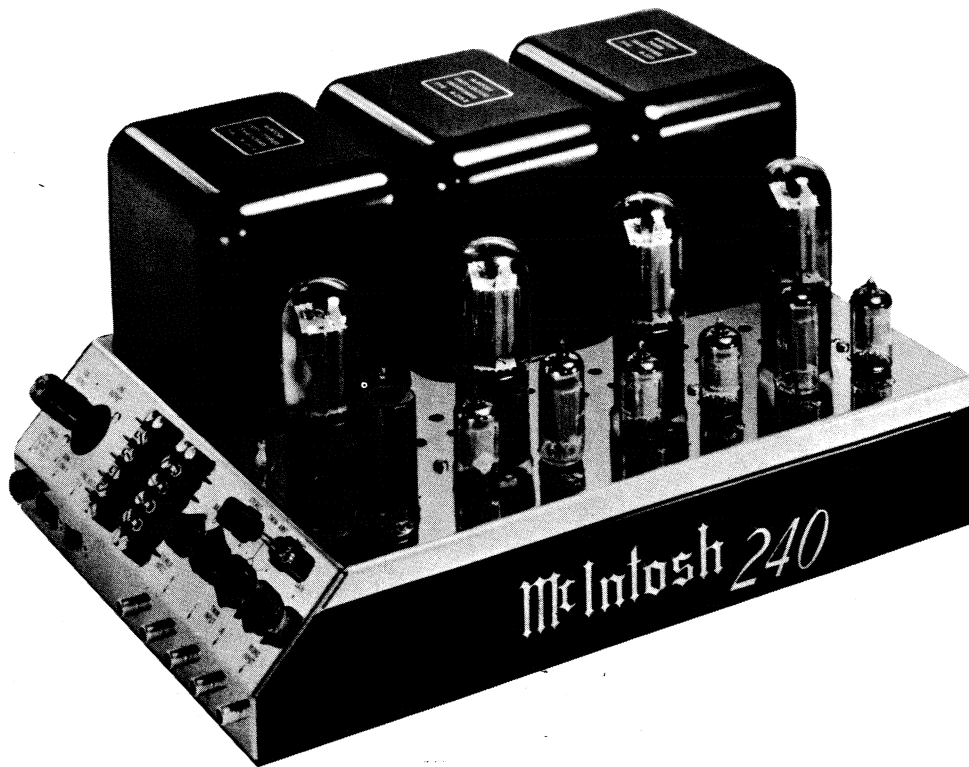


# McIntosh

## MC 240



## SERVICE INFORMATION

STARTING WITH SERIAL NO'S 1P001, 100D1, OR 10G01

McINTOSH LABORATORY INC. 2 CHAMBERS STREET BINGHAMTON, NEW YORK

MC 240

## ELECRICAL SPECIFICATIONS

### Power Output

40 watts continuous per channel, 80 watts continuous monophonic.

### Harmonic Distortion

Less than 0.5% at 40 watts output or less per channel, 20Hz through 20,000Hz. Less than 0.5% at 80 watts output or less monophonic 20Hz through 20,000Hz.

### Intermodulation Distortion

Less than 0.5% for any combination of frequencies from 20Hz through 20,000Hz if instantaneous peak power is below 80 watts per channel or 160 watts monophonic.

### Phase Shift

Less than  $\pm 6$  degrees, 20Hz through 20,000Hz.

### Frequency Range

At 40 watts output per channel: +0 to -0.1 dB 16Hz through 40kHz  
+0 to -0.5 dB 16Hz through 60kHz  
At 20 watts output per channel: +0 to -1 dB 10Hz through 100kHz

### Noise and Hum

90 dB or more below rated output

### Output Impedance

4 ohms, 8 ohms, 16 ohms, 125 ohms, and 600 ohms per channel. 2, 4, 8, 16, 32, 62, 300 ohms monophonic.

### Output Voltages

25 volts and 70.7 volts, stereo or monophonic.

### Internal Impedance

Less than 10% of rated load impedance

### Input

Input Impedance: 250,000 ohms per channel  
Input Sensitivity: Twin amp and mono inputs 0.5 volts with gain control. Stereo input 2.0 volts with balance control.

### Power Requirements

117 volts AC, 50/60 cps. Uses 270 watts at 40 watts output; 145 watts at zero signal output.

### Single Channel (Mono) Output Connection:

For single channel output, parallel or series connect the L and R outputs to obtain the desired impedance.

### 600 Ohms/70.7V Output Receptacle Connections

Pin 1 : Ground, 70.7V return and 600 ohms C.T.  
Pins 1 and 2 : Left 70.7V output  
Pins 2 and 3 : Left 600 ohms output  
Pins 1 and 4 : Right 70.7V output  
Pins 4 and 5 : Right 600 ohms output





## VOLTAGE AND RESISTANCE CHART

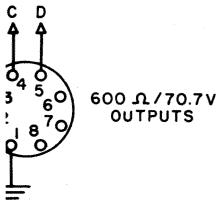
Tube	Pin No.	DC Volts No. Signal	AC Volts at rated output	Resistance in Ohms Unit Off
12AX7 (V1)	1	103	1.9	160K*
	2	0	.42	1M
	3	.7	.41	3.3K
	4 & 5	0	0	0
	6	103	1.9	160K*
	7	0	.42	1M
	8	.7	.41	3.3K
	9	0	6.3	0
	12AU7 (V2 or V5)	1	205	11
2		103	1.9	160K*
3		108	.9	18K
4 & 5		0	0	0
6		205	11	43K*
7		85	0	2.4M*
8		108	.9	18K
9		0	6.3	0
12BH7 (V3 or V6)		1	350	144
	2	18	11	200K
	3	35	.6	2.7K
	4 & 5	0	0	0
	6	350	144	12K*
	7	18	11	200K
	8	35	.6	2.7K
	9	0	6.3	0
	12AX7 (V4 or V7)	1	430	108
2		-46	144	1.1M
3		-46	136	260K
4 & 5		0	0	0
6		430	108	26*
7		-46	144	1.1M
8		-46	136	260K
9		0	6.3	0
6L6GC/7027A (V8, V9, V10, V11)		1	—	—
	2	0	0	0
	3	430	108	27*
	4	430	108	26*
	5	-46	136	260K
	6	—	—	—
	7	0	6.3	0
	8	.7	108	26

\*This Resistance measured with condenser C25A shorted to ground.

A high impedance VTVM is used to measure the operating voltages and resistances.

BE SURE THE AMPLIFIER IS TURNED OFF WHEN MEASURING RESISTANCES.

LEFT  
OUTPUT  
16 Ω  
8 Ω  
4 Ω  
COM

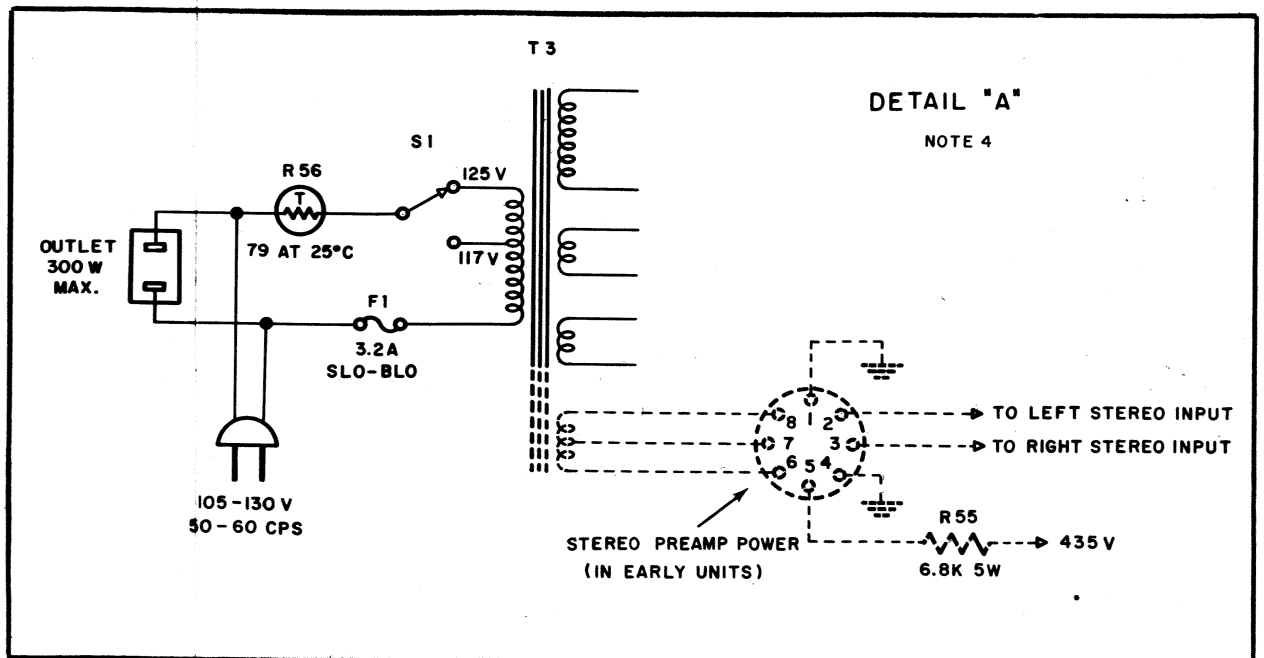


RIGHT  
OUTPUT  
16 Ω  
8 Ω  
4 Ω  
COM

specified, resistance  
s, 1/2 watt, and 10%  
tors marked with an  
5% tolerance. Capacit  
er than 1 are in  
values greater than 1  
(pF). Inductors are  
μH).

ponents are matched to

4 and R 27  
7 and R 50  
3 and R 36  
1 and R 34



## SCHEMATIC NOTES

1. In units with serial numbers below 32G66, C 29 and C 30 do not appear; R9 & C2 and R32 & C12 are connected together as shown.
2. In units with serial numbers below 32G66, R17 & 40 were 27K; R18 & 41 were 30K; R10 & 33 were 10K; and R57 was 10K 2W.
3. In units with serial numbers below 32G66, R58 (100K) is used. When this resistor is used, the connection is broken at point indicated by "X".
4. In units with serial numbers below 45G45, power transformer T3 is connected as shown in detail "A".

### 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
C2	Tubular ceramic 470pF	061-033
C3	Elect. 100 $\mu$ F 3V	066-047
C12	Tubular ceramic 470pF	061-033
C13	Elect. 100 $\mu$ F 3V	066-047
C23	Elect. 250 $\mu$ F 250V	066-022
C24	Elect. 250 $\mu$ F 250V	066-023
C25,26	Elect. 100/30 $\mu$ F 500/450V	066-027
C27	Elect. 12 $\mu$ F 250V	066-046

#### RECTIFIERS

SR1,2	Si. rectifier	070-032
SR3	Se. rectifier	070-005

#### FUSES

F1	Fuse 3.2 amp	089-006
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L1,2	Choke
L3,4	Choke
L5	Filter
RESISTORS	
R1	Mono ga
R2	Left ga
R3	Right g
R7	Balance
R56	Thermis
S2	Mode se
V1	12AX7
V2	12AU7
V3	12BH7-A
V4	12AX7
V5	12AU7
V6	12BH7-A
V7	12AX7
V8,9	6L6CG/7
V10,11	6L6CG/7
TF	
T1	Output
T2	Output
T3	Power (
T3	Power (
MISCF	
	Mountir
	Plastic
	Owners
	Mountir
	Hardwar
	Gain &
	Mode se
	Octal j
	Octal j
	Line co
	Fuse ho
	Shippin

## C NOTES

Serial numbers below  
 30 do not appear;  
 C12 are connected  
 1.

Serial numbers below  
 were 27K; R18 & 41  
 3 were 10K; and

Serial numbers below  
 is used. When  
 used, the connection  
 is indicated by "X".

Serial numbers below  
 transformer T3 is  
 shown in detail "A".

## PARTS

Common items obtain-  
 ible.  
 Obtained when ordered

Radio Inc.  
 Department  
 New York 13903  
 (3-3512)

	Part Number
.70pF	061-033
3V	066-047
.70pF	061-033
3V	066-047
250V	066-022
250V	066-023
μF	066-027
OV	
250V	066-046
	070-032
	070-005
	089-006

### CHOKES

L1,2	Choke 2.2mH	122-001
L3,4	Choke 2.2mH	122-001
L5	Filter choke 1H	122-002

### RESISTORS & POTENTIOMETERS

R1	Mono gain	134-020
R2	Left gain	134-020
R3	Right gain	134-020
R7	Balance	134-116
R56	Thermistor	144-006

### SWITCHES

S2	Mode selector	146-005
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### TUBES

V1	12AX7	165-019
V2	12AU7	165-018
V3	12BH7-A	165-020
V4	12AX7	165-019
V5	12AU7	165-018
V6	12BH7-A	165-020
V7	12AX7	165-019
V8,9	6L6CG/7027-A	165-014
V10,11	6L6CG/7027-A	165-014

### TRANSFORMERS

T1	Output (left)	043-656
T2	Output (right)	043-657
T3	Power (10G01 to 45G45)	043-048
T3	Power (45G45 & Above)	043-655

### MISCELLANEOUS ITEMS

Mounting flanges	001-067
Plastic feet	017-040
Owners manual	038-174
Mounting template	038-003
Hardware package	043-432
Gain & balance knobs	090-013
Mode selector knob	090-015
Octal plug cap	127-004
Octal plug	127-006
Line cord	170-021
Fuse holder	178-001
Shipping carton	033-011

