

119



SERVICE
MANUAL **300DC**



marantz

model 300DC

Power Amplifier

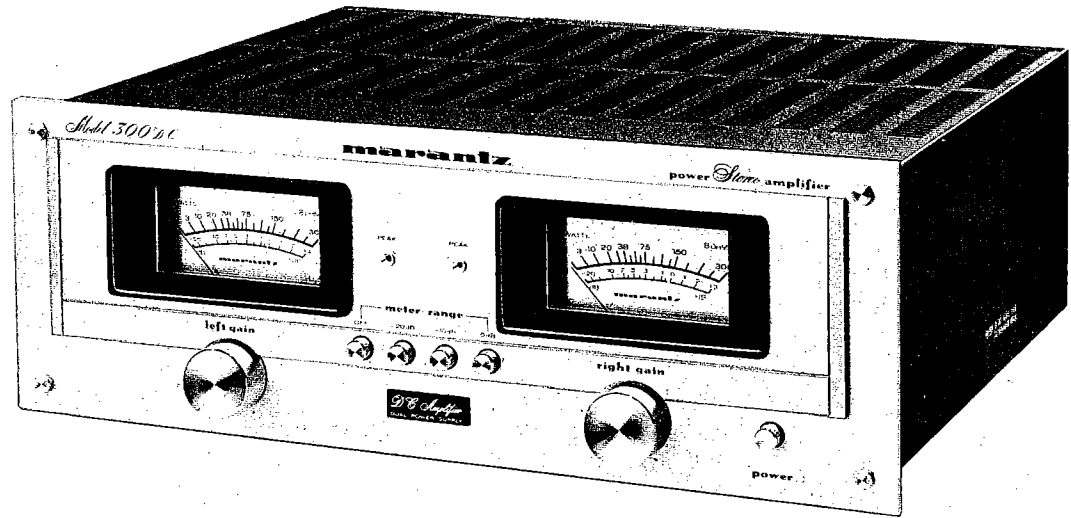


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1. INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for Marantz Model 300DC Main Amplifier.

Servicing information and voltage data included in this manual are intended for use by the knowledgeable and experienced technician only. All instructions should be read carefully. No attempt should be made to proceed

without a good understanding of the operations in the receiver.

The parts list furnishes information by which replacement parts may be ordered from the Marantz Company. A simple description is included for parts which can usually be obtained through local suppliers.

2. TEST EQUIPMENT REQUIRED FOR SERVICING

Table 1 lists the test equipment required for servicing the Model 300DC Main Amplifier.

Item	Manufacturer and Model No.	Use
Distortion Analyzer Audio Oscillator AC VTVM	Sound Technology Model 1700B	Distortion measurements Sinewave and squarewave signal source voltage measurements (AC)
Oscilloscope	Tektronix Model T932 Philips Model 3232	Waveform analysis and trouble shooting and ASO alignment
Circuit Tester		Trouble shooting
DC VTVM	Fluke Model 8000 "Digital" Simpson Model 313, Triplet Model 801	Voltage measurements (DC)
AC Wattmeter	Simpson Model 1379	Monitors primary power to amplifier
AC Ammeter	Commercial Grade (1-10A)	Monitors amplifier output under short circuit condition
Line Voltmeter	Simpson Model 1359	Monitors potential of primary power to amplifier
Variable Autotransformer	Superior Electronic Co., Powerstat Model 116B-10A	Adjusts level of primary power to amplifier
Shorting Plug	Use phono plug with 600 ohm across center pin and shell	Shorts amplifier input to eliminate noise pickup
Output Load (8 ohms, ± 0.5% 100W)	Commercial Grade	Provides 8-ohm load for amplifier output termination
Output Load (4 ohms, ± 0.5% 100W)	Commercial Grade	Provides 4-ohm load for amplifier output termination

3. ALIGNMENT PROCEDURE

3.1 DC Balance

1. Connect oscilloscope to Left Channel output terminals of the Model 300DC.
2. Turn Line Switch to ON and adjust variac to 120 vac.
3. After relay energizes, adjust Left Channel (Left Hand Heatsink) amplifier board potentiometer R719 for an indication of a "line" zero (i.e., 0V \pm 50 mV) as indicated on the oscilloscope.
4. Repeat for Right Channel (Right Hand Heatsink).

3.2 Meter Adjustment

1. Fully turn RN03 (RN04) clockwise and RN01 (RN02) counterclockwise.
2. Turn meter range switch to 0 dB position.
3. Set the output of the speaker terminal to 34.5 V R.M.S.
4. Set the meters (M001, M002) to "0VU" by RN01 (RN02).
5. Decrease the output of the speaker terminal to 6.2 V R.M.S.
Turn meter range switch to -20 dB position.
Turn RN03 (RN04) in the clockwise direction and stop where the meter's pointer hits the full scale stopper.

● **EUROPEAN MODEL ONLY**

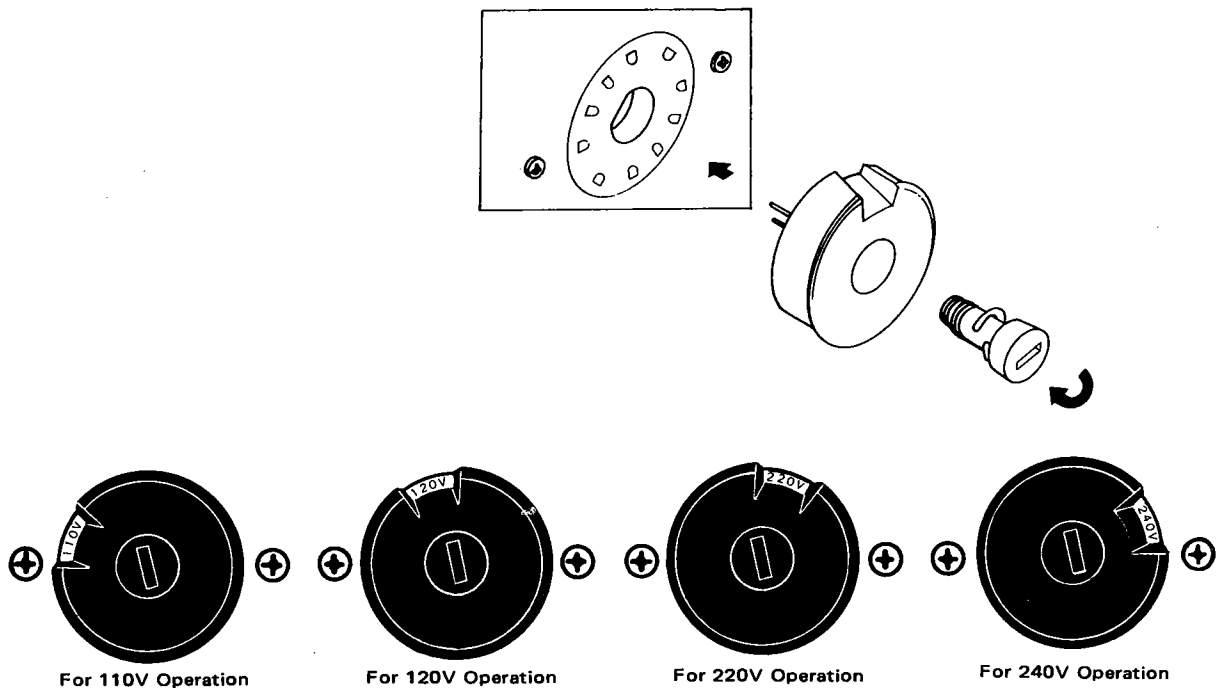
4. VOLTAGE CONVERSION

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.

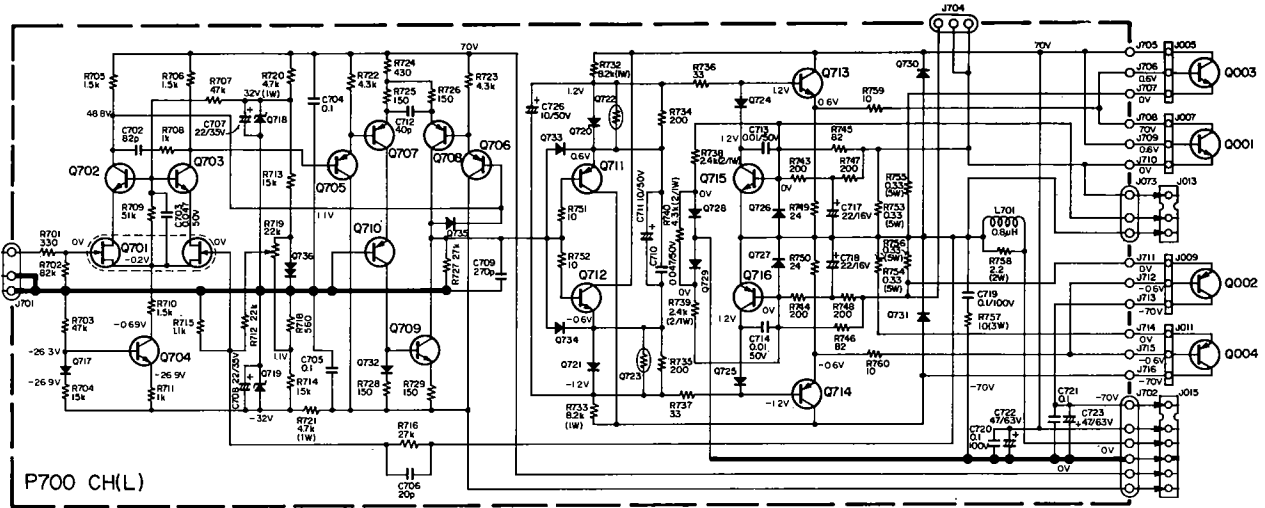
CAUTION
DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE.

4.1 Voltage Conversion Chart

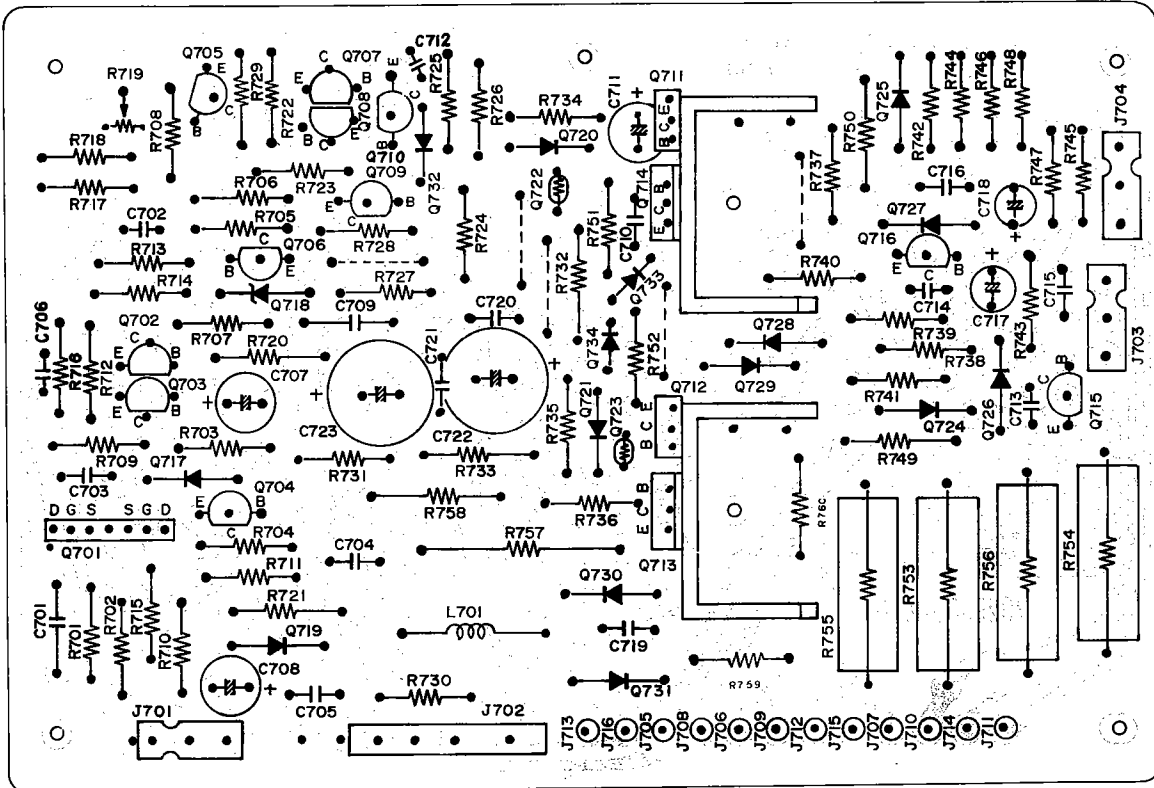


5. DIAGRAM AND COMPONENT LOCATIONS

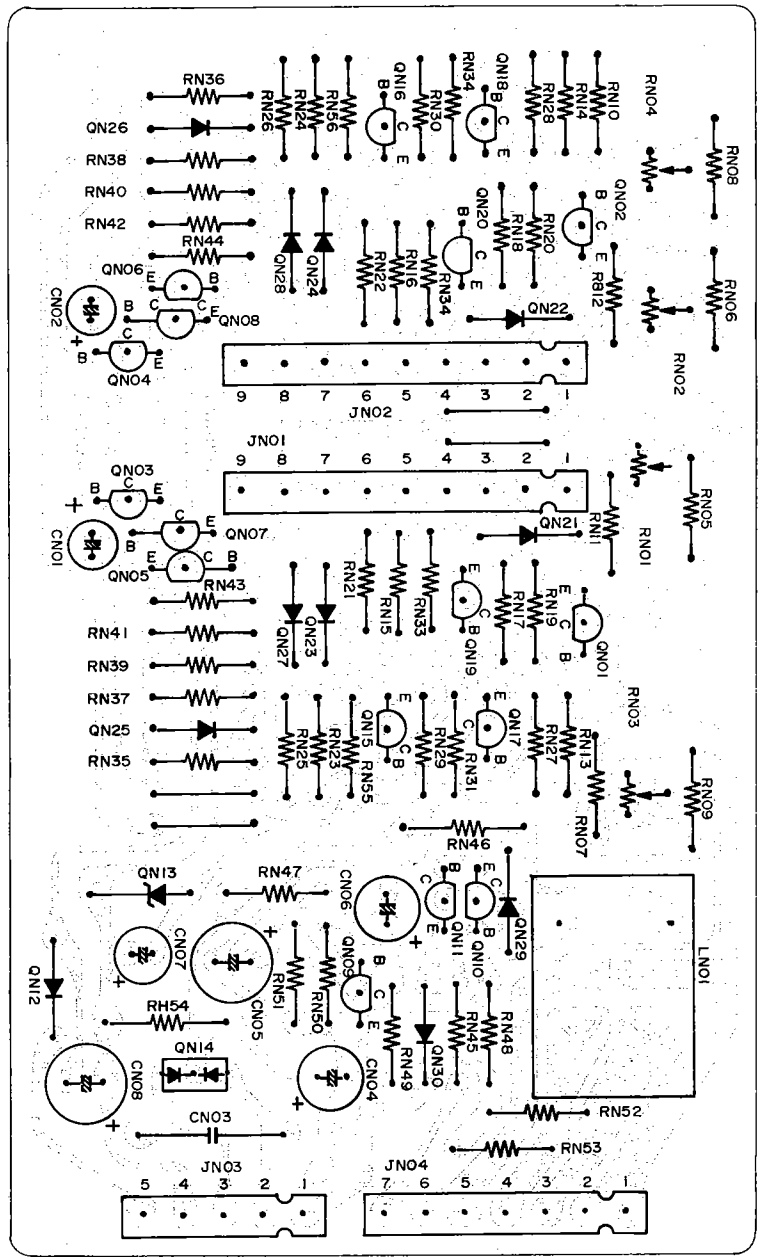
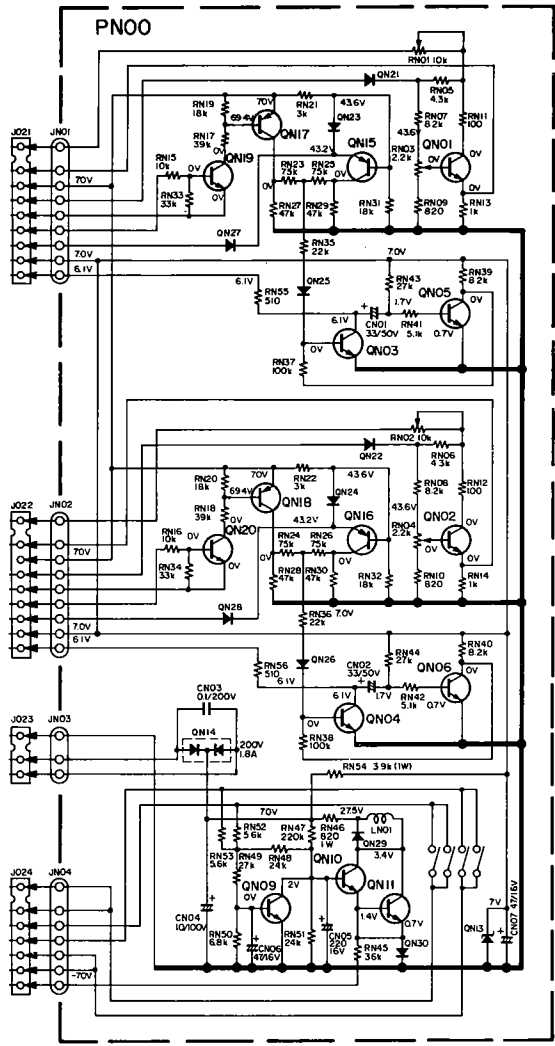
5.1 Main Amp. Assembly (P700) Schematic Diagram and Component Locations



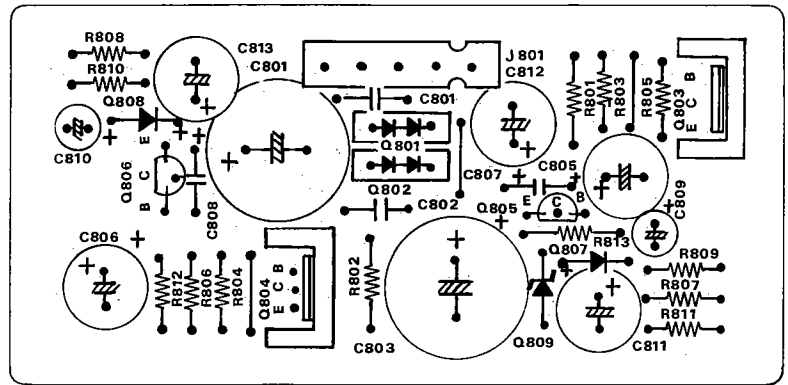
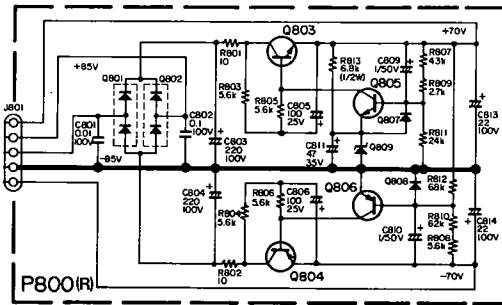
P700 CH(L)



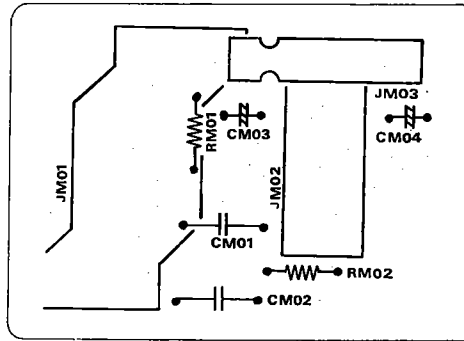
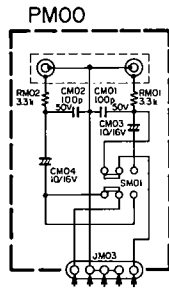
5.2 Peak Ind Assembly (PN00) Schematic Diagram and Component Locations



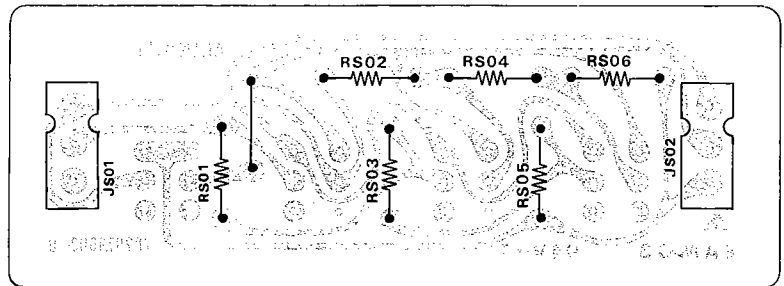
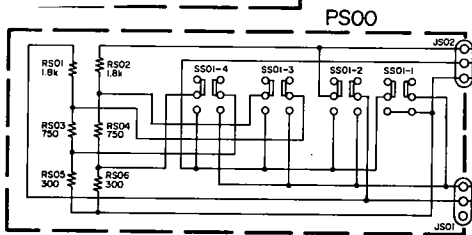
5.3 Power Supply Assembly (P800) Schematic Diagram and Component Locations



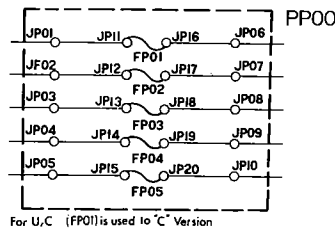
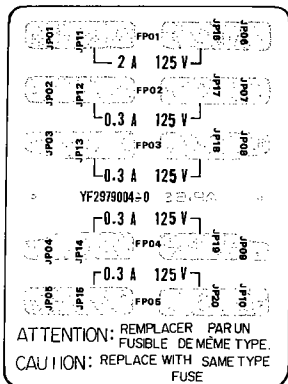
5.4 RCA Pin Terminal Assembly (PM00) Schematic Diagram and Component Locations



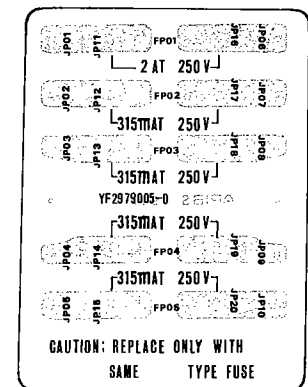
5.5 Meter Range Assembly (PS00) Schematic Diagram and Component Locations



5.6 Fuse Assembly (PP00) Schematic Diagram and Component Locations

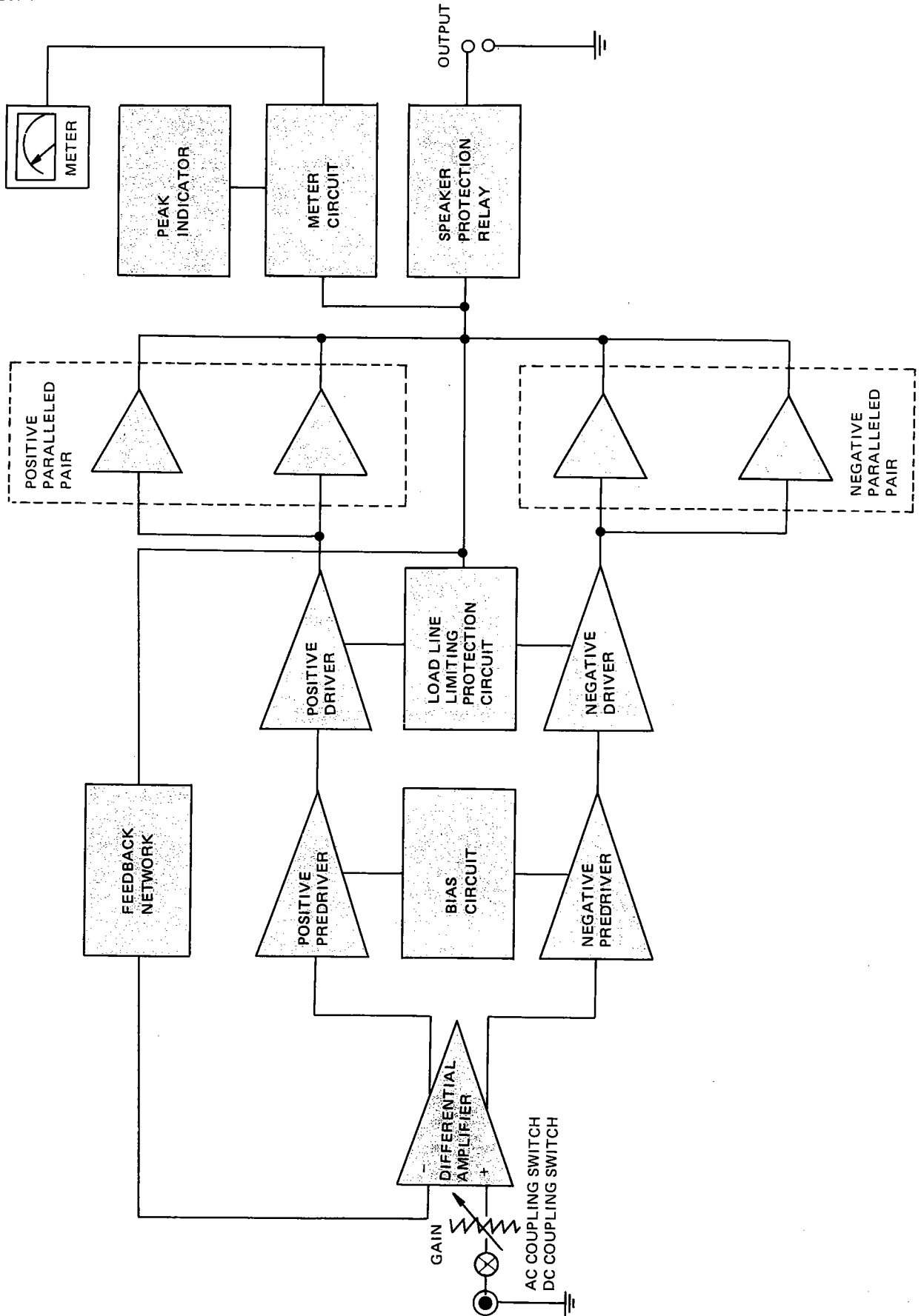


For (U) (C)

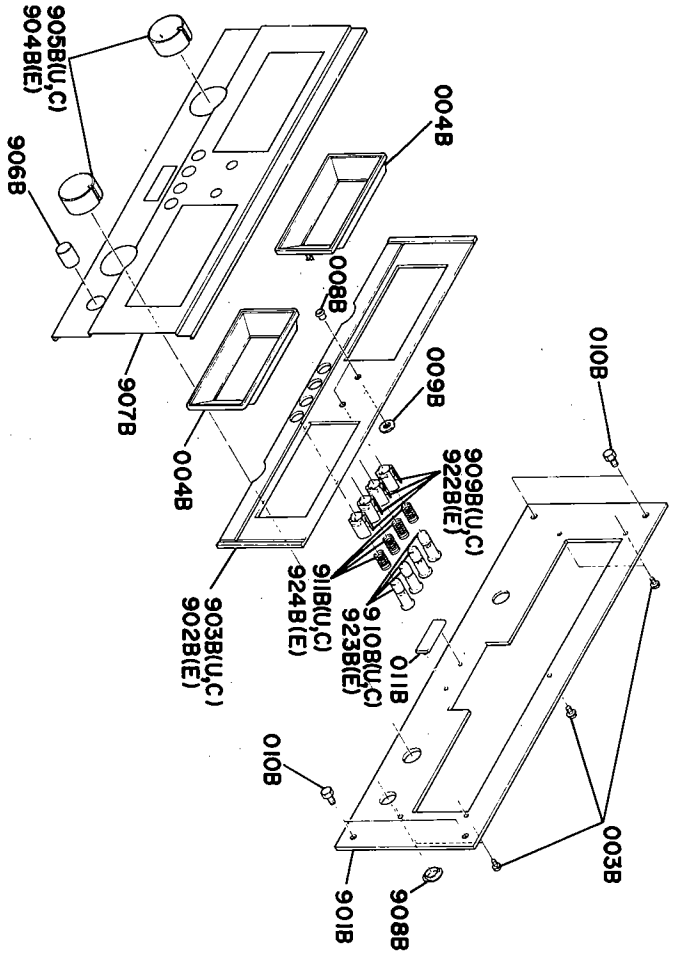


For (N)

6. BLOCK DIAGRAM



PLODED VIEW PARTS LIST
01-99] Front Panel

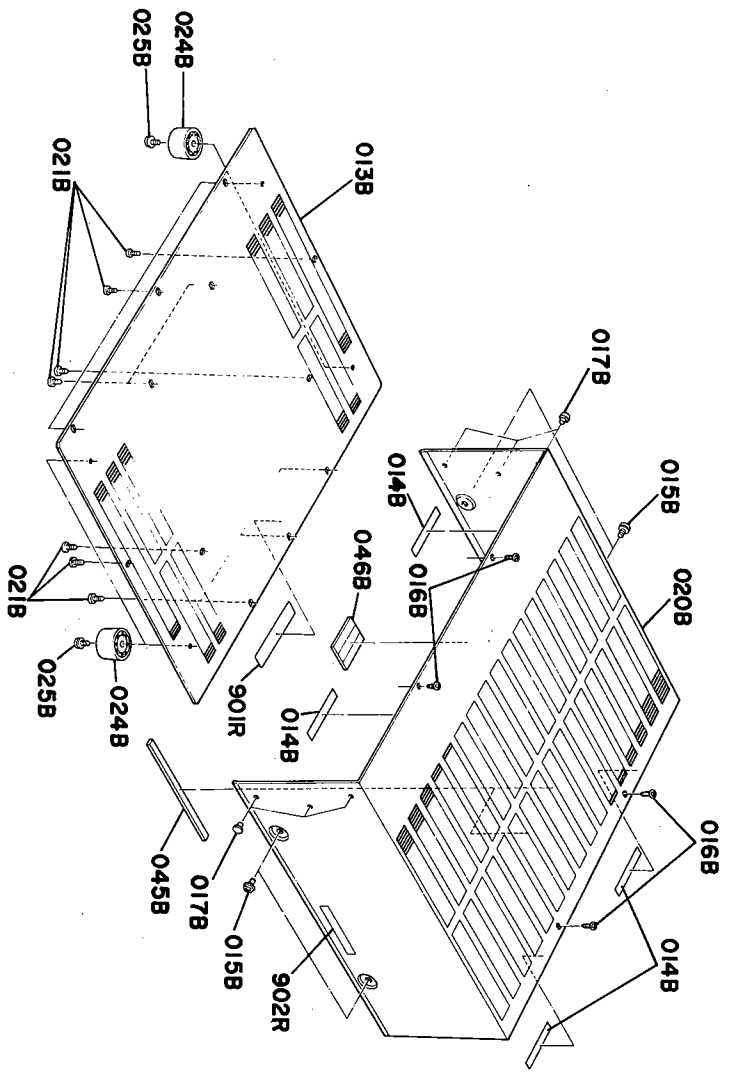


U : for U.S.A.
C : for Canada
E : for Europe

QTY	PART NO.	DESCRIPTION	REF. DESIG.		
			U	C	E
1	2979063400	Front Panel Assembly			
5	51480306A9	F. Washer Screw F3 x 6			
2	2979401010	Frame			
2	2979259022	Bushing			
2	64020600C0	RG Ring, CS Type			
1	2979251020	Badge			
1	2979063010	Escutcheon			
1	2979063025	Escutcheon			
1	2979063110	Escutcheon			
1	2979063025	Escutcheon			
1	2978259010	Bushing			
4	2979259010	Bushing			

REF. DESIG.	QTY	PART NO.	DESCRIPTION	REF. DESIG.		
				U	C	E
010B	4	52017069J0	H. Head Bolt			
904B	4	2979154010	Knob			
905B	2	2979154010	Knob			
906B	1	2970154030	Knob			
907B	1	2979053112	Cover			
910B	4	2979154020	Knob			
911B	4	2979115010	Spring			
923B	4	2979154020	Knob			
924B	4	2979115010	Spring			

[C02-99] Lid



U : for U.S.A.
C : for Canada
E : for Europe

REF. DESIG.	QTY	PART NO.	DESCRIPTION	REF. DESIG.		
				U	C	E
013B	1	2963257010	Lid			
014B	4	2965118010	Spacer			
015B	4	51480406S9	F. Washer Screw F4 x 6			
016B	4	51280308U0	B.H. TAP. Screw B3 x 8			
017B	6	2991259010	Bushing			
020B	1	2979257010	Lid			
021B	12	51280410U0	B.H. TAP. Screw B4 x 10			
024B	4	2759057010	Leg			
025B	4	51570410S0	P. TAPT. Screw P4 x 10			
045B	2	2979056010	Buffer			

REF. DESIG.	QTY	PART NO.	DESCRIPTION	REF. DESIG.		
				U	C	E
046B	1	2979056200	Buffer			
901R	1	2578861010	Label			
901R	1	2911861110	Label			
902R	1	2911861143	Label			
902R	1	2932861010	Label			

