MC352
POWER AMPLIFIER

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McIntosh
SERVICE MANUAL
PERFORMANCE SPECIFICATIONS

POWER OUTPUT STEREO
350 watts into 2, 4 or 8 ohm loads is the minimum sine wave continuous average power output per channel both channels operating.

POWER OUTPUT MONO PARALLEL
700 watts into 1, 2 or 4 ohm loads is the minimum sine wave continuous average power output.

OUTPUT LOAD IMPEDANCE
2, 4 or 8 ohms (Stereo Mode)
1, 2 or 4 ohms (Mono Mode)

RATED POWER BAND
20Hz to 20,000Hz

DYNAMIC HEADROOM
2.1dB

FREQUENCY RESPONSE
+0, -0.25dB from 20Hz to 20,000Hz
+0, -3dB from 10Hz to 100,000Hz

TOTAL HARMONIC DISTORTION
0.005% maximum at any power level from 250 milliwatts to rated power per channel from 20Hz to 20,000Hz, all channels operating.

INTERMODULATION DISTORTION
0.005% maximum if instantaneous peak output per channel does not exceed twice the rated output with all channels operating for any combination of frequencies from 20Hz to 20,000Hz.

SIGNAL TO NOISE RATIO (A WEIGHTED)
85dB Unbalanced (116dB below rated output)
115dB Balanced (124dB below rated output)

SENSITIVITY
1.9 Volts Unbalanced Input
3.8 Volts Balanced Input

INPUT IMPEDANCE
20,000 ohms Unbalanced
40,000 ohms Balanced

DAMPING FACTOR
Greater than 40

POWER REQUIREMENTS
100 Volts, 50/60Hz at 14.5 amps
110 Volts, 50/60Hz at 13.0 amps
120 Volts, 50/60Hz at 12.0 amps
220 Volts, 50/60Hz at 6.50 amps
230 Volts, 50/60Hz at 6.25 amps
240 Volts, 50/60Hz at 6.00 amps

NOTE: Refer to the rear panel of the MC352 for the correct voltage.

DIMENSIONS
Front Panel: 17.50 inches (44.5cm) wide, 8.89 inches (22.58cm) high. Depth behind front mounting panel is 21 inches (53.3cm) including clearance for connectors. Panel clearance required in front of mounting panel is 1.125 inches (2.9cm).

WEIGHT
105 pounds (47.63Kg) net, 138 pounds (63Kg) in shipping carton

NOTES

1. The heavy lines on the schematics denote the primary signal path.

2. Unless otherwise noted, all voltages indicated on the schematics are measured under the following conditions:
   a. DC input at 14.4 volts.
   b. ON connector at 14.4VDC.
   c. All voltages are +/− with respect to ground.
   A high impedance (10 megohm) voltmeter must be used.

3. Unless otherwise specified:
   a. Resistor values are in ohms.
   b. Capacitor values are in microfarads (uf).
   c. Inductor values are in microhenries (uH).

4. The voltages enclosed in a box are signal voltages that are measured with a 0.3V, 1kHz signal connected to all channels at the input jacks.
   CHANNELS HI-PASS FILTER OUT
   SUBWOOFER OUT
   LEVEL (4) 0.3V

5. On PC Board Drawings, Square Pad Indicates:
   a. Polarized Capacitors — Positive
   b. Diode Cathode
   c. Others — Pin 1

6. WARNING:
   Parts marked with the symbol have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.
1. **CAPACITOR 049216**

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

2. **PCB 049216**

   PCB 049222
9 METER LAMPS PCB 049218

8 FRONT LAMPS PCB 049218
<table>
<thead>
<tr>
<th>PART NO.</th>
<th>DESCRIPTION</th>
<th>REFERENCE NO.</th>
<th>PART NO.</th>
<th>DESCRIPTION</th>
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<td>064236</td>
<td>POLYPROPYLE CAP 0.15mF 250V</td>
<td>C31 C32 C33</td>
<td>114113</td>
<td>RES MF 100K 1/4W</td>
<td>R6 R7 R8 R9</td>
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<td>C22 C23 C24 C25</td>
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<td>METAL FILM RES 2.2K 1/4W</td>
<td>R10 R12 R3 S R7</td>
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<tr>
<td>066424</td>
<td>CAP ELECT 0.47UF 50V ALUM</td>
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<td>114122</td>
<td>RES MF 1.5K 1/4W</td>
<td>R6 R7 R8 R9</td>
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<td>066630</td>
<td>CAP ELECT 22UF 16V SHORT CAN</td>
<td>C40 C41</td>
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<td>RES MF 221 OHMS 1/4W</td>
<td>R22 R23 R24</td>
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<td>066646</td>
<td>ELECT CAP 47mF 35V AMMCO</td>
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<td>114173</td>
<td>RES MF 221 OHMS 1/4W</td>
<td>R28 R29 R31 R42</td>
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<tr>
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<td>ELECT CAP 1UF 100VDC AMMO</td>
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<td>114177</td>
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<tr>
<td>117215</td>
<td>4-PIN CONNECTOR</td>
<td>B12 B13 B14</td>
<td>114179</td>
<td>RESITOR LDR VTL59C</td>
<td>R46 R47 R48 R50</td>
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<td>117217</td>
<td>MALE CONNECTOR 7 PIN</td>
<td>B15 B16 B17 B18 B19</td>
<td>114334</td>
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<td>117279</td>
<td>11-POS MALE CONNECTOR</td>
<td>B25 B26 B27 B28 B29</td>
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<td>RES MF 475K 1/4W</td>
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<td>113222</td>
<td>N, CHANNEL FIT</td>
<td>B30 B31 B32 B33 B34</td>
<td>114398</td>
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<td>TRANSISTOR NPN MPS412 24K/REEL</td>
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<td>132244</td>
<td>TRANSISTOR PNP 2SA1016K</td>
<td>C44 C45 C46</td>
<td>134899</td>
<td>SLIDE SWITCH</td>
<td>S1</td>
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<td>132326</td>
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<td>DISC CAP 1UF, 25V, Tantal</td>
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<td>136901</td>
<td>TRIM POT 200 OHM 20%</td>
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<td>136905</td>
<td>WIRE RES 2 OHMS 10% SW</td>
<td>D16 D17 D18 D19</td>
<td>137136</td>
<td>DUAL OPERATIONAL AMPLIFIER</td>
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<td>139191</td>
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<td>141009</td>
<td>RES CF 2.2F 5% 1/4W</td>
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<td>D41 D42 D43 D44</td>
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<td>C42 C43</td>
<td>064329</td>
<td>DISC CAP 22.2UF 5% G/DVC</td>
<td>C24 C25 C26</td>
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<td>066424</td>
<td>CAP ELECT 0.47UF 50V ALUM</td>
<td>C20 C21</td>
<td>064350</td>
<td>CAP ELECT 4 UFD 105V 25%</td>
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<td>066390</td>
<td>CAP ELECT 22UF 100V</td>
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**MC352**
EXPLDED VIEW PARTS LIST

Ref. Part No. Description Ref. Part No. Description
1 030603 END CAP 24 037249 LIGHT BOX
2 101042 TS 4-40 x 1/2 FL, TYPE 1 25 049243 METAL BOX
3 004939 DETRUSION BRACKET 26 114672 METAL SUPPORT BRACKET
4 009266 KNob 27 004997 CHASSIS
5 101173 TS 6-32 x 1/4 FH L/C, PHIL, BLK 28 004931 TBC 6-32 x 1/2 PHIL, PAN, BLK
6 038689 BOTTOM EXTENSION 29 103176 CAPACITOR CLAMP
7 084603 GLASS 30 038365 CAPACITOR
8 100377 FELT WASHER 31 066480 SUBBASE
9 017377 PLEXIGLAS 32 049249 CAPACITOR PCB
10 092419 BLUE FILTER 33 049246 INPUT PCB
11 036619 TOP EXTENSION 34 049252 REAR PANEL
12 004923 DUST COVER 35 049293 PANEL Pcb
13 100178 TS 6-32 x 5/16 PHIL, PAN, BLK 36 101114 SM 4 x 1/2 PHIL, PAN
14 101254 TS 6-32 x 1 PHIL, PAN, BLK 37 104283 LK WASHER #4 INTERNAL TOOTH
15 004994 SUBPANEL 38 100188 SECS MS 10-32 x 3/8 IN DENIED HEX HD
16 049218 LAMP PCB 39 049212 CAPACITOR COVER
17 102201 XP NUT 4-40 40 018614 HEAT SINK
18 004800 SWITCH BRACKET 41 114179 TRANSISTOR CLIP 214
19 146243 POWER SWITCH 42 114118 TRANSISTOR CLIP 218
20 124366 PANEL METER 43 049214 HEAT SINK PCB
21 049227 POWER BOARD LIGHT Pcb 44 049238 HEAT SINK COVER RIGHT
22 092401 PALE BLUE FILTER 45 004928 HEAT SINK COVER LEFT
23 092403 AZURE FILTER 46 049217 POWER GLAID LIGHT Pcb ASSY
27 28
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. Four, 1/4 - 20 x 2-1/4 bolts with washers must be used to fasten the unit securely to the wood skid. 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.

<table>
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<tr>
<th>Qty</th>
<th>Part No.</th>
<th>Description</th>
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<td>1</td>
<td>034051</td>
<td>Shipping carton bottom</td>
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<tr>
<td>2</td>
<td>034054</td>
<td>Foam pad (front and rear)</td>
</tr>
<tr>
<td>2</td>
<td>034053</td>
<td>Foam Pad (side)</td>
</tr>
<tr>
<td>2</td>
<td>034055</td>
<td>Foam pad (top and bottom)</td>
</tr>
<tr>
<td>1</td>
<td>034052</td>
<td>Shipping carton (top)</td>
</tr>
<tr>
<td>1</td>
<td>034049</td>
<td>Inner carton (bottom)</td>
</tr>
<tr>
<td>1</td>
<td>034056</td>
<td>Shipping skid</td>
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<tr>
<td>1</td>
<td>034048</td>
<td>Foam pad (inner carton)</td>
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<tr>
<td>1</td>
<td>034050</td>
<td>Inner carton (top)</td>
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<td>4</td>
<td>101212</td>
<td>1/4 - 20 x 2-1/4 cap screw</td>
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<tr>
<td>4</td>
<td>104058</td>
<td>Flat washer</td>
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