
NAD SERVICE MANUAL

IMPORTANT NOTICE:

THIS MANUAL SUPPLEMENTS THE NAD 2200
SERVICE MANUAL AND SHOULD BE USED FOR UNITS
WITH SERIAL NOS. 6010010 ONWARD.

2200PE

POWER AMPLIFIER

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SPECIFICATIONS

FEATURES

- | | | | |
|-------------------------------------|---|---|---|
| A. Control and Switch | | C. Chassis and Circuit | |
| 1. AC Power switch | : On-off Push Type | 1. Display | |
| 2. Bridging switch | : Normal-Bridging Slide Type with Locking plate | Power (Green), Soft clipping (Yellow), Overload (Red), Protection (Red) | |
| 3. Soft Clipping | : On-off Slide Type | D. Output Load | |
| B. 1. Speaker terminal (L/R) | : 4P army type binding post for banana plug | Speaker Output | : 8 ohm/4 ohm |
| 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/B ₁ -Version Australia | E. Maximum Power Consumption | : 770W |
| 3. Main Input (L/R) | : RCA Type Pin Jack (2p) | F. AC Power Supply | : 120V 60Hz/A-Version U.S.A.
: 240V 50Hz/B-Version U.K.
: 220V 50Hz/C-Version Europe
: 240V 50Hz/B ₁ -Version Australia |
| 4. Lab Input (L/R) | : RCA Type Pin Jack (2p) | G. Netweight and Dimension (Approx.) | |
| | | 1. Netweight | : 12.5 Kg |
| | | 2. Dimensions | : W=420 H=129 D=385 (mm) |

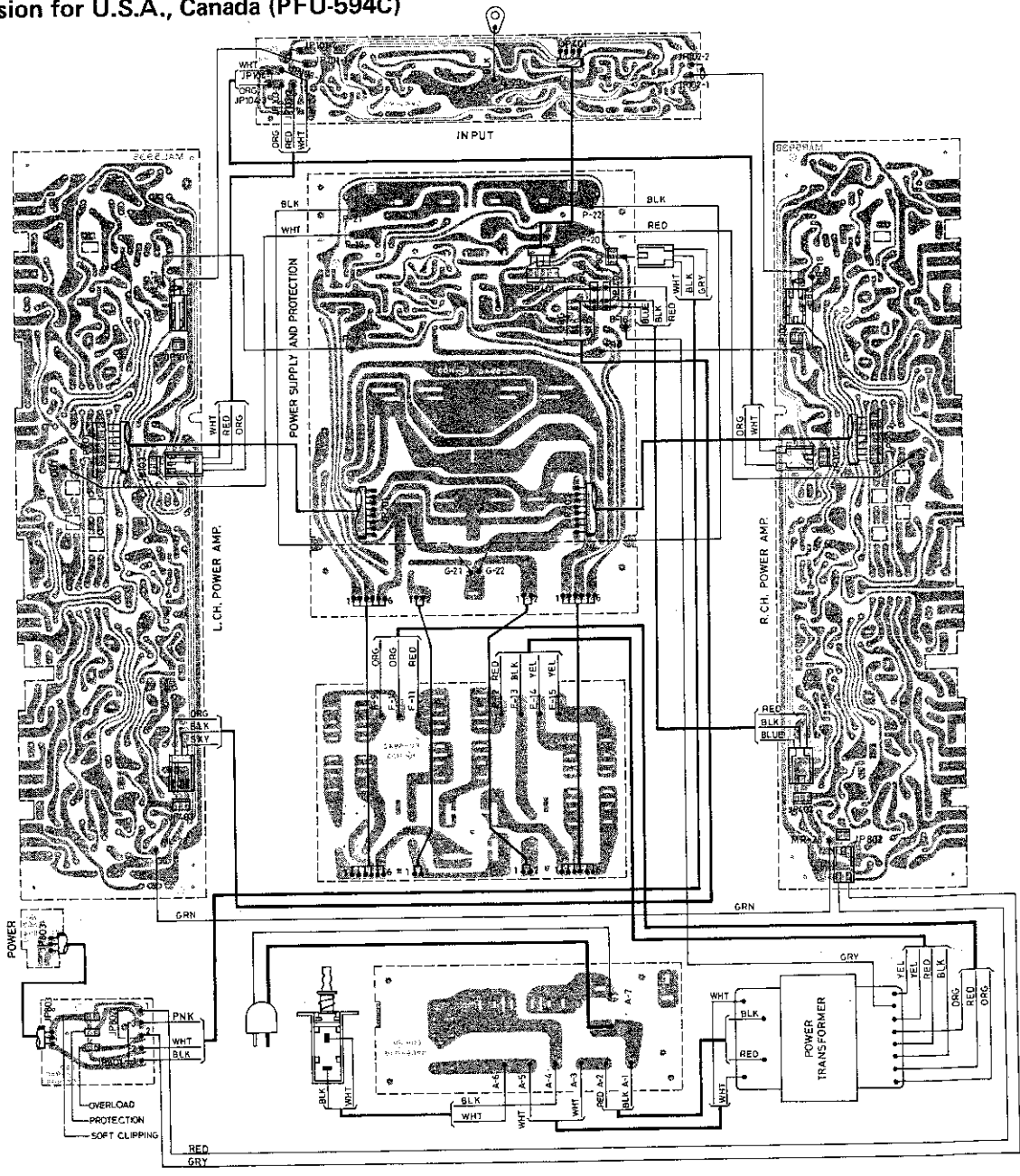
ELECTRICAL SPECIFICATION

	Nominal	Limit	Unit		Nominal	Limit	Unit
1. Sensitivity	0.775	±1.5dB	(V)	9. Damping factor	120	100	
Input : 1000Hz				at 50Hz, 8 ohm Load			
Output : 100W				10. Slew Rate	25	23	(V/u.Sec.)
2. Channel difference		less than 1	(dB)	11. Signal to noise ratio			
3. Output power				Input shorted	110	105	(dB)
Input : Main in				Normal input			
Output : 0.04% THD		More than 100 (W)		Ref. Rated power			
20-20000Hz continuous both				IHF-A weighted			
CH. Driven				12. Residual noise	unweighted	0.3	0.5 (mV)
4. Clipping Power				weighted	0.1	0.2	
Input : Main in 8 ohm load	140	125	(W)	13. Input impedance		More than 20 (Kohm)	
Output : 1% THD				14. Crosstalk			
1 KHz continuous	200	180	(W)	Between the channels of stereo			
Both CH. Driven				equipment			
5. Dynamic Power				Input : Normal (shorted)			
Input : Main in 8 ohm	400	350	(W)	8 ohm load			
Output : Clipping point 4 ohm	500	440	(W)	1000 Hz	80	76	(dB)
1 KHz 20ms IHF dynamic wave				20000Hz	63	56	(dB)
Both CH. Driven				15. Soft clip level (100W)			
6. IM Distortion				(When switched in just at onset			
Input : Main in 60Hz:		less than 0.04(%)		of clipping)			
7000Hz=4:1				4 ohm	-0.5	-0.5±0.4	(dB)
Output : From 250mW-100W				8 ohm	-0.5	-0.5±0.4	(dB)
Both CH. Driven 8 ohm load				16. Peak short term (1 msec)	50	45	(A)
7. THD				O/P current			
Input : Main in							
Output : 20-20000Hz, from		less than 0.04(%)					
250mW-100W							
Both CH. Driven 8 ohm load							
8. Frequency response							
Input : LAB in		±0.5dB					
Output : 10W							
20-20000Hz							
Input : Nor in at 14 Hz	-3	-3±1.5	(dB)				
Output : 10W at 45KHz	-3	-3±1.5	(dB)				
600 Ohm/Ch drive, Both 12dB/							
Octave							

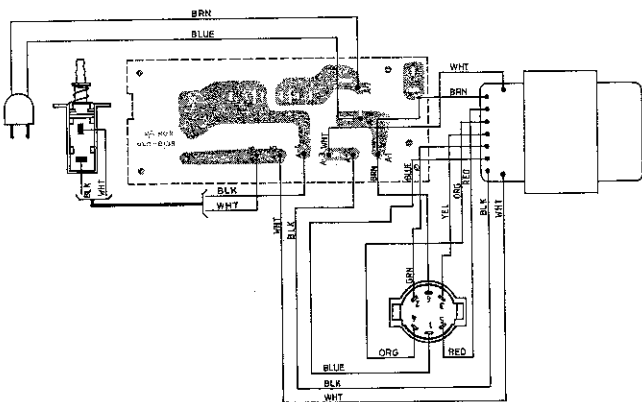
* Unless otherwise specified procedure shall be made in accordance with IHF-A202.

WIRING DIAGRAM (Component side)

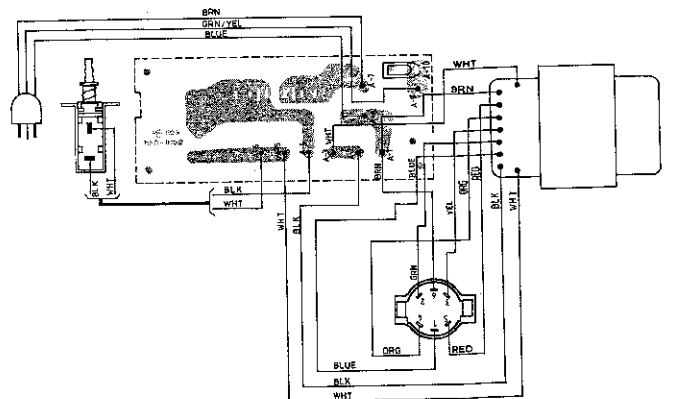
A, A₁ -Version for U.S.A., Canada (PFU-594C)



B, C, C₁ -Version for U.K., Scandinavia, W.Germany (PFU-610B)

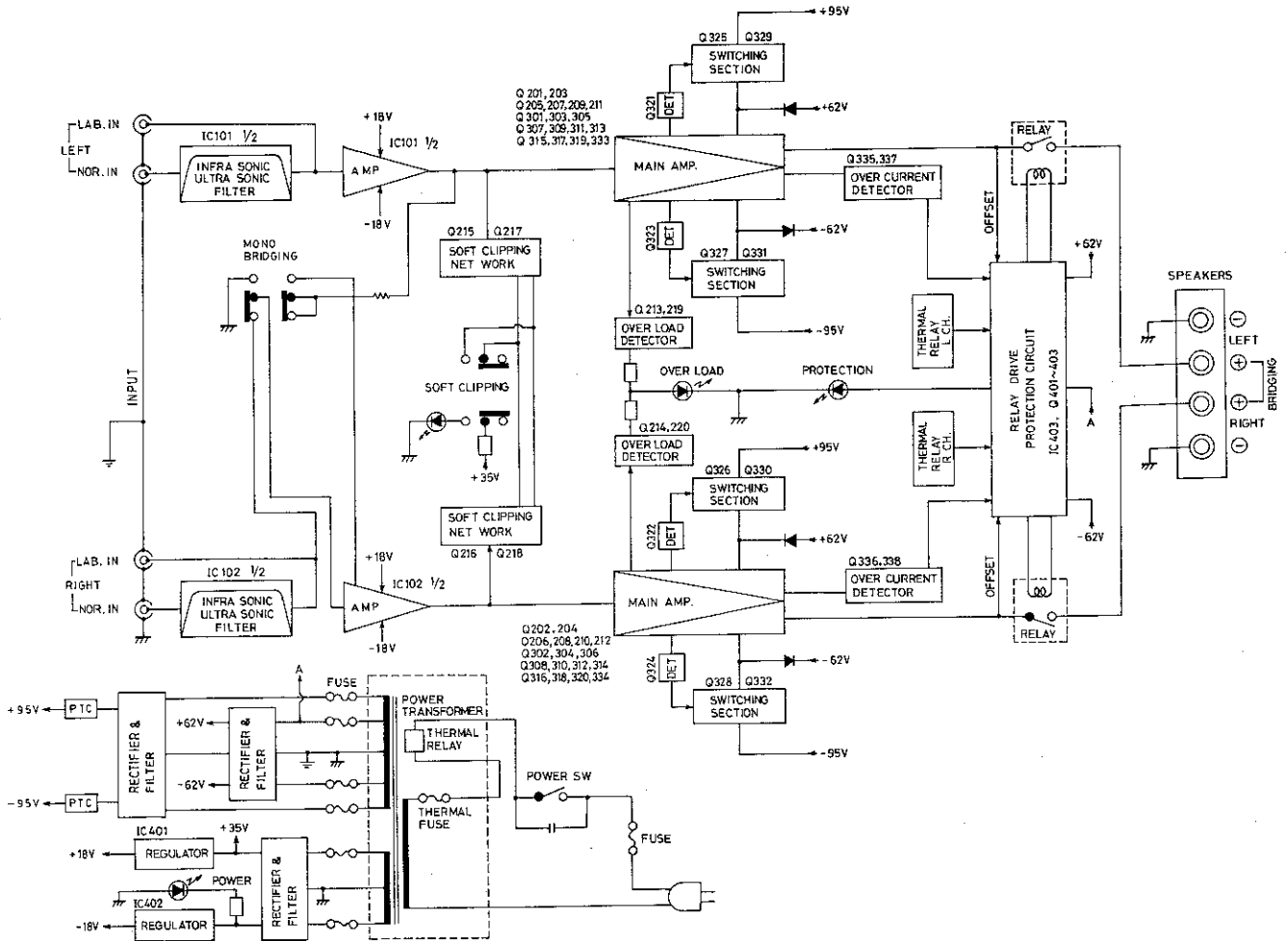


B₁ -Version for Australia/N.Z. (PFU-610B)



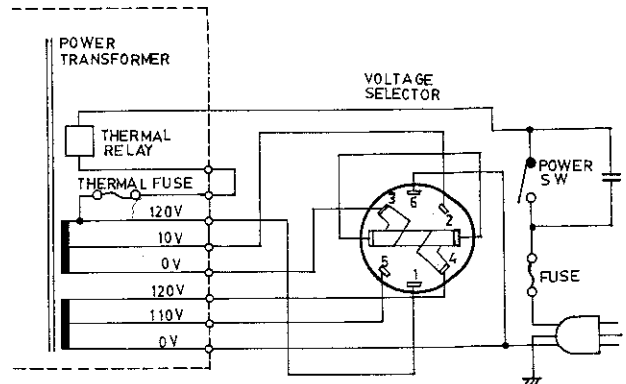
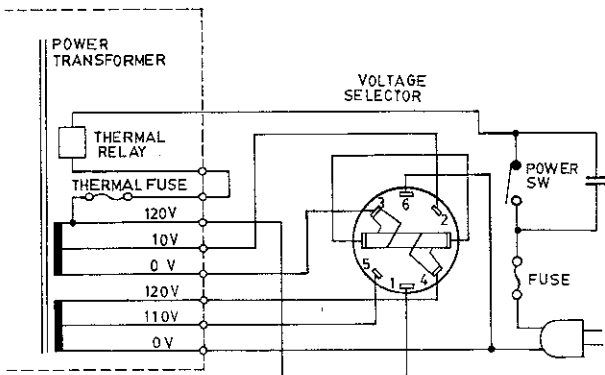
BLOCK DIAGRAM

A, A₁ -Version for U.S.A., Canada (PFU-594C)



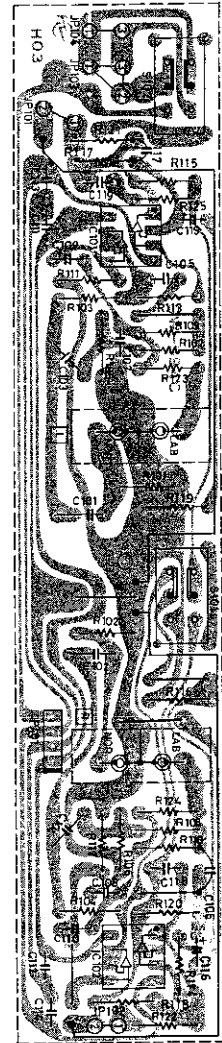
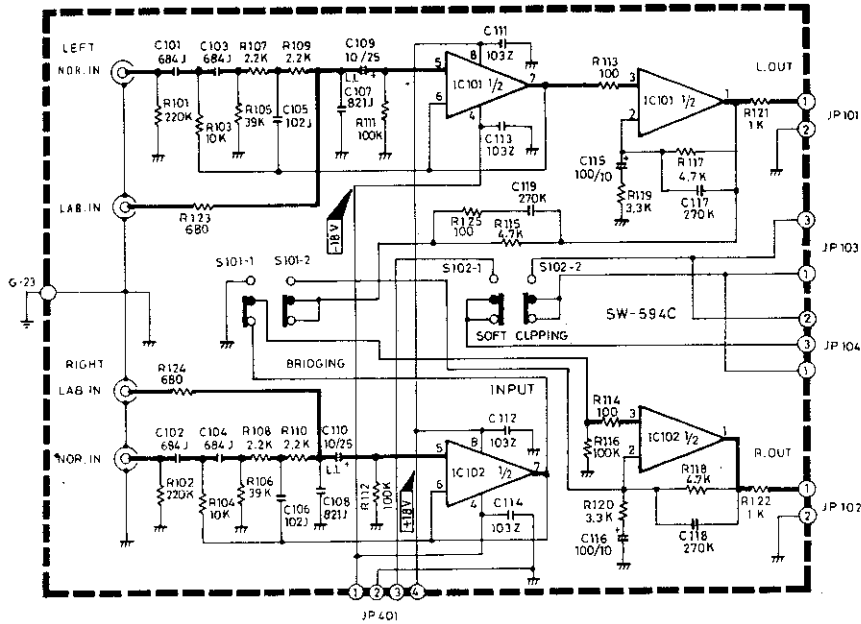
B, C, C₁ -Version for U.K., Scandinavia, W.Germany
(PFU-610B)

B₁ -Version for Australia/N.Z. (PFU-610B)

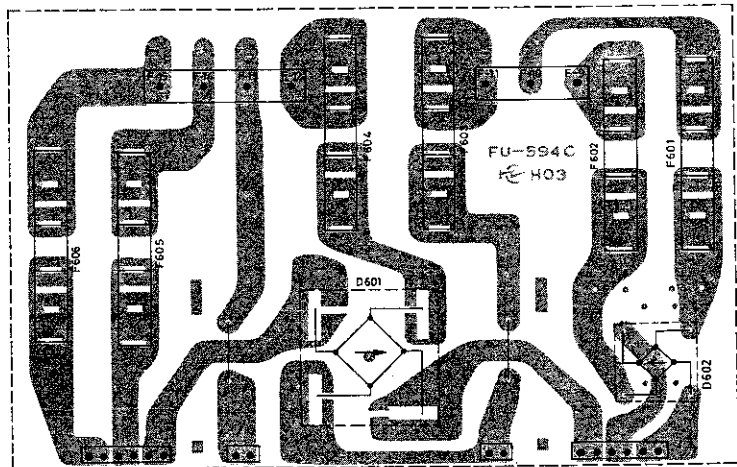
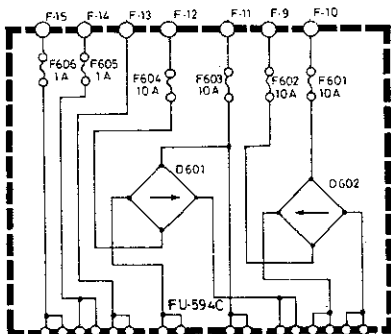


SCHEMATIC AND PCB LAYOUT (Foil side)

Input Circuit (SW-594C or SW-610B)

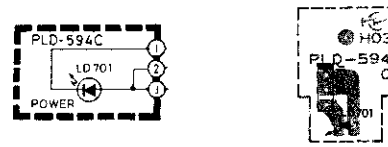
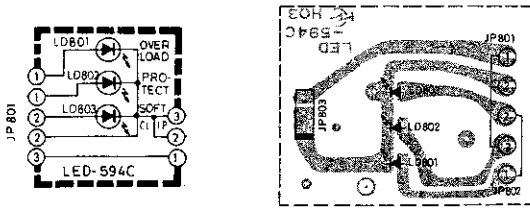


Fuse Circuit (FU-594C or FU-610B)



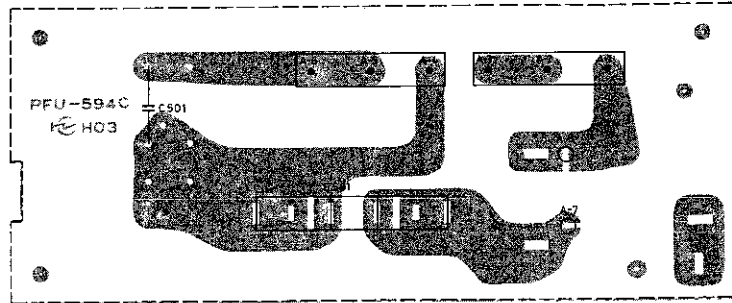
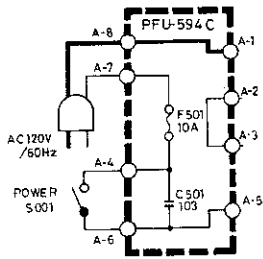
Indicators Circuit (LED-594C or LED-610B)

Power Indicator Circuit PLD-594C or PLD-610B)

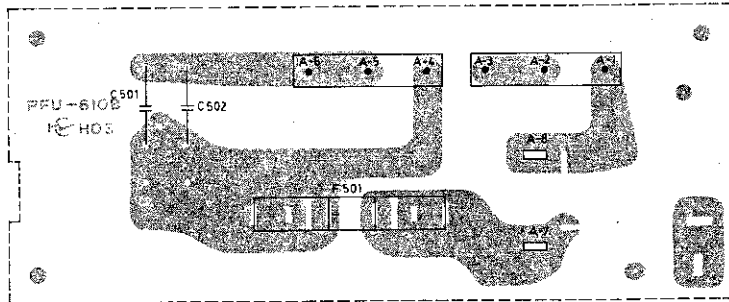
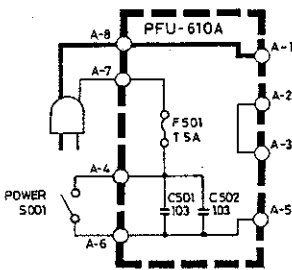


Primary Fuse Circuit

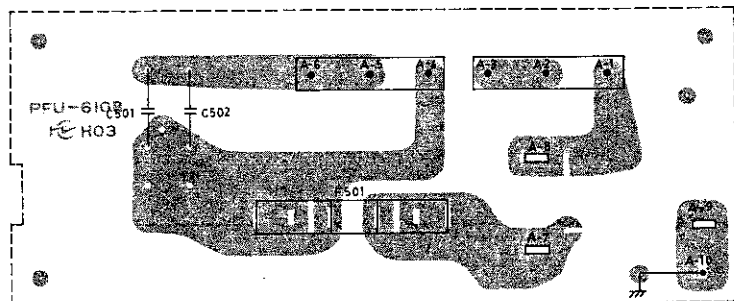
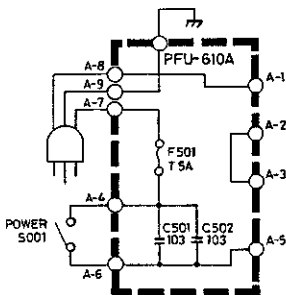
A, A₁ -Version for U.S.A., Canada (PFU-594C)



B, C, C₁ -Version for U.K., Scandinavia, W.Germany (PFU-610B)

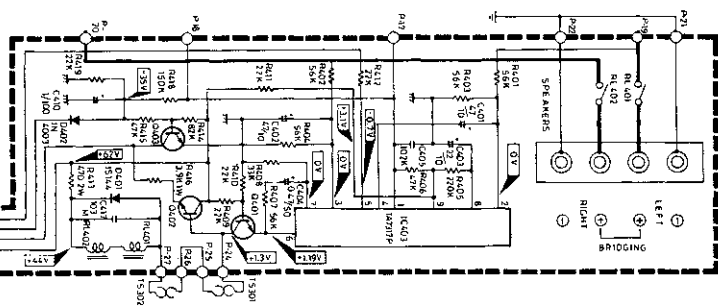
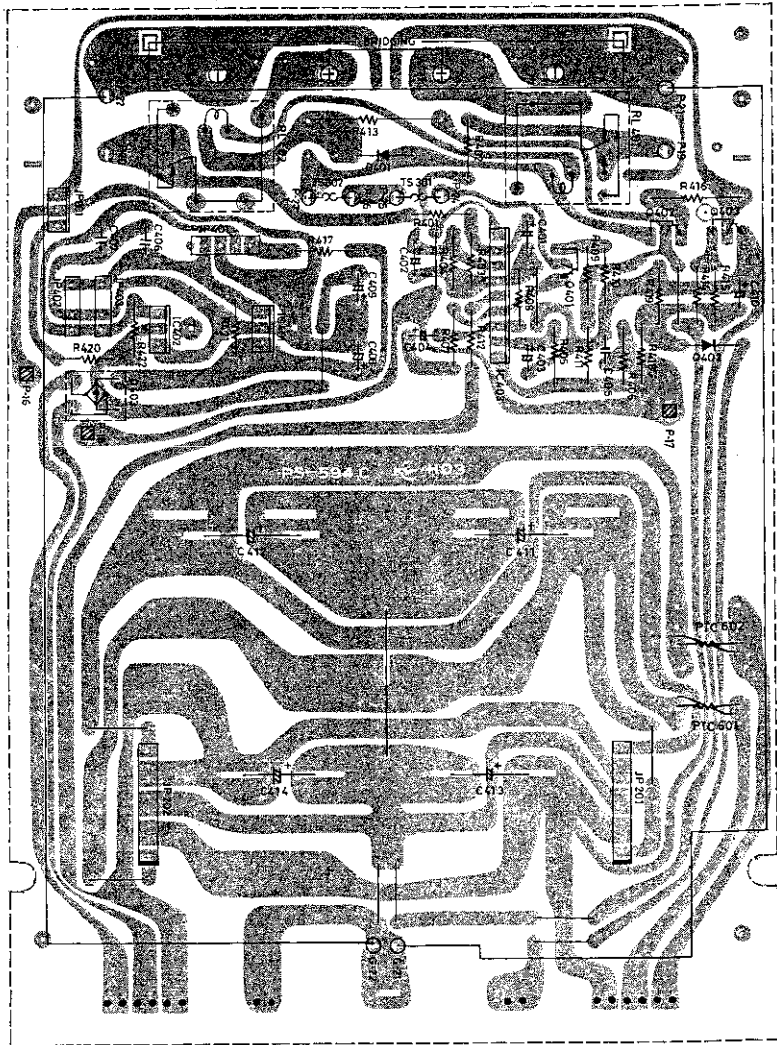
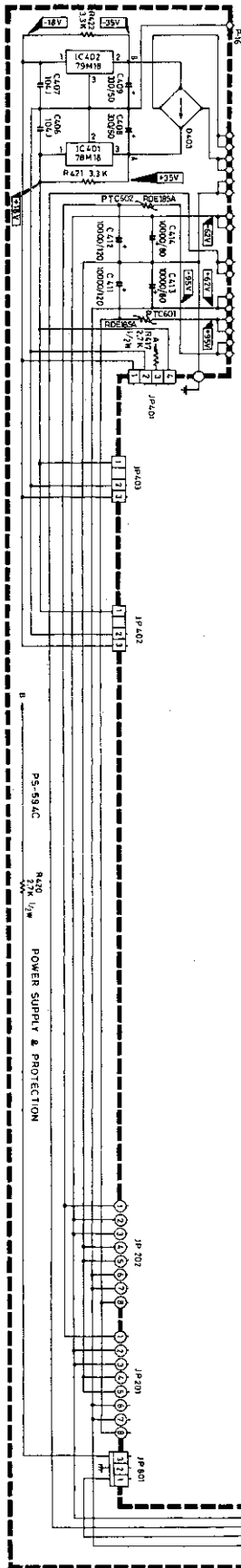


B₁ -Version for Australia/N.Z. PFU-610B)

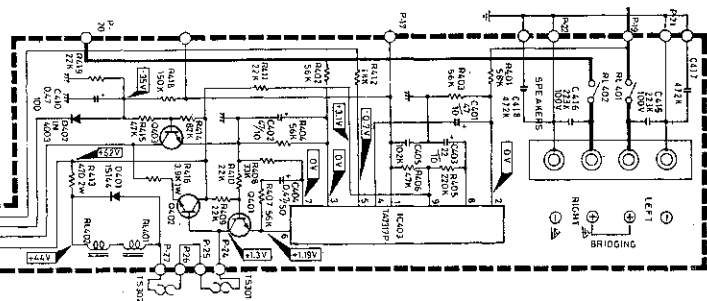
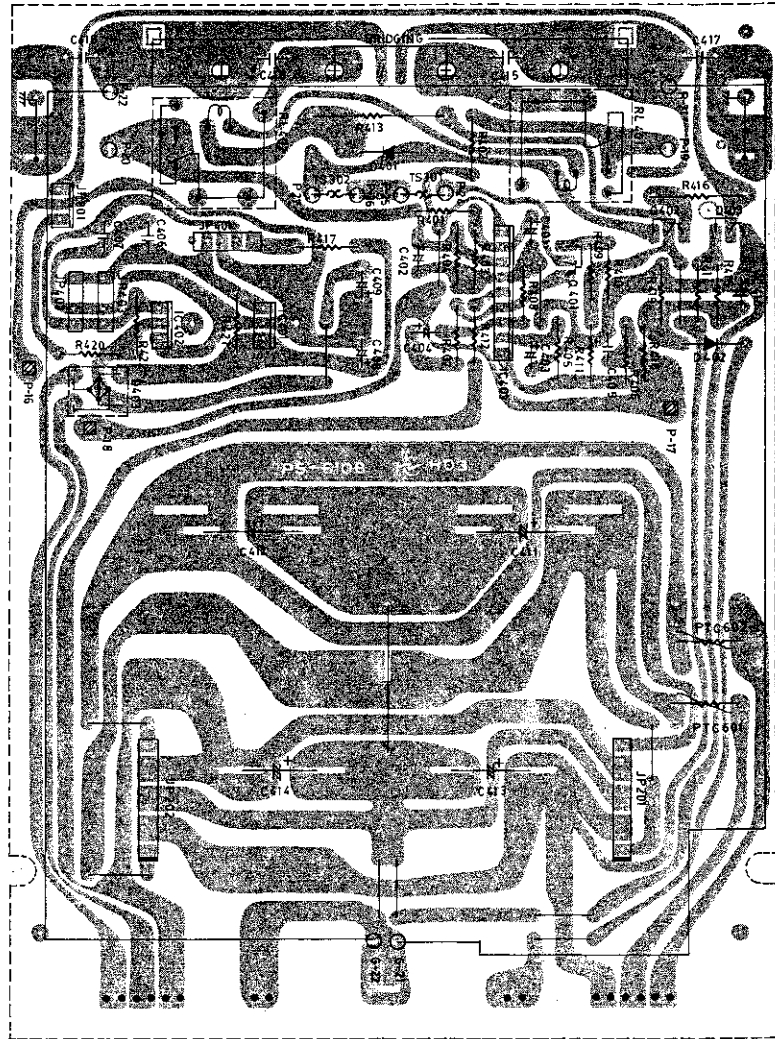
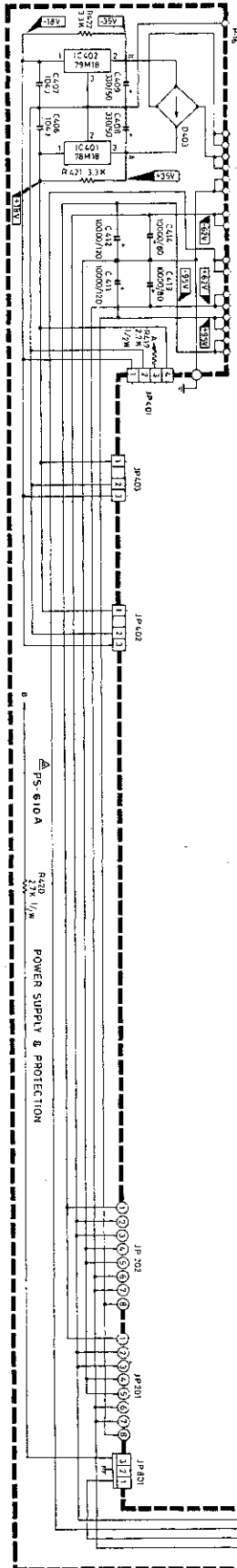


Power Supply Protection Circuit

A, A₁, B, B₁, C-Version for U.S.A., Canada, U.K., Australia/N.Z., Scandinavia (PS-594C or PS-610B)

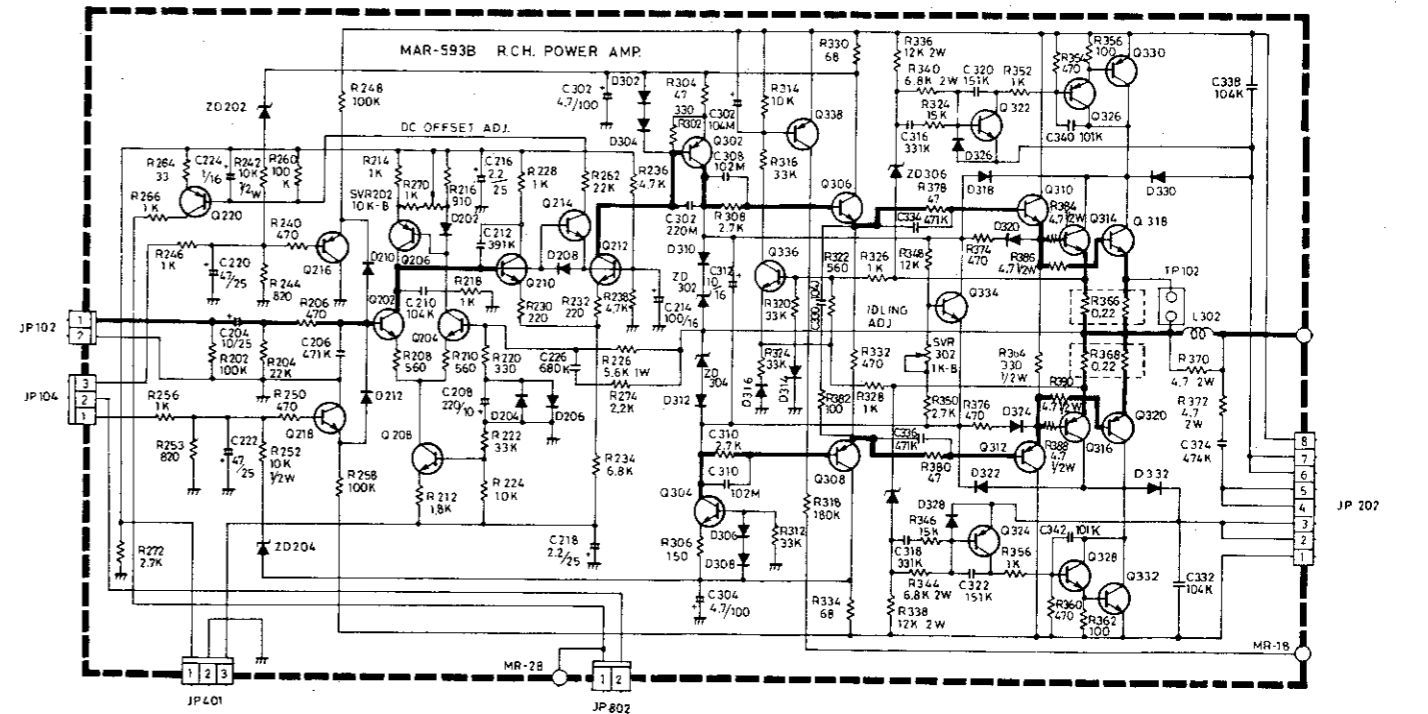
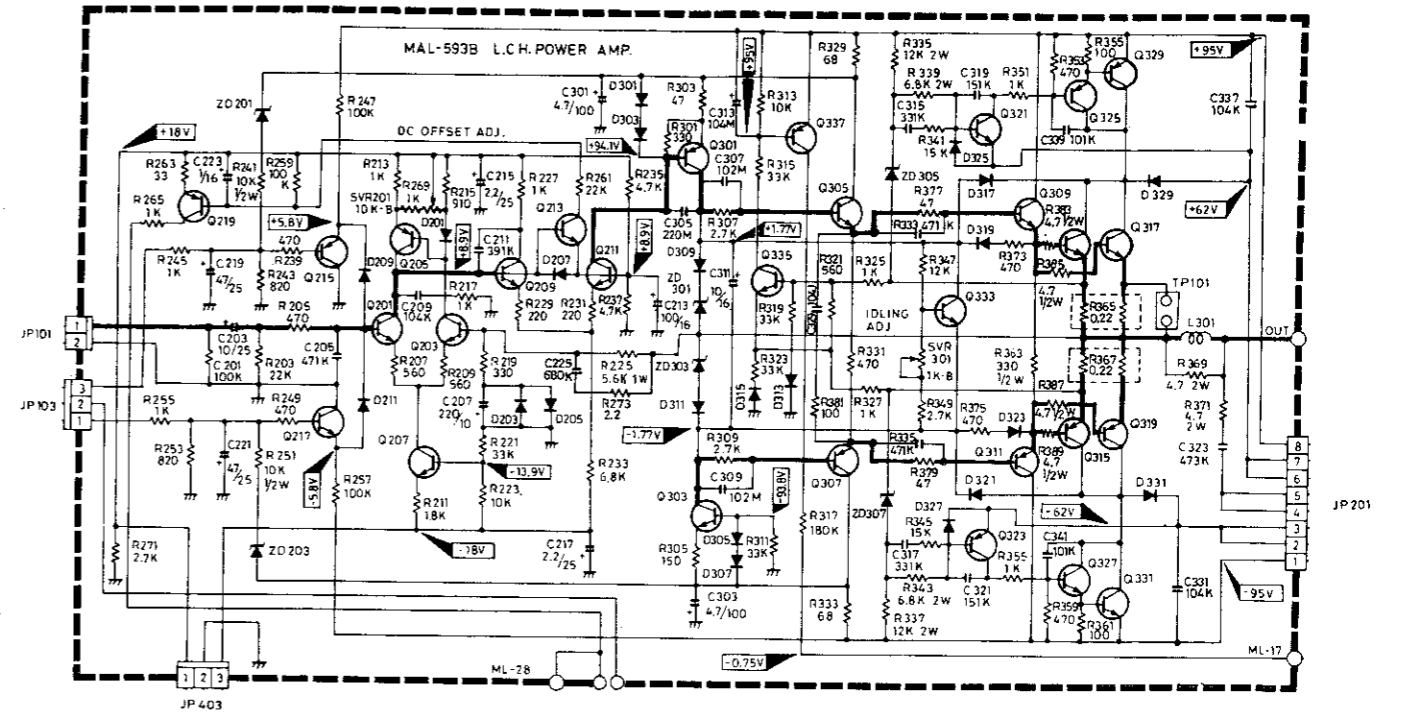
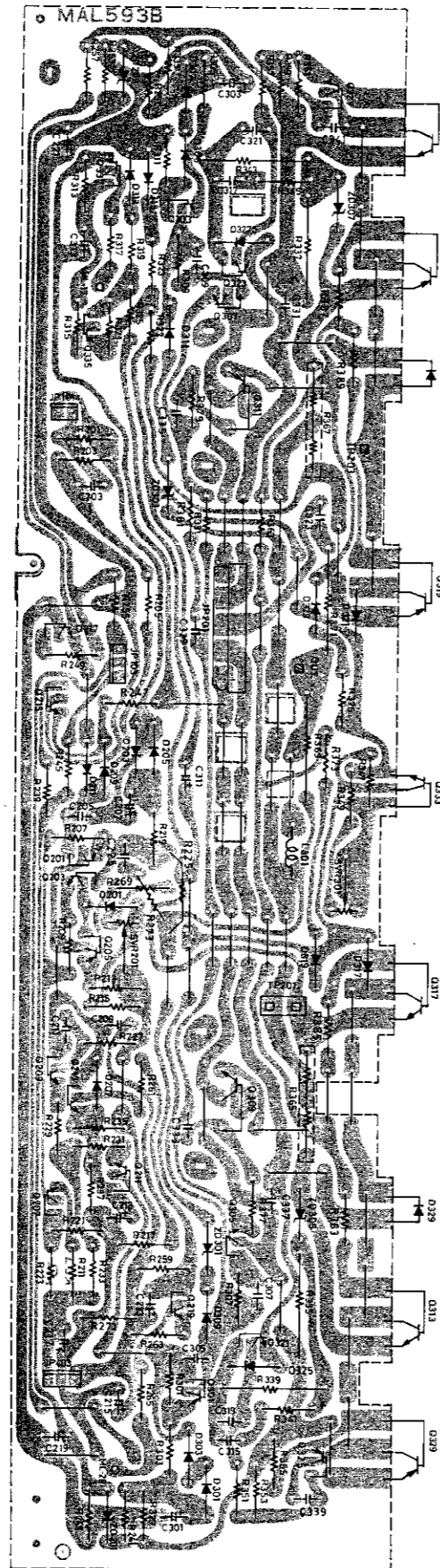
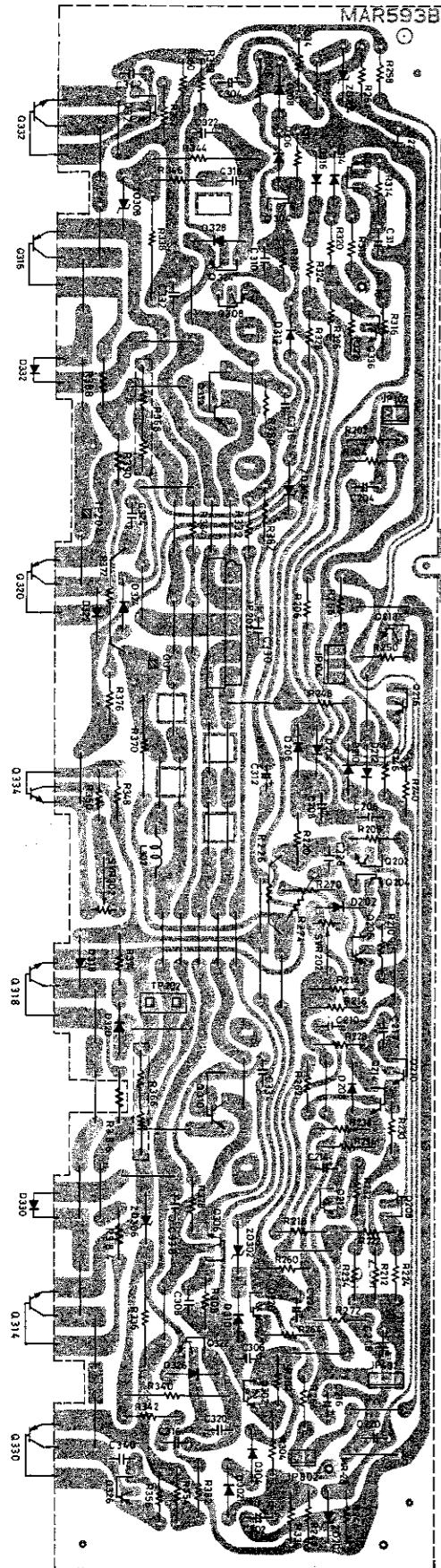


C₁ -Version for W.Germany (PS-610B)

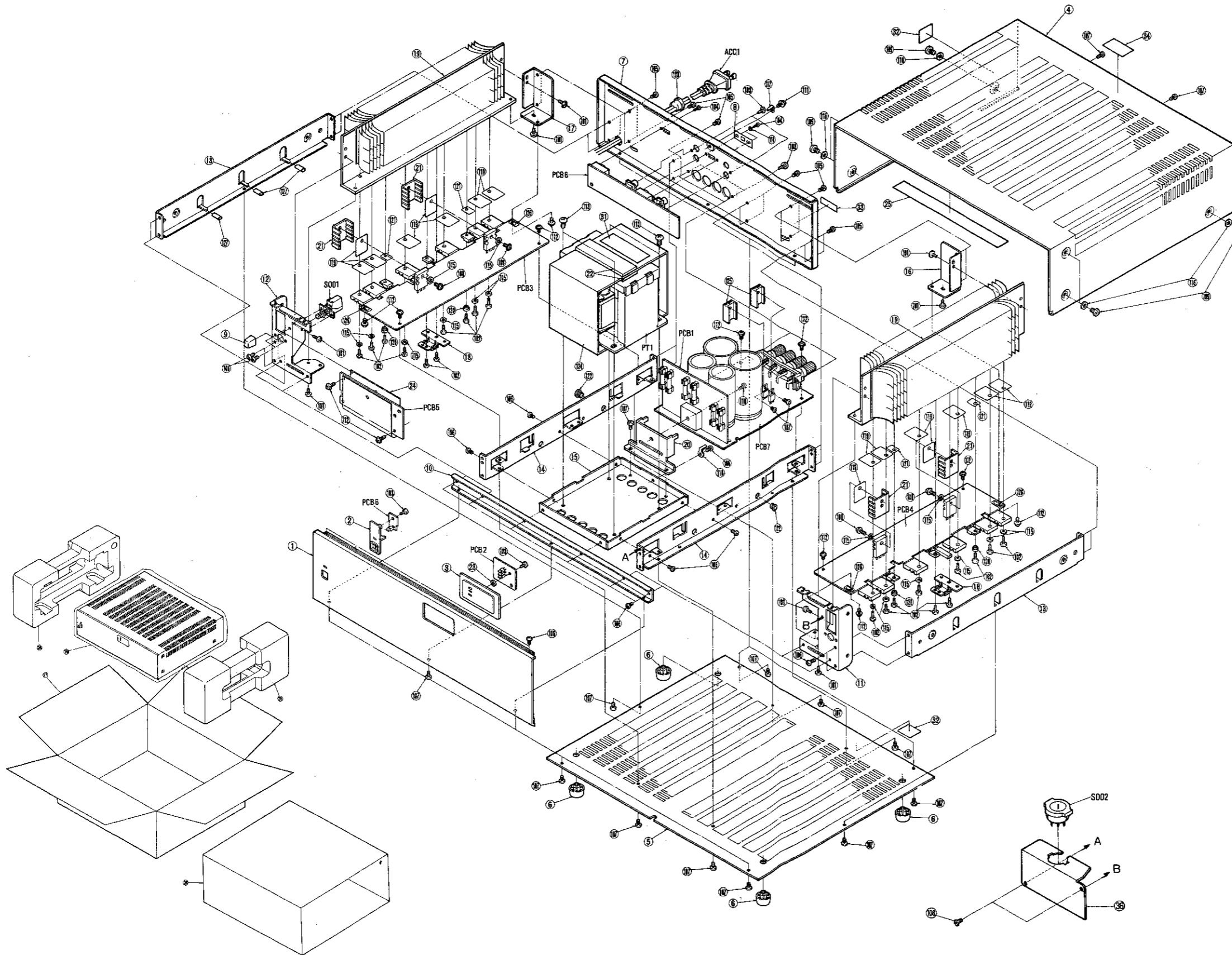


R ch Power Amp Circuit (MAR-593B)

L ch Power Amp Circuit (MAL-593B)

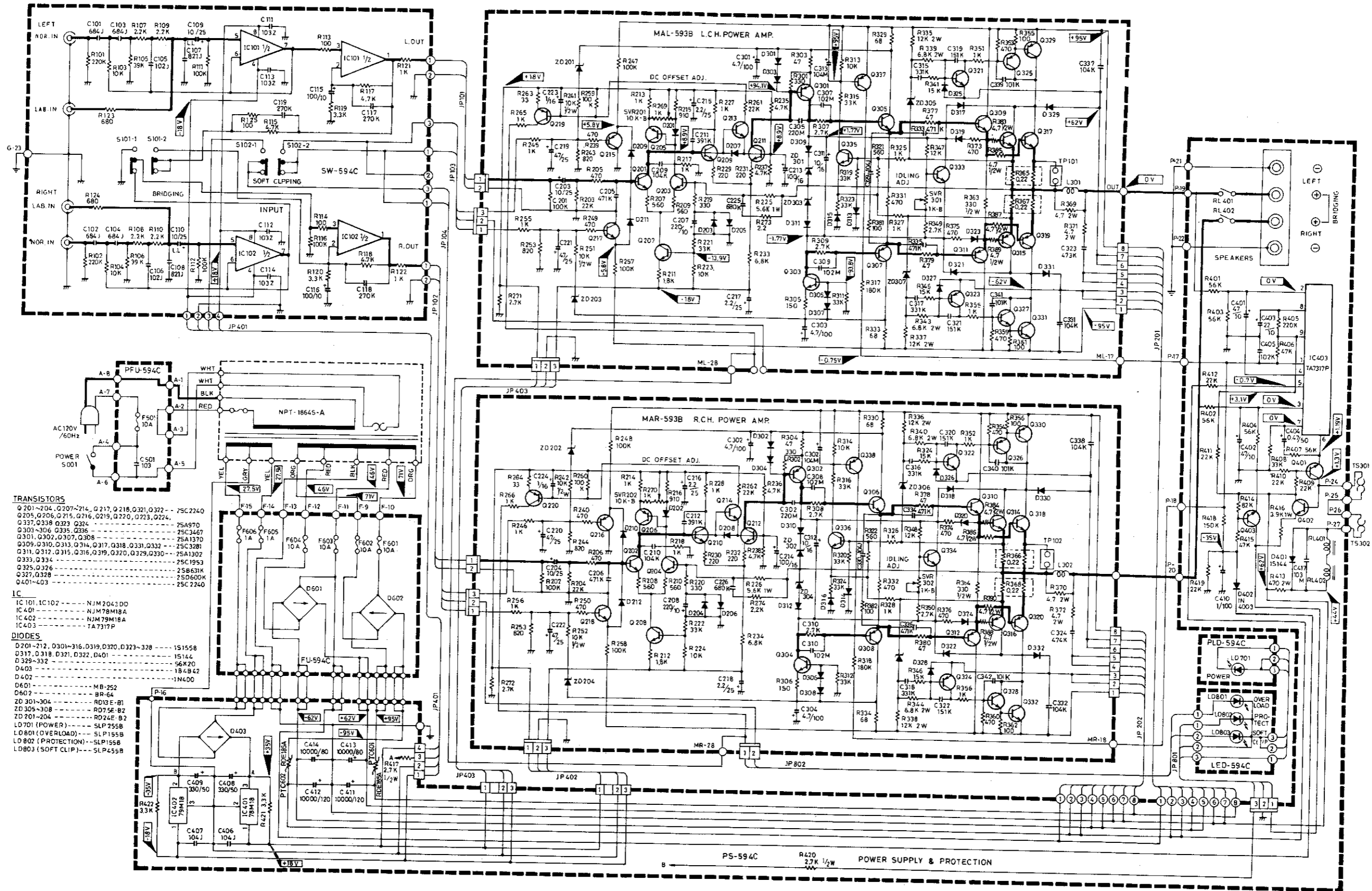


EXPLODED VIEW AND PARTS LIST



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	58BS1692	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]

SCHEMATIC DIAGRAM



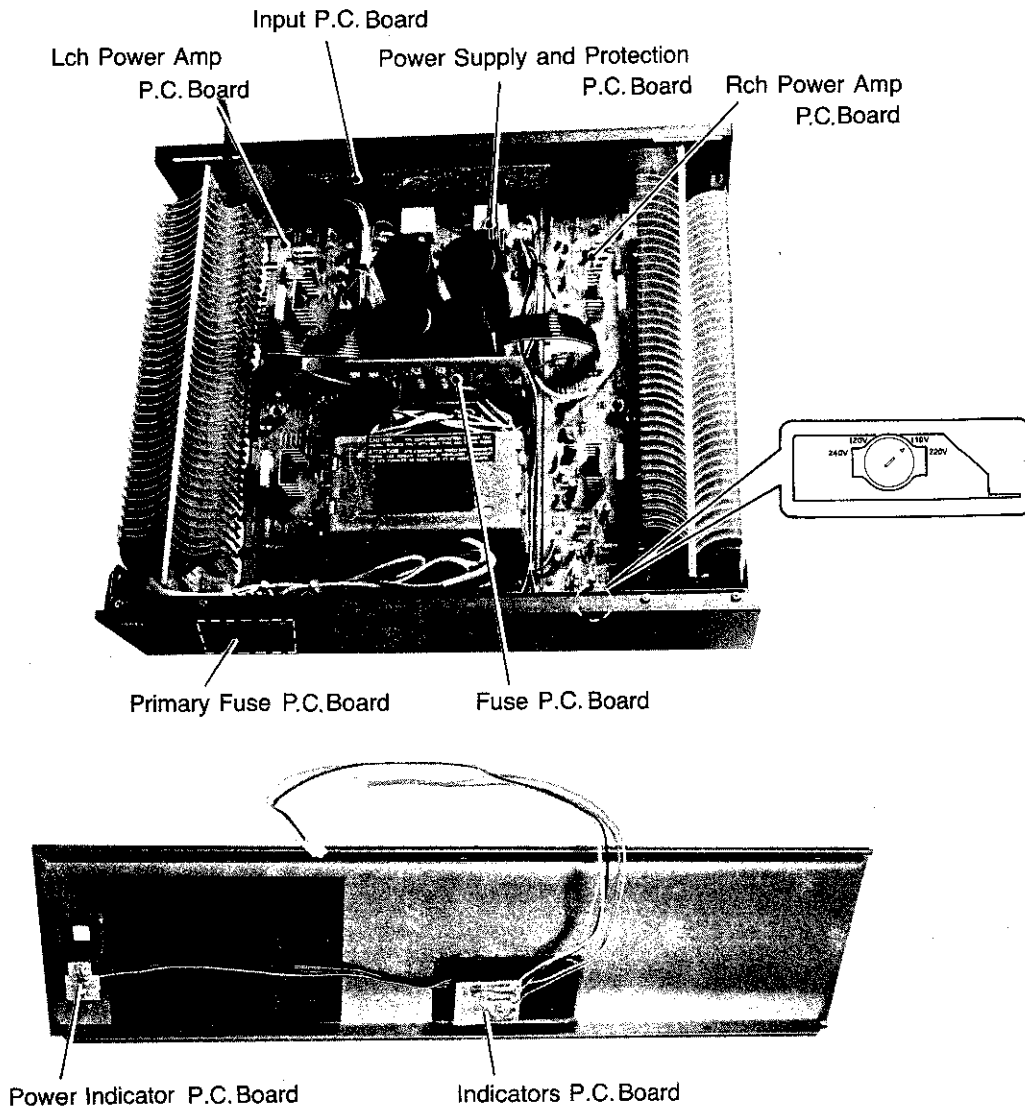
- TRANSISTORS**
- Q 201~204, Q 207~214, Q 217, Q 218, Q 321, Q 322 --- 2SC 2240
 - Q 205, Q 206, Q 215, Q 216, Q 219, Q 220, Q 223, Q 224, Q 323, Q 324, Q 325, Q 326 --- 2SC 3467
 - Q 301~306, Q 335, Q 336 --- 2SC 3467
 - Q 307, Q 308, Q 309, Q 310, Q 311, Q 312, Q 313, Q 314, Q 317, Q 318, Q 331, Q 332 --- 2SA 1370
 - Q 315, Q 316, Q 319, Q 320, Q 329, Q 330 --- 2SA 1302
 - Q 333, Q 334 --- 2SC 1953
 - Q 325, Q 326 --- 2SC 1953
 - Q 327, Q 328 --- 2SB 631K
 - Q 401~403 --- 2SB 600K
- IC**
- IC 101, IC 102 --- NJM 2043 DD
 - IC 401 --- NJM 78M18A
 - IC 402 --- NJM 79M18A
 - IC 403 --- TA 7317P
- DIODES**
- D 201~212, D 301~316, D 319, D 320, D 323~328 --- 1S 1558
 - D 317, D 318, D 321, D 322, D 401 --- 1S 144
 - D 329~332 --- 56K 20
 - D 403 --- 1B 4B 42
 - D 402 --- 1N 400
 - D 601 --- MB 252
 - D 602 --- BR 64
 - ZD 301~304 --- RO 13 E-B1
 - ZD 305~308 --- RO 7 SE-B2
 - ZD 201~204 --- RO 24 E-B2
 - LD 701 (POWER) --- SLP 255B
 - LD 801 (OVERLOAD) --- SLP 155B
 - LD 802 (PROTECTION) --- SLP 155B
 - LD 803 (SOFT CLIP) --- SLP 455B

CAUTION: THOSE FUSES WITH SYMBOL MARKS and ARE FAST-BLOW TYPE. REPLACE WITH SAME TYPE 10A 250V (OR 1A 250V) FUSE.

ATTENTION: LES FUSIBLES MARQUES ET SONT DE TYPE A FUSION RAPIDE. UTILISER UN FUSIBLE DE RECHANGE DE MEME TYPE DE 10A 250V (OU 1A 250V).

DRAWING NO.	MODEL NO.
CD-554	2200A

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.

