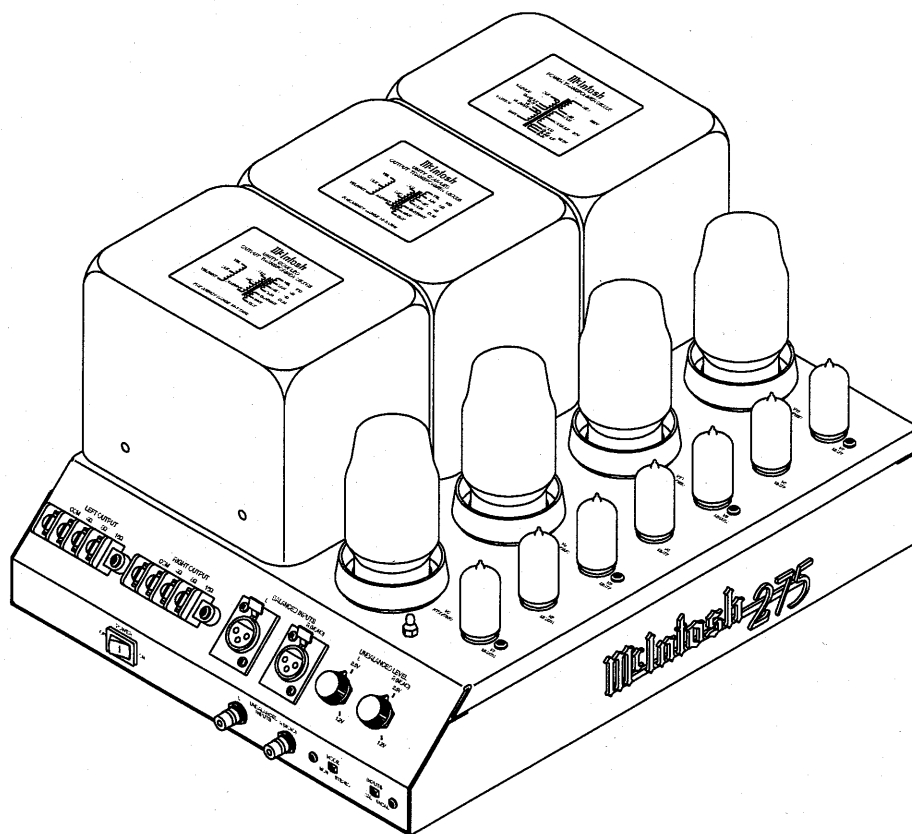




MC275

STEREO POWER AMPLIFIER

STARTING WITH SERIAL NO. VN1001



CONTENTS

Performance Specifications	2	Amplifier Schematic and PCB	9 - 12
Notes	2	Input Schematic and PCB	13 - 14
Rear Panel	3	Parts List	15 - 16
Section Location	4	Exploded View and Parts List	17 - 18
Block Diagram	5	Repacking Instructions	19
Interconnection Diagram	7 - 8		

SERVICE MANUAL

PERFORMANCE SPECIFICATIONS

Power Output Stereo

Minimum sine wave continuous average power output per channel, both channels operating is:
75 watts into 4, 8 or 16 ohm load

Power Output Mono (Parallel)

Minimum sine wave continuous average power output is:
150 watts into 2 ohm, 4 ohm or 8 ohm load

Output Load Impedance

4, 8, or 16 ohm (Stereo Mode)
2, 4, or 8 ohm (Mono Mode)

Rated Power Band

20Hz to 20,000Hz

Total Harmonic Distortion

Maximum Total Harmonic Distortion at any power level from 250 milliwatts to rated power output is 0.5%

Intermodulation Distortion

Maximum Intermodulation Distortion if instantaneous peak output per channel does not exceed twice the rated output, for any combination of frequencies from 20Hz to 20,000Hz, with both channels operating is 0.5%

A-Weighted Signal To Noise Ratio

100dB

Frequency Response

+0, -0.5dB from 20Hz to 20,000Hz
+0, -3dB from 10Hz to 70,000Hz

Sensitivity

1.2 Volt unbalanced inputs
2.5 Volt balanced inputs

Wide Band Damping Factor

Greater than 14

Input Impedance

100,000 ohms unbalanced
200,000 balanced

Tube Compliment

3 - 12AX7A Inputs and Phase Inverters
4 - 12AT7 Voltage Amplifier and Drivers
4 - KT88/6550 Power Output

Power Requirements

100 Volts, 50/60Hz at 3.6 amps
110 Volts, 50/60Hz at 3.6 amps
120 Volts, 50/60Hz at 3.6 amps
220 Volts, 50/60Hz at 1.8 amps
230 Volts, 50/60Hz at 1.8 amps
240 Volts, 50/60Hz at 1.8 amps

Note: Refer to the right side panel of the MC275 for the correct voltage.


Overall Dimensions

Width is 16-1/2 inches (41.91cm), Height is 8-1/4 inches (20.96cm) including feet, Depth is 12 inches (30.48cm)

Weight

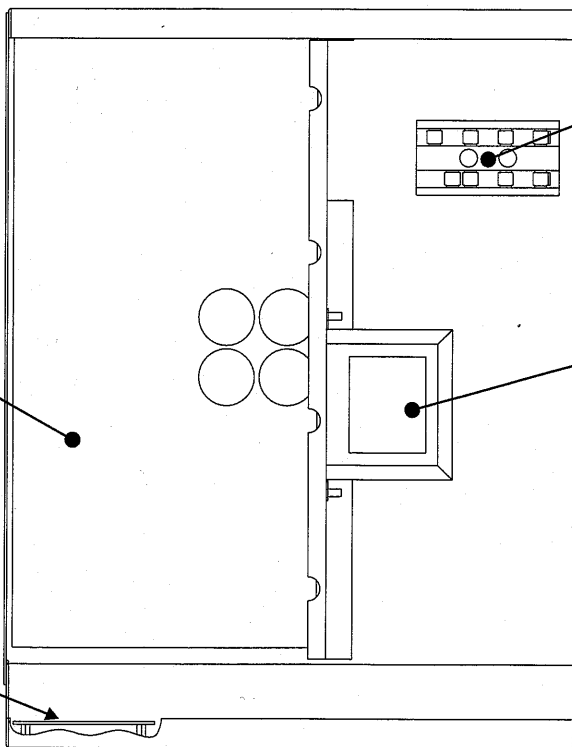
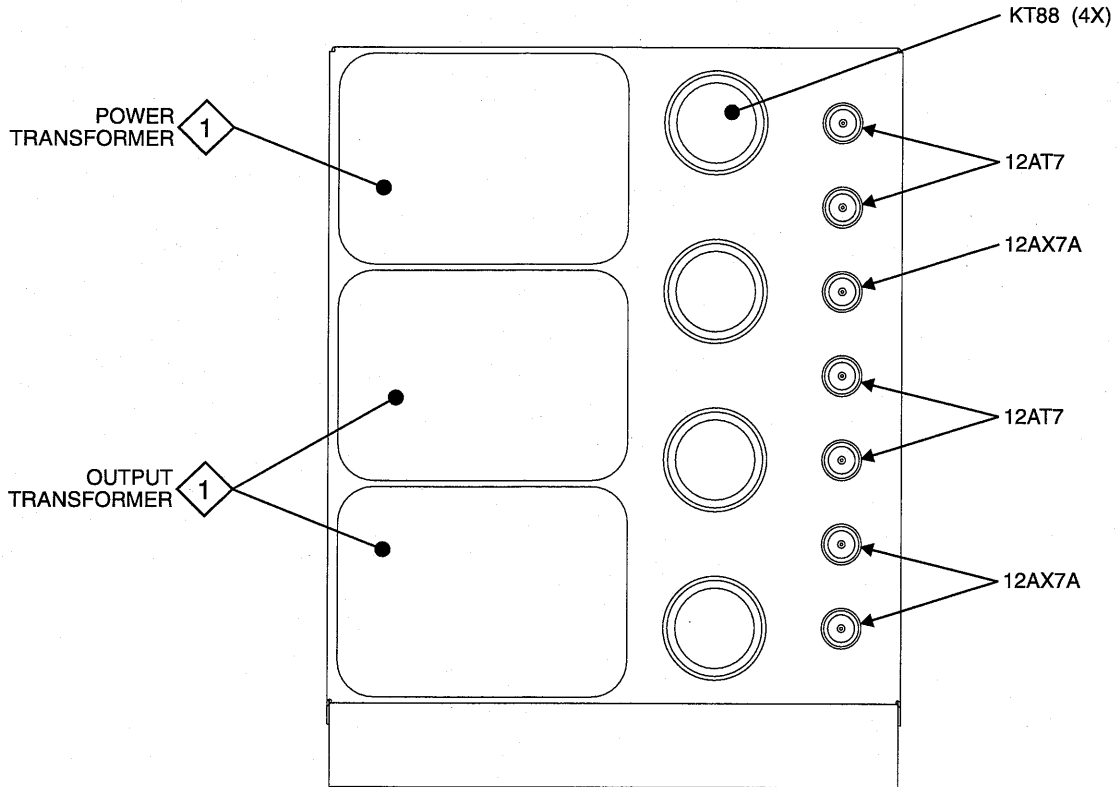
67 pounds (30.5kg) net, 75 pounds (34.1kg) in shipping carton

NOTES

1. The heavy lines on the schematic denote the primary signal path.
2. Unless otherwise noted, all voltages indicated on the schematics are measured under the following conditions:
 - a. AC input at 120 volts, 50/60Hz.
 - b. All voltages are +/-10% with respect to ground. A high impedance (10 megaohm) voltmeter must be used.
3. Unless otherwise specified:
 - a. Resistor values are in ohms.
 - b. Capacitor values are microfarads (uF).
 - c. Inductor values are in microhenries (uH).
4. On PC board drawings, Square pad indicates:
 - a. Polarized Capacitors - Positive
 - b. Diodes - Cathode
 - c. Others - Pin 1
5. **WARNING**
Parts marked with the symbol  have critical characteristics. Use only replacement parts recommended by the manufacturer.

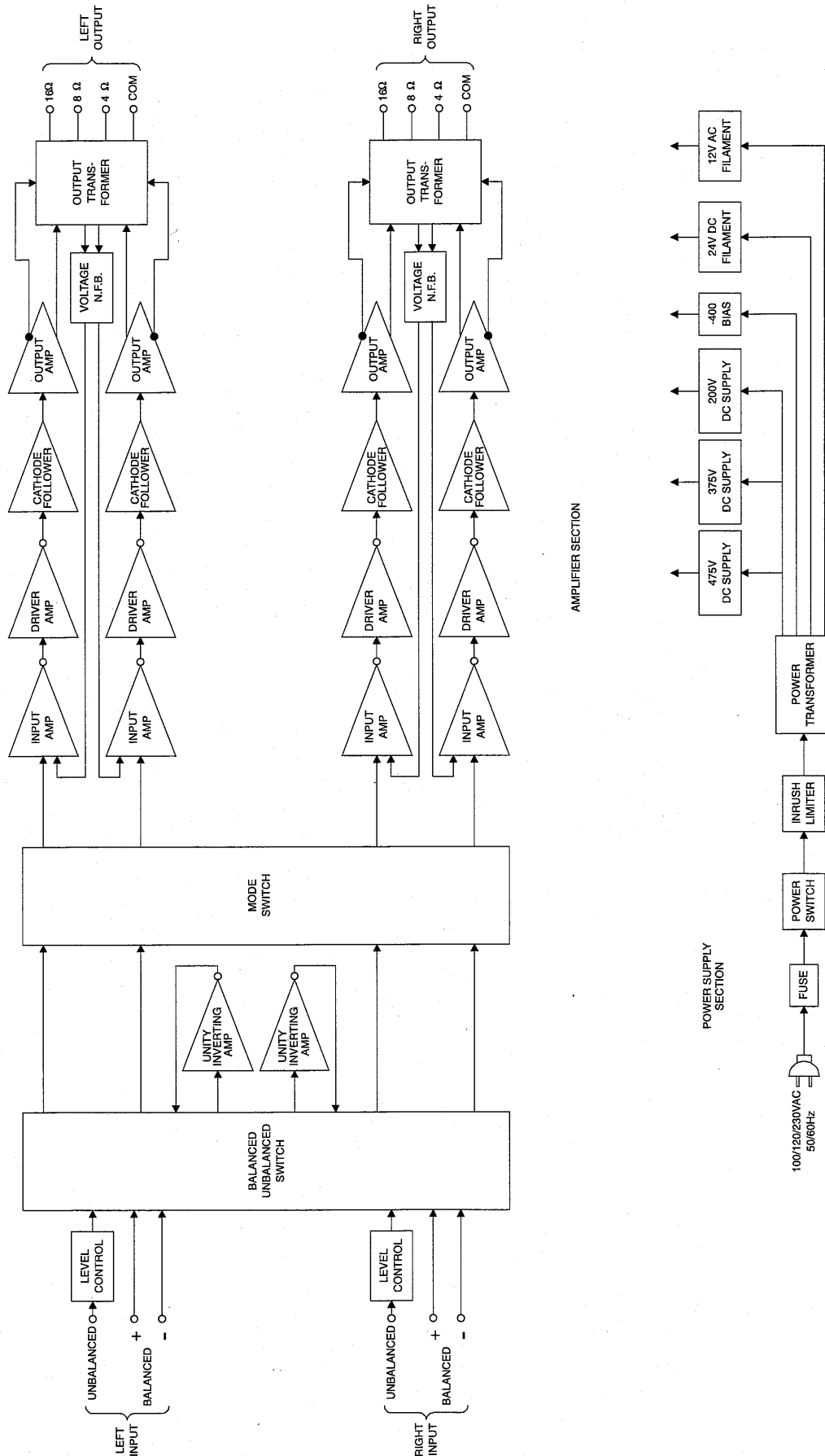
SECTION LOCATIONS

TOP VIEW WITH COVER REMOVED



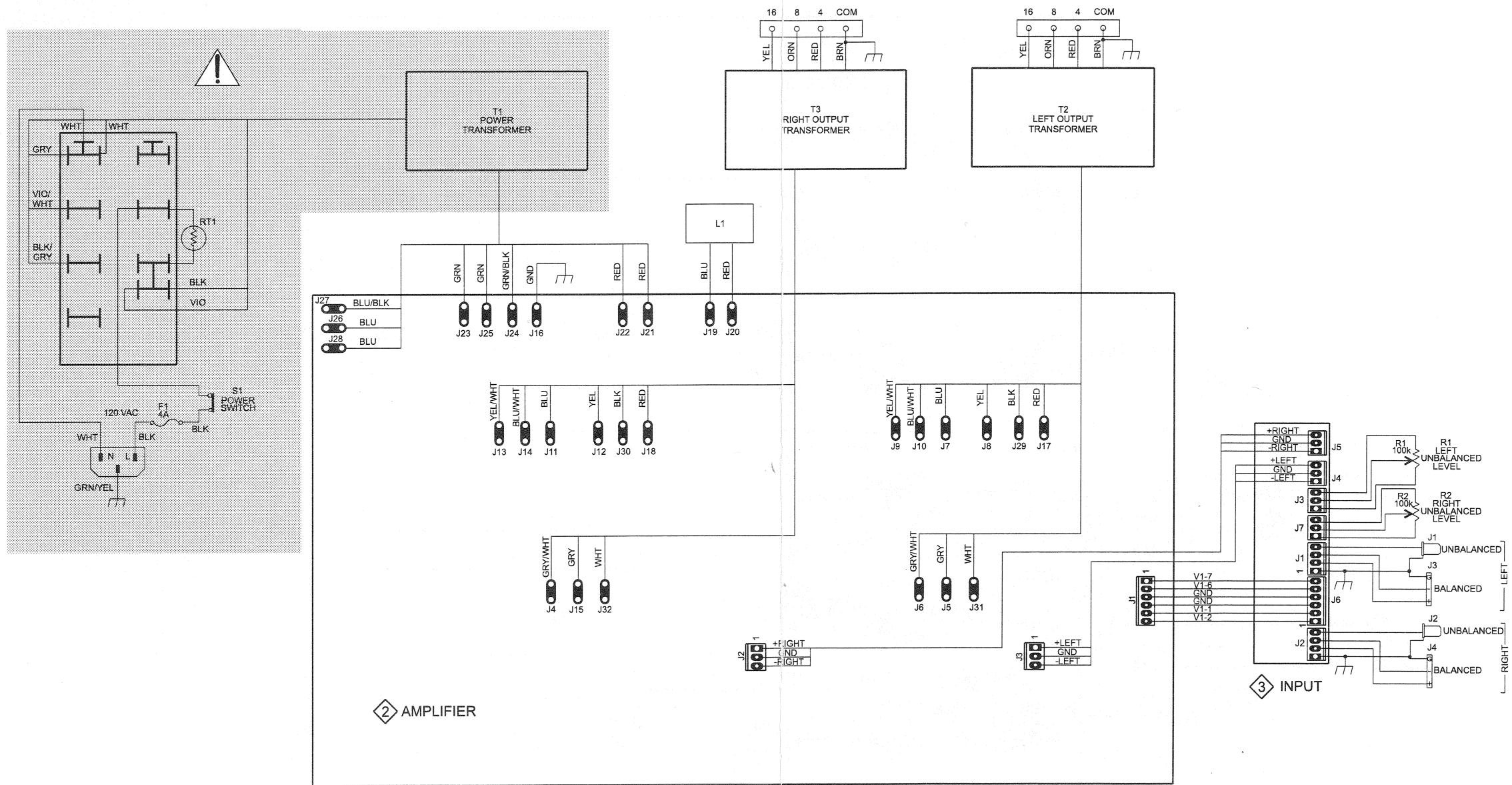
BOTTOM VIEW WITH COVER REMOVED

BLOCK DIAGRAM



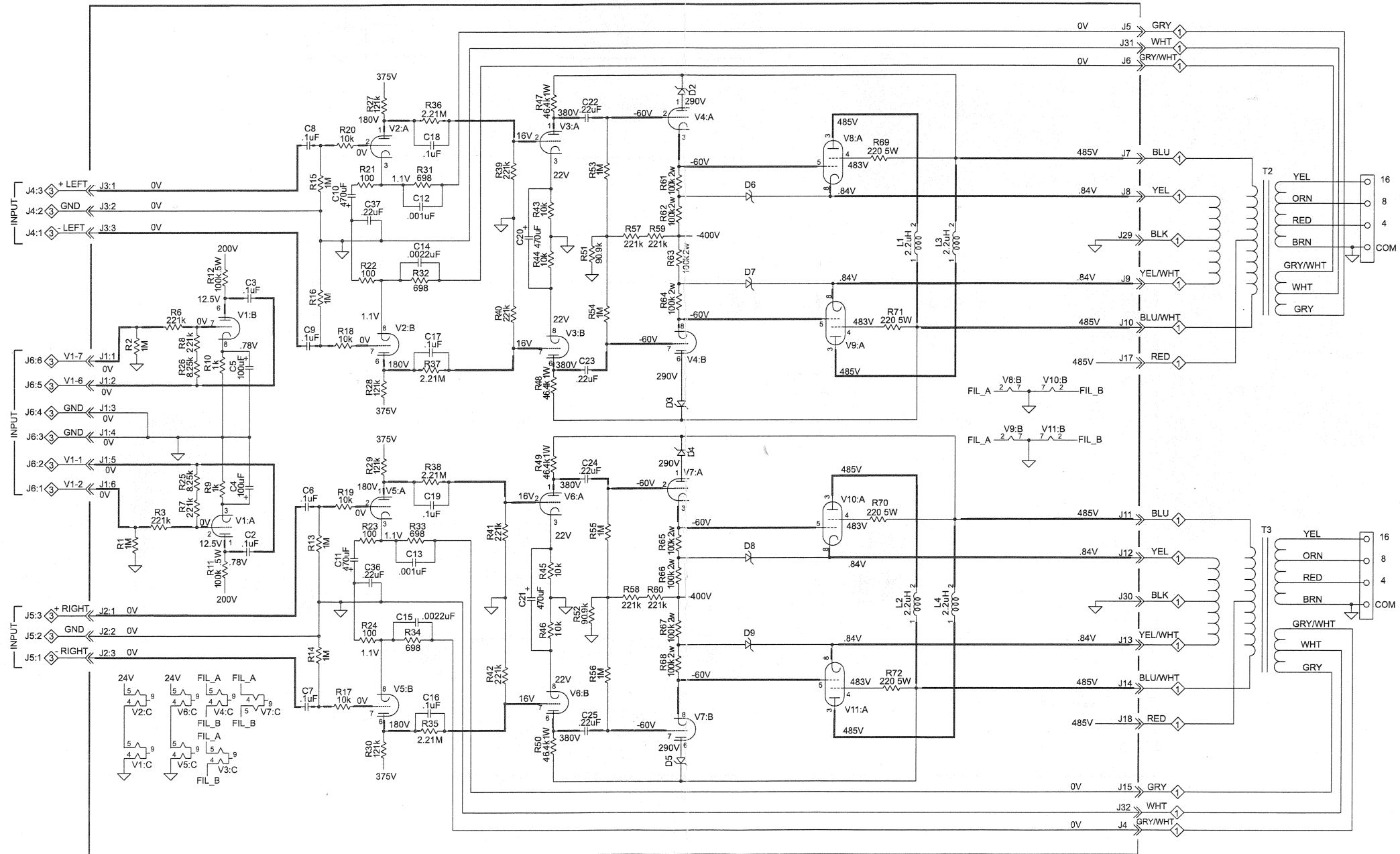
1 INTERCONNECT

! WARNING Parts located in the shaded area have critical characteristics. Use only replacement parts recommended by the manufacturer.





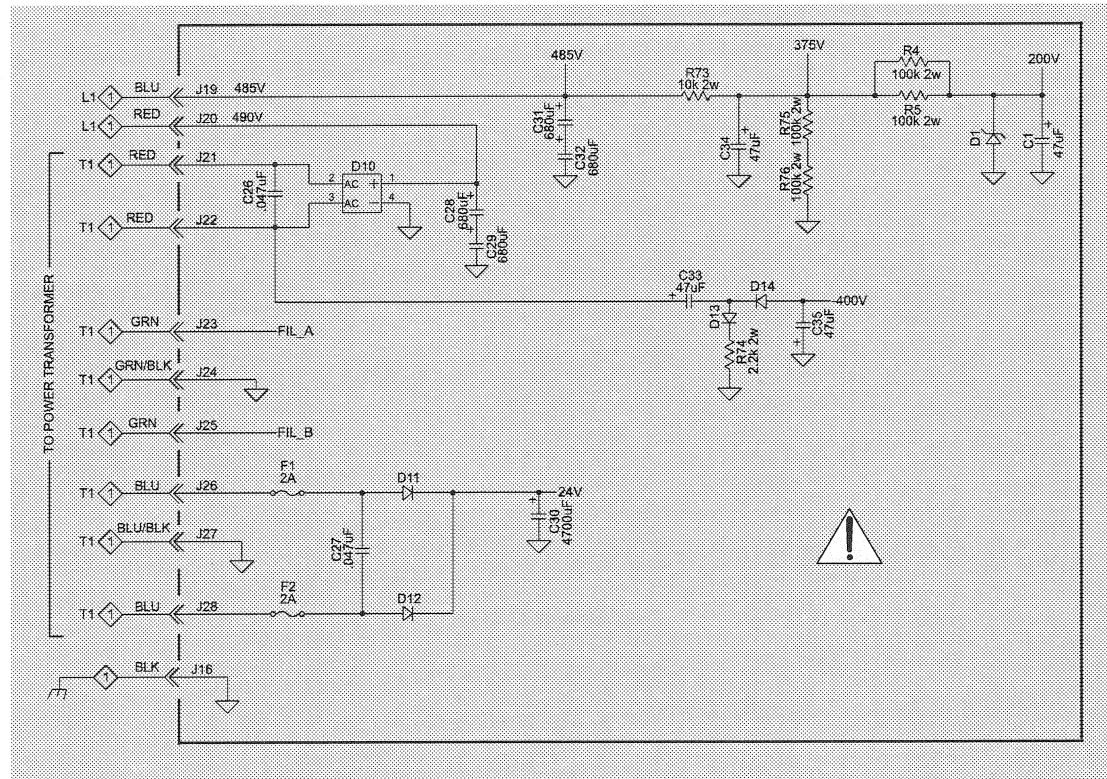
AMPLIFIER 050081



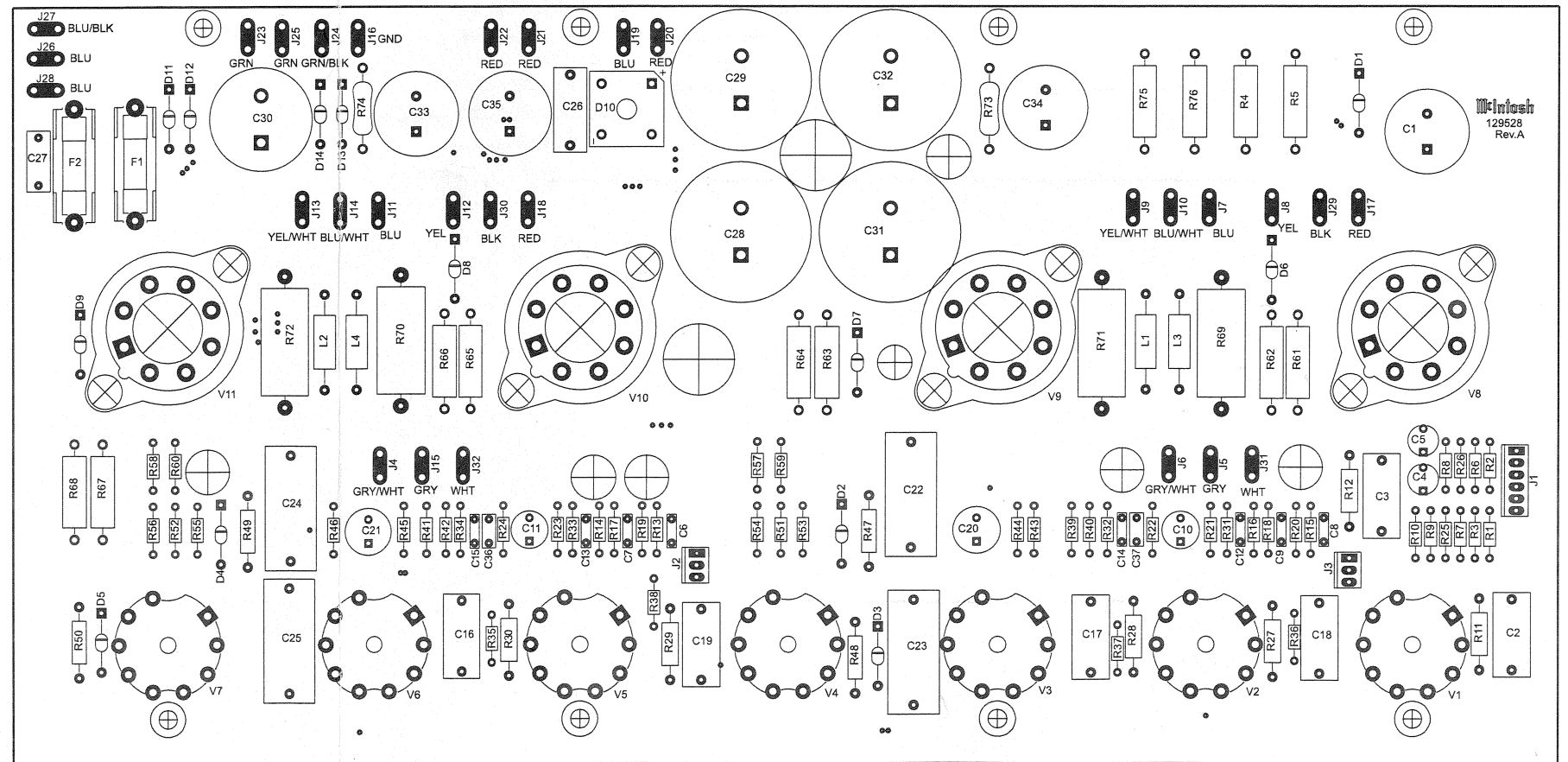
2B AMPLIFIER 050081

MC275

2 AMPLIFIER 050081

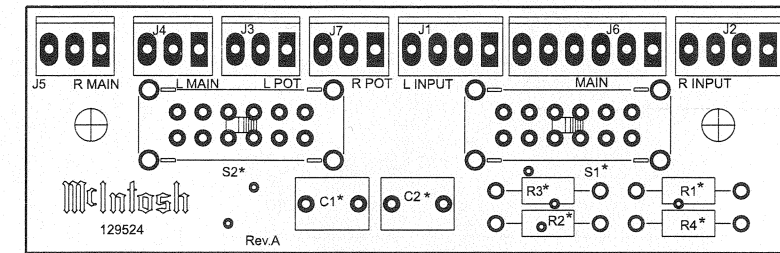
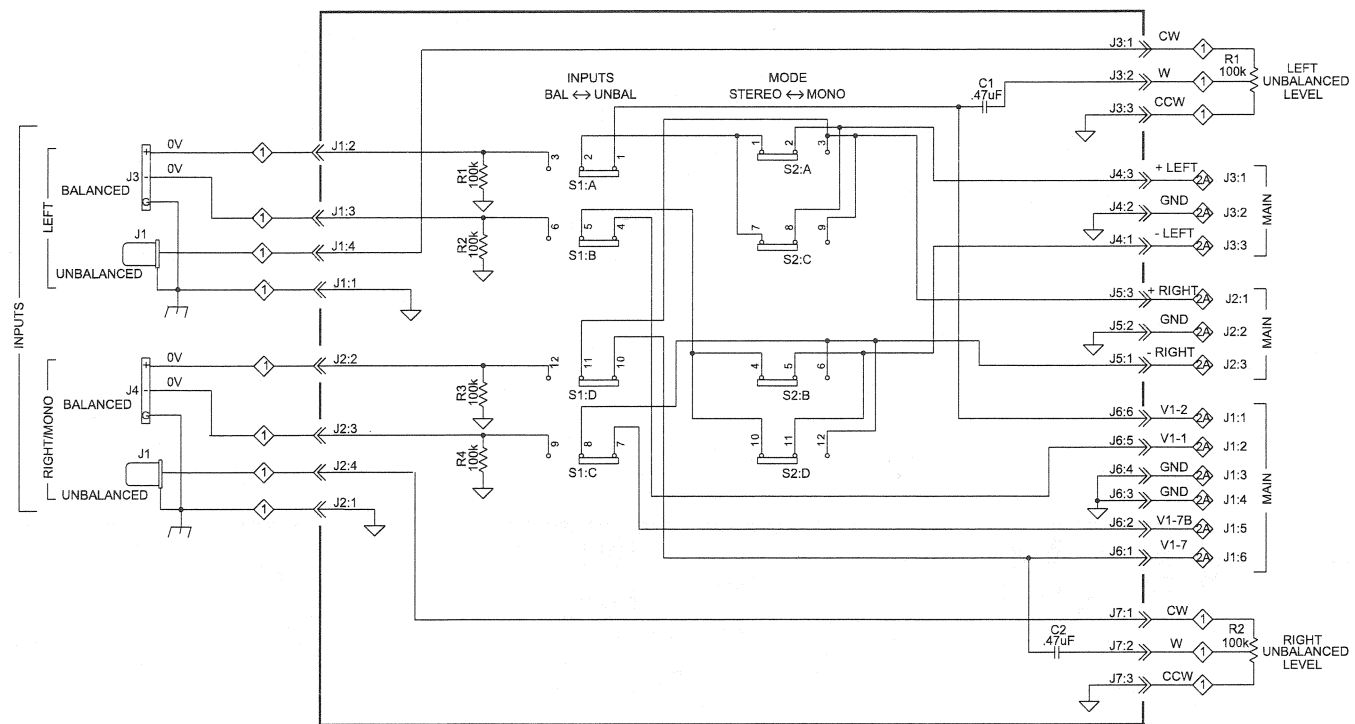


! WARNING Parts located in the shaded area have critical characteristics. Use only replacement parts recommended by the manufacturer.



Minish
129528
Rev.A

3 INPUT 050082



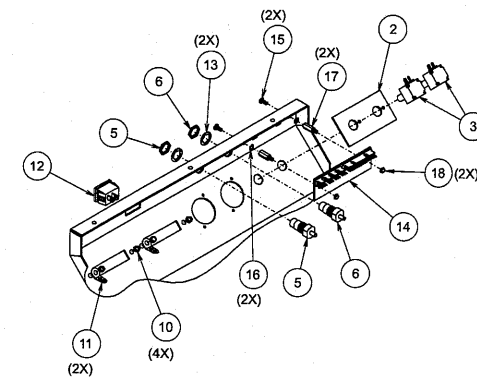
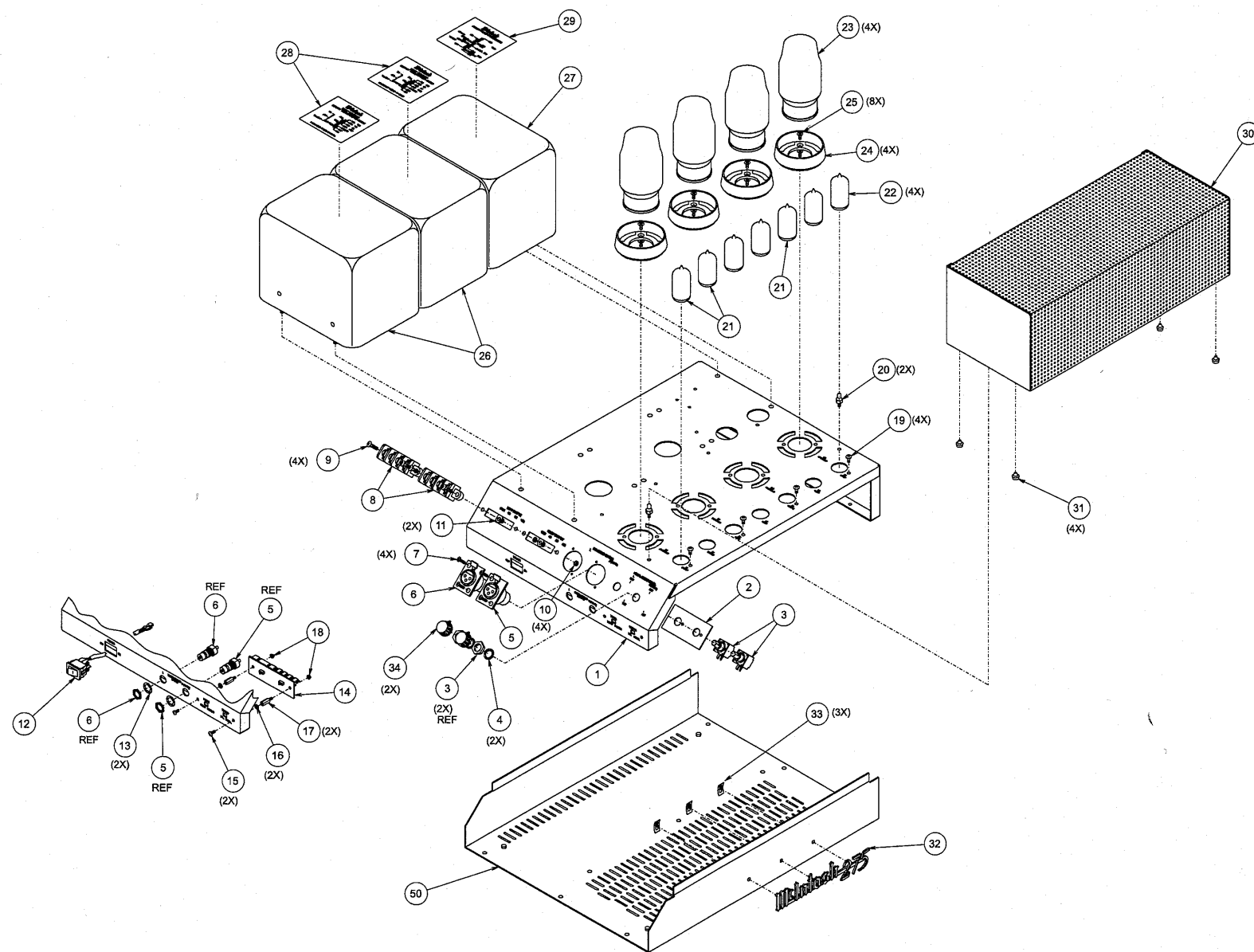
PARTS LIST

Ref. No.	Description	Part No.			
1	INTERCONNECT				
F1	FUSE 4A 250V SLO-BLO 5X20 IEC	089099	D10	DIODE BRID RECT 1000V 6A	070165
L1	CHOKER FILTER 0.5H 800MA SLOTS	122379	D11	DIODE SIL 400 PIV @ 1.5A	070031
R1	POT LINEAR GAIN 100K 10% 1/2W	134503	D12	DIODE SIL 400 PIV @ 1.5A	070031
R2	POT LINEAR GAIN 100K 10% 1/2W	134503	D13	DIODE RECTIFIER 1N4007	070169
RT1	ASSEMBLY THERMISTOR CL-40 5R	052008	D14	DIODE RECTIFIER 1N4007	070169
S1	CABLE ASSY PWR SWCH/FSEHLDRJ42	171026	F1	FUSE 2A 250V SLO-BLO 5X20 IEC	089088
T1	POTTED TRANSFORMER POWER	050086	F2	FUSE 2A 250V SLO-BLO 5X20 IEC	089088
T2	POTTED TRANSFORMER OUTPUT	050085	J1	CONN MALE 6 POS FRICTION LOCK	117218
T3	POTTED TRANSFORMER OUTPUT	050085	J2	CONN 3 POS MALE MTS100 NORMAL	117214
			J3	CONN 3 POS MALE MTS100 NORMAL	117214
			J4	BLADE FASTON W/FEET	117708
			J5	BLADE FASTON W/FEET	117708
			J6	BLADE FASTON W/FEET	117708
			J7	BLADE FASTON W/FEET	117708
			J8	BLADE FASTON W/FEET	117708
			J9	BLADE FASTON W/FEET	117708
			J10	BLADE FASTON W/FEET	117708
			J11	BLADE FASTON W/FEET	117708
			J12	BLADE FASTON W/FEET	117708
			J13	BLADE FASTON W/FEET	117708
			J14	BLADE FASTON W/FEET	117708
			J15	BLADE FASTON W/FEET	117708
			J16	BLADE FASTON W/FEET	117708
			J17	BLADE FASTON W/FEET	117708
			J18	BLADE FASTON W/FEET	117708
			J19	BLADE FASTON .187	117726
			J20	BLADE FASTON .187	117726
			J21	BLADE FASTON W/FEET	117708
			J22	BLADE FASTON W/FEET	117708
			J23	BLADE FASTON W/FEET	117708
			J24	BLADE FASTON W/FEET	117708
			J25	BLADE FASTON W/FEET	117708
			J26	BLADE FASTON W/FEET	117708
			J27	BLADE FASTON W/FEET	117708
			J28	BLADE FASTON W/FEET	117708
			J29	BLADE FASTON W/FEET	117708
			J30	BLADE FASTON W/FEET	117708
			J31	BLADE FASTON W/FEET	117708
			J32	BLADE FASTON W/FEET	117708
			L1	CHOKER 2.2UH	122001
			L2	CHOKER 2.2UH	122001
			L3	CHOKER 2.2UH	122001
			L4	CHOKER 2.2UH	122001
			R1	RES MF 1M 1/4W	144269
			R2	RES MF 1M 1/4W	144269
			R3	RES MF 221K 1% 1/4W	144421
			R4	RES MO 100K 5% 2W	144438
			R5	RES MO 100K 5% 2W	144438
			R6	RES MF 221K 1% 1/4W	144421
			R7	RES MF 221K 1% 1/4W	144421
			R8	RES MF 221K 1% 1/4W	144421
			R9	RES MF 1K 1% 1/4W	144090
			R10	RES MF 1K 1% 1/4W	144090
			R11	RES MF 100k 1% .5W	144429
			R12	RES MF 100k 1% .5W	144429
			R13	RES MF 1M 1/4W	144269
			R14	RES MF 1M 1/4W	144269
			R15	RES MF 1M 1/4W	144269
			R16	RES MF 1M 1/4W	144269
2	050081 AMPLIFIER PCB				
C1	CAP ELECT 47UF 450V	066497			
C2	CAP MPF 0.1UF 630VDC	064431			
C3	CAP MPF 0.1UF 630VDC	064431			
C4	CAP ELECT 100UF 16V OR 25V	066447			
C5	CAP ELECT 100UF 16V OR 25V	066447			
C6	CAP MPF 0.1UF 5% 63VDC	064325			
C7	CAP MPF 0.1UF 5% 63VDC	064325			
C8	CAP MPF 0.1UF 5% 63VDC	064325			
C9	CAP MPF 0.1UF 5% 63VDC	064325			
C10	CAP ELECT 470UF 16V	066508			
C11	CAP ELECT 470UF 16V	066508			
C12	CAP MPF 0.001UF 5% 63VDC	064300			
C13	CAP MPF 0.001UF 5% 63VDC	064300			
C14	CAP MPF 0.0022UF 5% 63VDC	064304			
C15	CAP MPF 0.0022UF 5% 63VDC	064304			
C16	CAP MPF 0.1UF 630VDC	064431			
C17	CAP MPF 0.1UF 630VDC	064431			
C18	CAP MPF 0.1UF 630VDC	064431			
C19	CAP MPF 0.1UF 630VDC	064431			
C20	CAP ELECT 470UF 50V	066469			
C21	CAP ELECT 470UF 50V	066469			
C22	CAP POLYPROP 0.22UF 20% 1KVDC	064432			
C23	CAP POLYPROP 0.22UF 20% 1KVDC	064432			
C24	CAP POLYPROP 0.22UF 20% 1KVDC	064432			
C25	CAP POLYPROP 0.22UF 20% 1KVDC	064432			
C26	CAP POLY .047UF 10% 1000VDC	064434			
C27	CAP POLYPROP .047UF 10% 250VDC	064364			
C28	CAP ELECT 680UF 315V	066549			
C29	CAP ELECT 680UF 315V	066549			
C30	CAP ELECT 4700UF 35V	066541			
C31	CAP ELECT 680UF 315V	066549			
C32	CAP ELECT 680UF 315V	066549			
C33	CAP ELECT 47UF 450V	066497			
C34	CAP ELECT 47UF 450V	066497			
C35	CAP ELECT 47UF 450V	066497			
C36	CAP MPF 0.22UF 5% 63VDC	064329			
C37	CAP MPF 0.22UF 5% 63VDC	064329			
D1	DIODE ZENER 200V 1.5W	070146			
D2	DIODE ZENER 200V 1.5W	070146			
D3	DIODE ZENER 200V 1.5W	070146			
D4	DIODE ZENER 200V 1.5W	070146			
D5	DIODE ZENER 200V 1.5W	070146			
D6	DIODE ZENER 200V 1.5W	070146			
D7	DIODE ZENER 200V 1.5W	070146			
D8	DIODE ZENER 200V 1.5W	070146			
D9	DIODE ZENER 200V 1.5W	070146			

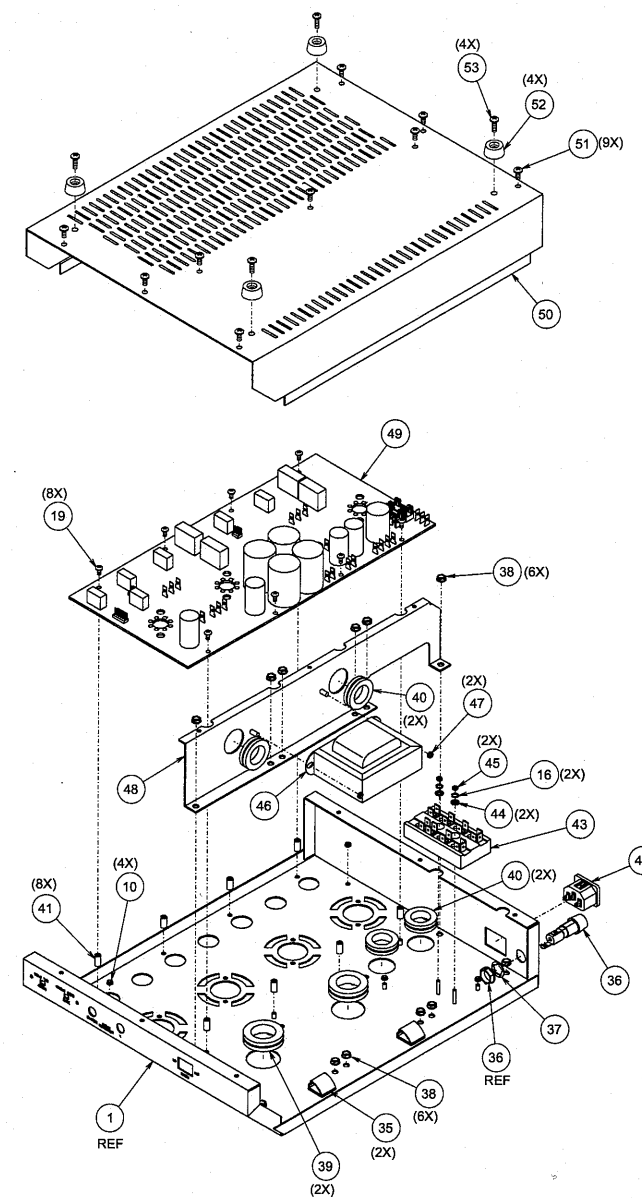
PARTS LIST con't

R17	RES MF 10K 1% 1/4W	144053	R76	RES MO 100K 5% 2W	144438
R18	RES MF 10K 1% 1/4W	144053	V1	TUBE ELEC 12AX7	165065
R19	RES MF 10K 1% 1/4W	144053	V2	TUBE ELEC 12AX7	165065
R20	RES MF 10K 1% 1/4W	144053	V3	TUBE 12AT7	165067
R21	RES MF 100 OHM 1% 1/4W	144196	V4	TUBE 12AT7	165067
R22	RES MF 100 OHM 1% 1/4W	144196	V5	TUBE ELEC 12AX7	165065
R23	RES MF 100 OHM 1% 1/4W	144196	V6	TUBE 12AT7	165067
R24	RES MF 100 OHM 1% 1/4W	144196	V7	TUBE 12AT7	165067
R25	RES MF 8.25K 1% 1/4W	144153	V8	TUBE KT88	165069
R26	RES MF 8.25K 1% 1/4W	144153	V9	TUBE KT88	165069
R27	RES MF 121K OHM 1% 1/2W	144308	V10	TUBE KT88	165069
R28	RES MF 121K OHM 1% 1/2W	144308	V11	TUBE KT88	165069
R29	RES MF 121K OHM 1% 1/2W	144308			
R30	RES MF 121K OHM 1% 1/2W	144308			
R31	RES 698 OHM 1% 1/4W	144088	3 050082 INPUT PCB		
R32	RES 698 OHM 1% 1/4W	144088	C1	CAP MPF 0.47UF 5% 50/63VDC	064333
R33	RES 698 OHM 1% 1/4W	144088	C2	CAP MPF 0.47UF 5% 50/63VDC	064333
R34	RES 698 OHM 1% 1/4W	144088	J1	CONN 4 PIN	117215
R35	RES MF 2.21M 1/4W	144265	J2	CONN 4 PIN	117215
R36	RES MF 2.21M 1/4W	144265	J3	CONN 3 POS MALE MTS100 NORMAL	117214
R37	RES MF 2.21M 1/4W	144265	J4	CONN 3 POS MALE MTS100 NORMAL	117214
R38	RES MF 2.21M 1/4W	144265	J5	CONN 3 POS MALE MTS100 NORMAL	117214
R39	RES MF 221K 1% 1/4W	144421	J6	CONN MALE 6 POS FRICTION LOCK	117218
R40	RES MF 221K 1% 1/4W	144421	J7	CONN 3 POS MALE MTS100 NORMAL	117214
R41	RES MF 221K 1% 1/4W	144421	R1	RES MF 100K 1% 1/4W	144113
R42	RES MF 221K 1% 1/4W	144421	R2	RES MF 100K 1% 1/4W	144113
R43	RES MF 12.1K 1% 1/4W	144154	R3	RES MF 100K 1% 1/4W	144113
R44	RES MF 12.1K 1% 1/4W	144154	R4	RES MF 100K 1% 1/4W	144113
R45	RES MF 12.1K 1% 1/4W	144154	S1	SWITCH SLD 4PDT	148064
R46	RES MF 12.1K 1% 1/4W	144154	S2	SWITCH SLD 4PDT	148064
R47	RES MO 46.4k 1% 1W	144436			
R48	RES MO 46.4k 1% 1W	144436			
R49	RES MO 46.4k 1% 1W	144436			
R50	RES MO 46.4k 1% 1W	144436			
R51	RES MF 90.9K 1% 1/4W	144170			
R52	RES MF 90.9K 1% 1/4W	144170			
R53	RES MF 1M 1/4W	144269			
R54	RES MF 1M 1/4W	144269			
R55	RES MF 1M 1/4W	144269			
R56	RES MF 1M 1/4W	144269			
R57	RES MF 221K 1% 1/4W	144421			
R58	RES MF 221K 1% 1/4W	144421			
R59	RES MF 221K 1% 1/4W	144421			
R60	RES MF 221K 1% 1/4W	144421			
R61	RES MO 100K 5% 2W	144438			
R62	RES MO 100K 5% 2W	144438			
R63	RES MO 100K 5% 2W	144438			
R64	RES MO 100K 5% 2W	144438			
R65	RES MO 100K 5% 2W	144438			
R66	RES MO 100K 5% 2W	144438			
R67	RES MO 100K 5% 2W	144438			
R68	RES MO 100K 5% 2W	144438			
R69	RES WW 220 OHM 10% 5W	139009			
R70	RES WW 220 OHM 10% 5W	139009			
R71	RES WW 220 OHM 10% 5W	139009			
R72	RES WW 220 OHM 10% 5W	139009			
R73	RES MO 10K 5% 2W	144437			
R74	RES MO 2.2K 5% 2W	144494			
R75	RES MO 100K 5% 2W	144438			

EXPLODED VIEW and PARTS LIST



THIS VIEW FOR REFERENCE ONLY



Ref.No.	Part No.	Description
1	005421	CHASSIS
2	005431	POT LOCATOR
3	134503	POT LINEAR GAIN 100K 10% 1/2W
4	104014	WASHER INT STAR 3/8 X .507 X .002
5	052104	ASSY CABLE RIGHT INPUT
6	052105	ASSY CABLE LEFT INPUT
7	100195	SCREW MACH 4-40 X 3/8 PH OVL GLD
8	074107	TERMINAL BLOCK 4 POS GOLD
9	100117	SCREW MACH 6-32 X 1/2 PH PN
10	102003	NUT MACH 6-32 W/LOCK
11	075021	LUG SOLDER #6 HOLE
12	171578	CABLE ASSY POWER SWITCH
13	104165	WASHER 3/8 INT TOOTH GOLD
14	050082	ASSY INPUT PCB
15	100121	SCREW MACH 4-40 X 1/4 PH PN BLK
16	104004	WASHER LOCK 5 X .255 INT STAR
17	112084	STANDOFF 4-40 X 7/16 (M/F)
18	102001	NUT KEP 4-40 CADMIUM PLATE
19	100157	SCREW MACH 6-32 X 1/4 PH PN
20	114012	STUD TINNER P116-473-8
21	165065	TUBE 12AX7A McINTOSH
22	165067	TUBE 12AT7
23	165070	TUBE KT88 WITH McINTOSH LOGO
24	017761	AIR PIPE
25	100292	SCREW MACH 6-32 X 3/8 PH FH BLK
26	050085	POTTED TRANSFORMER OUTPUT
27	050086	POTTED TRANSFORMER POWER
28	166003	DECAL OUTPUT TRANSFORMER
29	166004	DECAL POWER TRANSFORMER
30	050088	ASSY TUBE COVER
31	017862	PUSH-ON FOOT
32	125667	NAMEPLATE
33	106012	SPRING CLIP: PUSH-ON
34	090290	KNOB PLASTIC 11/16 DIA
35	017452	KLIP WIRE
36	178161	HOLDER FUSE 5 X 20mm IEC
37	104016	WASHER INT STAR .5 X .630 X .022
38	102006	NUT MACH 10-32 W/LOCK
39	078024	GROMMET RUBBER 1" ID
40	078025	GROMMET RUBBER 3/4" ID
41	017859	SPACER NYLON 6-32 X 7/16
42	117487	RECEPTACLE AC LINE
43	074091	TERMINAL BLOCK AC
44	104001	WASHER FLAT STEEL 4 X 9/32 X .025
45	102022	NUT MACH 4-40 X 3/16 X 1/16
46	122379	CHOKE FILTER
47	102005	NUT MACH 8-32 W/LOCK
48	005425	SUPPORT BRACKET
49	050081	ASSY AMPLIFIER PCB
50	005426	BOTTOM COVER
51	101078	SCREW TAP 8-32 X 5/16 PH PN BLK
52	017542	PLASTIC FOOT
53	100153	SCREW MACH 8-32 X 1/2 PH PN

MC275

REPACKING INSTRUCTIONS

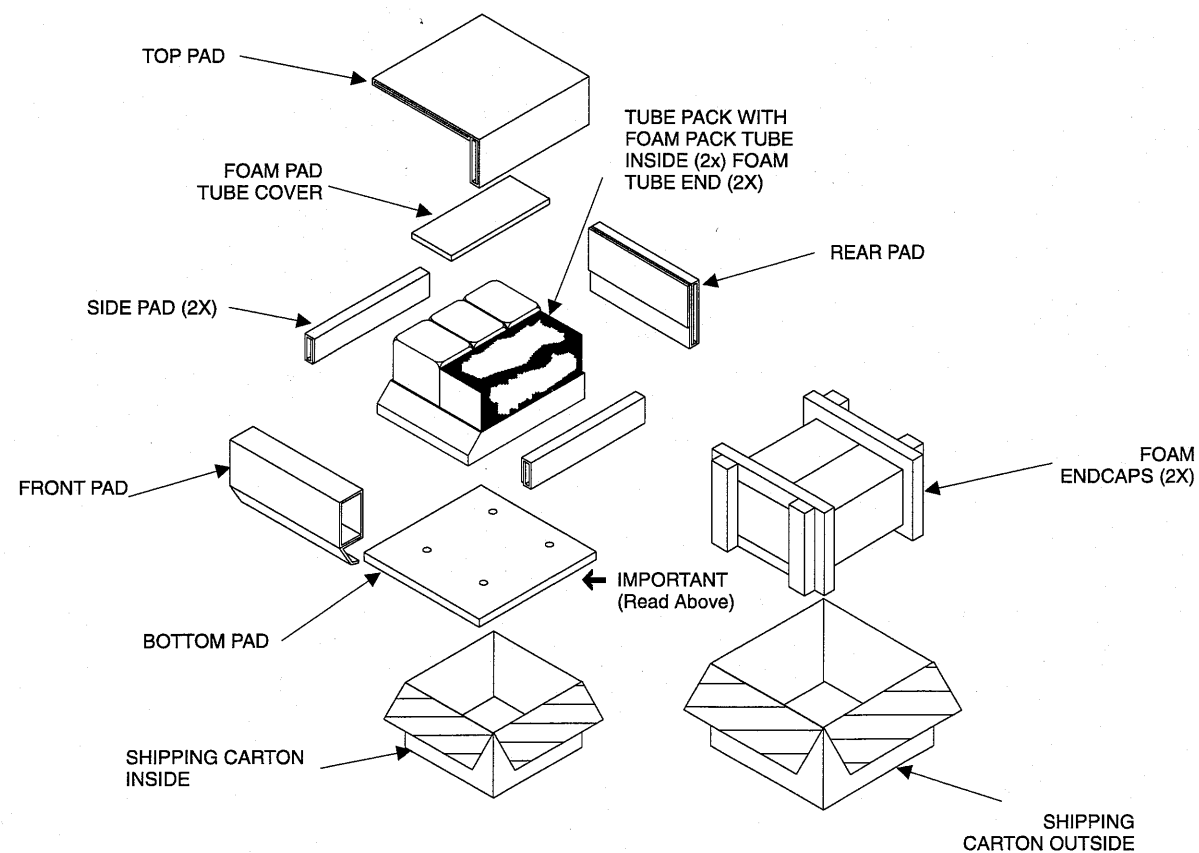
In the event it is necessary to repack the unit for shipment, the unit must be packed exactly as shown below.

IMPORTANT - For ease of shipment, attach the four feet to the bottom of the unit. Failure to do this will result in shipping damage.

If a shipping carton or any of the interior parts is needed, please call or write the Customer Service Department of McIntosh Laboratory. Order parts from the accompanying list by part number.

Use the original shipping carton and interior parts only if they are in good serviceable condition.

Qty.	Part No.	Description
1	033704	Bottom pad
1	033705	Front Pad
1	033706	Rear Pad
1	033707	Top pad
2	033711	Side pad
1	033712	Foam pad (tube cover)
2	033718	Foam endcaps
1	034005	Shipping carton (outside)
1	034006	Shipping carton (inside)
2	034265	Tube pack
2	034266	Tube pack (end)



MC275

STEREO POWER AMPLIFIER

STARTING WITH SERIAL NO. VN1001

SERVICE MANUAL



The continuous improvement of its products is the policy of McIntosh Laboratory Incorporated, who reserve the right to improve design without notice. Because of the constant upgrading of McIntosh products' circuitry and components, the Company cannot insure, and does not warrant, the accuracy of the within schematic material, which is intended for information only.