

264

SERVICE  
MANUAL **1300DC**



**marantz**

model **1300DC**

*Stereo Console Amplifier*

**MARANTZ DESIGN AND SERVICE**

Using superior design and selected high grade components, MARANTZ Company has created the ultimate in stereo sound. Only original MARANTZ parts can insure that your MARANTZ product will continue to perform to the specifications for which it is famous.

Parts for your MARANTZ stereo are generally available within 72 hours throughout the nation via a toll-free line to our National Parts Depot in California. The sales professionals who take your call immediately refer to their own desk top computer terminal and can quickly determine the availability and price information you require. If for some reason, your order should exceed our available stock, we usually can instantly provide an alternate replacement part or current delivery information. When the order is placed and confirmed, the computer simultaneously generates "hard copy" orders at the distribution center. As hard copies come directly from the computer to the national parts depot, your requested stock is assembled and prepared for shipment and placed on the first available carrier for delivery to you.

**ORDERING PARTS**

Phone orders will eliminate mail delays, and we encourage the use of this method. If you order by mail, use MARANTZ parts order forms which are available from our National Parts Depot located at the following address:

SUPERSCOPE NATIONAL PARTS DEPARTMENT  
20525 Nordhoff Street  
Chatsworth, California 91311  
Phone: 1-800-423-5108  
1-213-998-9333

The following information must be supplied to eliminate delays in processing your order:

1. Complete address.
2. Complete part numbers.
3. Complete description of parts.
4. Model number for which part is required (indicate MARANTZ).
5. Account number (for account customers only).

Direct consumers will be provided with the current retail price quotation on available parts in order to advise them of the cost of the parts and shipping.

**OVERSEAS PARTS ORDERING**

Parts may also be ordered from the following overseas addresses:

**CANADA**

Superscope Canada, Ltd.  
3710 Nashua Drive  
Mississauga  
Ontario, Canada L4V1M5

**AUSTRALIA**

Superscope (Australasia) Pty., Ltd.  
32 Cross Street (P.O. Box 604)  
Brookvale 2100 N.S.W.  
Australia

**JAPAN**

Marantz Japan, Inc.  
3622 Kamitsuruma  
Sagamihara Shi  
Kanagawa, Japan

**EUROPE**

Superscope Europe, S.A.  
Avenue Leopold III, 2  
7120 Perennes-Lez-Binche  
Belgium

Marantz France  
Rue Louis Armand 9  
92600 Asnieres  
Hauts-de-Seine  
France

Marantz Audio U.K. Ltd.  
London Road, 203  
Staines  
Middlesex  
England

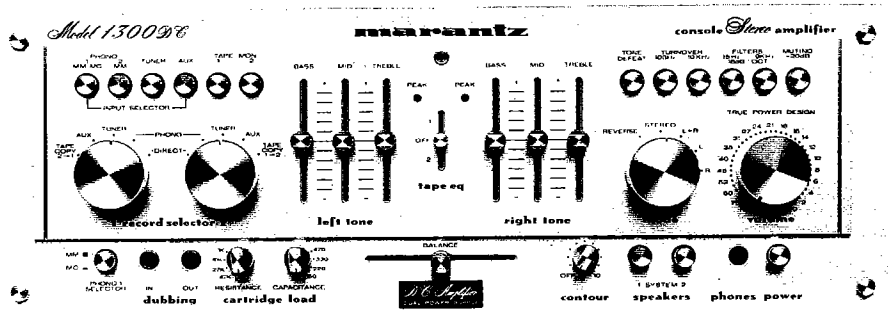
Superscope GmbH  
Max-Planck-Strasse 22  
D-6072 Dreieich 1  
West Germany

All of the above locations are fully equipped to take care of your total service needs. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please contact the nearest facility for the necessary assistance.

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We sound better.

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**1. POWER AMPLIFIER ADJUSTMENT**

**1.1 Adjustment of idling current**

Connect VTVM between left channel R760 and R761. Adjust R733 until the meter reads 20mV. Similarly, connect VTVM between right channel R760 and R761 and adjust R733 until the meter reads 10mV.

**1.2 DC-OFFSET adjustment**

Connect VTVM to JW02 and JW08 (or ground) and adjust left channel R720 until the meter indication

reaches 0mV ( $\pm 5mV$ ). Similarly, connect VTVM to JW04 and JW08 (or ground) and adjust right channel R720 until the meter indication reaches 0mV ( $\pm 5mV$ ).

**2. POWER SUPPLY ADJUSTMENT**

Connect a voltmeter between J810 and J820. Adjust R810 until meter indicates 31 VDC. Similarly connect a voltmeter between J812. Check to make sure that the meter indicates - 31 V.

**3. TEST EQUIPMENT REQUIRED FOR SERVICING**

Table 1 lists the test equipment required for servicing the Model 1180DC Stereo Console Amplifier. The wattmeter, AC voltmeter, and variable autotransformer may be assembled as a test fixture as shown schematically in Figure 1. The load resistors and AC ammeter may be assembled into a second test fixture as shown in Figure 2.

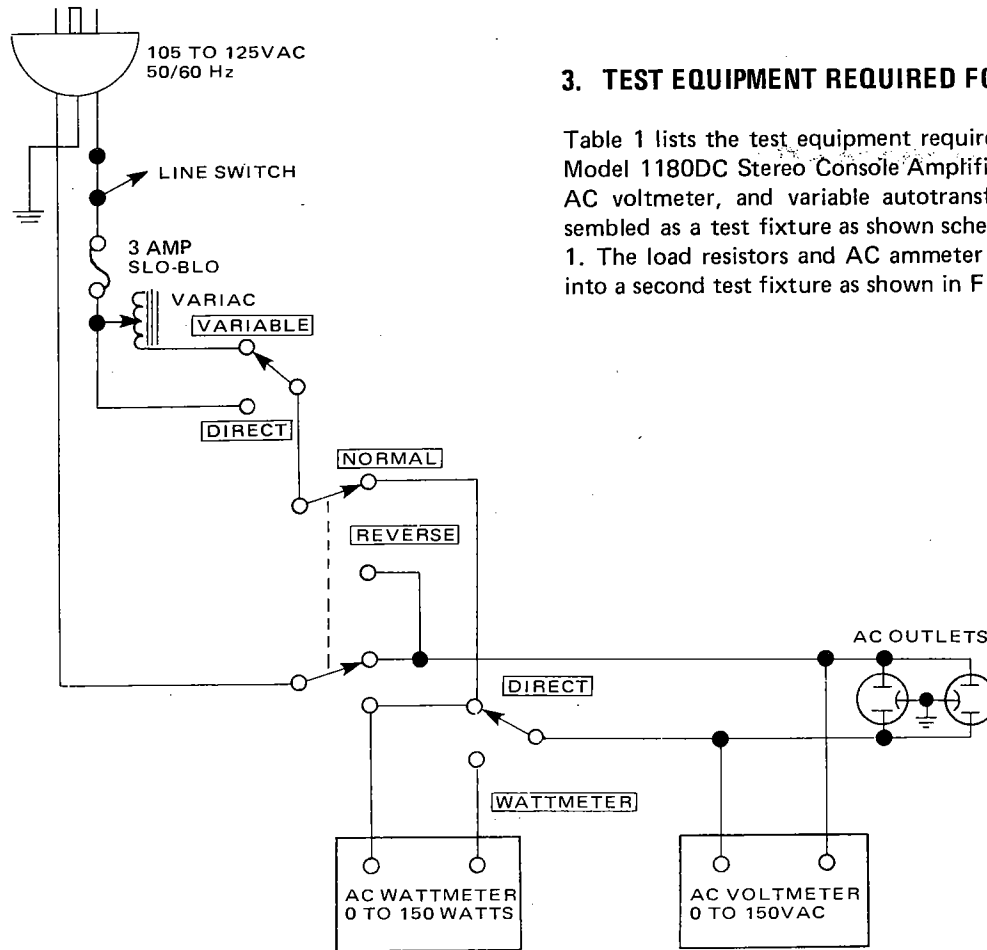


Figure 1. AC Power Control Box Simplified Schematic

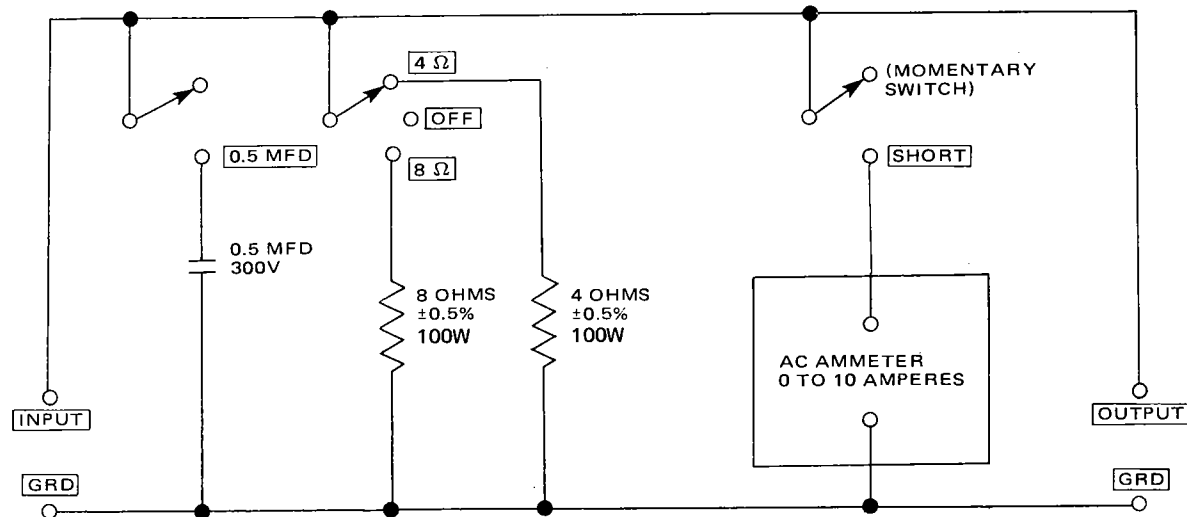


Figure 2. Amplifier Output Load Box Simplified Schematic

Table 1. Test Equipment Required for Servicing

Item	Manufacturer and Model No. (or equivalent)	Use
Distortion Analyzer and Audio Oscillator	Spund Technology, Model 1700B (NOTE : Less then 0.002 percent residual distortion is required.)	Measures distortion, voltage of amplifier output and sinewave source
Oscilloscope	Tektronix, Model 503 Data, Model 555	Waveform analysis and troubleshooting.
VTVM	RCA Senior Volt-Ohmyst, Model WV-98C	Voltage and resistance measurements.
AC Wattmeter	Simpson, Model 390	Monitors primary power consumption of amplifier.
AC Ammeter (0 to 10 amps)	Commercial Grade	Monitors amplifier output under short circuit condition.
Line Voltmeter (0 to 150V AC)	Commercial Grade	Monitors potential of primary power to amplifier.
Variable Autotransformer (0 to 140V AC, 10 amps)	Powerstat, Model 116B	Adjusts level of primary power to amplifier.
Shorting Plug	Use phono plug with 600 ohms across center pin and shell.	Shorts amplifier input to eliminate noise pickup.
Power Supply Bleeder Resistor (10 ohms at 1 W)	Commercial Grade	Discharges power supply filter capacitors prior to disassembly or resistance measurements.
Output Load Resistor (8 Ω ±0.5%, 250W)	Commercial Grade	Provides 8-ohm load for amplifier output termination.
Output Load Resistor (4 Ω ±0.5%, 250W)	Commercial Grade	Provides 4-ohm load for amplifier output termination.
Output Load Capacitor (0.5 mfd)	Mylar	Provides capacitive load for instability checks.
AC Power Control Box	Optional Item. Fabricate in accordance with Figure 1.	Monitors and controls primary power for amplifier.
Amplifier Output Load Box	Optional Item Fabricate in accordance with Figure 2.	Provides various amplifier loads and can monitor shorted output.

## 4. VOLTAGE CONVERSION

### ● EUROPEAN MODEL ONLY

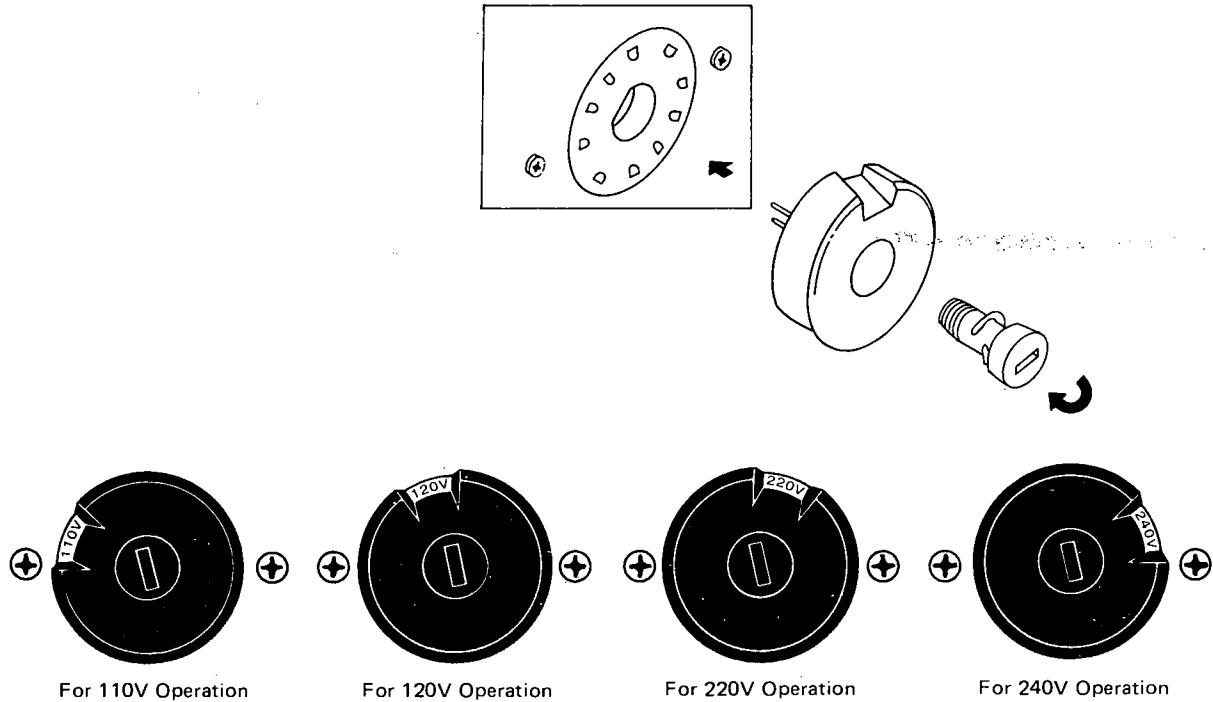
This Model is equipped with a universal power transformer to permit operation at 110, 120, 220 and 240 V AC 50/60 Hz.

To convert the unit to the required voltage, set the plug as illustrated so that you can adjust the voltage as required.

#### CAUTION

DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE.

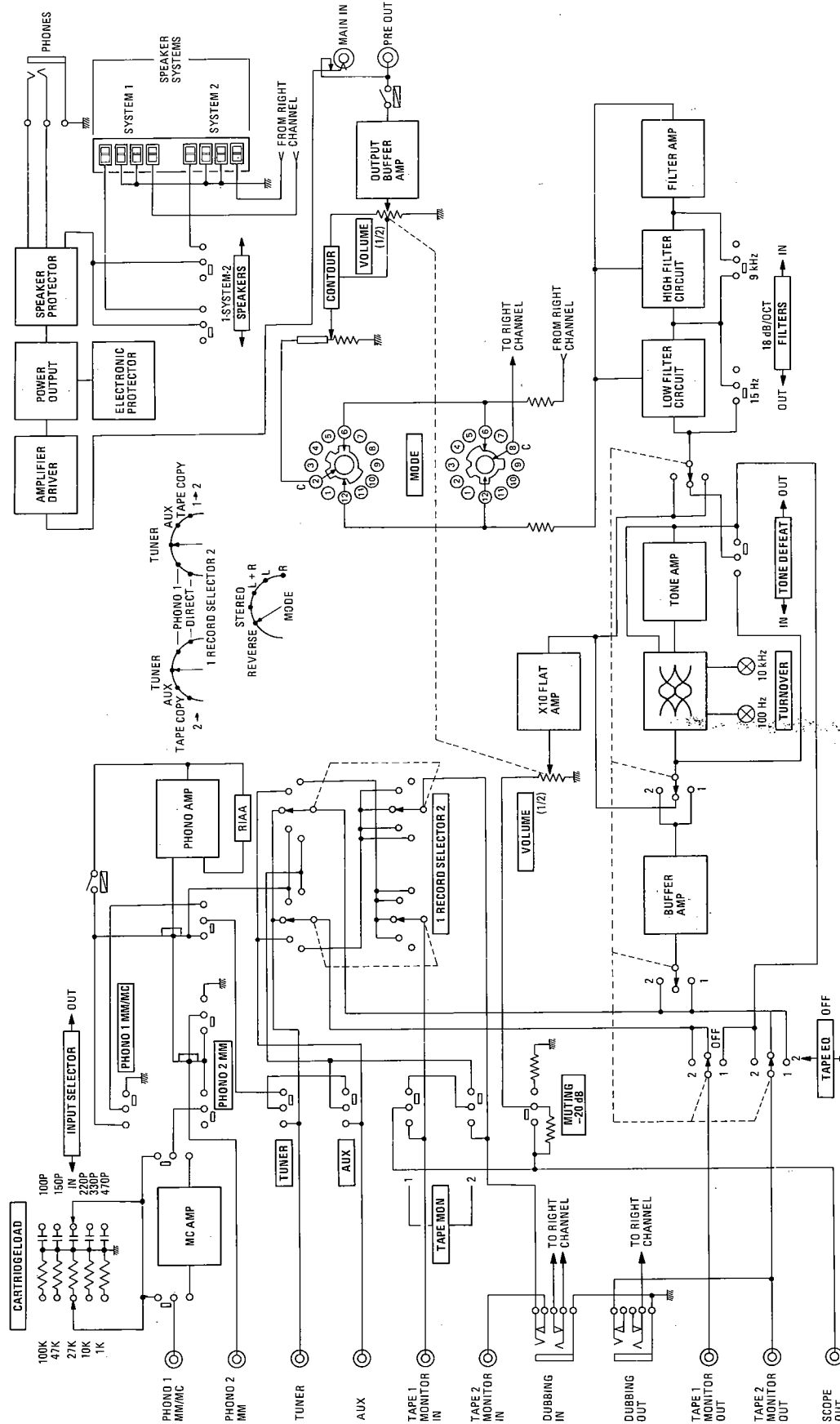
Figure 3. Voltage Conversion Chart



#### Removal Procedure of P.W. Boards

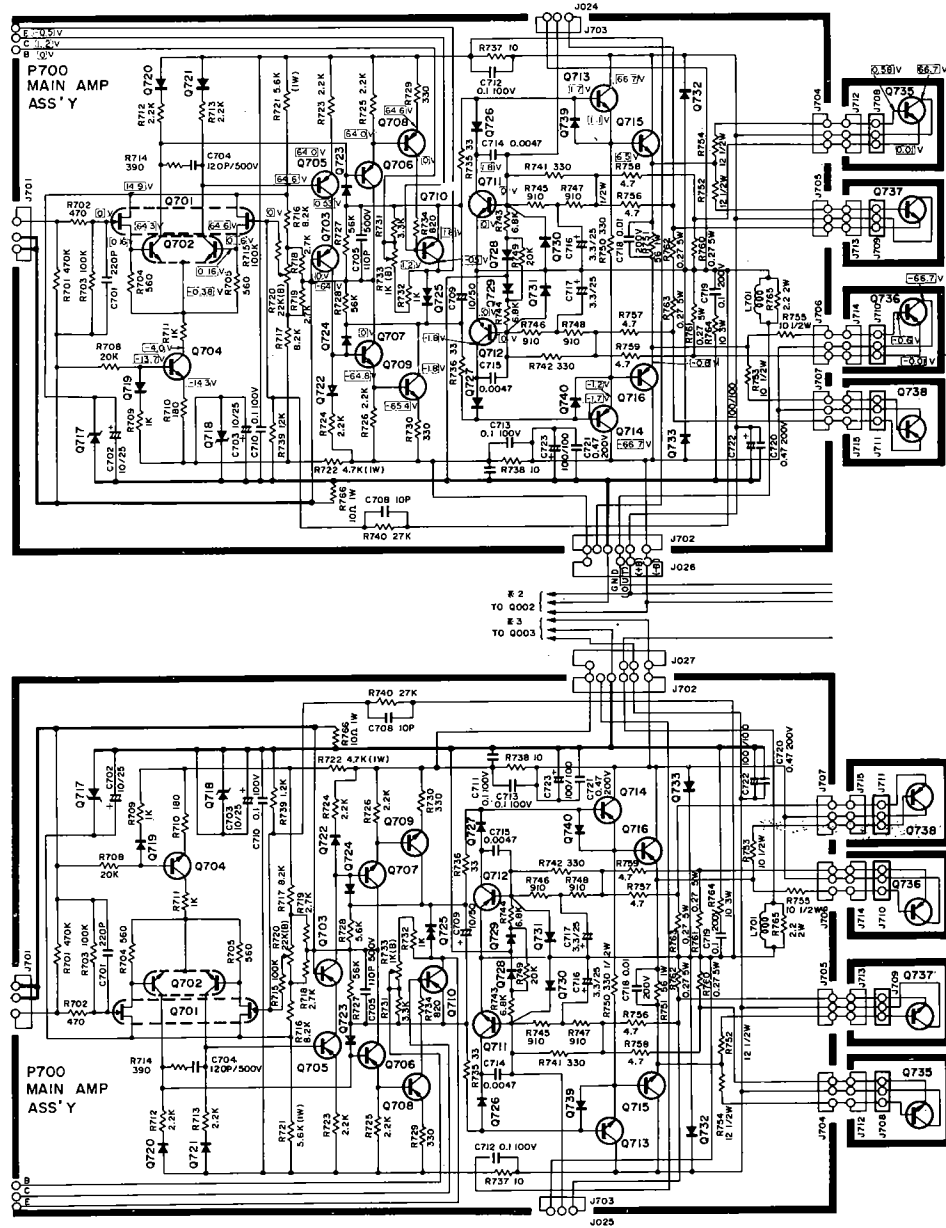
1. Remove the screw 1 (002C) and screw 2 (003C). Remove the Upper cover
2. Remove the screw 3 (011C). Remove the bottom cover.
3. Remove the screw 4 (101F). Remove the front cover (100F).
4. Remove the controls 1 (016B), 2 (017B), 3 (019B), 4 (020B), 5 (022B) and 6 (023B), and remove the screw 5 (021B), nut 1 (020F) and bolt 1 (025B). Remove the escutcheon.
5. Remove the screws 6 (003F), 7 (005F) and 8 (034F). Then the board will be drawn out toward you.

# 5. BLOCK DIAGRAM

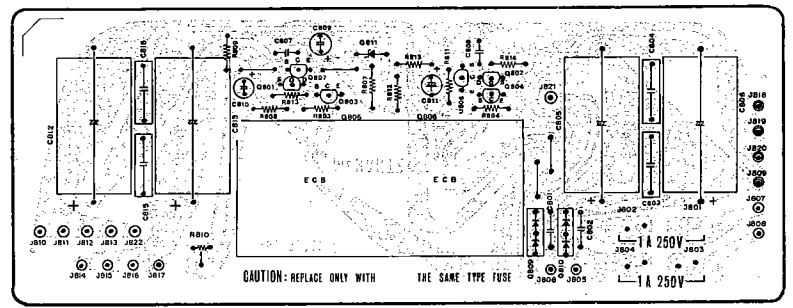
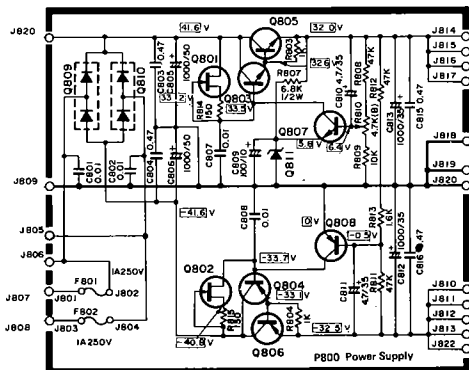


6. DIAGRAM AND COMPONENT LOCATIONS

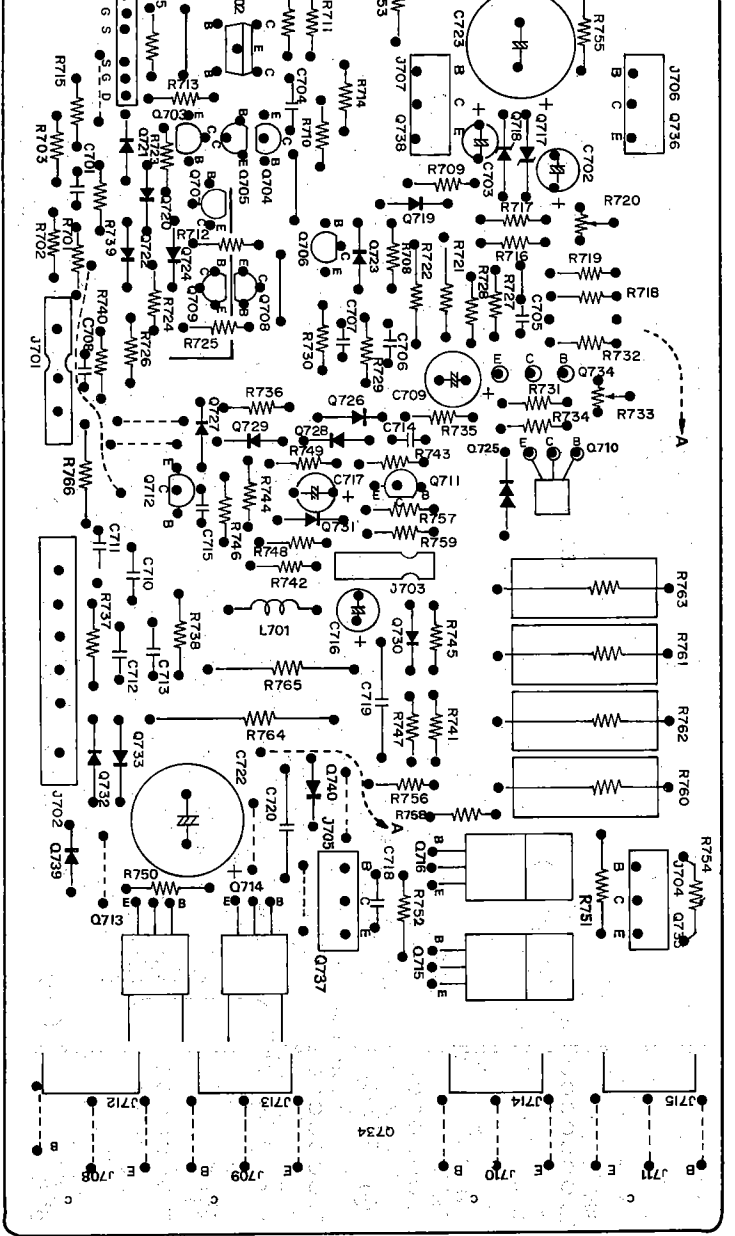
6.1 Main Amp Assembly (P700/P703,4/P705,6) Schematic Diagram and Component Locations



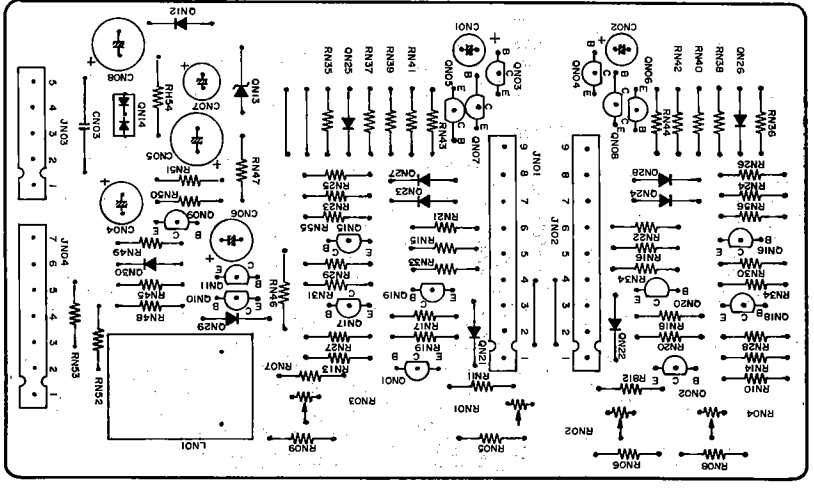
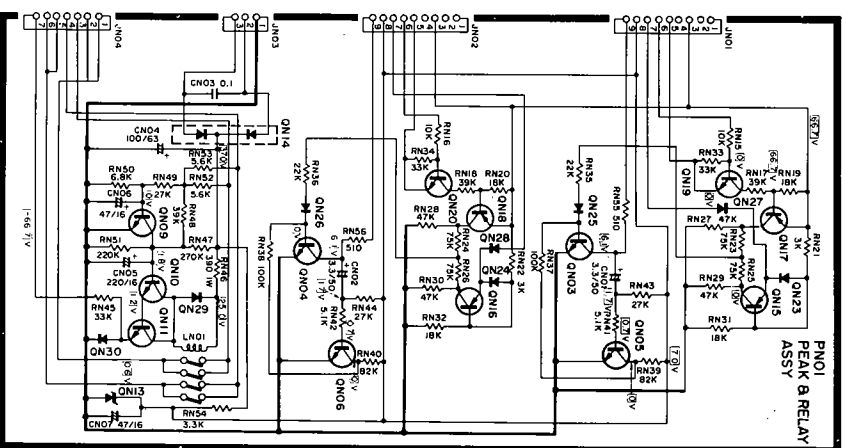
6.2 Power Supply Assembly (P800) Schematic Diagram and Component Locations







6.3 Peak and Relay Assembly (PN01) Schematic Diagram and Component Locations



6.4 Pre Amp Assembly (PE00) Schematic Diagram and Component Locations

