42

NAD SERVICE MANUAL

2200
STEREO POWER AMPLIFIER

Contents

SPECIFICATIONS

FEATURES

A. Control and Switch
- 1. AC Power switch : On-off . . . . . Push Type
- 2. Bridging switch : Normal-Bridging . . . . Slide Type with Locking plate
- 3. Soft Clipping : On-off . . . . . Slide Type

B. 1. Speaker terminal (L/R) : 4P army type binding post for banana plug
- 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
- 3. Main Input (L/R) : RCA Type Pin Jack (2p)
- 4. Lab Input (L/R) : RCA Type Pin Jack (2p)

C. Chassis and Circuit
- 1. Display
  Power (Green), Soft clipping (Yellow), Overload (Red), Protection (Red)

D. Output Load
Speaker Output : 8 ohm/4 ohm

E. Maximum Power Consumption : 770W

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

G. Netweight and Dimension (Approx.)
- 1. Netweight : 12.5 Kg
- 2. Dimensions : W=420 H=129 D=385 (mm)

ELECTRICAL SPECIFICATION

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

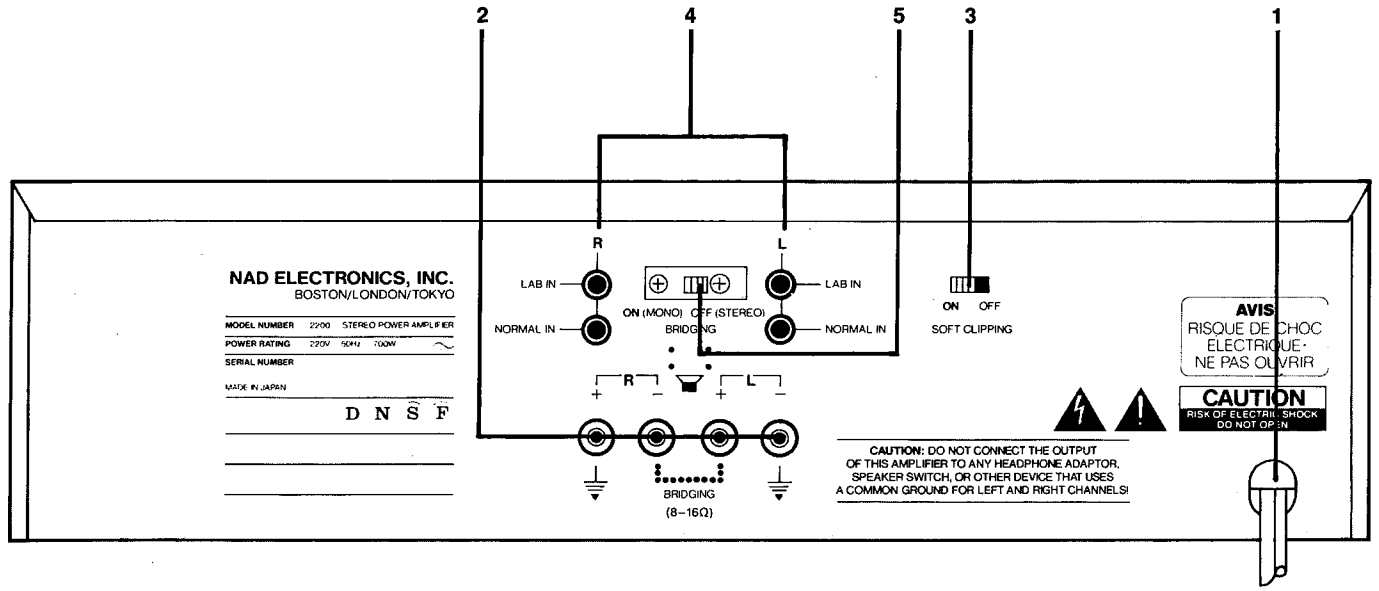
	Nominal	Limit	Unit
1. Sensitivity Input : 1000Hz Output : 100W	0.775	±1.5dB	(V)
2. Channel difference		less than 1	(dB)
3. Output power Input : Main in Output : 0.04% THD 20-20000Hz continuous both CH. Driven		More than 100	(W)
4. Clipping Power Input : Main in 8 ohm load Output : 1% THD 1 KHz continous 4 ohm load Both CH. Driven	140 200	125 180	(W) (W)
5. Dynamic Power Input : Main in 8 ohm Output : Clipping point 4 ohm 1 KHz 20ms IHF dynamic wave Both CH. Driven	400 500	350 440	(W) (W)
6. IM Distortion Input : Main in 60Hz: 7000Hz=4:1 Output : From 250mW—100W Both CH.Driven 8 ohm load		less than 0.04	(%)
7. THD Input : Main in Output : 20—20000Hz, from 250mW—100W Both CH. Driven 8 ohm load		less than 0.04	(%)
8. Frequency response Input : LAB in Output : 10W 20—20000Hz		±0.5dB	
Input : Nor in at 14 Hz Output : 10W at 45KHz 600 Ohm/Ch drive, Both 12dB/Octave	—3 —3	—3±1.5 —3±1.5	(dB) (dB)

	Nominal	Limit	Unit
9. Damping factor at 50Hz, 8 ohm Load	120	100	
10. Slew Rate	25	23	(V/u.Sec.)
11. Signal to noise ratio Input shorted Normal input Ref. Rated power IHF-A weighted	110	105	(dB)
12. Residual noise unweighted weighted	0.3 0.1	0.5 0.2	(mV)
13. Input impedance		More than 20	(Kohm)
14. Crosstalk Between the channels of stereo equipment Input : Normal (shorted) 8 ohm load			
1000 Hz	80	76	(dB)
20000Hz	63	56	(dB)
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)
16. Peak short term (1 msec) O/P current	50	45	(A)

REAR PANEL

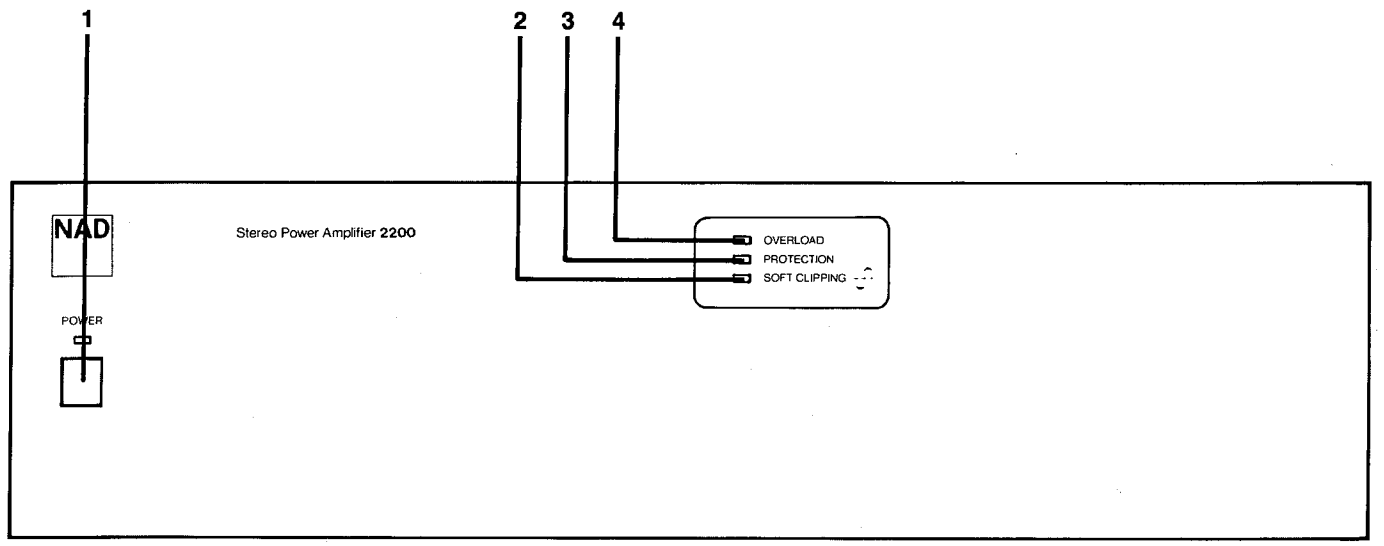
1. AC Line Cord.
2. Speaker terminals.
3. Soft Clipping.
4. Inputs (Normal and Lab).
5. Bridging.

CAUTION: DO NOT CONNECT THE OUTPUT OF THIS AMPLIFIER TO ANY HEADPHONE ADAPTER, 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.



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.

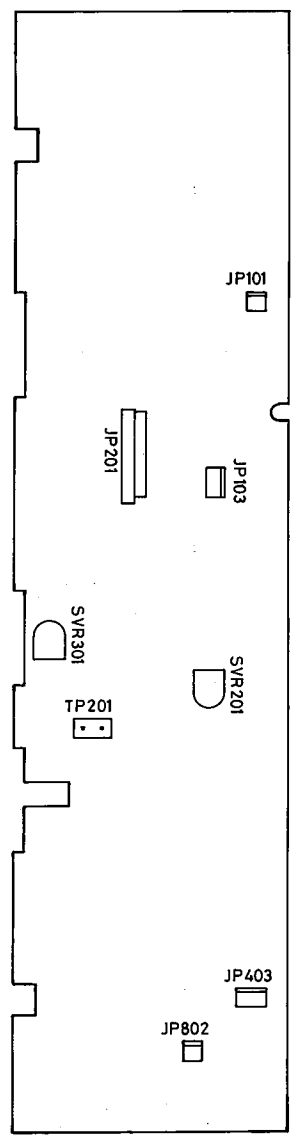
ALIGNMENT PROCEDURES

Condition

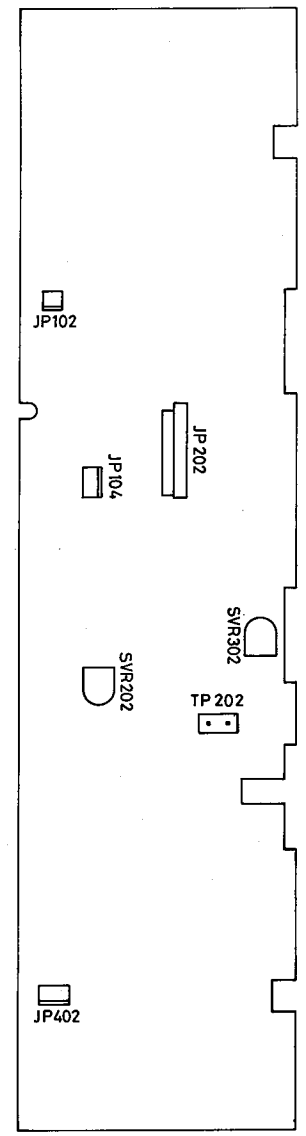
Preheat . . . . . more than 15 minutes
Speaker load . . . . . 8 ohms (dummy or speaker)
Input . . . . . No signal

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

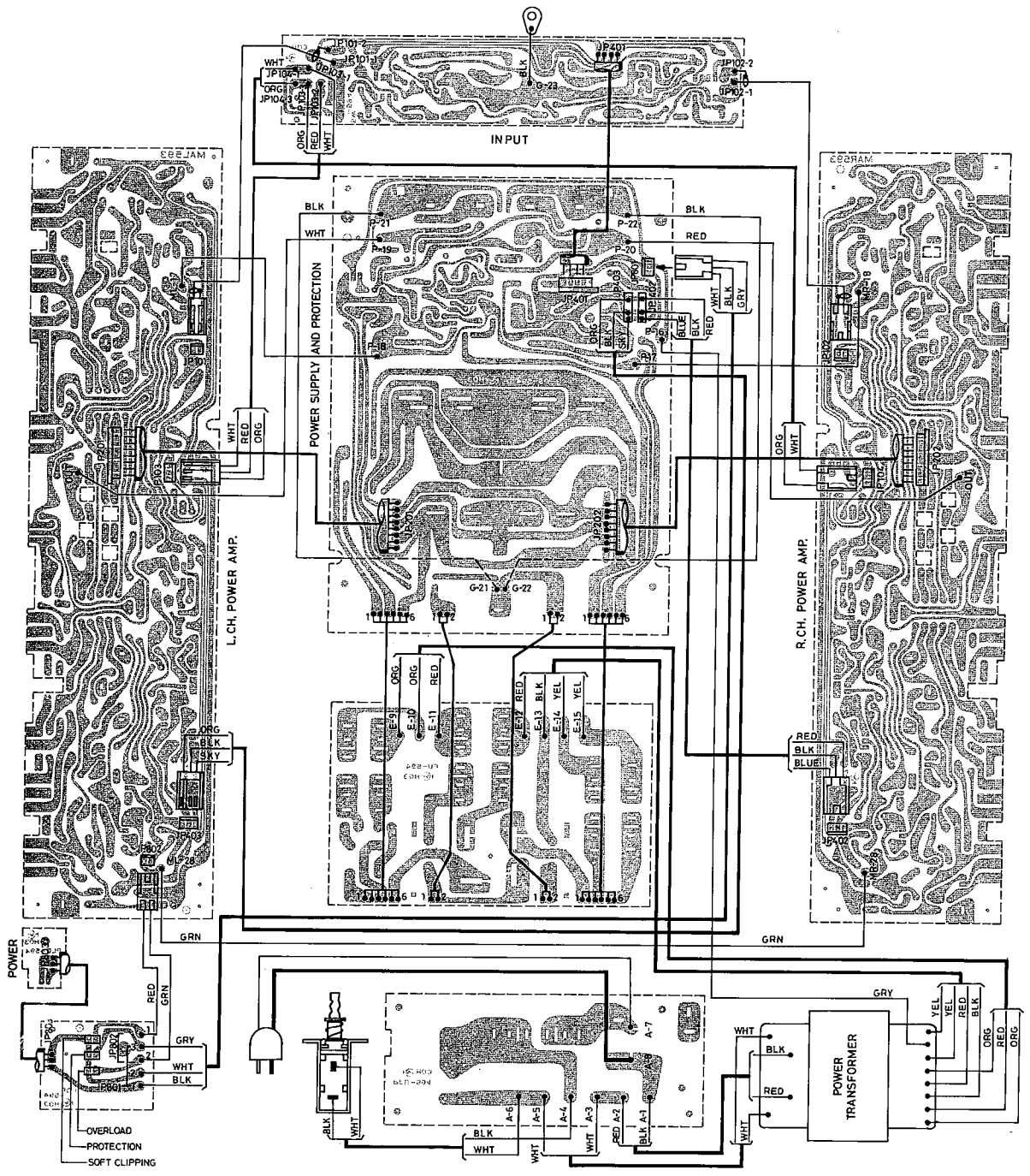
MAL-P.C. Board



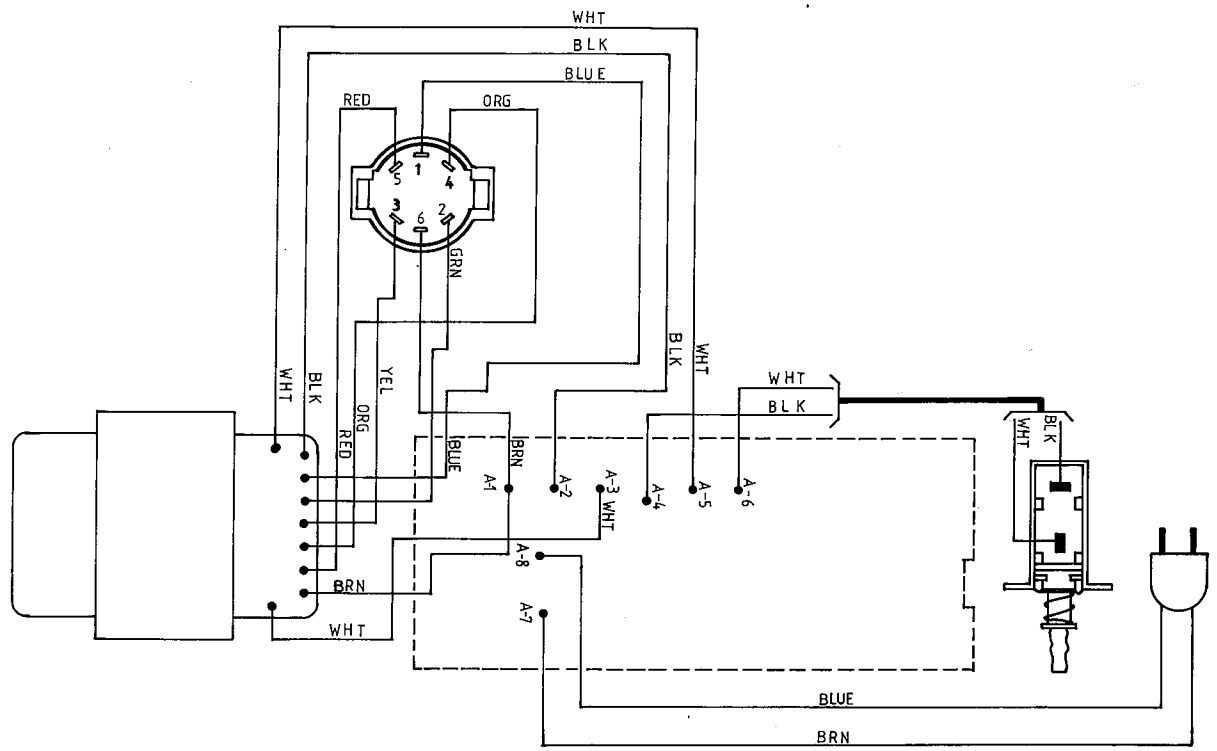
MAR-P.C. Board



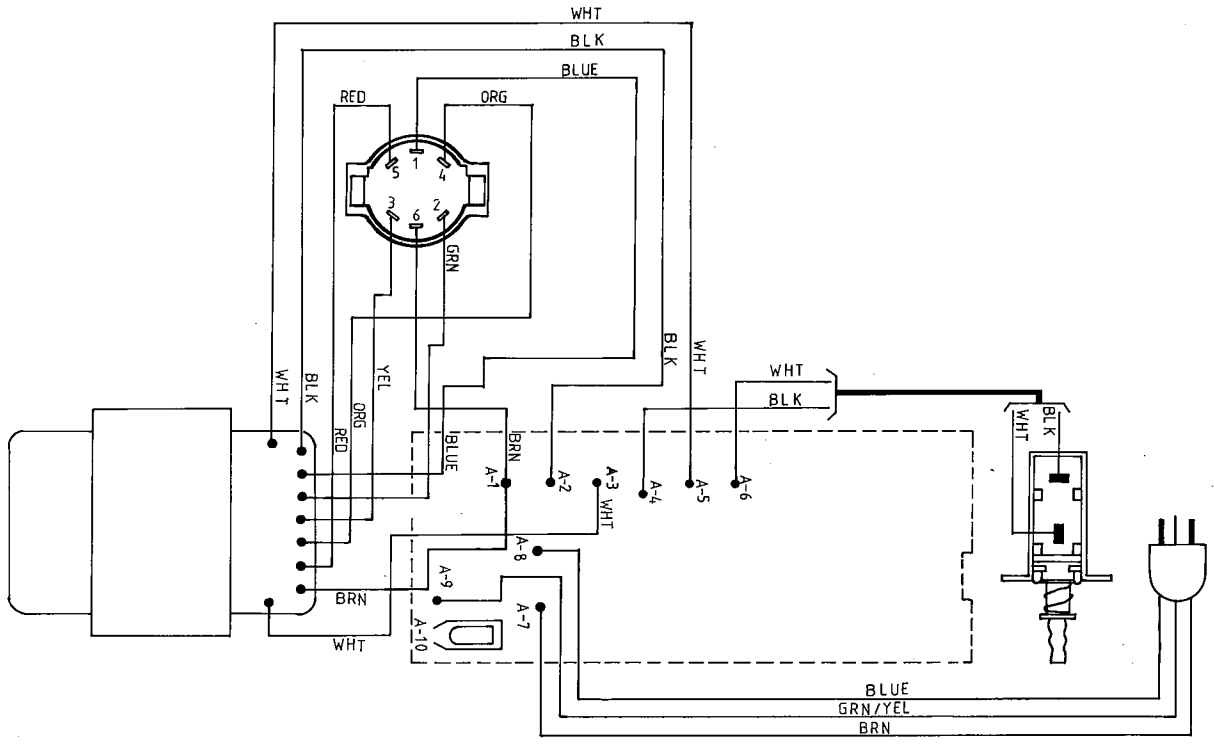
WIRING DIAGRAM (Component side)



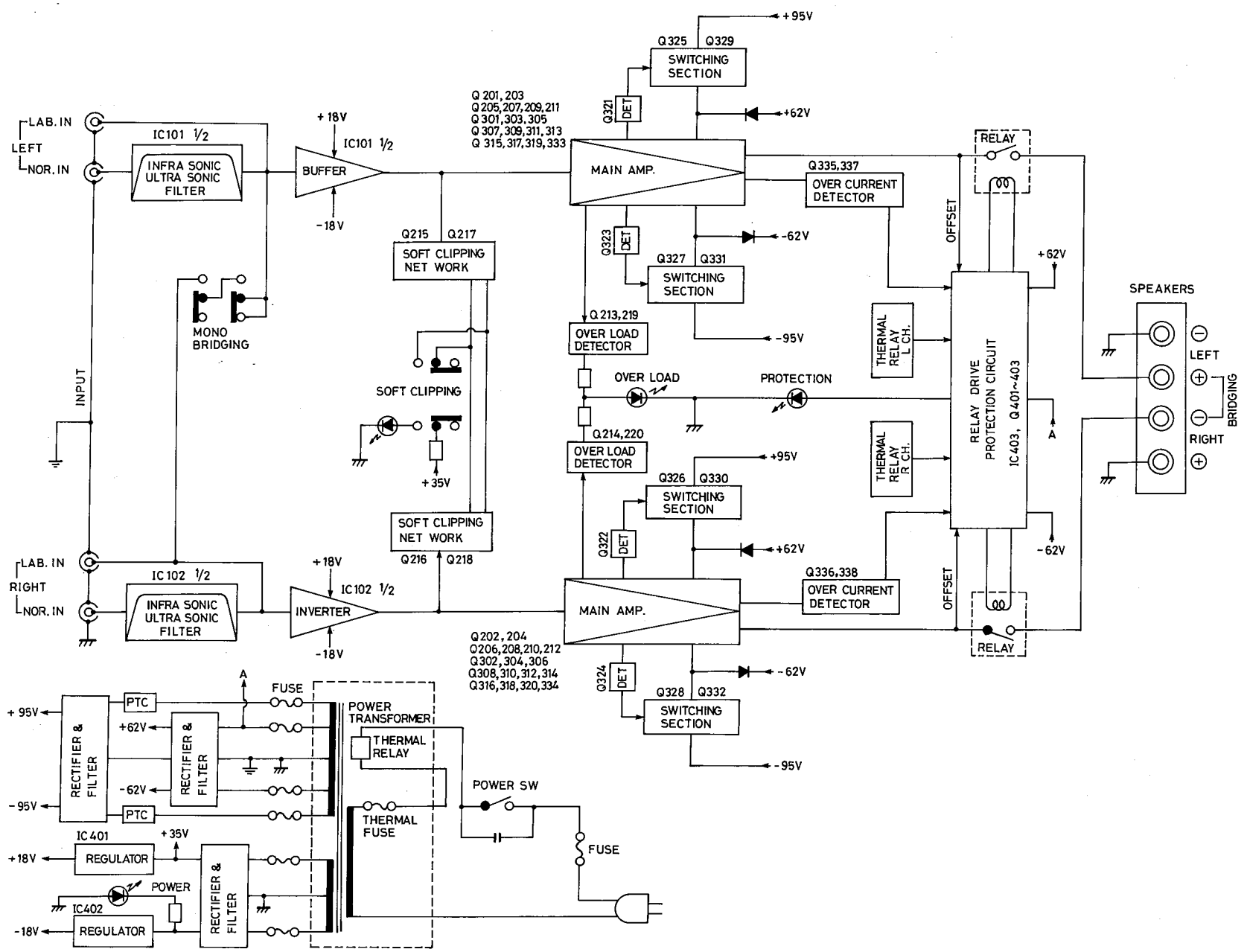
B-Version U.K.
C-Version Europe



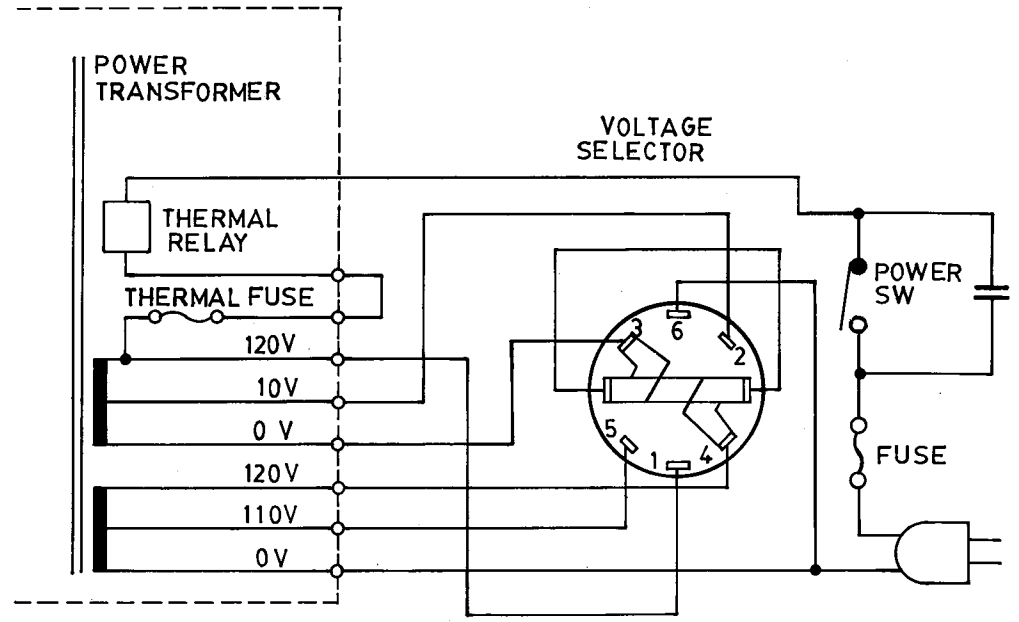
B_1-Version Australia



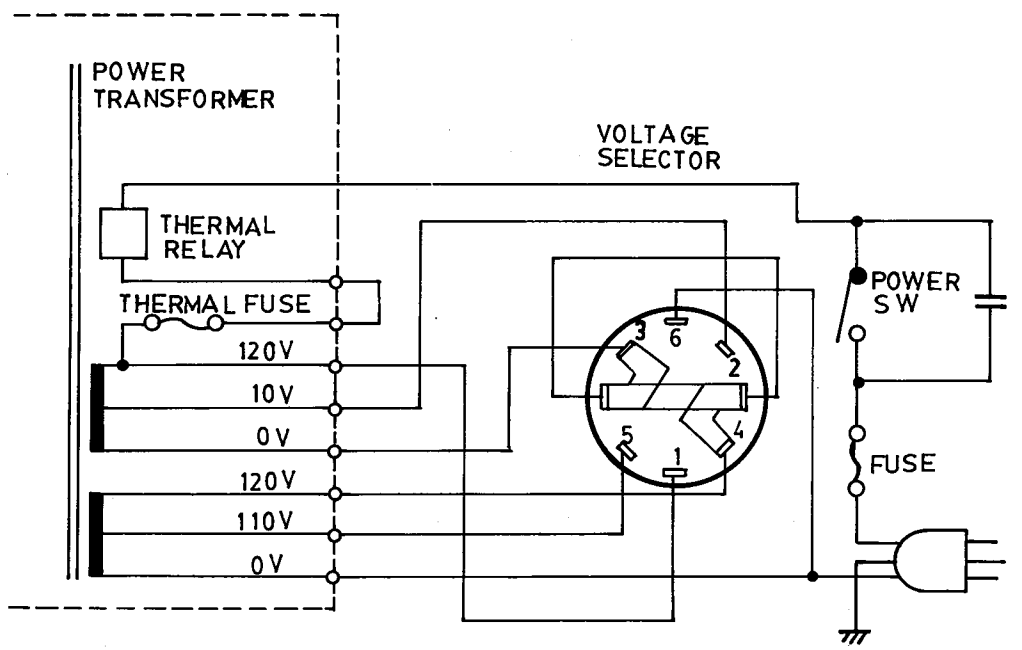
BLOCK DIAGRAM



B-Version U.K.
C-Version Europe

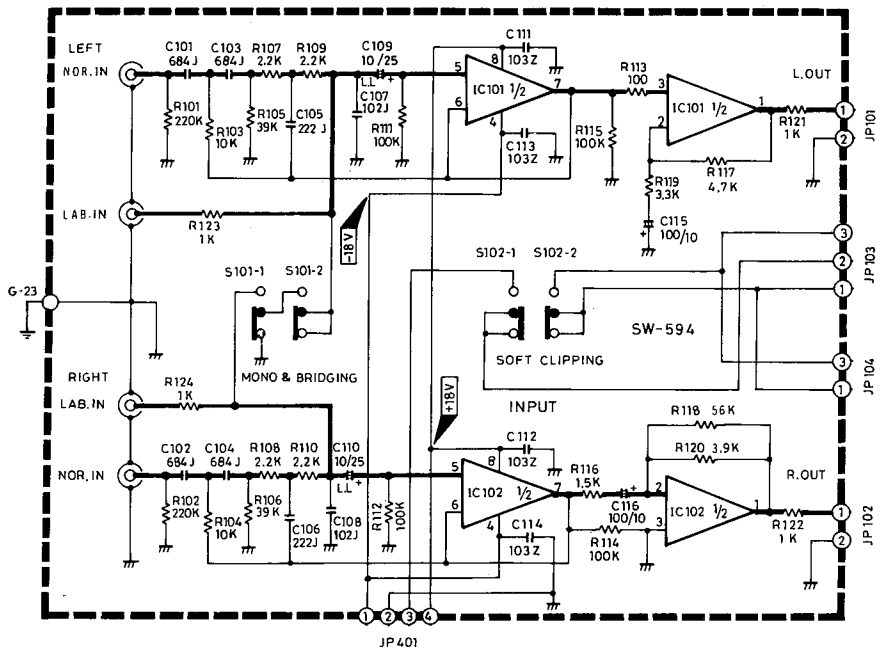


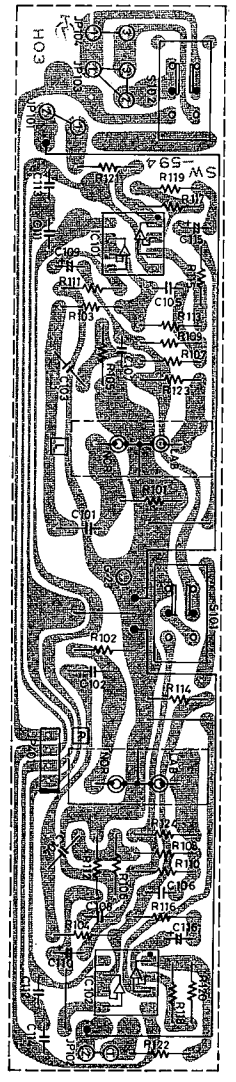
B_1-Version Australia



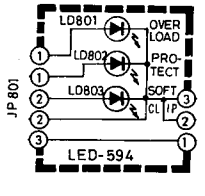
SCHEMATIC AND PCB LAYOUT (Foil side)

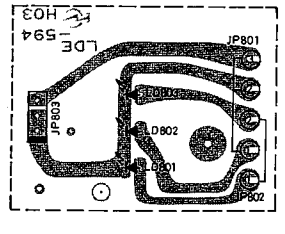
Input Circuit (SW-594)



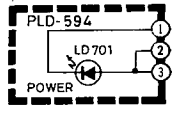


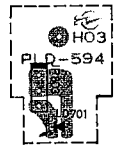
Indicators Circuit (LED-594)



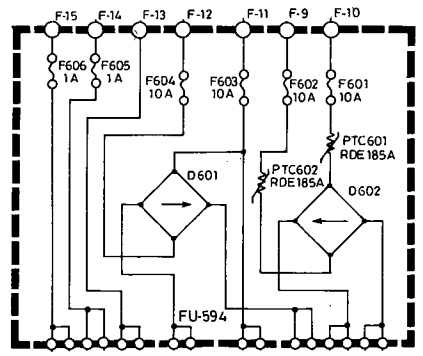


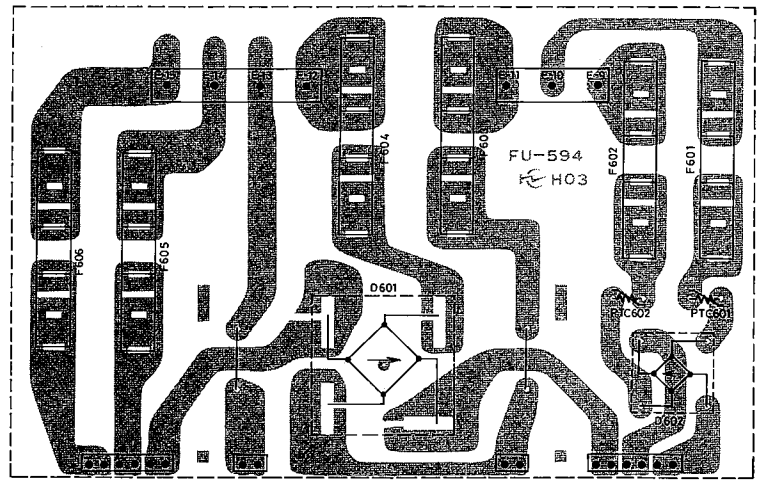
Power Indicator Circuit (PLD-594)



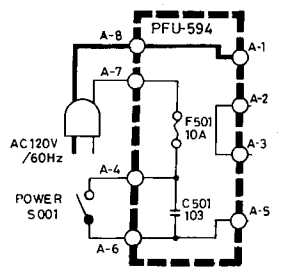


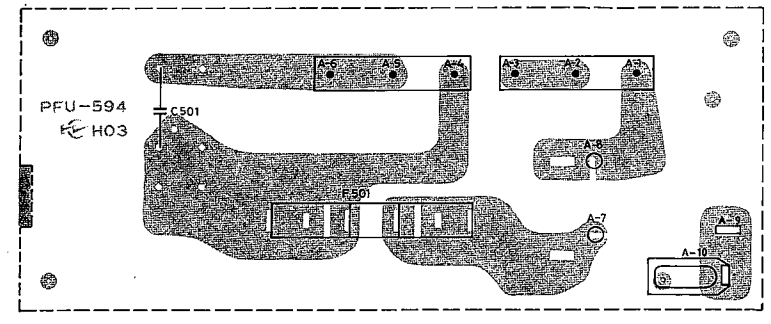
Fuse Circuit (FU-594)



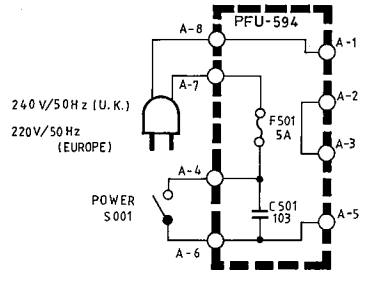


Primary Fuse Circuit (PFU-594)

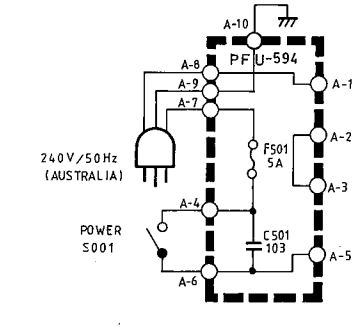




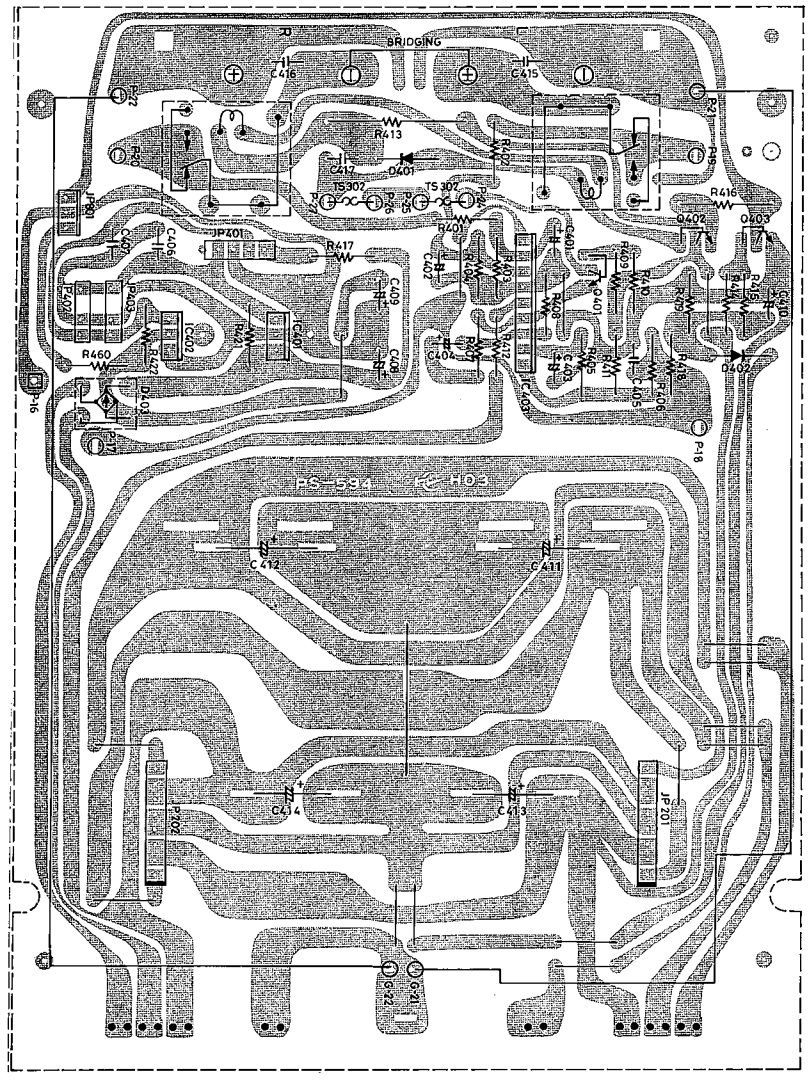
B-Version U.K.
C-Version Europe

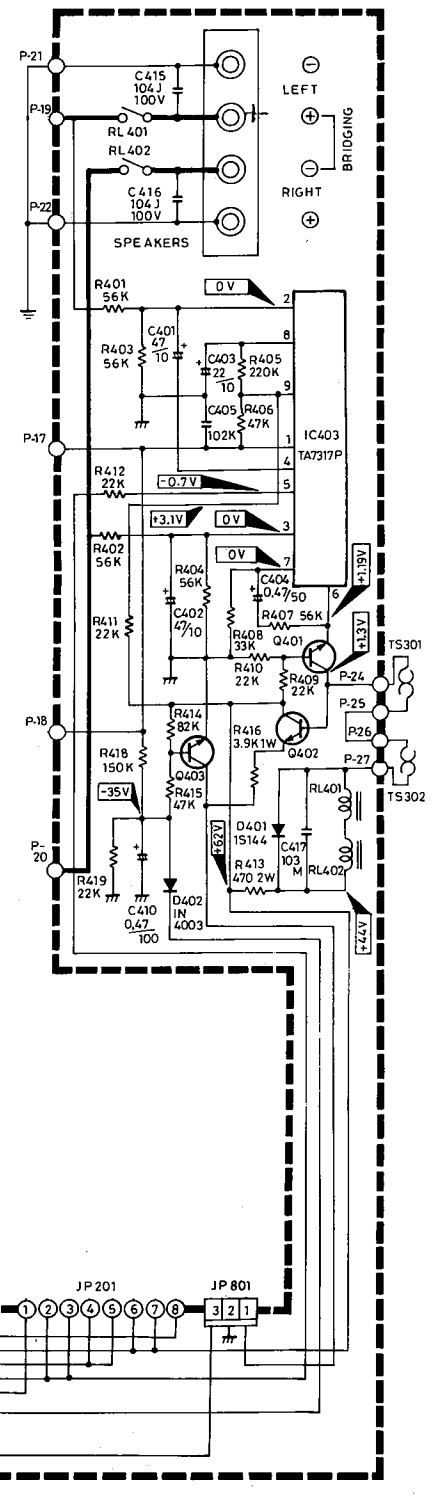


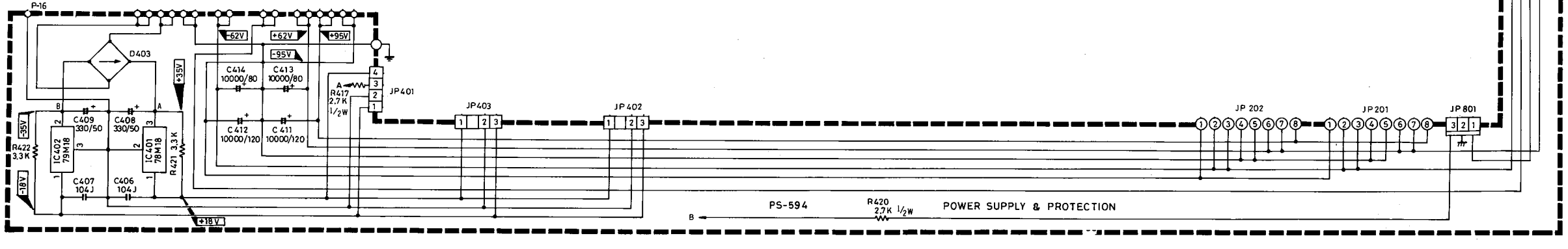
B_1-Version Australia



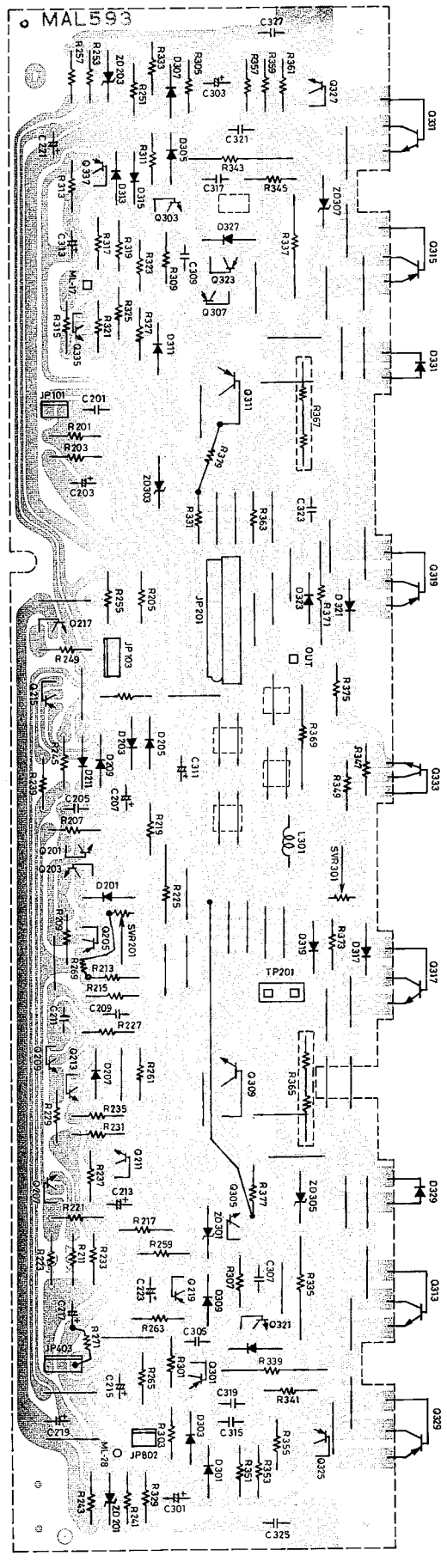
Power Supply and Protection Circuit (PS-594)







L ch Power Amp Circuit (MAL-593)



R ch Power Amp Circuit (MAR-593)