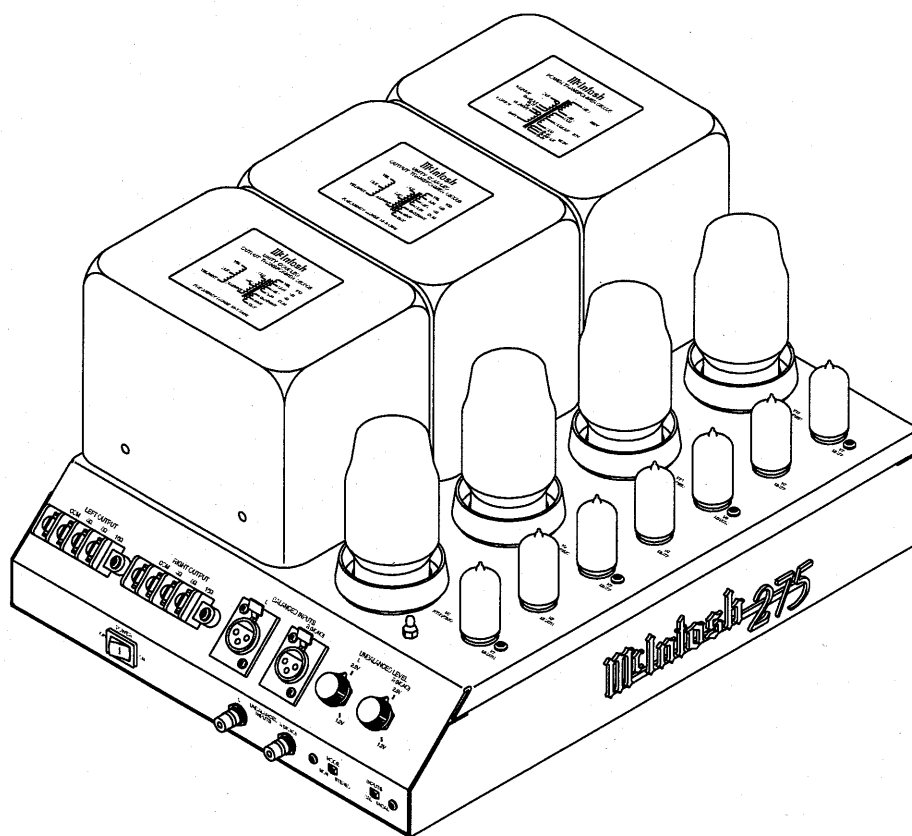




# MC275

## STEREO POWER AMPLIFIER

STARTING WITH SERIAL NO. VN1001



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# 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

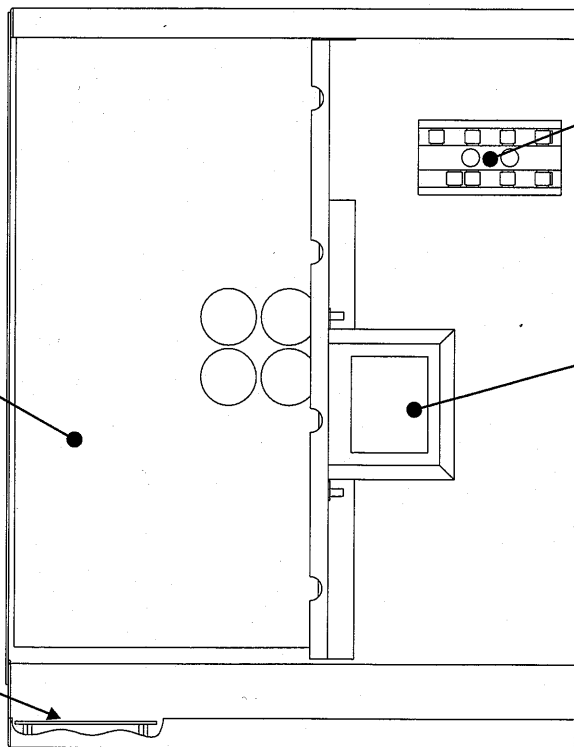
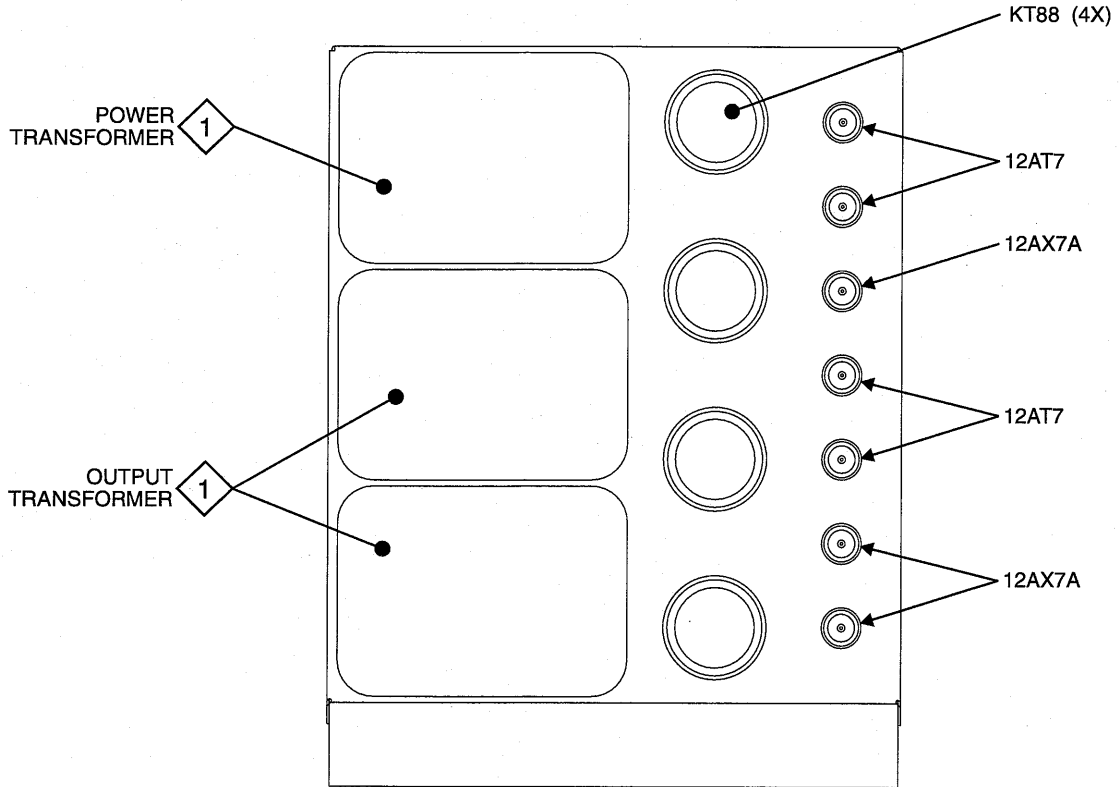
67 pounds (30.5kg) net, 75 pounds (34.1kg) in shipping carton

## 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.

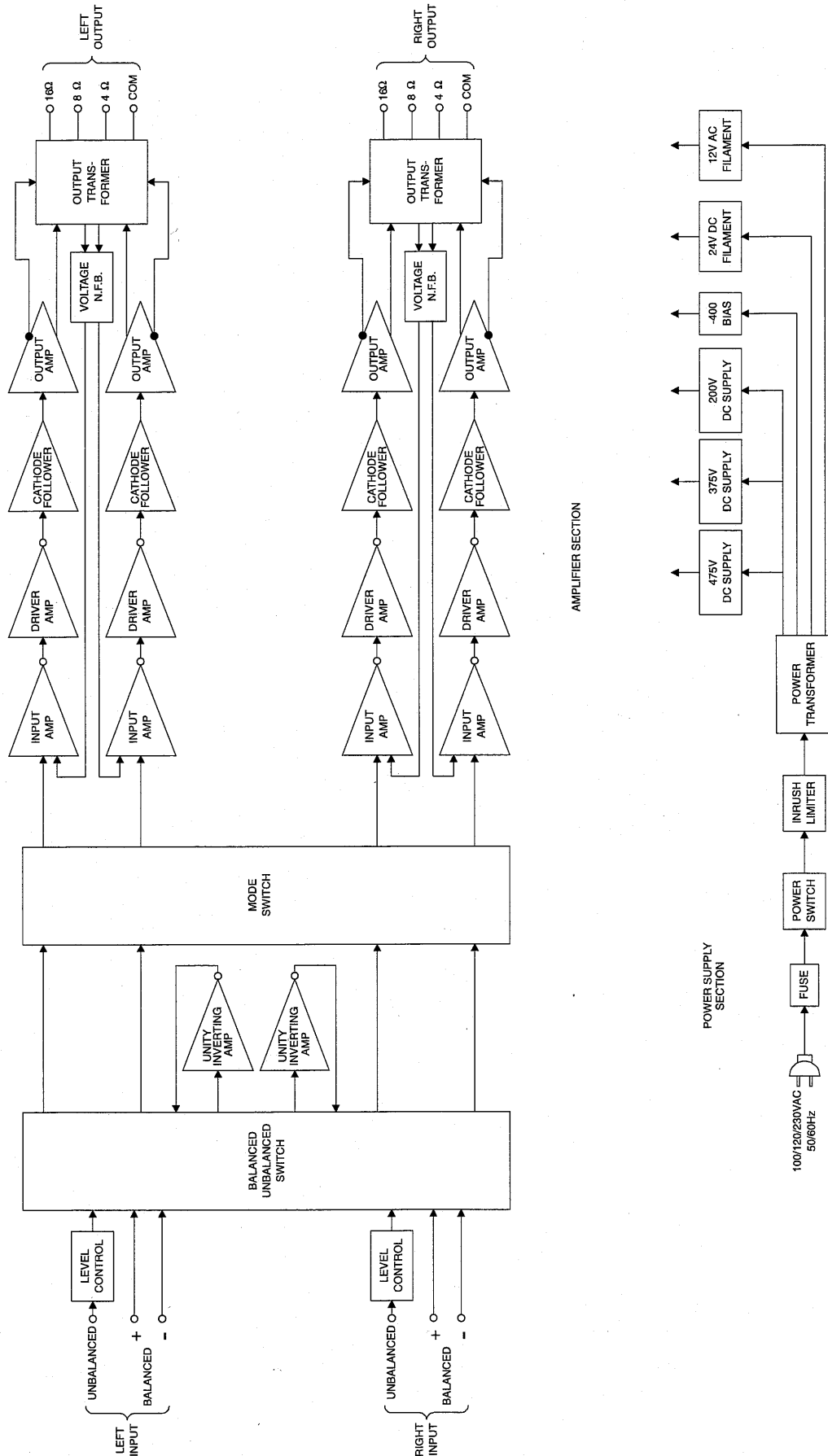
# SECTION LOCATIONS

TOP VIEW WITH COVER REMOVED



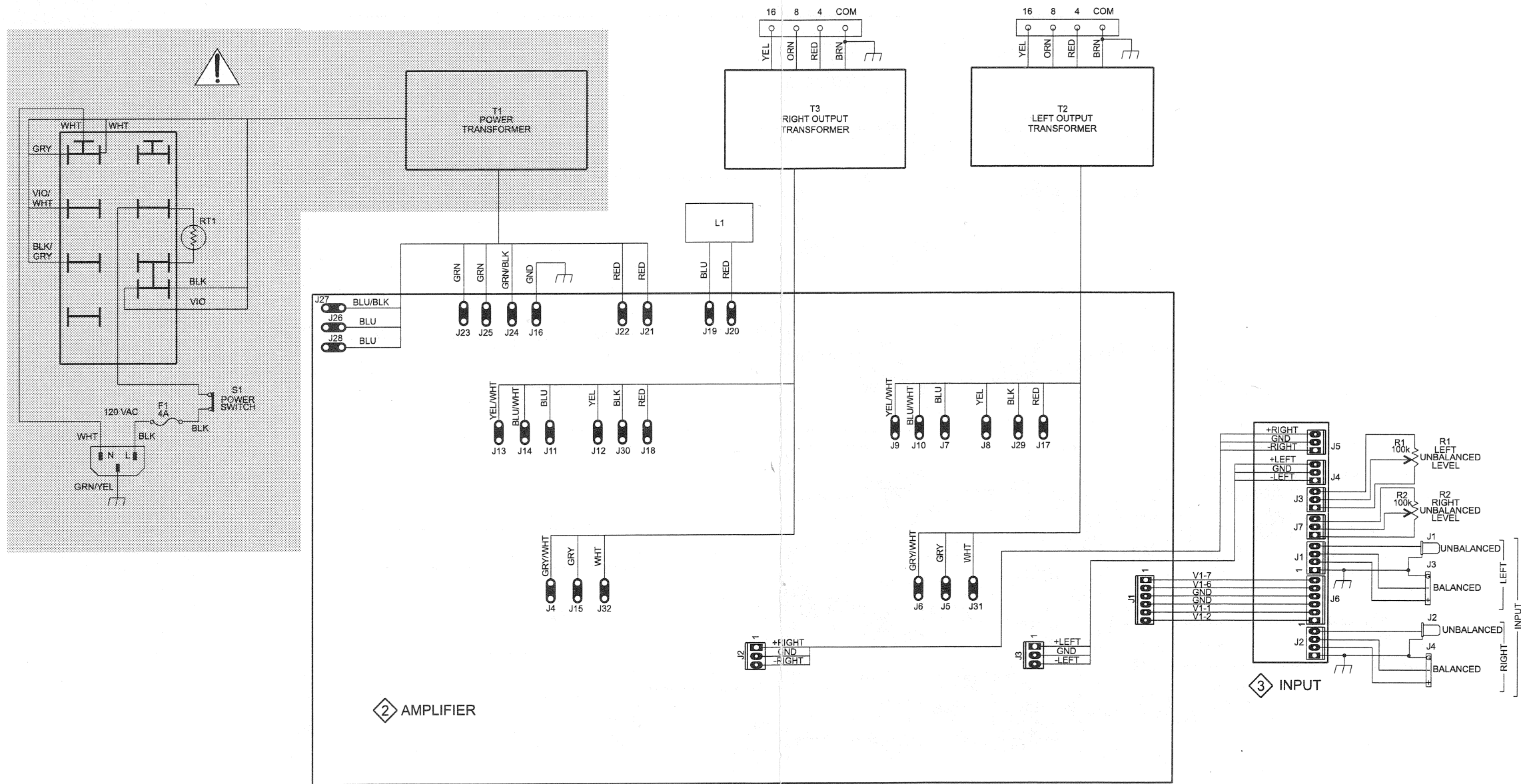
BOTTOM VIEW WITH COVER REMOVED

# BLOCK DIAGRAM



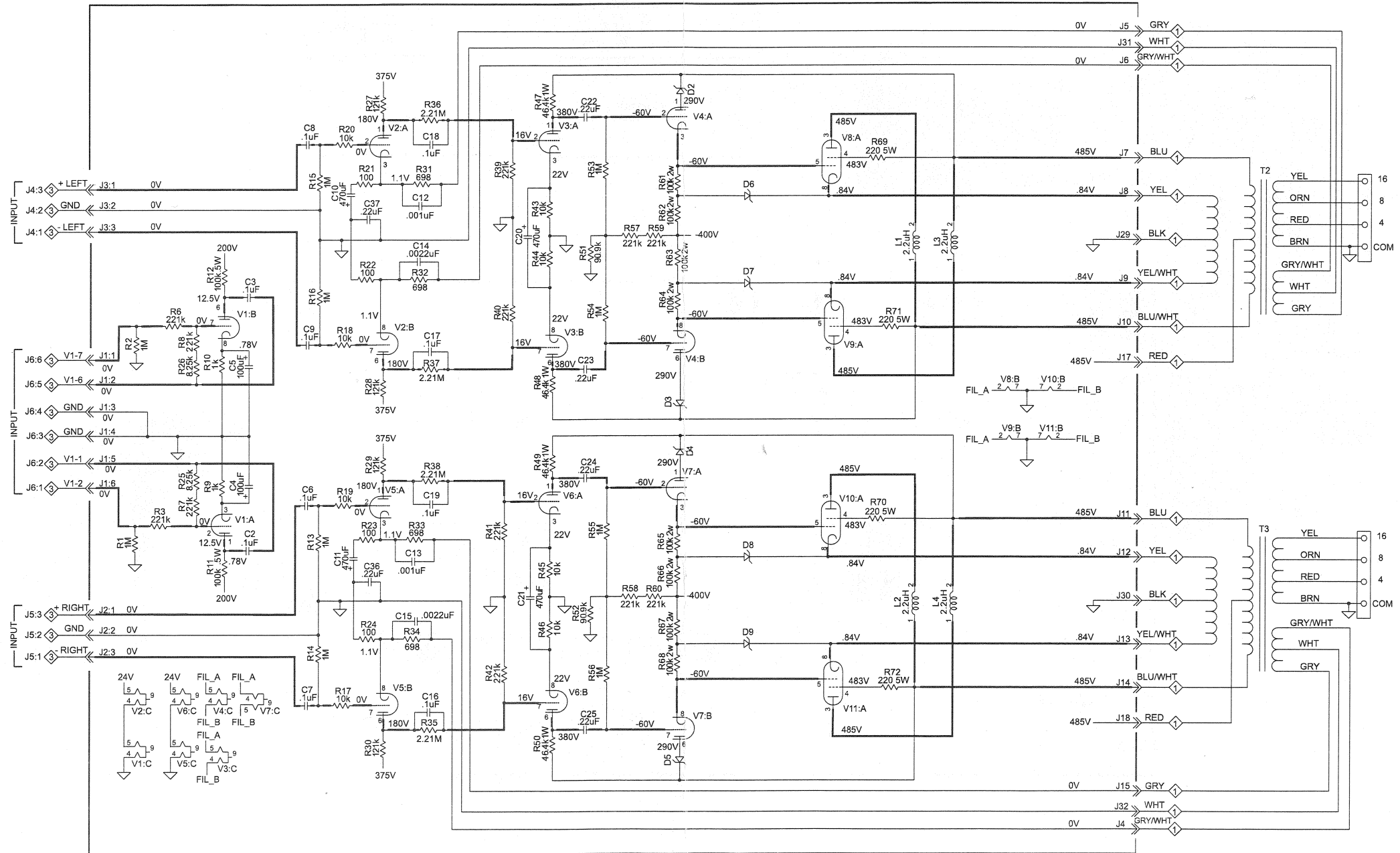
# 1 INTERCONNECT

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



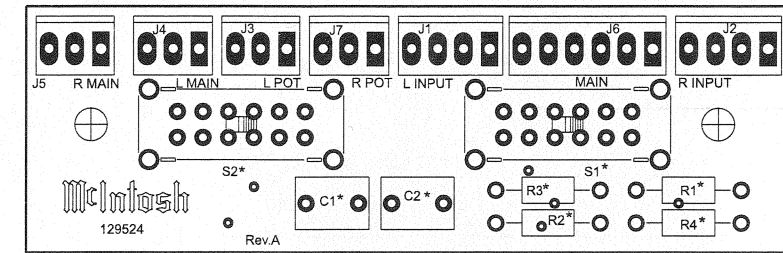
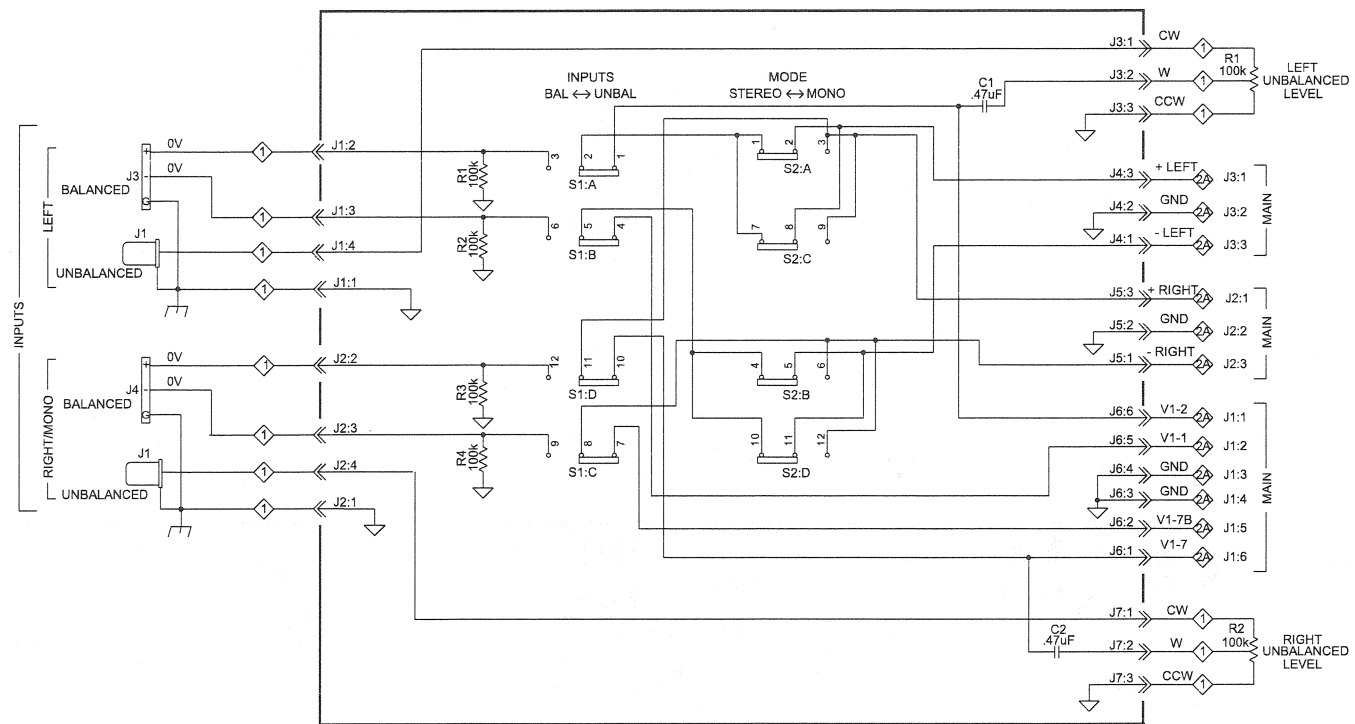


# AMPLIFIER 050081





# 3 INPUT 050082



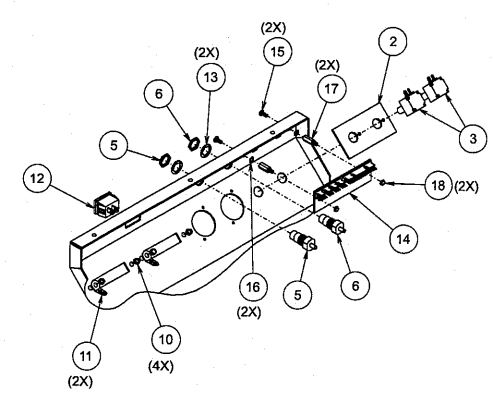
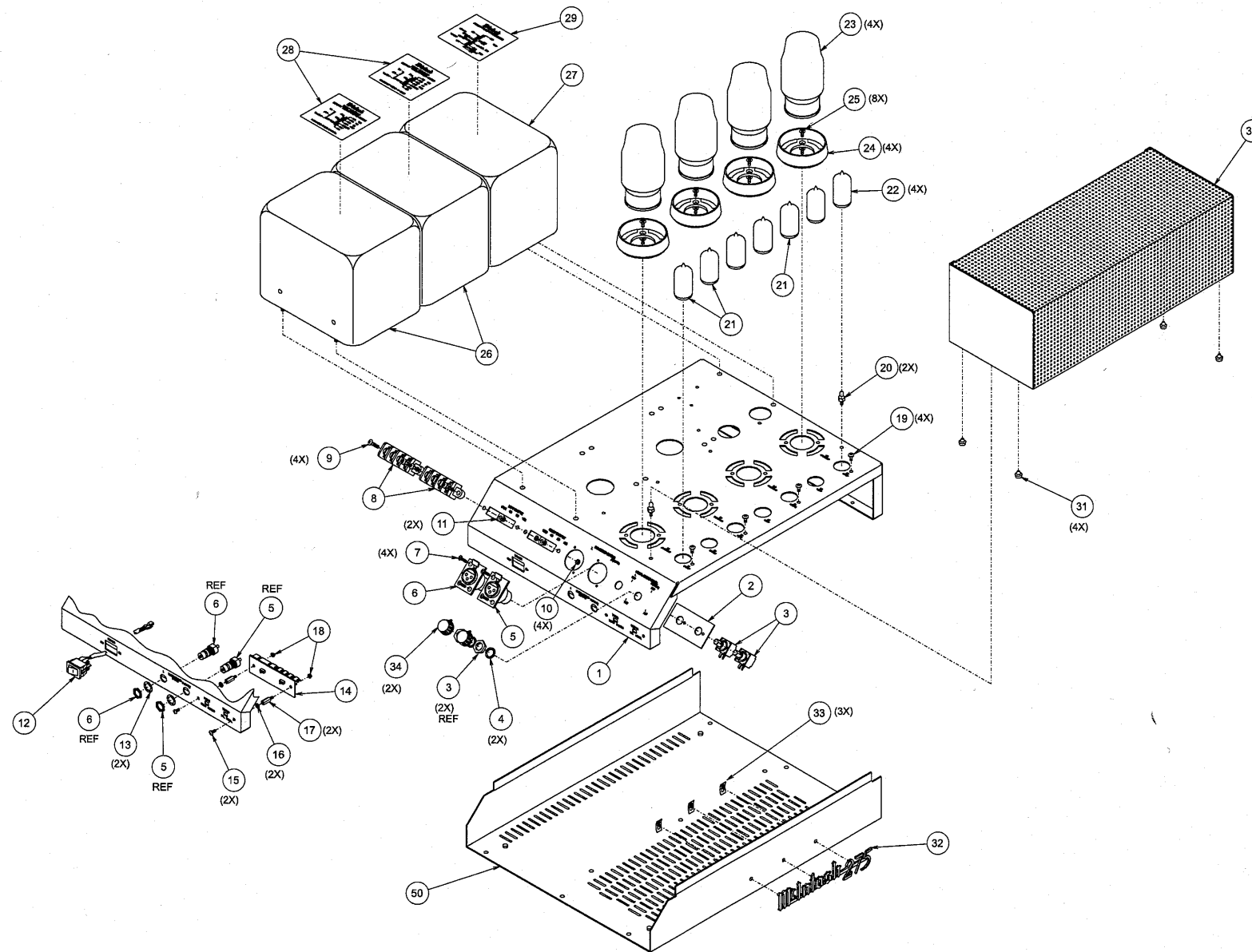


## PARTS LIST

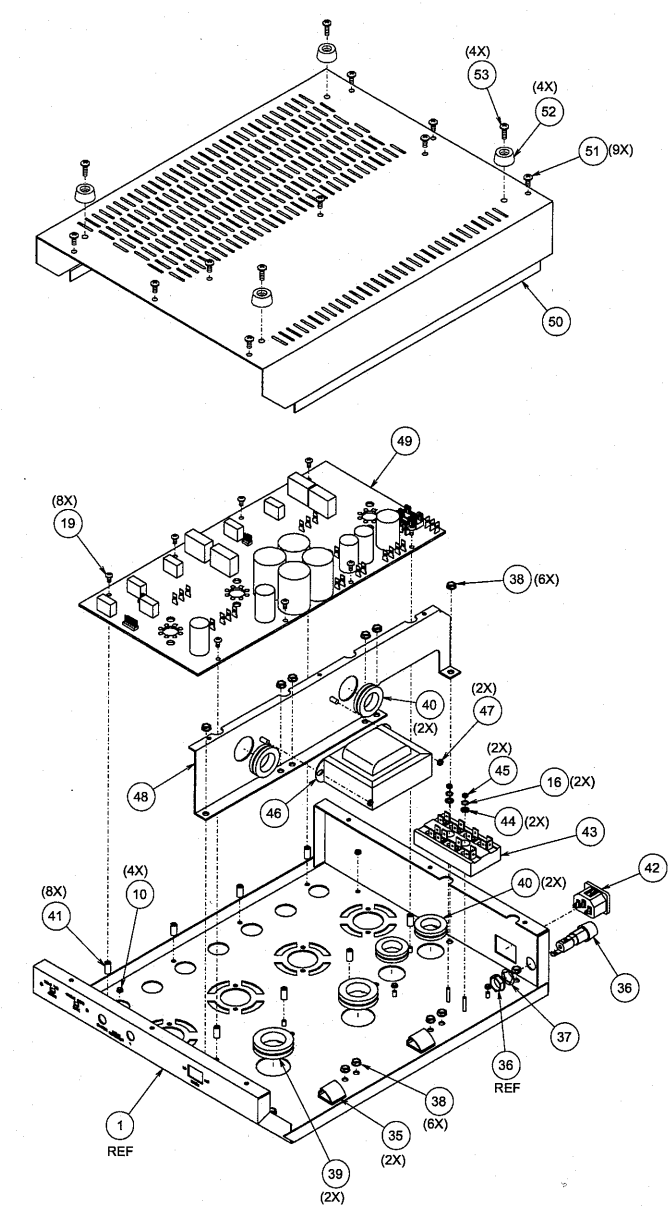
Ref. No.	Description	Part No.			
<b>1</b>	<b>INTERCONNECT</b>				
F1	FUSE 4A 250V SLO-BLO 5X20 IEC	089099	D10	DIODE BRID RECT 1000V 6A	070165
L1	CHOKE FILTER 0.5H 800MA SLOTS	122379	D11	DIODE SIL 400 PIV @ 1.5A	070031
R1	POT LINEAR GAIN 100K 10% 1/2W	134503	D12	DIODE SIL 400 PIV @ 1.5A	070031
R2	POT 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	CHOKE 2.2UH	122001
			L2	CHOKE 2.2UH	122001
			L3	CHOKE 2.2UH	122001
			L4	CHOKE 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
<b>2</b>	<b>050081 AMPLIFIER PCB</b>				
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			



# EXPLODED VIEW and PARTS LIST



THIS VIEW FOR REFERENCE ONLY



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

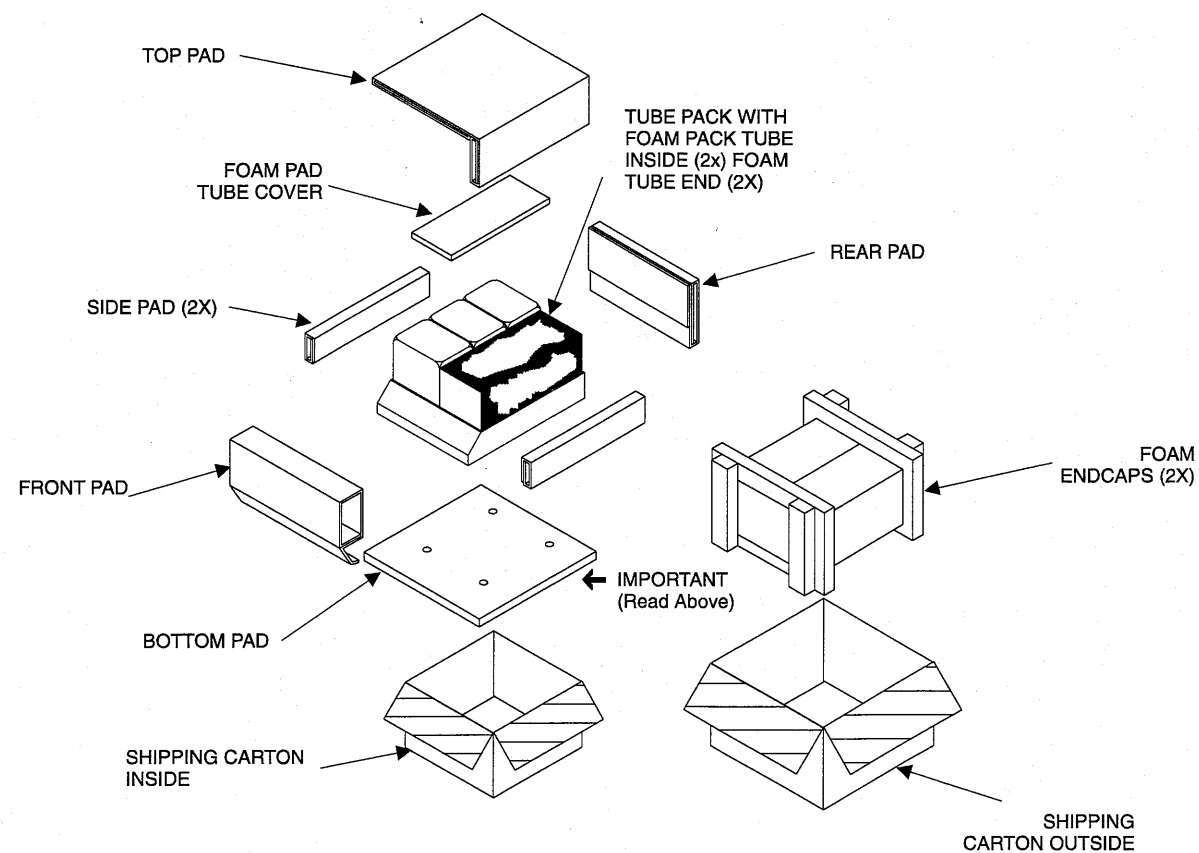
In the event it is necessary to repack the unit for shipment, the unit must be packed exactly as shown below.

**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.