

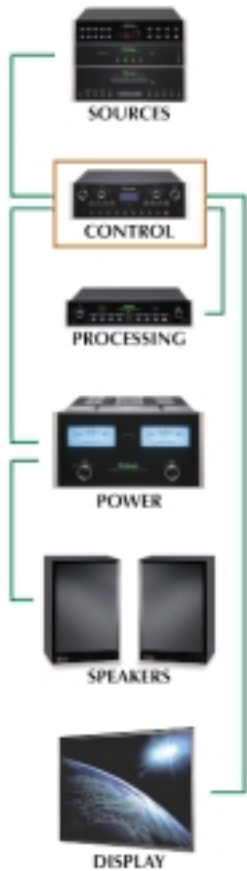
**McIntosh**<sup>®</sup>  
THE GREAT AMERICAN POWERHOUSE



C100 Preamplifier/Controller

# C100

## Preamplifier/Controller



See "SYSTEMS ENGINEERING"  
in main brochure for more on  
McIntosh system architectures.

It embodies the expertise of famously uncompromising engineers. It is a fully balanced design with a separate chassis for total isolation of the audio signal. It uses the finest one-percent resistors and capacitors and internal gold-plated contacts with solid-soldered joints. No details are overlooked in the design of a preamplifier virtually devoid of any measurable noise. The McIntosh C100 awaits those who may be searching for their *last* preamplifier.

### Featured Technologies

**FULLY BALANCED DUAL-CHASSIS DESIGN.** The extraordinary C100 is fully balanced from input to output – a configuration that essentially *cancels all distortion*. The precision volume control has four matched sections and the main gain stage uses four matched amplifiers operating in push-pull. Even unbalanced signals are converted to and processed as balanced signals. The Preamplifier chassis, which contains only audio circuits and inputs/outputs, is completely isolated from the power supply and the microprocessors, ensuring total noise rejection. The Controller chassis contains the selector switches, digital display, all control microprocessors, and the power supply. After any switching operation, the control circuits are automatically turned off to eliminate any possibility of microprocessor noise reaching the audio circuits. The only connection between the Preamplifier and Controller is a 25-pin shielded cable.

**SILENT ELECTROMAGNETIC SWITCHING.** In a conventional preamp, an input signal travels to a switch, and then travels to the input circuitry. Unfortunately, the farther a signal must travel, the more distorted it becomes. And this says nothing of what detritus a dirty switch can add to the signal. McIntosh Silent Electromagnetic Switching literally brings the switch to the input. The distortion-free switch consists of a glass tube containing oxygen-free gas and two signal leads separated by mere thousandths of an inch. The tube sits in a multilayer copper coil and the entire assembly is encased in shock-absorbent plastic. When DC voltage is applied to the coil in response to a switching command, current flow creates a magnetic field that causes the leads to bend and contact one another, completing the circuit. The inert gas eliminates corrosion of the contacts, ensuring a low-resistance, distortion-free switch that never needs cleaning. Another benefit is that non-selected inputs are truly "off," eliminating potential sources of interference.

## About the C100 Companion Products

The McIntosh products shown at right are logical companions for the C100. Separate literature is available. Check with your McIntosh dealer for any late additions. McIntosh speaker systems are also covered in detail in separate literature.

**MC1000 Power Amplifier, MDA700 D/A Converter, and MCD751 CD Transport.** The MC1000 double-balanced power amp and the C100 both hail from the no-compromise school of design. Add the MDA700 converter with balanced output plus the MCD751 transport for a totally balanced audio system without peer.

**MR85 AM/FM Tuner.** A natural companion, the MR85 tuner is a thoroughly engineered broadcast monitor that reveals the upper limits of AM and FM performance.

**RCT4 Remote Translator.** The Translator allows non-McIntosh components to be operated with a McIntosh handheld remote or keypad controller. It connects to the data outputs on the C100.

**PC4 AC Power Controller.** The PC4 provides five AC outlets (four switched) for turning non-McIntosh components on and off automatically when it is connected to the power control output of a Control Center or Integrated Amplifier.

**R649 IR Sensor.** With switching for three additional stereo power amplifiers and a connector for an external IR sensor, the C100 can supply music to other areas, with remote operation via the R649 wall-mount IR sensor.



MC1000 MONOBLOCK POWER AMP



MDA700 D/A CONVERTER



MCD751 CD TRANSPORT



MR85 AM/FM TUNER



RCT4 REMOTE TRANSLATOR



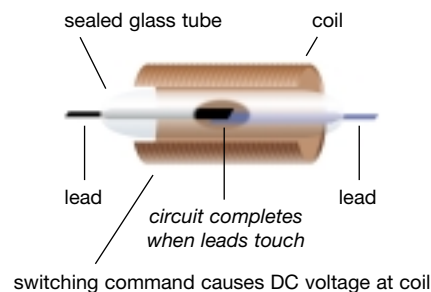
PC4 AC POWER CONTROLLER



R649 IR SENSOR



The input selectors on McIntosh Control Centers actually control state-of-the-art silent electromagnetic switches.



## Featured Technologies (cont'd.)

**PRECISION, OPTICALLY REGULATED VOLUME CONTROL.** If McIntosh electromagnetic switching brings the switch to the input, then the C100's volume control brings the *attenuator* to the input. The volume knob actually operates an optical rotary encoder with 128 steps; it sends instructions at the speed of light to the digitally controlled attenuator located near the inputs. Together they provide 0.5dB resolution with 0.05dB accuracy.

**PROGRAMMABLE SOURCE TRIM.** A traditional McIntosh feature that allows matching the output levels of different source components, source trim in the C100 establishes new standards for audio purity and operating convenience. Instead of adjusting individual potentiometers, the trim for each input is stored electronically as a volume offset, using the tuner level as the standard.

**ADVANCED PHONO SECTION.** Phono inputs are provided for both moving magnet and moving coil phono cartridges. The MC inputs have a dedicated RIAA preamplifier and double mu-metal-shielded step-up transformers wound with silver wire.

**CONTROL DATA OUTPUTS.** To facilitate system integration, the C100 outputs control data for source components. This allows remote operation of non-McIntosh components either by direct connection to compatible data inputs or via a McIntosh Remote Translator.

**BALANCED CONNECTIONS.** Balanced connections guard against induced noise. A balanced connection between the C100 and the MC1000 amp provides 40dB more noise protection than would an unbalanced ("single-ended") connection.

**REMOTE POWER CONTROL.** The C100 has four individual remote power jacks (two main, plus switched 1 and switched 2) that enable it to turn connected power amps on/off.



Most consumer electronics products are necessarily viewed as short-term investments because either they don't last or they quickly become obsolete in some way. *Coincidentally*, manufacturers supply a steady stream of "new-and-improved" products that you can buy. *Again*.

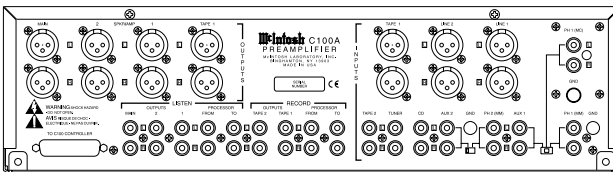
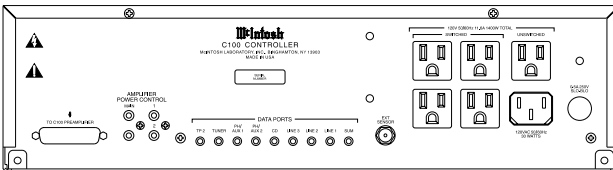
Behind every McIntosh is a fifty-year heritage of excellence, proudly carried forward by every employee. No production

lines, no "price-point" engineering, no planned obsolescence. McIntosh equipment is made to sound better and last longer.

When McIntosh products are presented to customers, the criteria they have been conditioned to overlook – reliability, longevity, craftsmanship, ease-of-use, adaptability, pride of ownership – suddenly leap to the top of their list.

The choice becomes clear: ***There is nothing like a McIntosh.***

# C100 Preamplifier/Controller



## FEATURES

- Fully balanced circuitry from input to output
- Dual chassis isolates audio signals from power and switching
- Extra-wide dynamic range
- Ultra-low distortion
- Silent electromagnetic switching
- Precision, optically regulated volume control with digital readout in decibels or percent
- Programmable source trim
- 10 source selections including separate MM and MC phono
- 3 balanced inputs (includes balanced tape loop)
- 4 balanced outputs (Main, Tape1, Line 1, Line 2)
- Independent listen and record selection
- Dual processor loops
- Control data output for source components
- Remote power control (2 main, 2 switched)
- Separate electronic regulators for each preamplifier section
- Discrete output stage
- Polyester coupling capacitors
- Low-noise 1% metal film resistors throughout
- Ultra-precision (.5%) metal film resistors and 1% polypropylene capacitors for phono equalization
- Gold-plated input and output jacks
- Modular construction with steel chassis
- Glass front panel with illuminated nomenclature
- Infrared remote control (all circuitry in power supply chassis)
- Connector for external IR sensor
- Headphone jack

## SPECIFICATIONS

### Frequency Response

10Hz to 40kHz, +0 / -0.5dB

### Rated Voltage Output

2.5Vrms

### Maximum Voltage Output

Balanced: 25Vrms

Unbalanced: 12Vrms

### Output Impedance

50 ohms balanced and unbalanced

### Total Harmonic Distortion

0.002% maximum from 20Hz to 40kHz

### Input Sensitivity

Phono: 4.4mV for rated output

High level: 450mV for rated output

### Maximum Input Signal

MM phono: 50mV

High level: 5V balanced and unbalanced

### A-Weighted Signal-to-Noise Ratio

Phono: 86dB

High level: 100dB

### Input Impedance

MC phono: 10 ohms

MM phono: 47k ohms, 65pf

High level:

44k ohms balanced

22k ohms unbalanced

### Voltage Gain

MC phono to tape: 70dB

MM phono to tape: 40dB

High level to tape: 0dB

High level to main: 15dB

### AC Outlets

4 switched, 1 unswitched

### Power Requirements

120V 50/60Hz, 30W

### Dimensions (h x w x d)

inch: 5.375 x 17.5 x 17.5 for each chassis

cm: 13.7 x 44.5 x 44.5 for each chassis

Controller knob clearance: 1.125" (2.9 cm)

### Weight

70 lbs. (31.8kg) shipping total in two cartons

