNLESS OTHERWISE NOTED.
3. ALL CAPACITANCE VALUES ARE IN μF UNLESS OTHERWISE NOTED.
4. ... V: DC VOLTAGE AT NO SIGNAL UNLESS OTHERWISE NOTED.
5. SAFETY REQUIREMENTS: COMPONENTS IN ACCORDANCE WITH PRESENT SAFETY REGULATIONS; THESE COMPONENTS MUST ONLY BE REPLACED BY ORIGINAL PARTS.

A B C D E F G

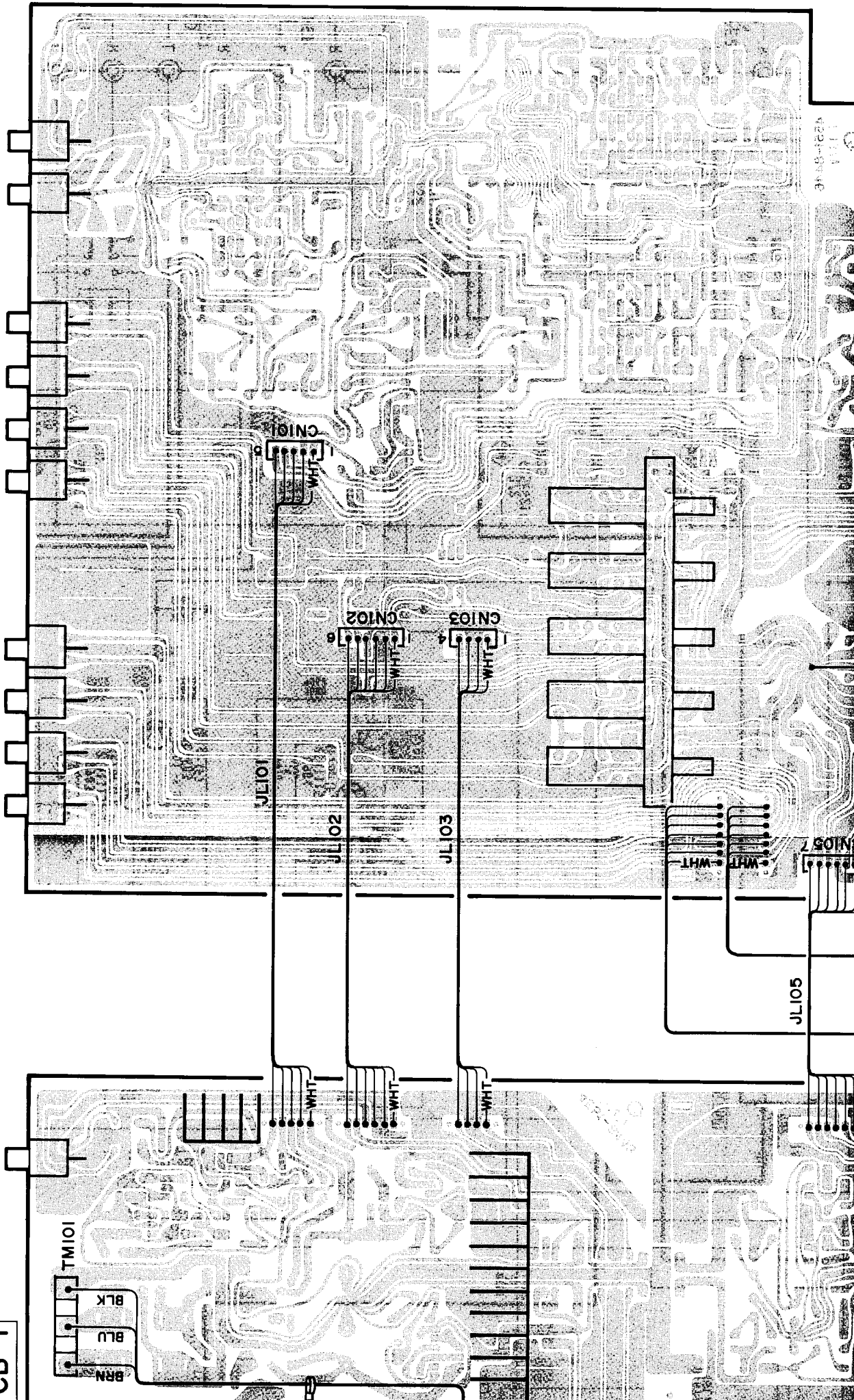
WIRING DIAGRAM

1 2 3 4 5



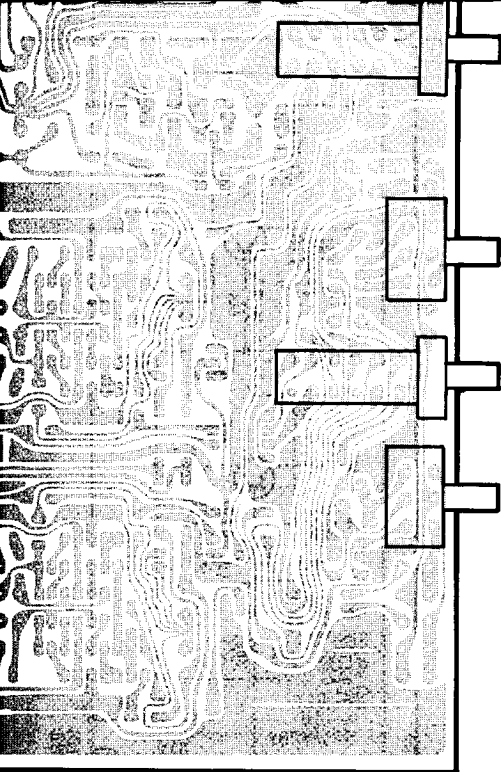
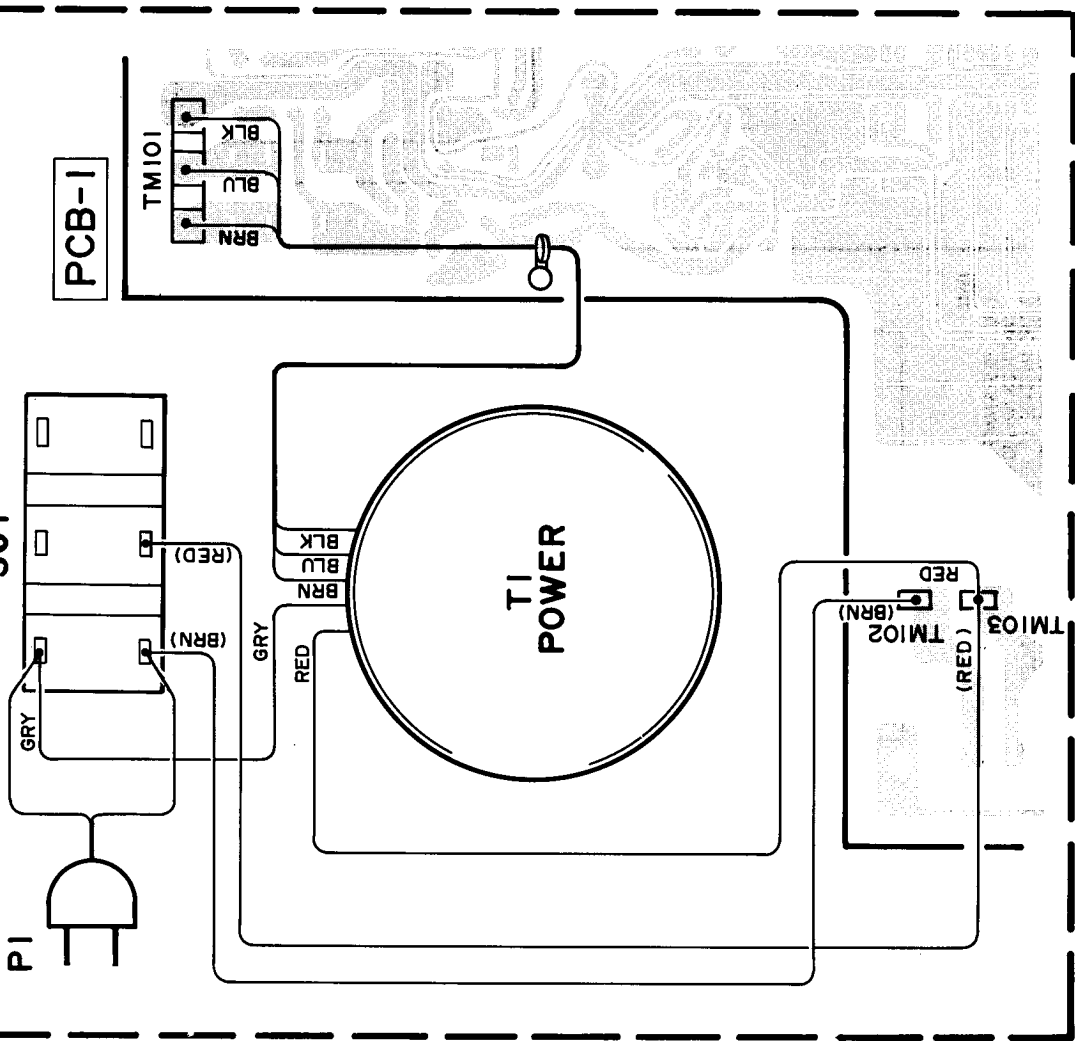
PCB-4

PCB-1

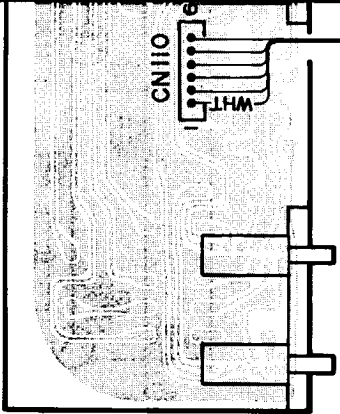




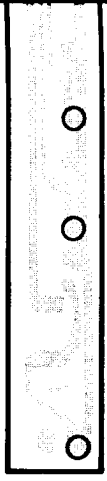
Japan model

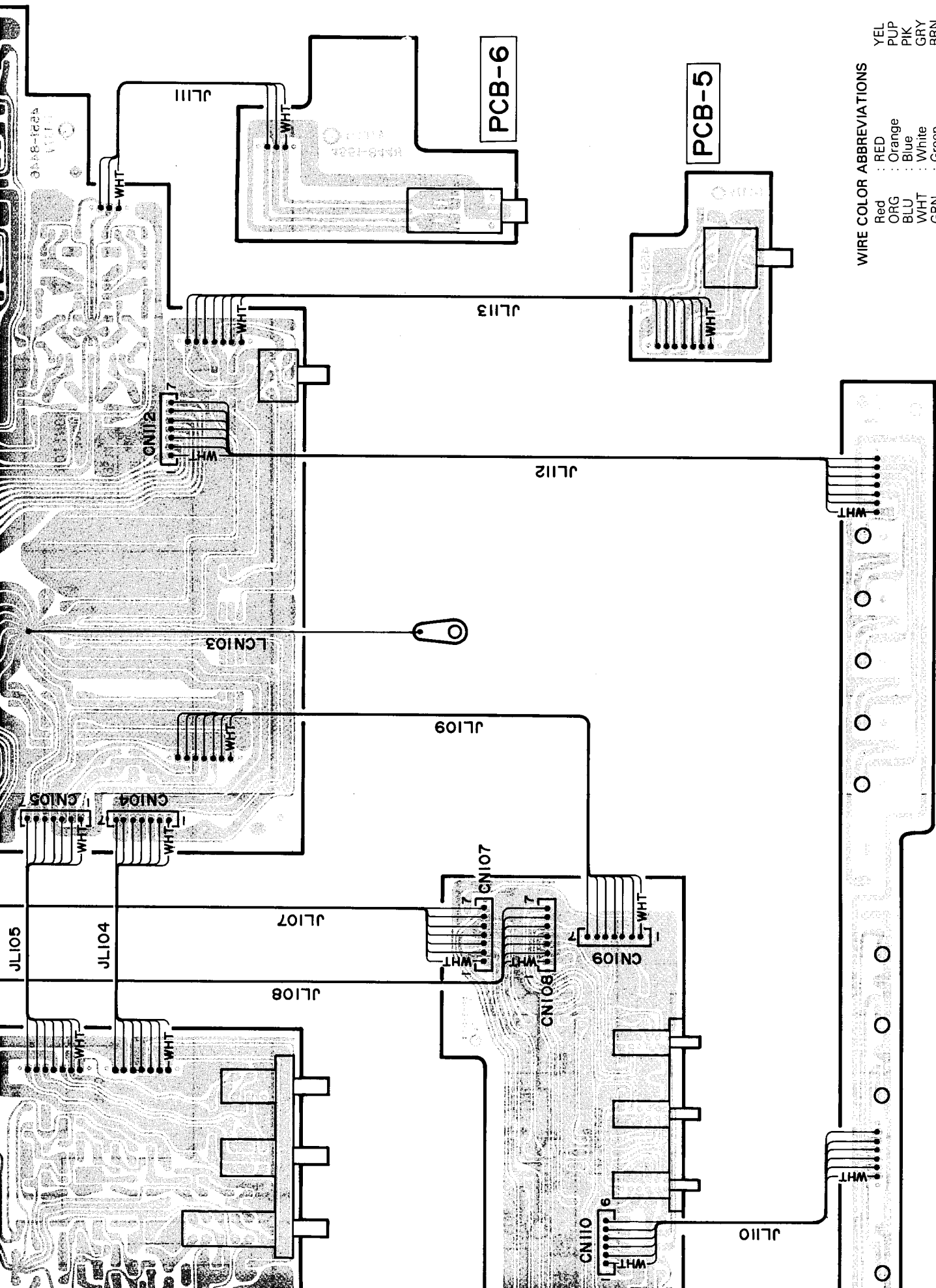


PCB-2



PCB-3





WIRE COLOR ABBREVIATIONS

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