

# McIntosh C 504

## The BEST COMPACT PREAMPLIFIER!

When you need a reliable, low noise flexible preamplifier in a compact size, you need the McIntosh C 504.

The values to look for in a preamplifier are:

1. QUALITY CONSTRUCTION
2. RELIABILITY
3. MECHANICAL STRENGTH
4. ELECTRONIC STABILITY
5. CONVENIENCE OF OPERATION
6. VERSATILITY
7. SUPERIOR PERFORMANCE

The McIntosh C 504 is a high technology preamplifier in a compact new case size. The features and performance of the C 504 reflect the latest in McIntosh Laboratory engineering design excellence.

### PRECISION TRACKING VOLUME CONTROL

The volume control, manufactured for McIntosh Laboratory, is a step attenuator which has tracking accuracy within 1 dB throughout its entire range. Such extremely accurate matching is achieved through electronically controlled trimming of the resistance material deposited on pairs of miniature printed circuits. Tracking accuracy and quiet performance are permanently maintained. Use does not affect performance as in ordinary volume controls.

### TRUE LOUDNESS COMPENSATION

The C 504 active circuit loudness control is continuously variable, with constant midrange gain and acts independently of the volume control. The loudness contour is accurately modeled after the Fletcher Munsom family of "Equal Loudness"

curves. Use of this control restores proper listening response at even the softest listening levels.

### FET ANALOG INPUT SWITCHING

All critical input switching is done electronically using field effect transistor analog switches. The front panel selector simply switches small amounts of control DC voltage which turn the FET analog switches on or off. Since the FET analog switches are located near the input jacks, the length of interconnecting leads is much shorter. Noise, switching transients, and hum pickup are eliminated.

### TRI-FREQUENCY PROGRAM EQUALIZER

Three separate controls allow the balance and response of musical information to be adjusted with far more flexibility than with conventional tone controls. The center frequencies of the controls are 30 Hz, 750 Hz and 10K Hz. Plus and minus 12 dB of control is available. Use of the program equalizer controls does not affect in the slightest, the low noise, low distortion performance of the preamplifier. When the equalizer controls are in their center or flat detent position, their action is neutral and response of the preamplifier is absolutely flat.

### HEADPHONE/OUTPUT AMPLIFIER

The main output amplifier section of the preamplifier is a push-pull complementary class AB circuit. Because of the extremely low distortion and power capability of this circuit it is used for both main and headphone outputs.

### INTEGRATED CIRCUIT OPERATIONAL AMPLIFIERS

Both the magnetic phono and the equalizer amplifier stages utilize new high technology integrated circuit operational amplifiers. Noise factors are incredibly low, and distortion levels are at or below the limits of present day test equipment.



**THE C 504** shown in optional walnut veneer cabinet

# C 504 Performance Limits

## PERFORMANCE GUARANTEE

Performance limits are the maximum deviation from perfection permitted for a McIntosh instrument. We promise you that when you purchase a new C 504 from a McIntosh Franchised dealer it will be capable of performance at or exceeding these limits or you can return the unit and get your money back. McIntosh is the only manufacturer that makes this statement.

## FREQUENCY RESPONSE

+ 0 -0.5 db from 20Hz to 20 kHz

## OUTPUT LEVELS

|           |       |
|-----------|-------|
| Main Out  | 2.5V  |
| Headphone | 750mV |
| Tape Out  | 250mV |

## DISTORTION

0.02% maximum at 2.5V output from 20 Hz to 20 kHz

## INPUT SENSITIVITY AND GAIN

|                          |                                                  |
|--------------------------|--------------------------------------------------|
| Input to Main Out        |                                                  |
| Phone 1 and 2            | 2.2mV in for 2.5V out<br>(61.1 dB gain at 1 kHz) |
| Tuner, Aux, Tape 1 and 2 | 250mV in for 2.5V out<br>(20 dB gain at 1 kHz)   |

|                          |                                                   |
|--------------------------|---------------------------------------------------|
| Input to Headphone Out   |                                                   |
| Phono 1 and 2            | 2.2mV in for 750mV out<br>(50.7 dB gain at 1 kHz) |
| Tuner, Aux, Tape 1 and 2 | 250mV in for 750mV out<br>(9.5 dB gain at 1 kHz)  |

|                          |                                                   |
|--------------------------|---------------------------------------------------|
| Input to Tape Out        |                                                   |
| Phono 1 and 2            | 2.2mV in for 250mV out<br>(41.1 dB gain at 1 kHz) |
| Tuner, Aux, Tape 1 and 2 | 250mV in for 250mV out<br>(0 dB gain at 1 kHz)    |

## SIGNAL TO NOISE

|                          |                                                                                         |
|--------------------------|-----------------------------------------------------------------------------------------|
| Phono 1 and 2            | -90 dB IHF A-weighted,<br>below 10mV input<br>-80 dB unweighted,<br>below 10mV input    |
| Tuner, Aux, Tape 1 and 2 | -100 dB IHF A-weighted,<br>below 250mV input<br>-90 dB unweighted,<br>below 250mV input |

## INPUT IMPEDANCE

|                          |      |          |
|--------------------------|------|----------|
| Phono 1 and 2            | 47kW | and 50pF |
| Tuner, Aux, Tape 1 and 2 | 47kW |          |

## OUTPUT IMPEDANCE

|           |                                                    |
|-----------|----------------------------------------------------|
| Main Out  | less than 100W (to operate into<br>5kW or greater) |
| Headphone | 8W                                                 |
| Tape Out  | less than 200W (to operate into<br>5kW or greater) |

## EQUALIZER CONTROL RESPONSE

|                    |                     |
|--------------------|---------------------|
| Center Frequencies | 30, 750, and 10 kHz |
| Boost and Cut      | ±12 dB              |

## GENERAL INFORMATION

### POWER REQUIREMENT

120 Volts 50/60 Hz, 25 Watts

### SEMI CONDUCTOR COMPLEMENT

|                             |
|-----------------------------|
| 15 Transistors              |
| 14 Field Effect Transistors |
| 11 Silicon Diodes           |
| 11 Integrated Circuits      |

## MECHANICAL INFORMATION

**SIZE:** Front panel measures 16 inches wide (40.6 cm) by 3 5/8 inches high (9.2 cm). Chassis measures 14 3/4 inches wide (37.5 cm) by 2 3/8 inches high (6.0 cm) by 14 1/2 inches deep (36.8 cm), including connectors. Knob clearance required is 1 1/4 inches (3.2 cm) in front of mounting panel.

**FINISH:** Front panel is anodized gold and black with special gold/teal nomenclature illumination. Chassis is black.

**MOUNTING:** Exclusive McIntosh developed professional PANLOC

**WEIGHT:** 14 pounds (6.4 kg) net, 25 pounds (11.3 kg) in shipping carton.

FRANCHISED DEALER

# McIntosh

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The continuous improvement of its products is the policy of McIntosh laboratory incorporated, who reserves the right to improve design without notice.