

McIntosh

MC 50 POWER AMPLIFIER



SERVICE INFORMATION

STARTING WITH SERIAL NO. 10U01

McINTOSH LABORATORY INC. 2 CHAMBERS STREET BINGHAMTON, NEW YORK

MC 50

PERFORMANCE

McIntosh audio power ratings are in accordance with the Federal Trade Commission Regulation of November 4, 1974 concerning power output claims for amplifiers used in home entertainment products.

POWER OUTPUT

50 watts minimum sine wave continuous average power output, operating into 4 ohms, 8 ohms, or 16 ohms load impedance, which is:

- 14.1 volts RMS across 4 ohms
- 20.0 volts RMS across 8 ohms
- 28.3 volts RMS across 16 ohms

OUTPUT LOAD IMPEDANCE

4 ohms, 8 ohms, or 16 ohms; separate terminals are provided for each output

RATED POWER BAND

20 Hz to 20,000 Hz

TOTAL HARMONIC DISTORTION

0.25% maximum harmonic distortion at any power level from 250 milliwatts to 50 watts from 20Hz to 20,000 Hz

INTERMODULATION DISTORTION

0.25% if instantaneous peak power output is 100 watts or less for any combination of frequencies 20 Hz to 20,000 Hz

FREQUENCY RESPONSE

20 Hz to 20,000 Hz +0 -0.25 db
10 Hz to 100,000 Hz +0 -3.0 dB at one watt output

NOISE AND HUM

90 dB below rated output

RATINGS**OUTPUT VOLTAGES**

25 volts for distribution lines

DAMPING FACTOR

25 at 4 ohms output
50 at 8 ohms output
17 at 16 ohms output

INPUT IMPEDANCE

200,000 ohms

INPUT SENSITIVITY

0.5 volt. Level control provided for higher input voltage

GENERAL INFORMATION**POWER REQUIREMENTS**

120 volts, 50/60 Hz, 15 watts at zero signal output, 120 watts at rated output

SEMICONDUCTOR COMPLEMENT

12 silicon transistors
12 silicon rectifiers and diodes

MECHANICAL INFORMATION**SIZE**

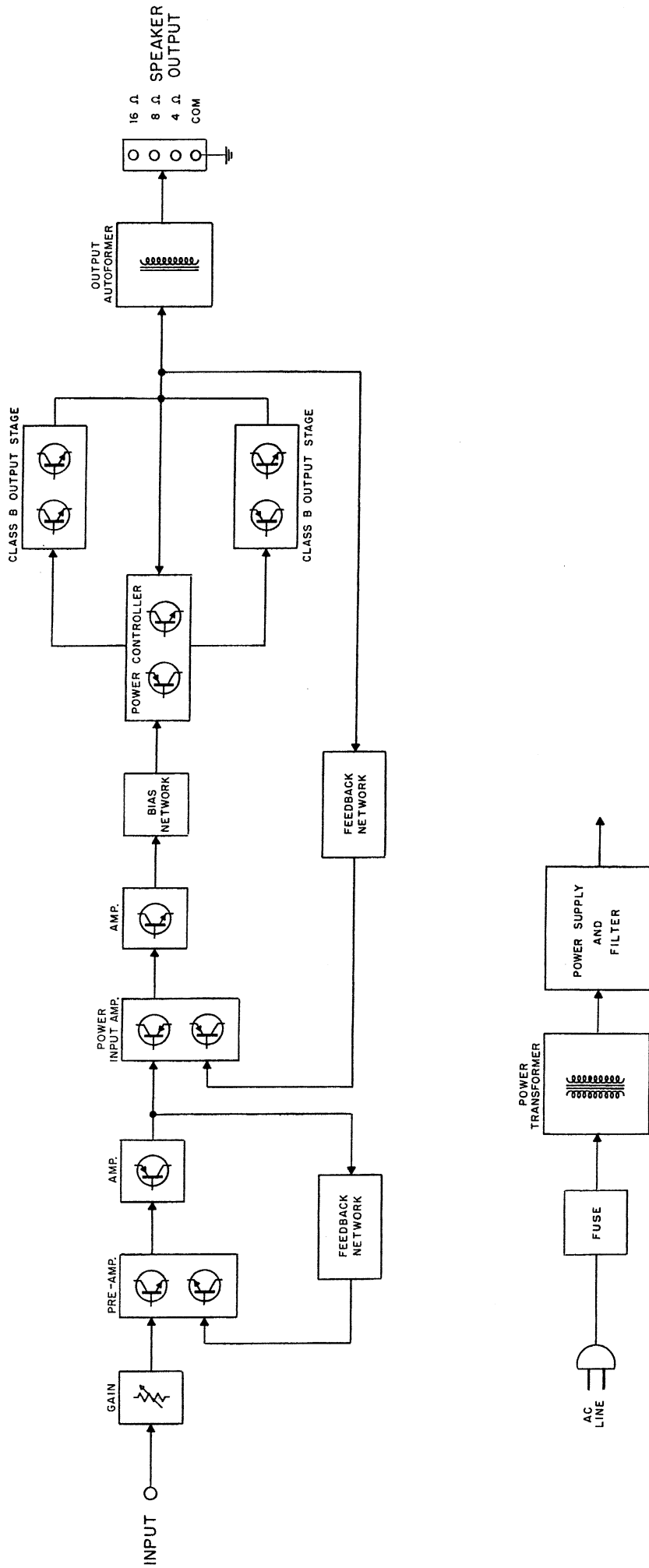
5½ inches high (13.97 cm), 8 inches wide (20.32 cm), 12½ inches deep (31.75 cm)

CHASSIS

Chrome and black

WEIGHT

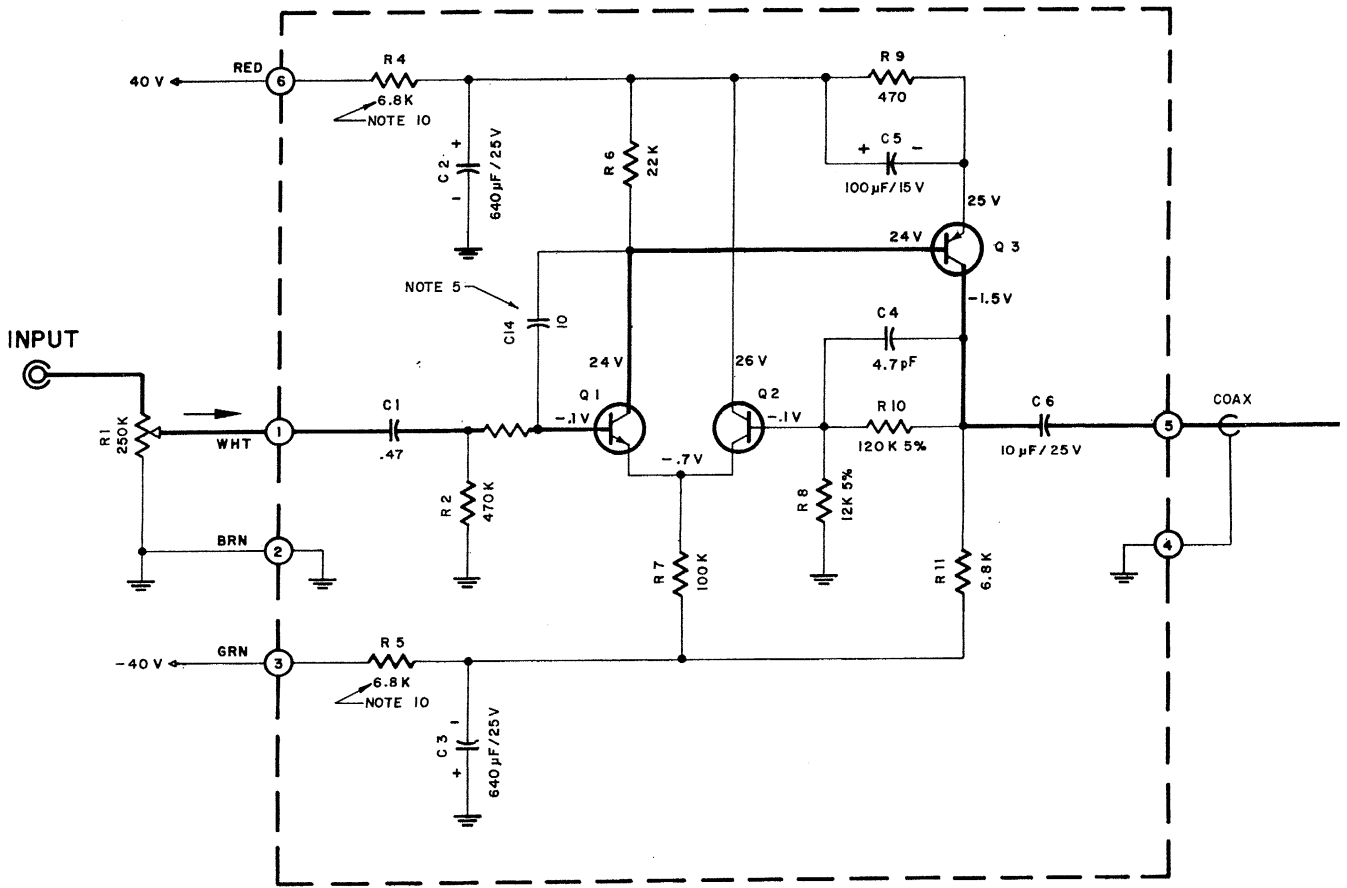
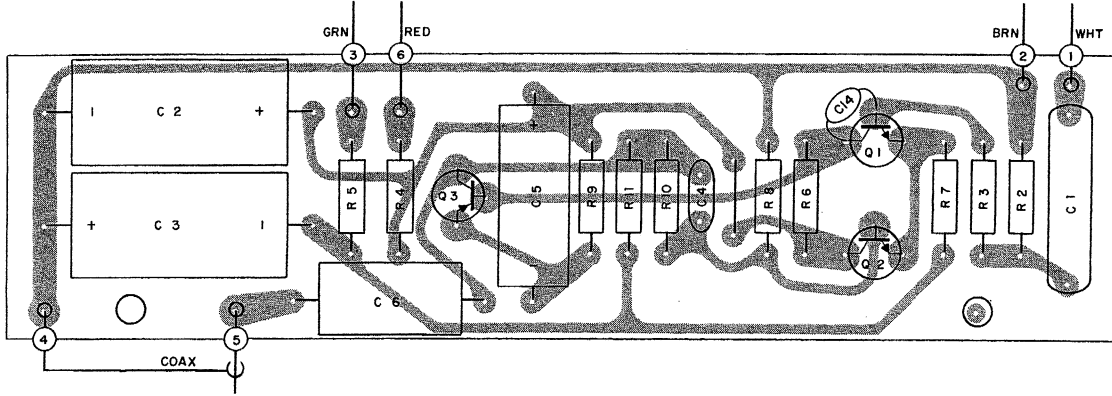
20 pounds (9.07 kg) net, 24 pounds (10.89 kg) in shipping carton



MC 50 BLOCK DIAGRAM

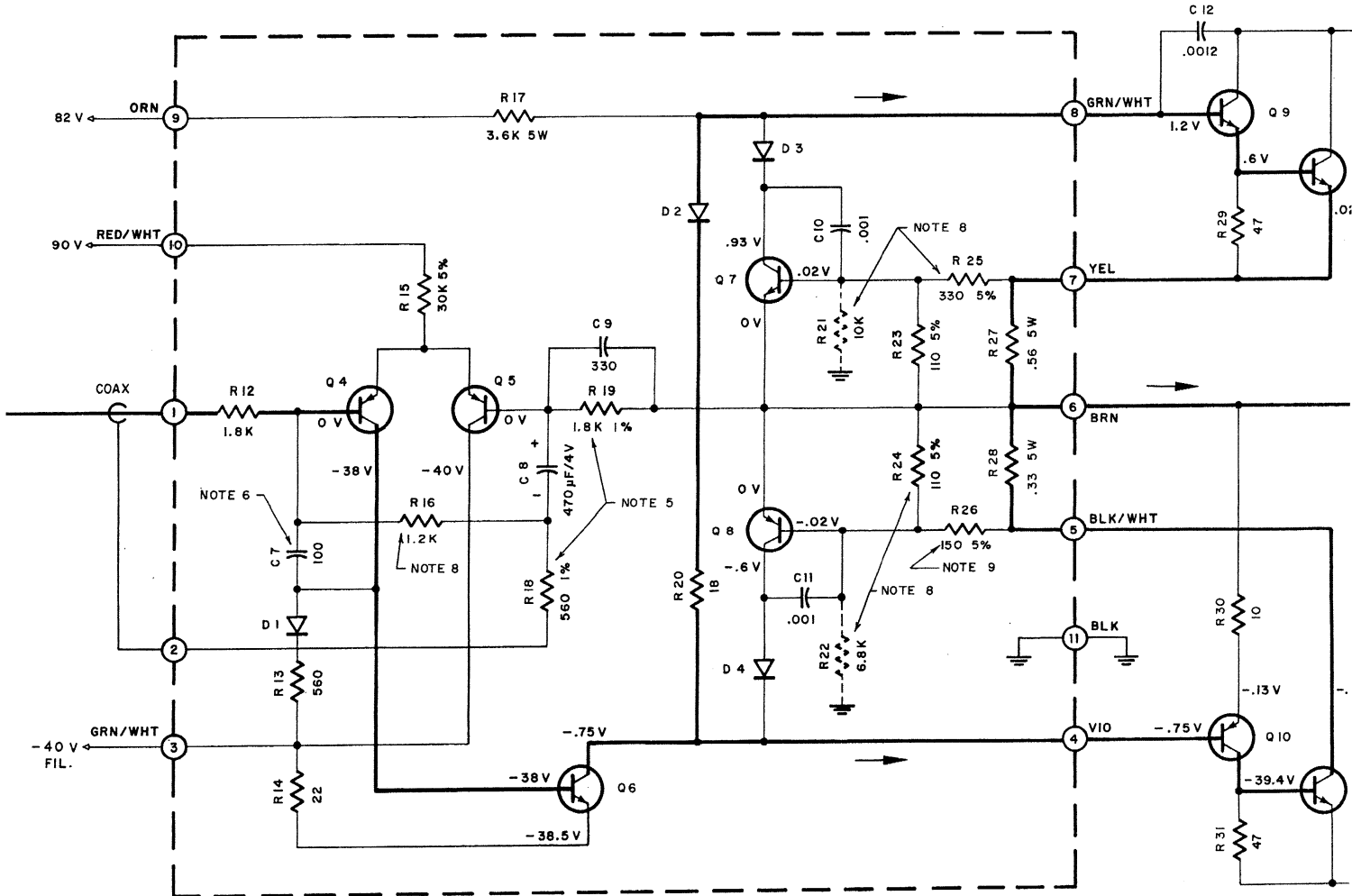
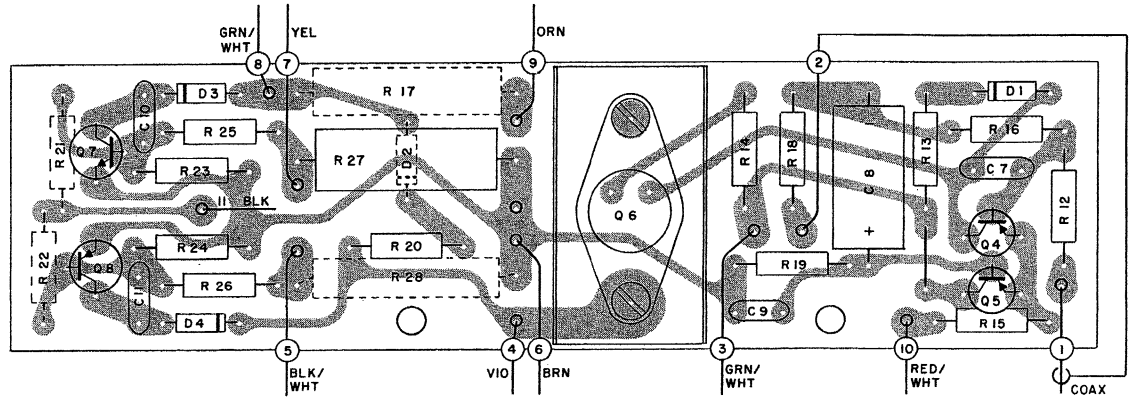


PRINTED CIRCUIT BOARD 043-917

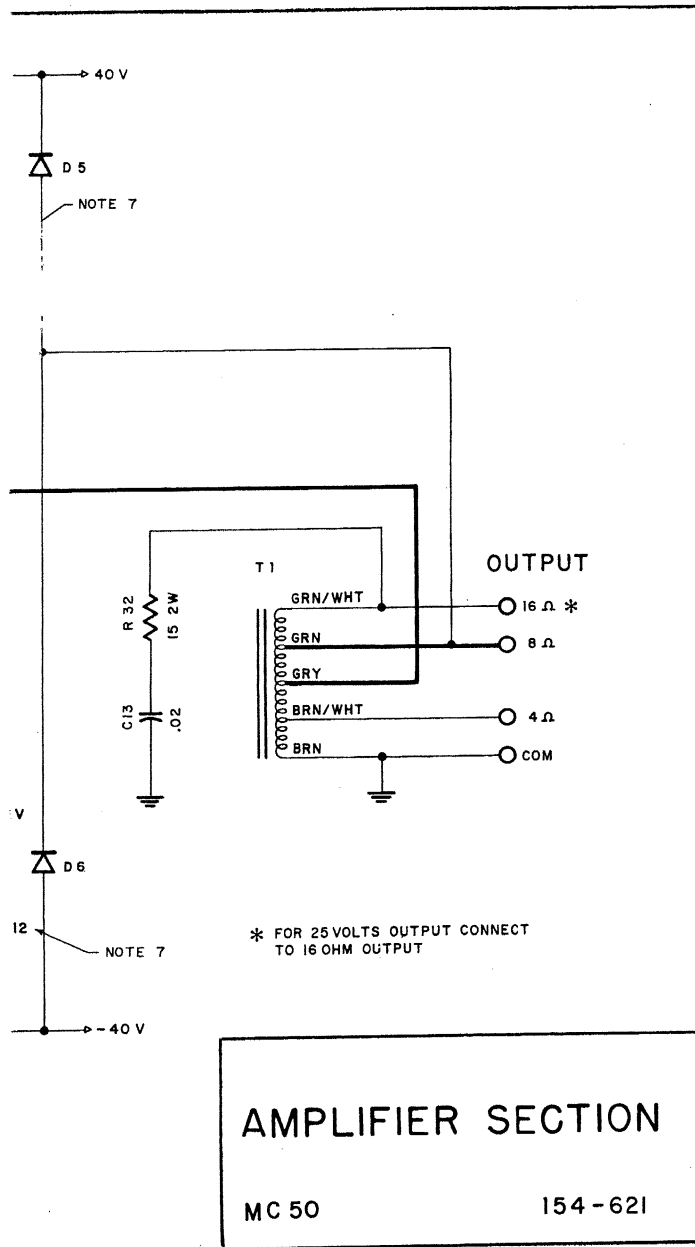


PRINTED CIRCUIT BOARD 043-917

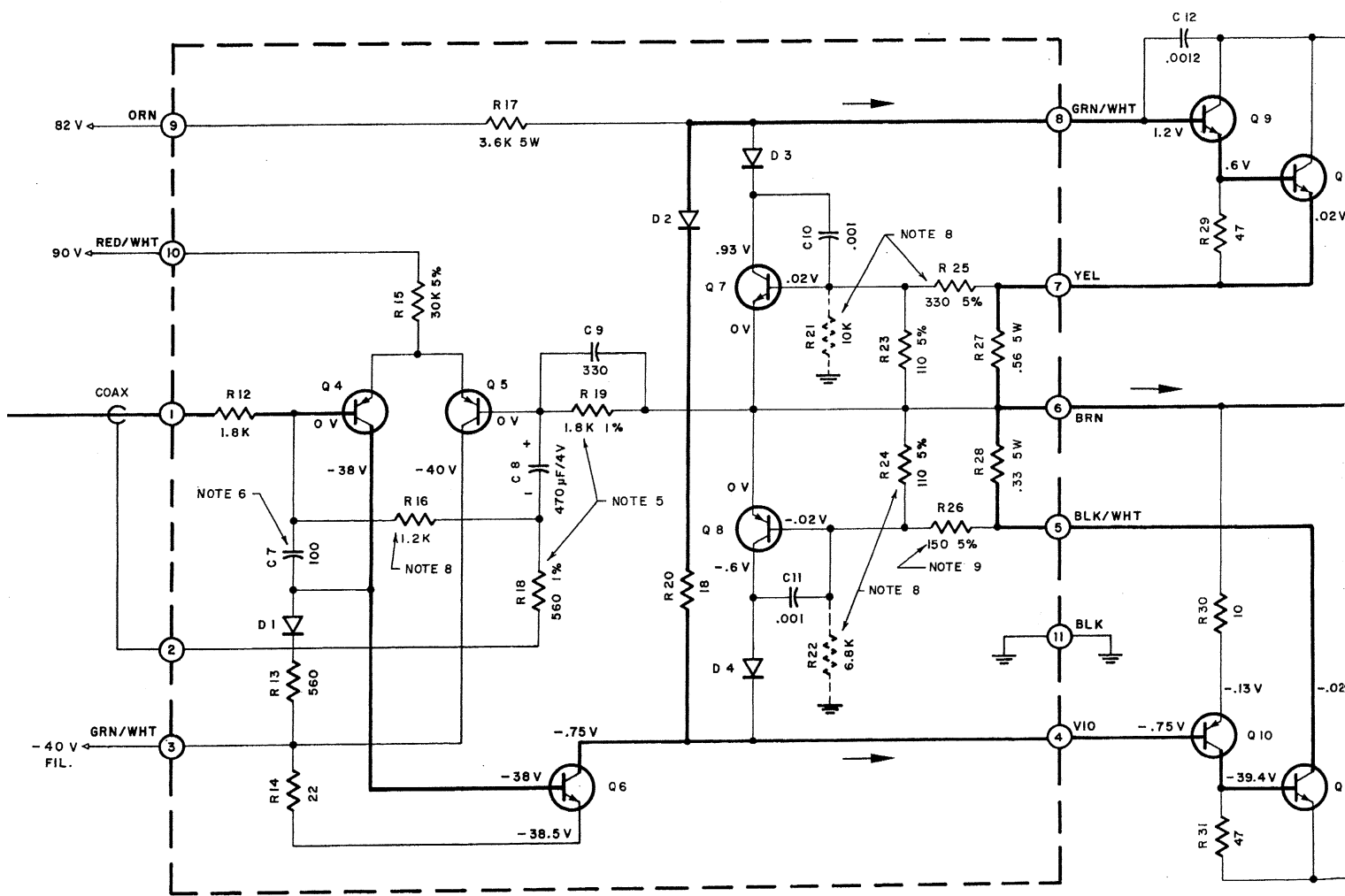
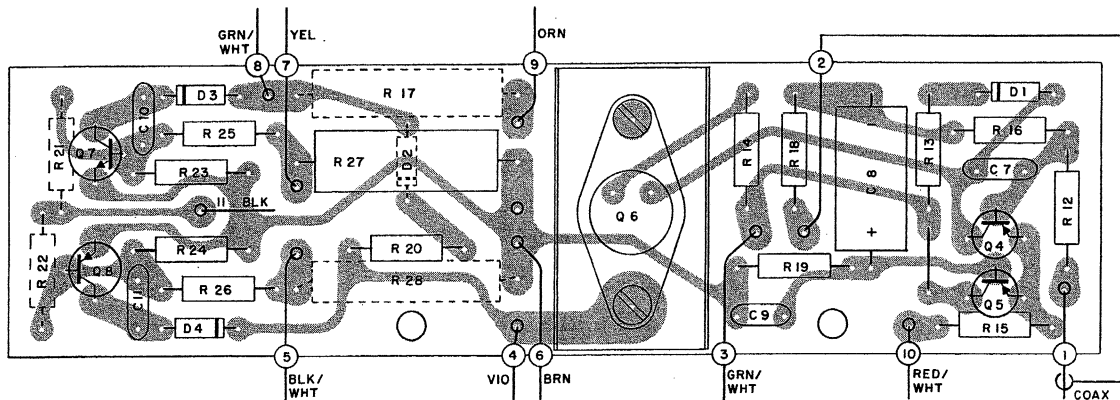
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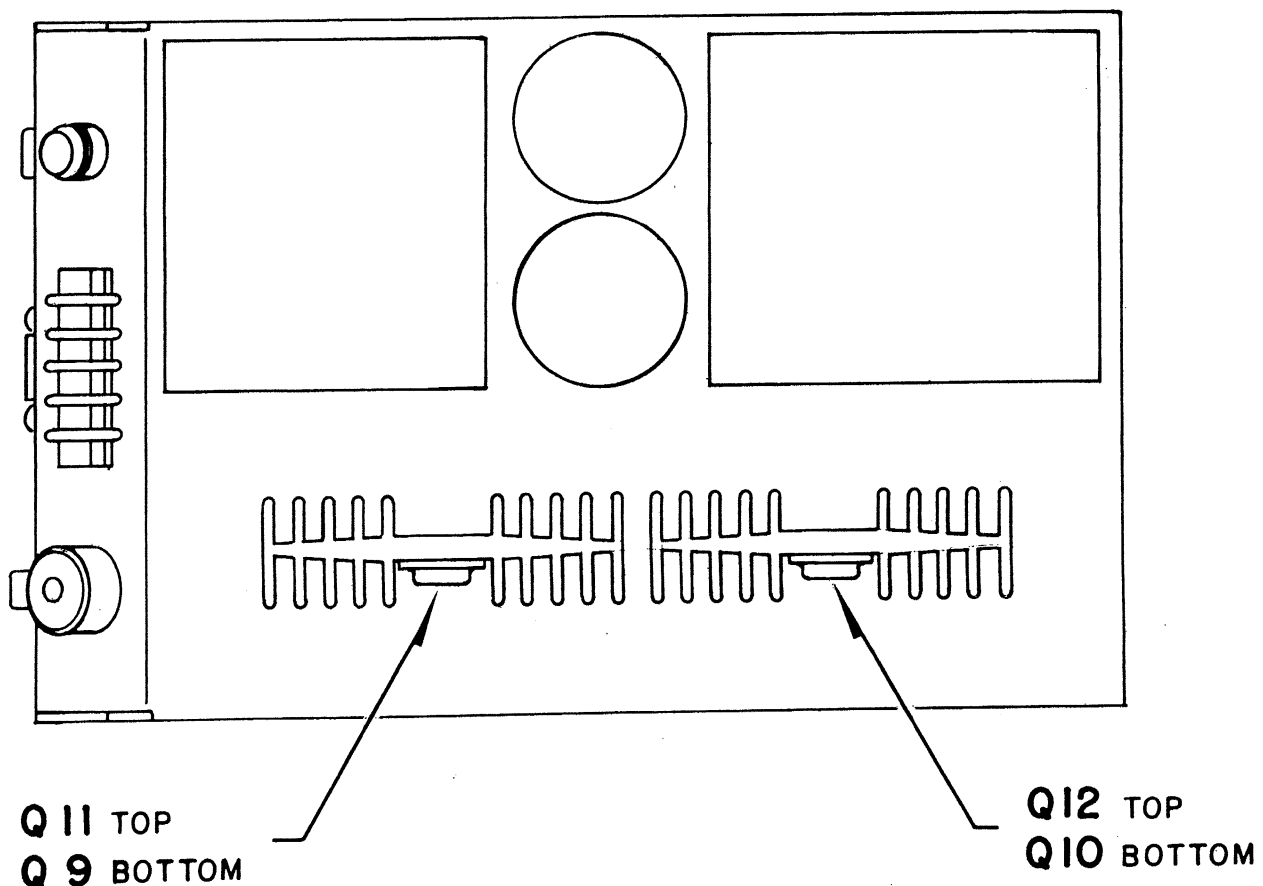
PRINTED CIRCUIT BOARD 043-916

SCHEMATIC NOTES

1. Unless otherwise specified: Resistance values are in ohms, 1/2 watt, and 10% tolerance; capacitance values smaller than 1 are in microfarads (μF); capacitance values greater than 1 are in picofarads (pF); inductors are in microhenries (μH).
2. Printed circuit board components are outlined on the schematics by dotted lines. The circled numbers on the dotted lines correspond to the numbers on the PC board layouts.
3. The heavy lines on the schematics denote the primary signal path.
4. All voltages indicated on the schematics are measured under the following conditions:

a. Use of an 11 megohm impedance VTVM.	d. AC input at 117 volts AC, 50/60Hz.
b. All voltages $\pm 10\%$ with respect to chassis ground.	e. Front panel controls at:
	Gain FULL CCW
c. No signal at input terminals.	
5. In units with Serial No.'s below 10U51, C14 is not used; R18 and R19 are 5% resistors.
6. In units with Serial No.'s from 13U00 to 15U85, C7 is 180pF.
7. In units with Serial No.'s below 14U80, Q11 and Q12 are McIntosh Part No. 132-536.
8. In units with Serial No.'s below 12U50, R16 is 3.3k; R24 is 160 Ω ; R25 is 220 Ω ; and R21 and R22 are used.
9. In units with Serial No.'s. below 20U78 R26 is 120 Ω .
10. In units with Serial No.'s. below 22U79 R4 and R5 are 3.3k.

LOCATION OF TRANSISTORS NOT ON PRINTED CIRCUIT BOARDS



REPLACEMENT PARTS

All parts not listed are common items obtainable from radio parts jobbers.

Replacement parts may be obtained when ordered by PART NUMBER from:

McIntosh Laboratory Inc.
Customer Service Department
2 Chambers Street
Binghamton, New York 13903
(telephone 607-723-3512)

CAPACITORS

Symbol Number	Description	Part Number
C1	Mylar .47 μ F 250V	064-069
C2,3	Elect. 640 μ F 25V	066-135
C5	Elect. 100 μ F 15V	066-127
C6	Elect. 10 μ F 25V	066-005
C8	Elect. 470 μ F 4V	066-136
C101,102	Elect. 4000 μ F 50V	066-096
C103	Elect. 470 μ F 40V	066-134
C104	Elect. 80/80/50/150 μ F 200/200/150/150V	066-095

DIODES

D1	Si. signal diode	070-047
D2	Si. reference diode	070-046
D3,4	Si. signal diode	070-047
D5,6	Si. rectifier	070-031
D101,102	Si. rectifier	070-031
D103,104	Si. rectifier	070-031
D105,106	Si. rectifier	070-031

FUSES

F101	Fuse 1.5 amp, slo-blo	089-003
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TRANSISTORS

Q1,2	Si. NPN transistor	132-092
Q3,4	Si. PNP transistor	132-056
Q5	Si. PNP transistor	132-056
Q6	Si. NPN transistor	132-515
Q7	Si. NPN transistor	132-021
Q8	Si. PNP transistor	132-032
Q9	Si. NPN transistor	132-524
Q10	Si. PNP transistor	132-530
Q11,12	Si. NPN transistor	132-070

POTENTIOMETERS

R1	Gain control	134-206
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RESISTORS

RT7	Wirewound 3.6k 5W	139-096
R27	Wirewound .56 Ω 5W	139-048
R28	Wirewound .33 Ω 5W	139-080

SWITCHES

S101	Thermal cut-out	153-007
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TRANSFORMERS

T1	Audio autoformer	043-607
T101	Power transformer	043-934

MISCELLANEOUS ITEMS

Plastic feet	017-144
Owners manual	038-659
Gain control knob	090-017
Shipping carton	033-100
AC power cord	170-021
Fuseholder	178-001