

NAD

2200

MODEL

SERVICE MANUAL

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SPECIFICATIONS

FEATURES

- | | |
|--|---|
| <p>A. Control and Switch</p> <p>1. AC Power switch : On-off Push Type</p> <p>2. Bridging switch : Normal-Bridging Slide Type with Locking plate</p> <p>3. Soft Clipping : On-off Slide Type</p> <p>B. 1. Speaker terminal (L/R) : 4P army type binding post for banana plug</p> <p>2. AC Line Cord : UL-1 type/A-Version U.S.A.
: BS type (without plug)/B-Version U.K.
: CEE2 type/C-Version Europe
: S type/B₁-Version Australia</p> <p>3. Main Input (L/R) : RCA Type Pin Jack (2p)</p> <p>4. Lab Input (L/R) : RCA Type Pin Jack (2p)</p> | <p>C. Chassis and Circuit</p> <p>1. Display
Power (Green), Soft clipping (Yellow), Overload (Red), Protection (Red)</p> <p>D. Output Load
Speaker Output : 8 ohm/4 ohm</p> <p>E. Maximum Power Consumption : 770W</p> <p>F. AC Power Supply
: 120V 60Hz/A-Version U.S.A.
: 240V 50Hz/B-Version U.K.
: 220V 50Hz/C-Version Europe
: 240V 50Hz/B₁-Version Australia</p> <p>G. Netweight and Dimension (Approx.)</p> <p>1. Netweight : 12.5 Kg</p> <p>2. Dimensions : W=420 H=129 D=385 (mm)</p> |
|--|---|

ELECTRICAL SPECIFICATION

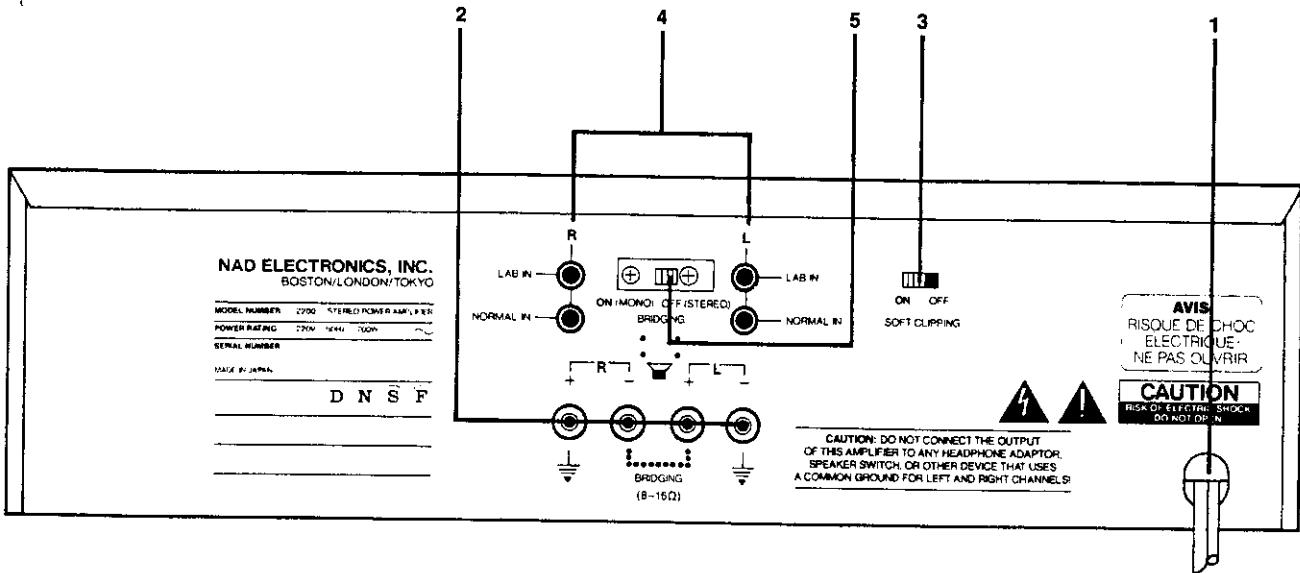
*Unless otherwise specified procedure shall be made in accordance with IHF-A202.

	Nominal	Limit	Unit		Nominal	Limit	Unit		
1. Sensitivity Input : 1000Hz Output : 100W	0.775	±1.5dB	(V)	9. Damping factor at 50Hz, 8 ohm Load	120	100			
2. Channel difference		less than 1	(dB)	10. Slew Rate	25	23	(V/u.Sec.)		
3. Output power Input : Main in Output : 0.04% THD 20-20000Hz continuous both CH. Driven		More than 100	(W)	11. Signal to noise ratio Input shorted Normal input Ref. Rated power IHF-A weighted	110	105	(dB)		
4. Clipping Power Input : Main in 8 ohm load Output : 1% THD 1 KHz continous 4 ohm load Both CH. Driven	140	125	(W)	12. Residual noise unweighted weighted	0.3 0.1	0.5 0.2	(mV)		
5. Dynamic Power Input : Main in 8 ohm Output : Clipping point 4 ohm 1 KHz 20ms IHF dynamic wave Both CH. Driven	400	350	(W)	13. Input impedance		More than 20	(Kohm)		
6. IM Distortion Input : Main in 60Hz: 7000Hz=4:1 Output : From 250mW-100W Both CH. Driven 8 ohm load		less than 0.04(%)		14. Crosstalk Between the channels of stereo equipment Input : Normal (shorted) 8 ohm load	1000 Hz 20000Hz	80 63	76 56	(dB) (dB)	
7. THD Input : Main in Output : 20-20000Hz, from 250mW-100W Both CH. Driven 8 ohm load		less than 0.04(%)		15. Soft clip level (100W) (When switched in just at onset of clipping)		4 ohm 8 ohm	-0.5 -0.5	-0.5±0.4 -0.5±0.4	(dB) (dB)
8. Frequency response Input : LAB in Output : 10W 20-20000Hz Input : Nor in at 14 Hz Output : 10W at 45KHz 600 Ohm/Ch drive, Both 12dB/ Octave		±0.5dB		16. Peak short term (1 msec) O/P current	50	45	(A)		

REAR PANEL

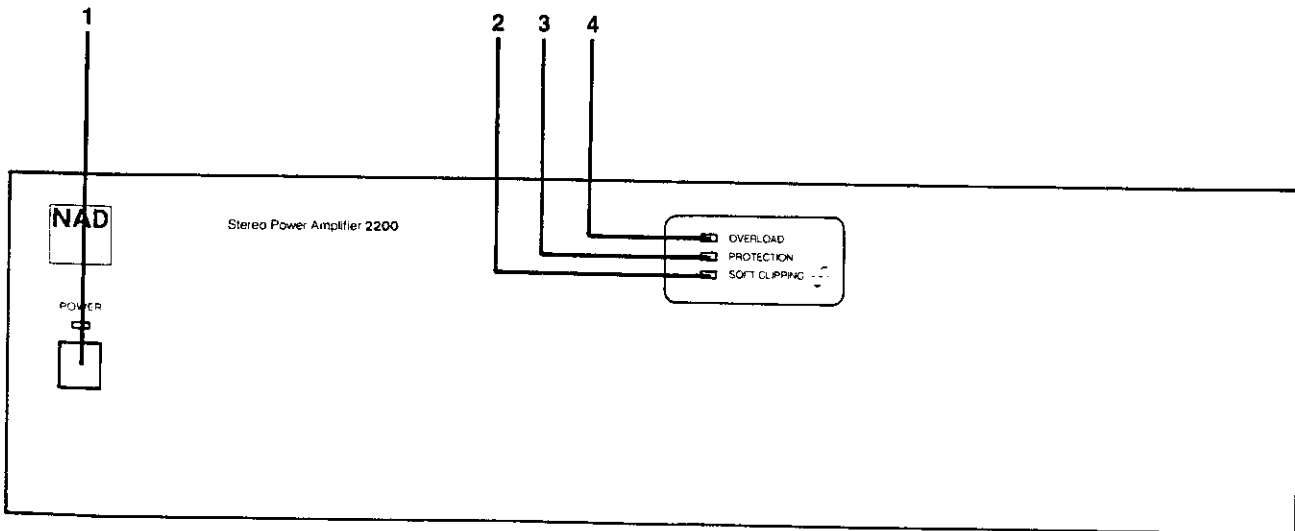
1. AC Line Cord.
2. Speaker terminals.
3. Soft Clipping.
4. Inputs (Normal and Lab).
5. Bridging.

CAUTION: DO NOT CONNECT THE OUTPUT OF THIS AMPLIFIER TO ANY HEADPHONE ADAPTOR, SPEAKER SWITCH, OR OTHER DEVICE THAT USES A COMMON GROUND FOR LEFT AND RIGHT CHANNELS.



FRONT PANEL

1. Power.
2. Soft Clipping.
3. Protection.
4. Overload.



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

TECHNICAL NOTE: FOR TESTING, CONNECT TO ONE CHANNEL AT A TIME. THE RIGHT CHANNEL IS POLARITY-INVERTING. (R+) IS CHASSIS GROUND, (R-) IS SIGNAL "HOT".

THE (+) AND (-) SYMBOLS INDICATE THE CORRECT SPEAKER CONNECTIONS FOR STEREO. IF SPEAKER SWITCHING IS REQUIRED, USE FOUR-POLE SWITCHES THAT MAINTAIN INDEPENDENT (FLOATING) GROUNDS FOR LEFT AND RIGHT CHANNELS.

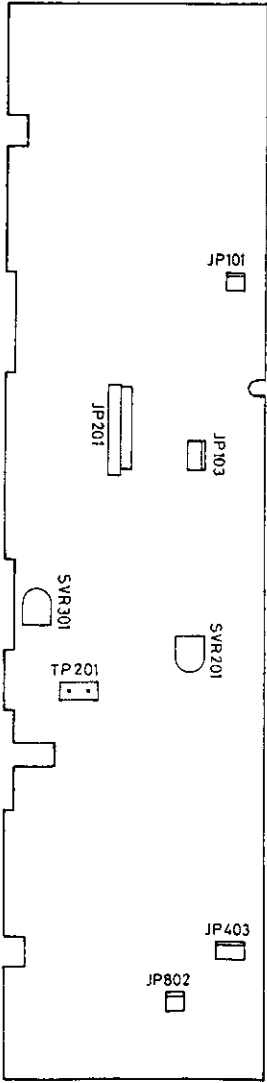
ALIGNMENT PROCEDURES

Condition

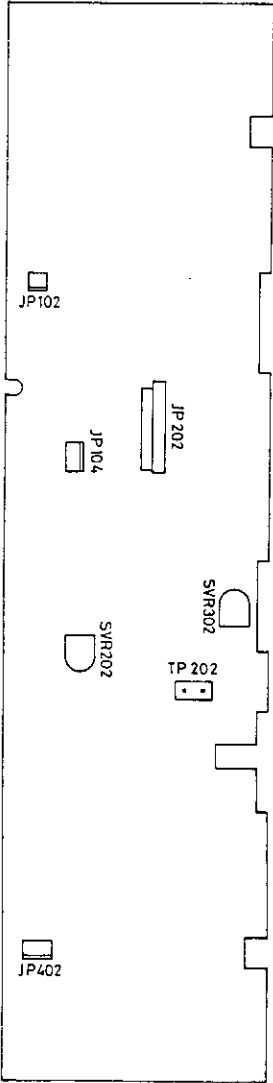
Preheat more than 15 minutes
 Speaker load 8 ohms (dummy or speaker)
 Input No signal

Step	Output Indication Connection	Adjustment	Adjust for
CENTER DC VOLTAGE			
1	DC digital voltmeter Speaker terminals	SVR201 (L ch) SVR202 (R ch)	0±5 mV
IDLING			
2	DC digital voltmeter TP201/TP202 (L/R)	SVR301 (L ch) SVR302 (R ch)	7.5±0.5mV

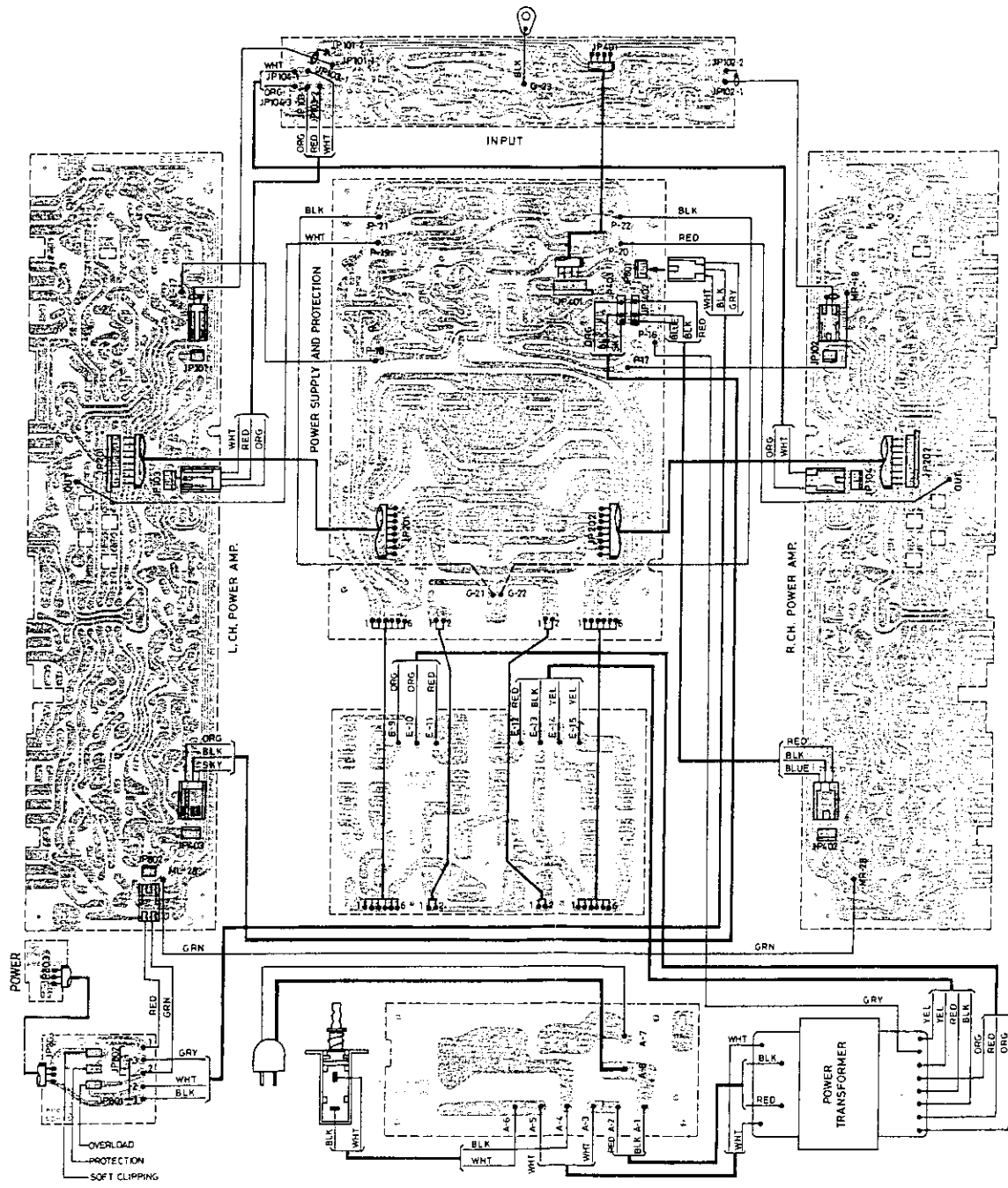
MAL-P.C. Board



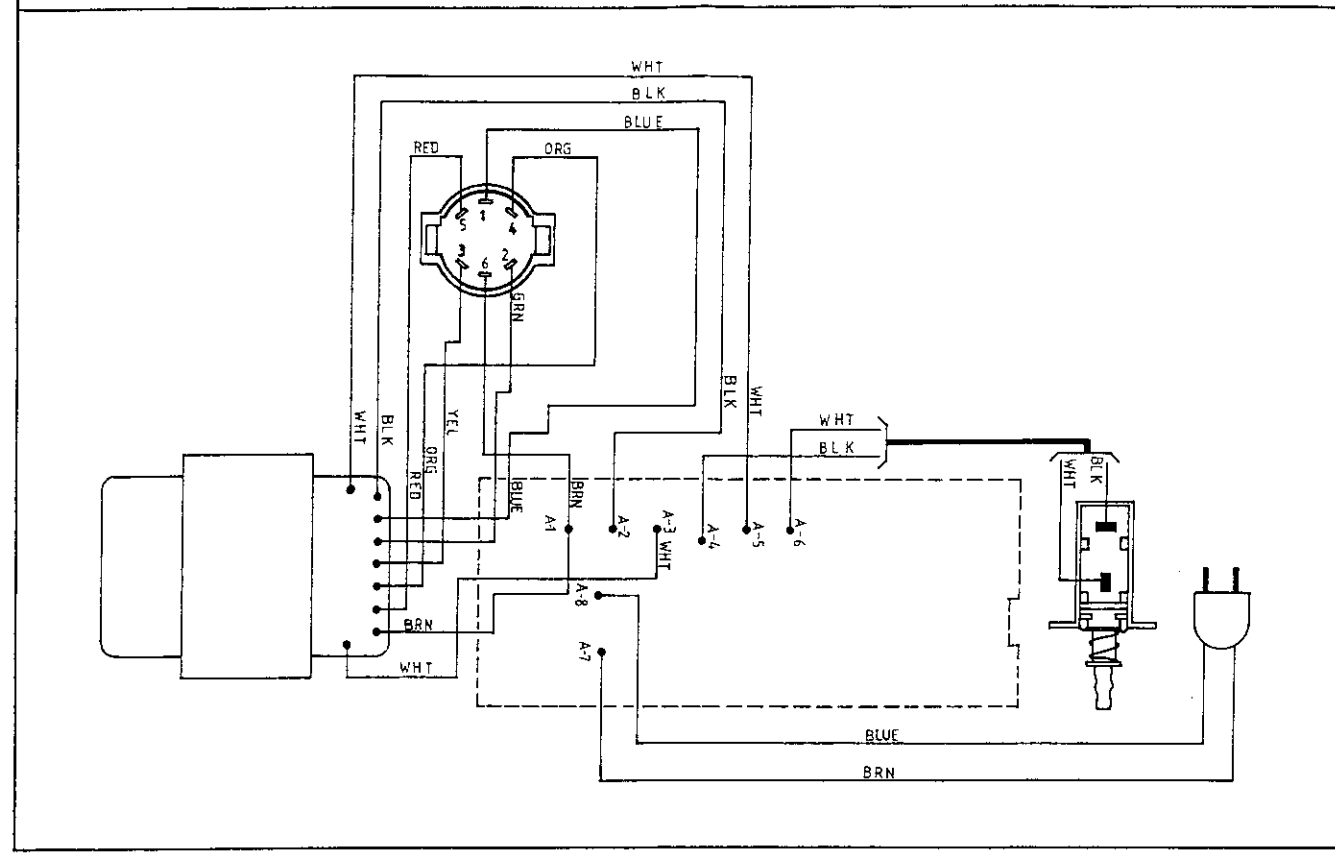
MAR-P.C. Board



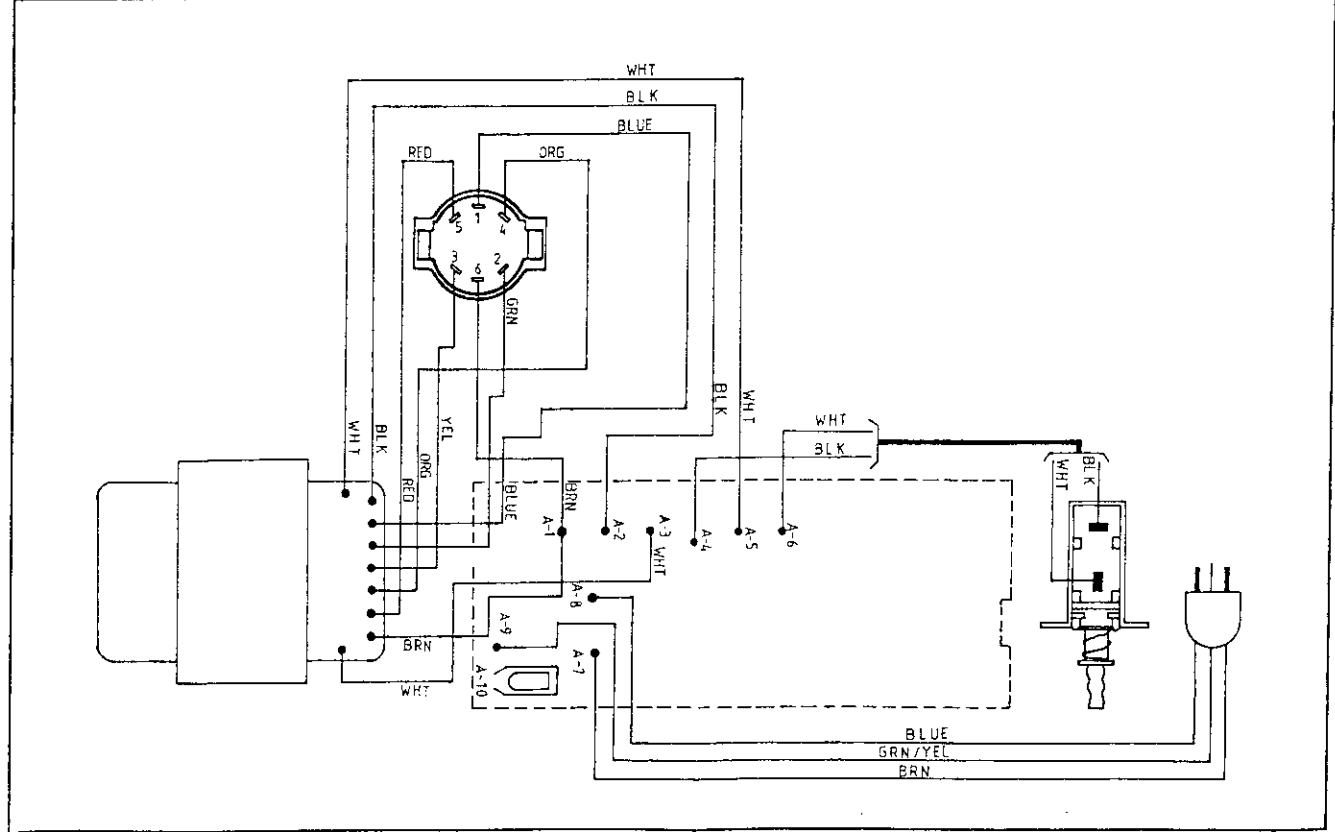
WIRING DIAGRAM (Component side)



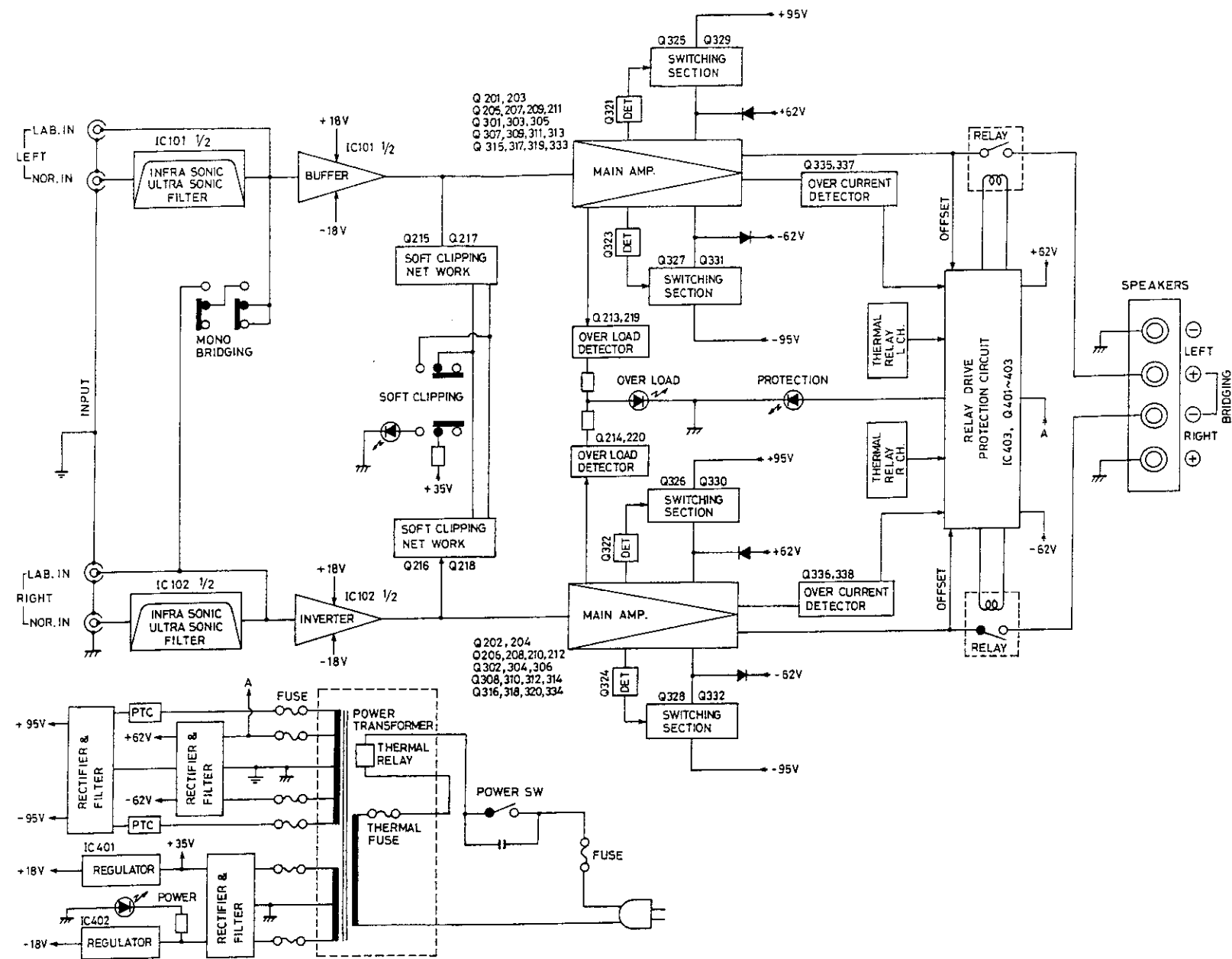
B-Version U.K.
C-Version Europe



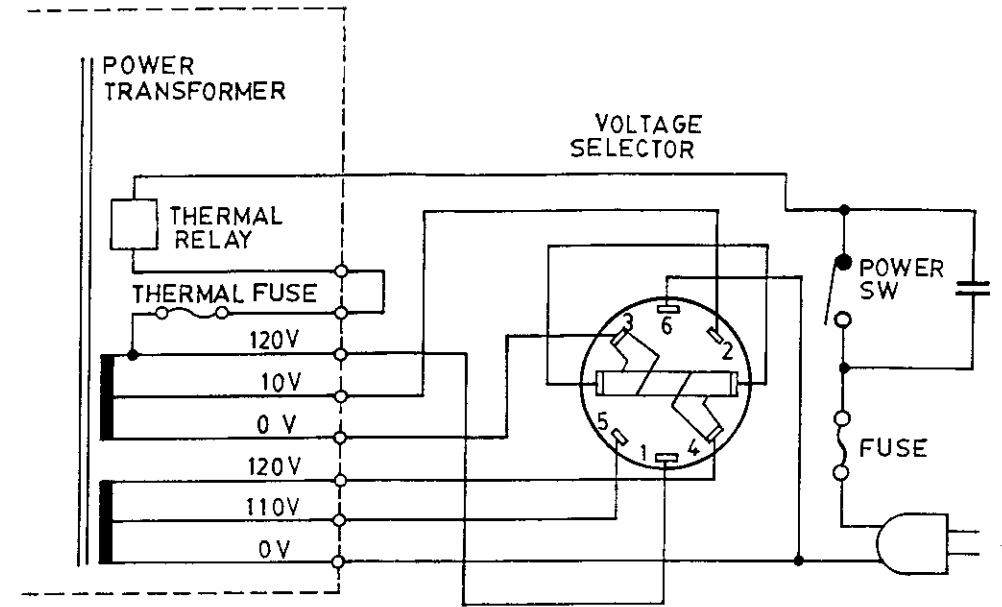
B₁-Version Australia



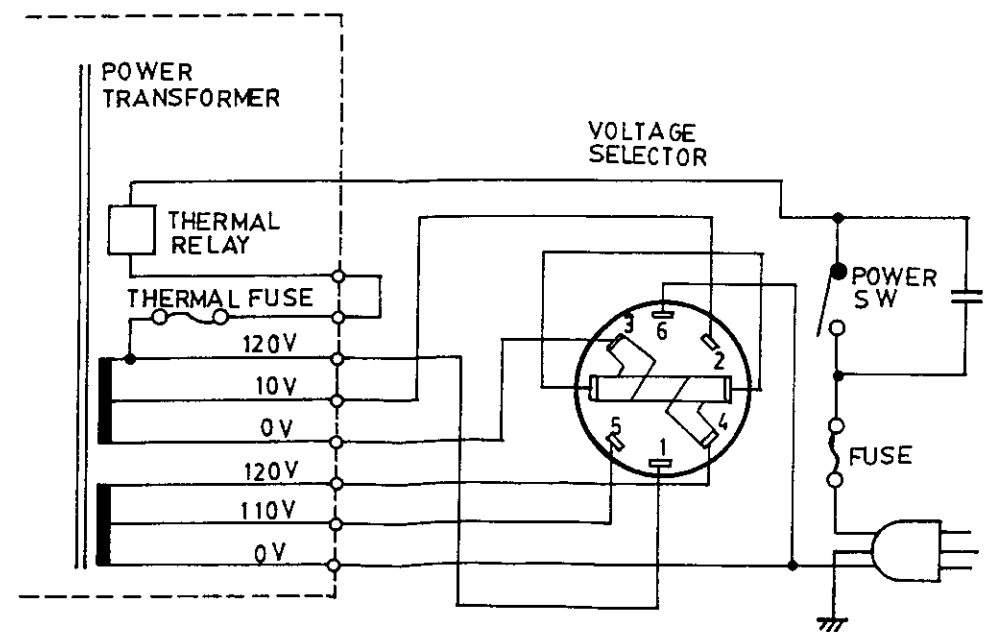
BLOCK DIAGRAM



B-Version U.K.
C-Version Europe

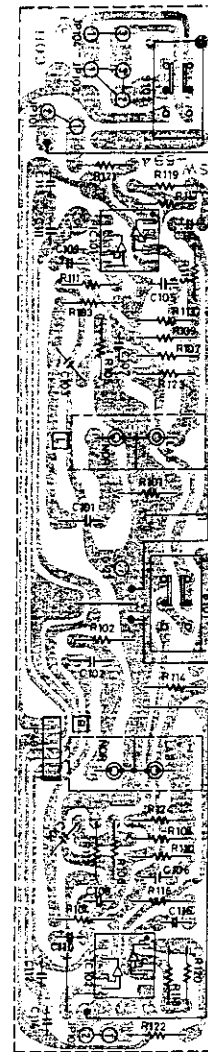
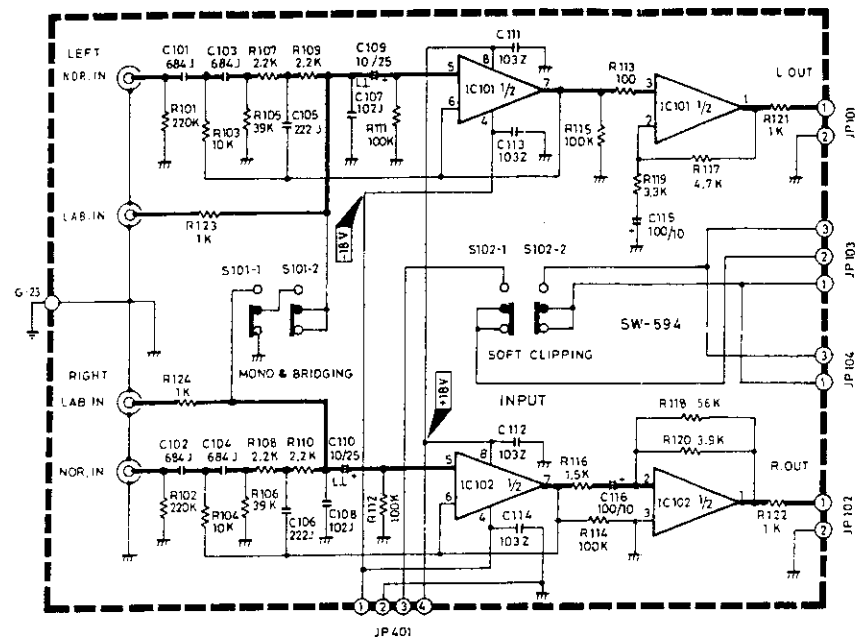


B₁-Version Australia

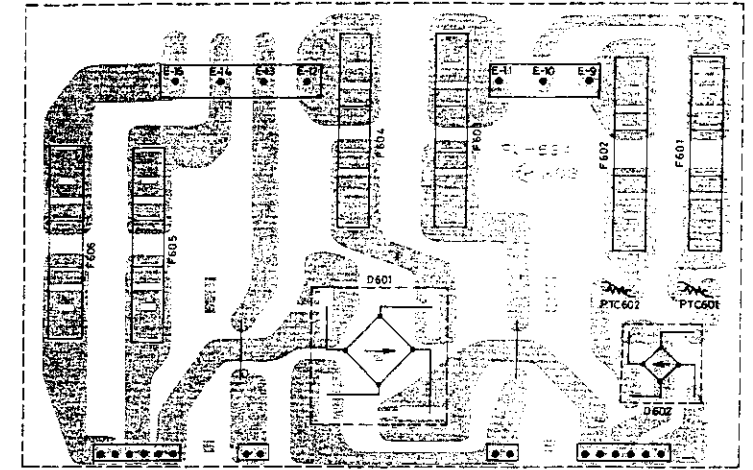
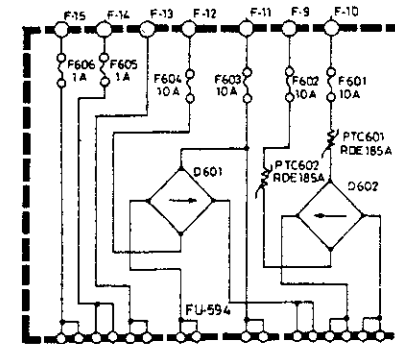


SCHEMATIC AND PCB LAYOUT (Foil side)

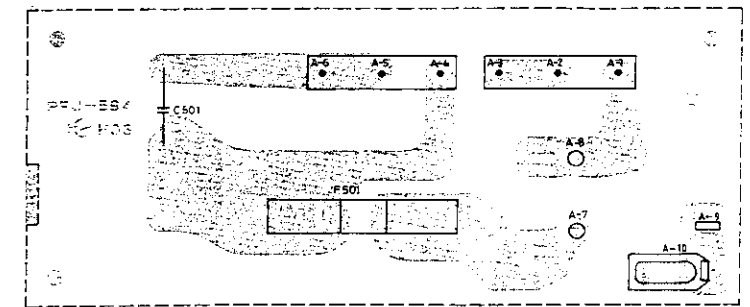
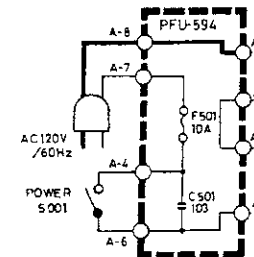
Input Circuit (SW-594)



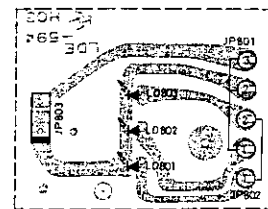
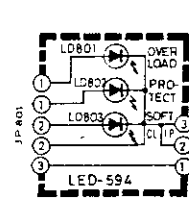
Fuse Circuit (FU-594)



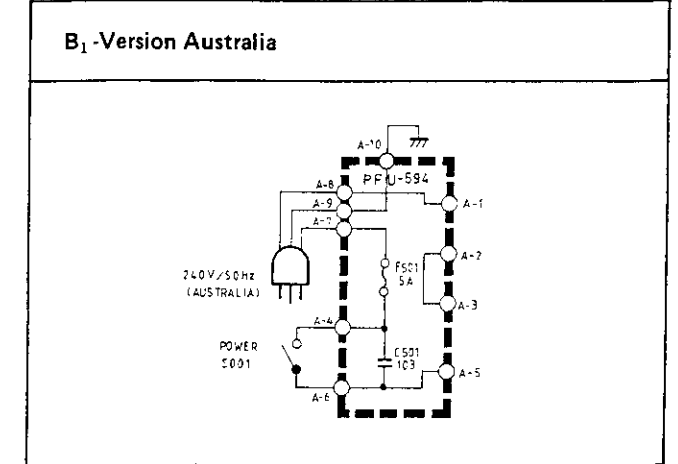
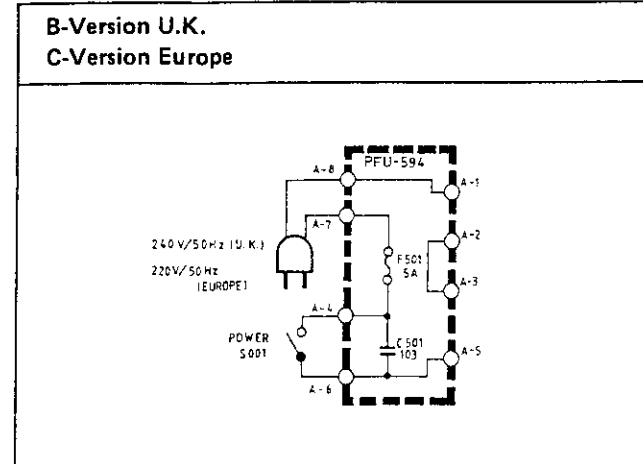
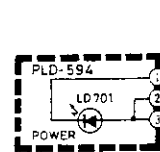
Primary Fuse Circuit (PFU-594)



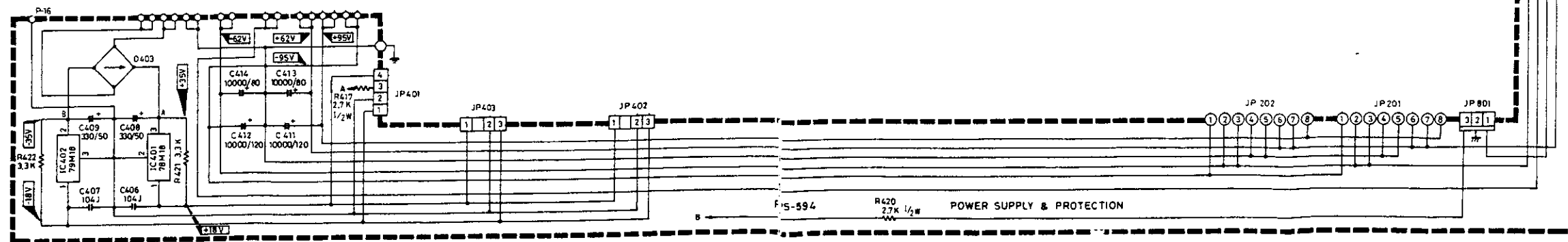
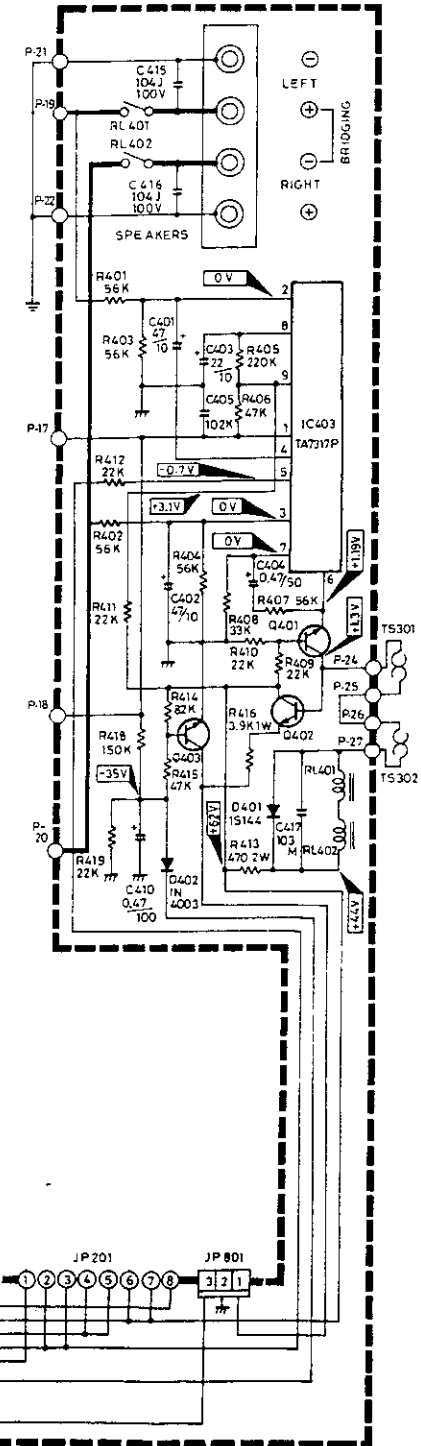
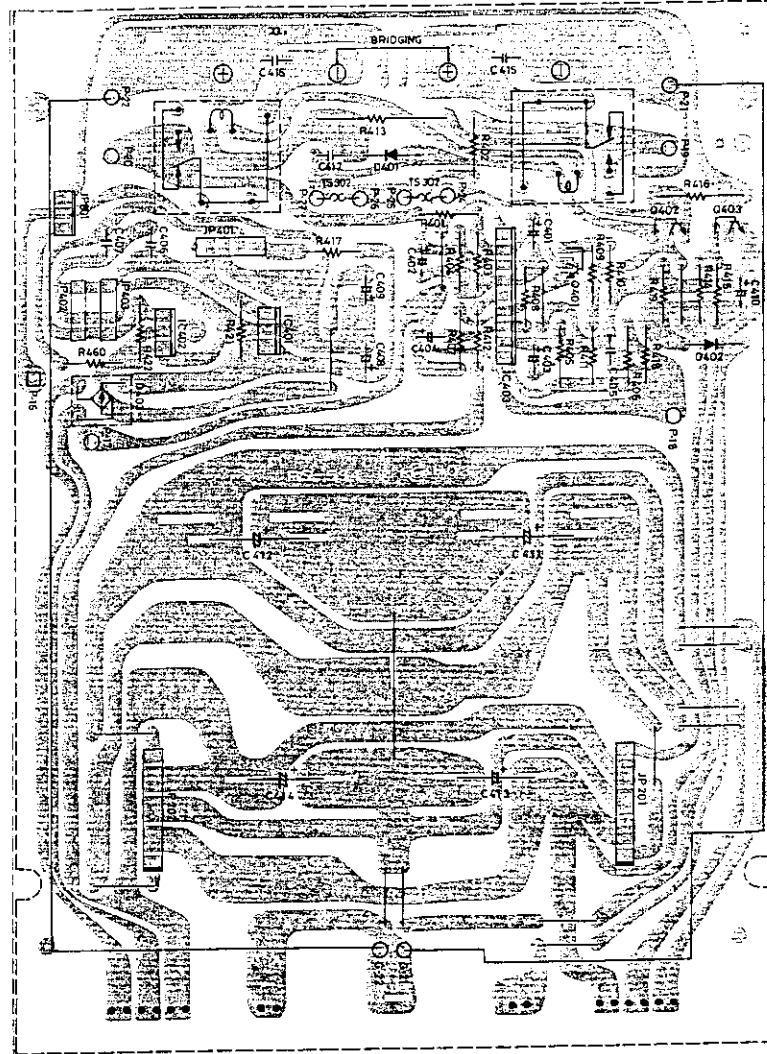
Indicators Circuit (LED-594)



Power Indicator Circuit (PLD-594)

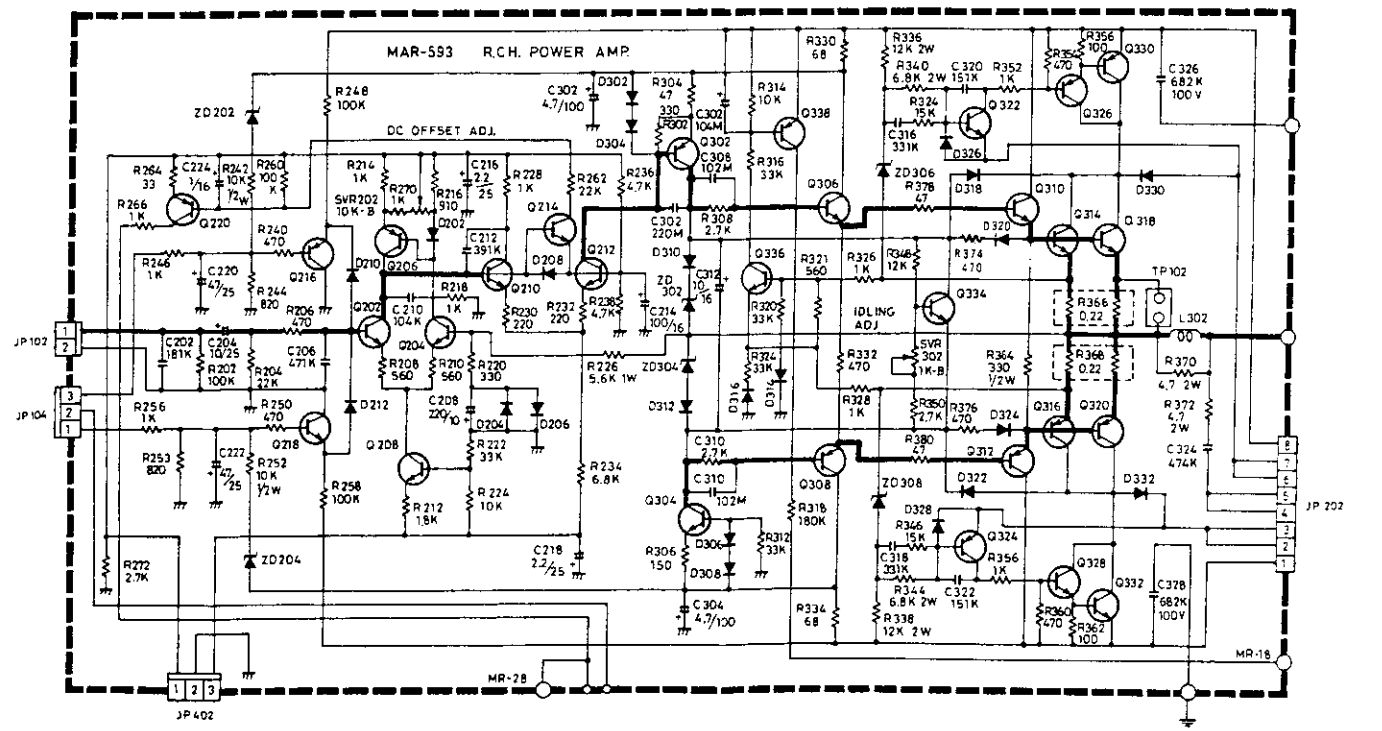
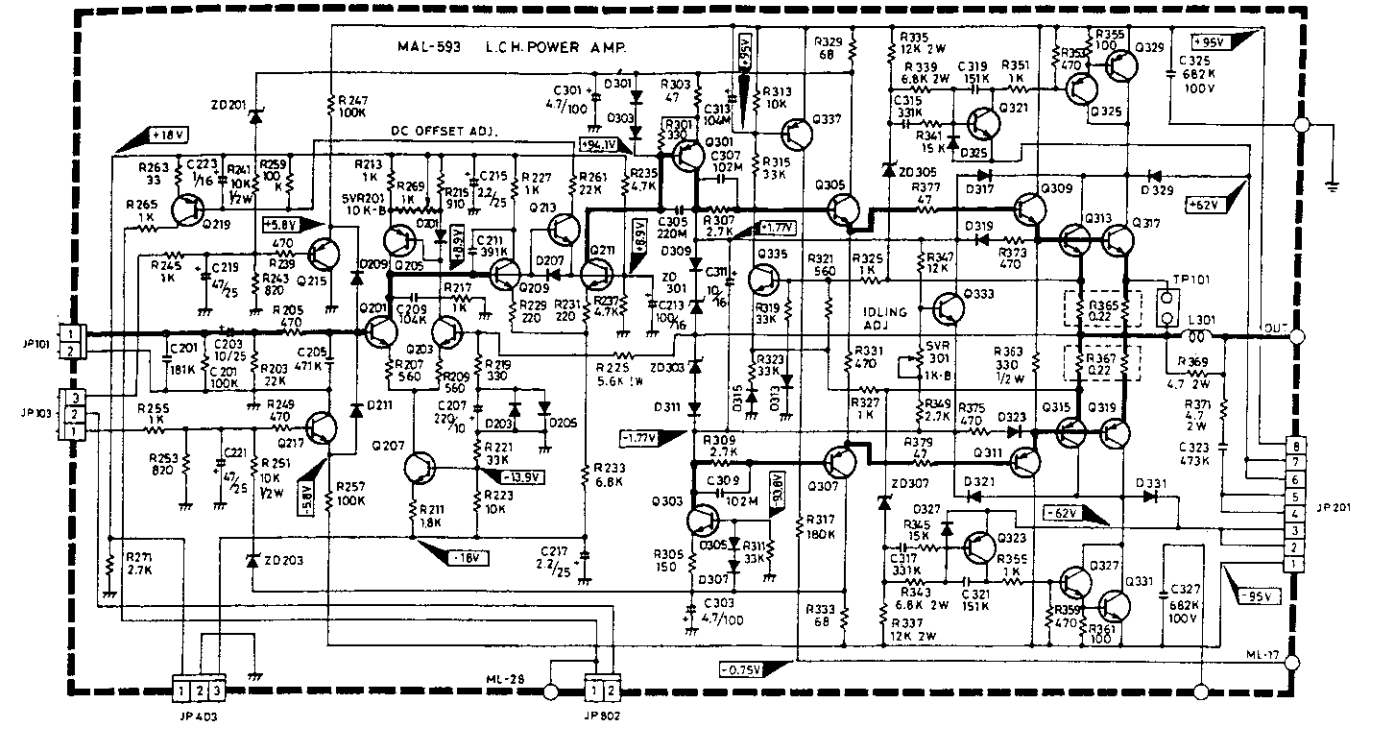
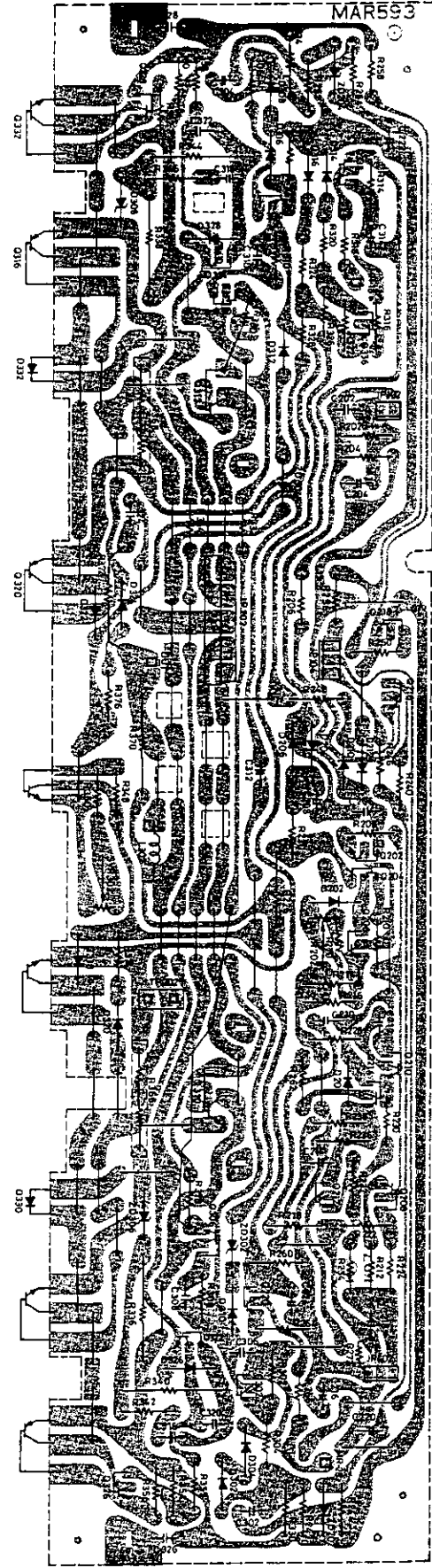
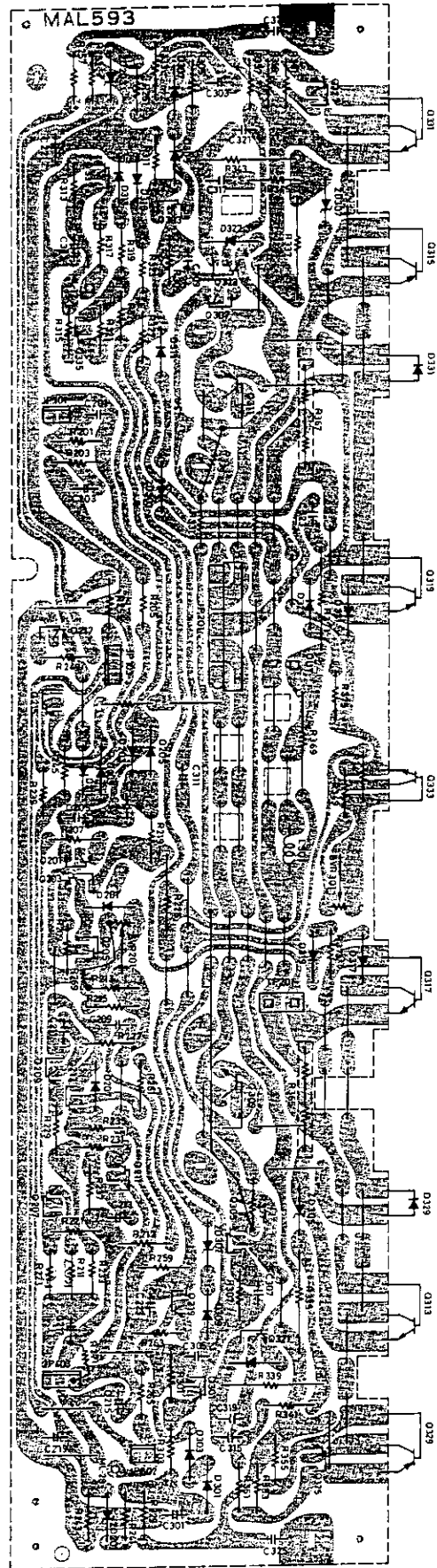


Power Supply and Protection Circuit (PS-594)



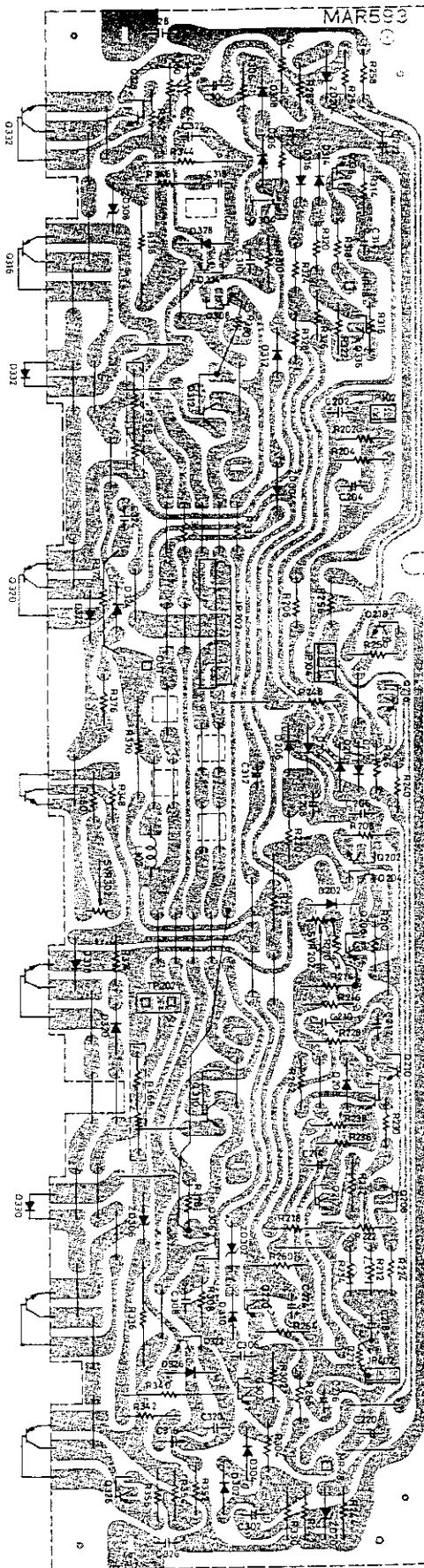
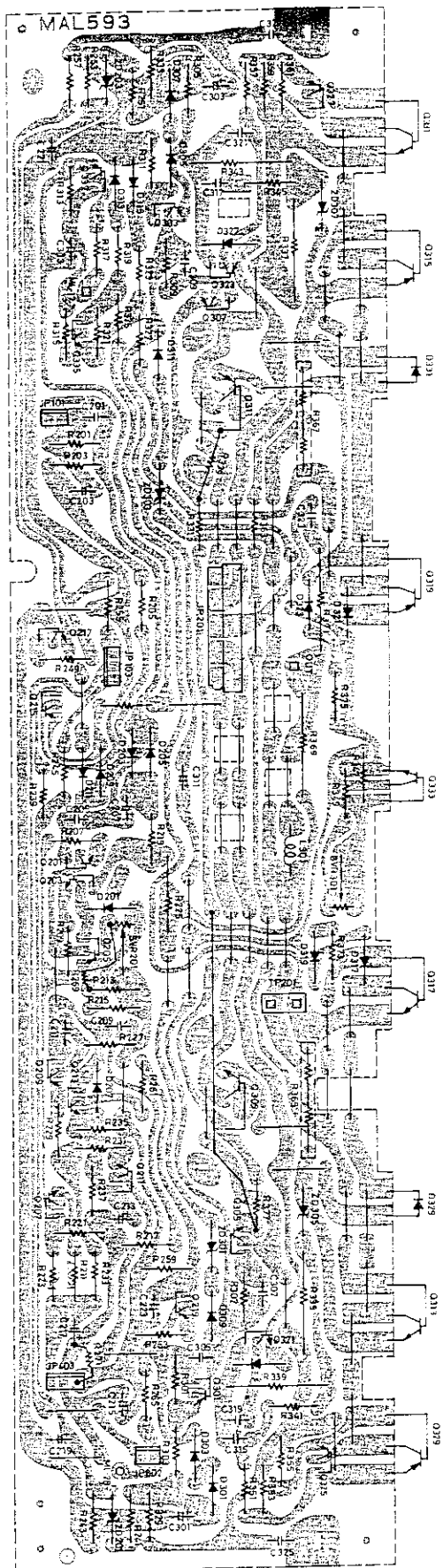
L ch Power Amp Circuit (MAL-593)

R ch Power Amp Circuit (MAR-593)

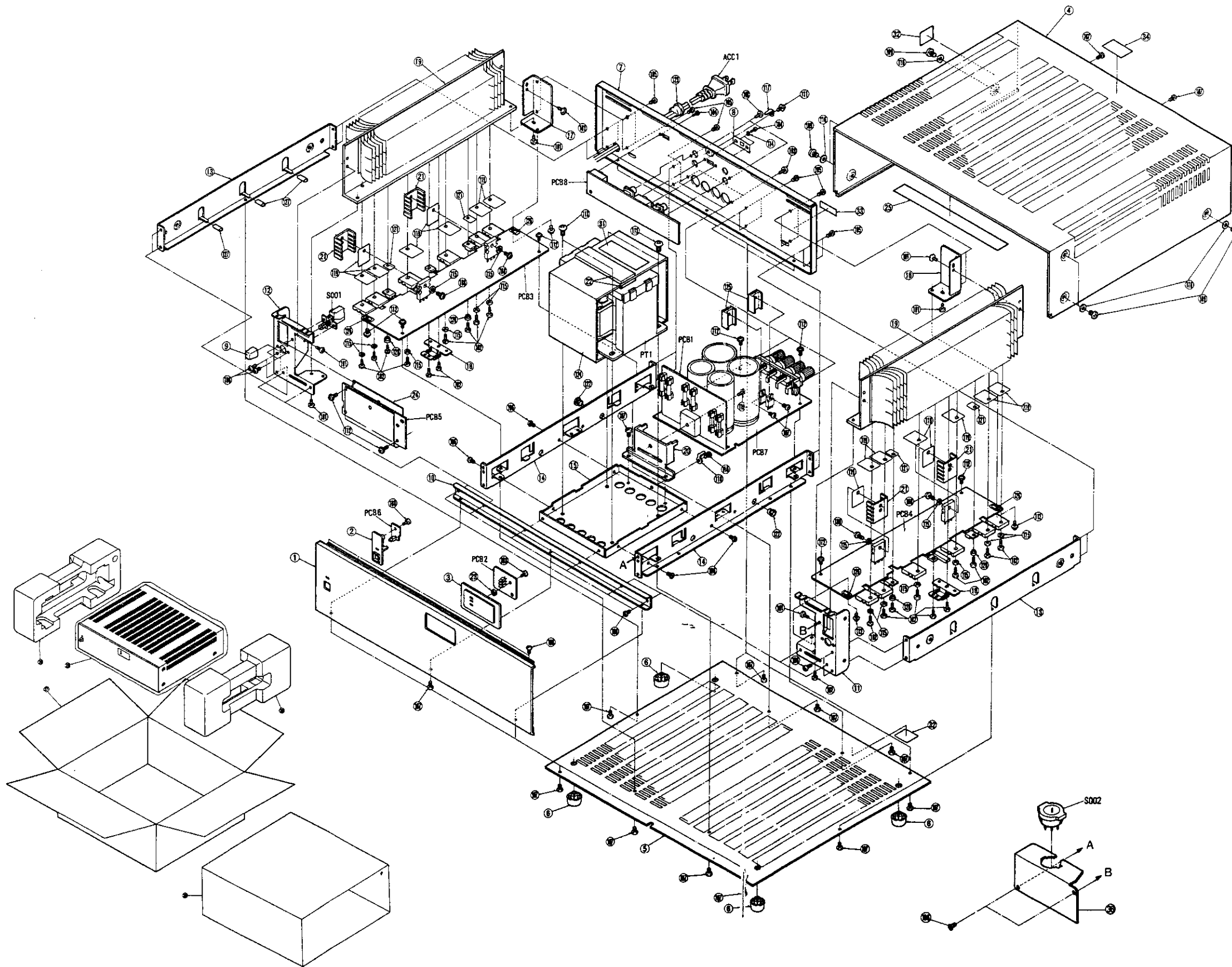


L ch Power Amp Circuit (MAL-593)

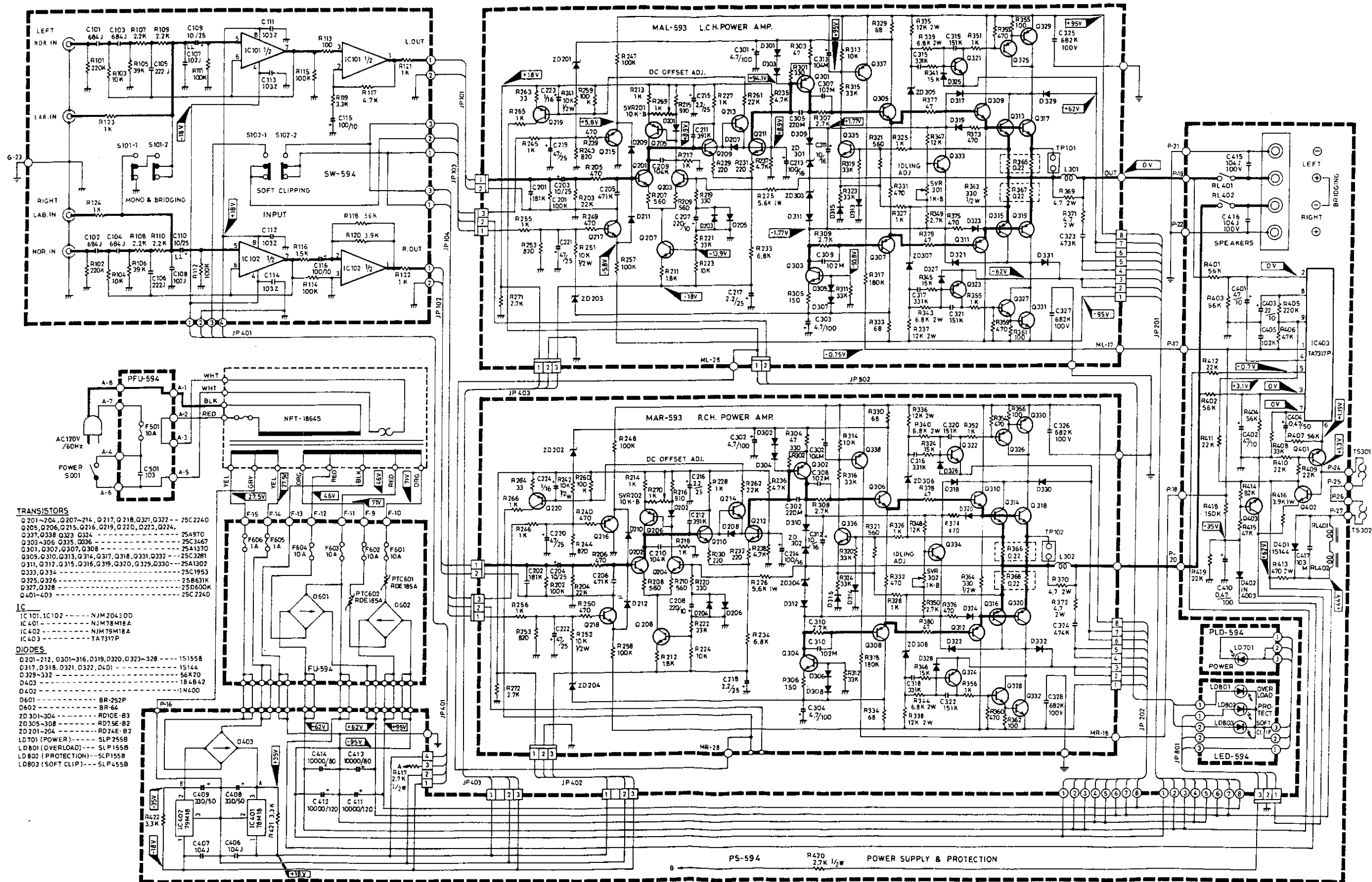
R ch Power Amp Circuit (MAR-593)



EXPLODED VIEW AND PARTS LIST



Ref. No.	Parts No.	Description
1	N21235-1	Front Panel
2	N30815	Button Guide
3	62-3470-1-0	Indicator Panel
4	N21237	Cabinet
5	N21239	Bottom Board
6	2299-1	Foot
7	N21238-1A	Rear Panel [A]
7	N21238-3A	Rear Panel [B, B ₁]
7	N21238-2B	Rear Panel [C]
8	N44236	Lock Plate
9	62-1105-1-0	Push Button
10	N30813	Front Sub Chassis
11	N44230	Front Sub Chassis R
12	N44231	Front Sub Chassis L
13	N30814	Side Chassis
14	N30812	Center Chassis
15	N30811	Support Chassis (P.T.)
16	N44232	Fittings R (Heat Sink)
17	N44233	Fittings L (Heat Sink)
18	N44235	Fittings (Thermal Relay)
19	N21240	Heat Sink
20	N44234	Heat Sink
21	SH-1230-1	Heat Sink
22	N44360	Cushion (P.T.)
23	N41946A	Washer
24	N44336	Shield Cover
25	N44295	Cabinet Mat
26	N30841	Shippings Sleeve
27	N21287	Shippings Carton
28	N21242	Packing Pad
29	N41318	Polyethylene Bag (Unit)
30	N40487	Polyethylene Bag (Accessories)
31	N41939	Label, Fuse [A]
32	N44043	Label, SA1965 (Lighting Flash) [A]
33	SL.1024	Label, Serial No.
34	N44339	Label, SP Caution
35	OM-554	Instruction Manual
36	N44441	Metal Fittings (Voltage Sele.) [B, B ₁ , C]
101	TBB+30X08-Y	Tap Screw B, Bind Head, Y
102	TBB+30X12-Y	Tap Screw B, Bind Head, Y
103	TPM+30X08-B	Tap Screw P, Round Head, B
104	TSB+26X05-B	Tap Screw S, Bind Head, B
105	TSB+30X06-B	Tap Screw S, Bind Head, B
106	TSB+30X06-Y	Tap Screw S, Bind Head, Y
107	TSB+30X08-B	Tap Screw S, Bind Head, B
108	TSB+30X10-Y	Tap Screw S, Bind Head, Y
109	TSB+40X08-B	Tap Screw S, Bind Head, B
110	TSB+40X16-Y	Tap Screw S, Bind Head, Y
111	TSC+30X06-N	Tap Screw S, Washer Faced, N
112	TSC+30X08-Y	Tap Screw S, Washer Faced, Y
113	TST+40X08-Y	Tap Screw S, Truss, Y
114	2AWX0826-05-B	Plain Washer, B
115	2AWX0830-05-Y	Plain Washer, Y
116	2AWX1040-05-B	Plain Washer, B
117	2AE-03	Lug
118	2AE-05	Lug
119	AC-261	Mica
120	B-10	Bushing
121	M-10	Mica
122	NO.5219	Bush
123	SR-4N-4	Cord Stopper [A]
123	SR-5N-4	Cord Stopper [B, B ₁ , C]
124	4B48503T	Shield Case
125	5E-25-BSB	Heat Sink
126	59BS1692	Gnd Lug
127	U9-#09B02	UL Type Tube
ACC1	ACC-035C5-9EK1	Line Cord [A]
ACC1	ACC-037D3-9EK1	Line Cord [B, C]
ACC1	ACC-038D3-9EK1	Line Cord [B ₁]
PCB1	32A1P02A-1	P.C.Board Ass'y (FU-594)
PCB2	32A1P02A-2	P.C.Board Ass'y (LED-594)
PCB3	32A1P01A	P.C.Board Ass'y (MAL-593)
PCB4	32A1P01A-1	P.C.Board Ass'y (MAR-593)
PCB5	32A1P02A-3	P.C.Board Ass'y (PFU-594)
PCB6	32A1P02A-4	P.C.Board Ass'y (PLD-594)
PCB7	32A1P02A	P.C.Board Ass'y (PS-594)
PCB8	32A1P02A-5	P.C.Board Ass'y (SW-594)
PT1	NPT-1864S	Power Transformer [A]
PT1	NPT-1862S	Power Transformer [B, B ₁ , C]
S001	ESB-99713V	Power Switch
S002	YKS11-0010	Voltage Selector [B, B ₁ , C]



DRAWING NO. CD-554
 MODEL NO. 2200A

ELECTRICAL PARTS LIST

Capacitors

Table with columns: Ref. No., Part No., Description. Lists various capacitor models and their specifications.

Resistors

Table with columns: Ref. No., Part No., Description. Lists various resistor models and their specifications.

Main table with columns: Ref. No., Part No., Description. Lists a wide range of electronic components including resistors, capacitors, diodes, and transistors.

Miscellaneous

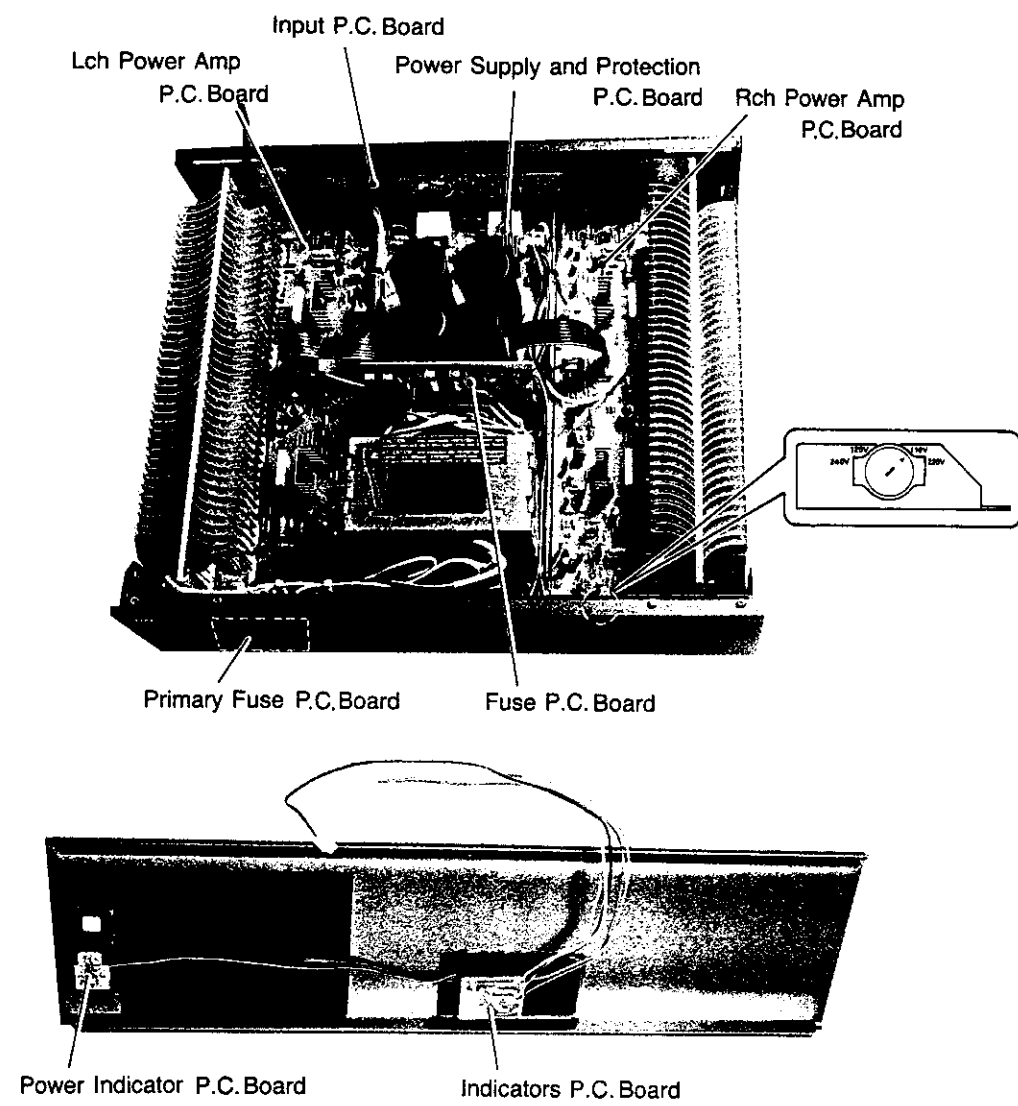
Table with columns: Ref. No., Part No., Description. Lists various miscellaneous electronic components like fuses, relays, and sockets.

Table with columns: Ref. No., Part No., Description. Lists various diode and transistor models.

Semiconductors

Table with columns: Ref. No., Part No., Description. Lists various semiconductor components like diodes and transistors.

P.C.BOARDS AND Vol. Sel. SW LOCATION



VOLTAGE CONVERSION

The units for U.K., Australia, and Europe are incorporated with voltage selectors. When changing the voltage, set up the mark "▷" of the selector to an appropriate indication voltage as shown in the figure.

