



The McIntosh

# C28

**STEREO PREAMPLIFIER**

is the  
**QUIETEST-  
MOST FLEXIBLE-  
EASIEST TO USE-  
MOST ADVANCED**  
and has the  
**LOWEST DISTORTION!**



McIntosh engineers could not be content with just another preamplifier.

New concepts, new technology has produced a preamplifier that gives you the greatest flexibility ever in a preamplifier.



Look at the great number of ways you can enjoy the C28 . . . . .

- Use 3 tape machines**  
2 with their own electronics and 1 tape playback deck with complete easy front panel switching
- Built-in headphone amplifier**  
listen to your favorite music - - - privately
- Main and remote loudspeaker switching**  
turn the main speakers on or off without affecting the remote speakers and vice versa (operates with accessory relay)
- New low noise phono input**  
listen to your records with a new quietness
- Individual channel phono level controls**  
match levels from different phono cartridges without degrading signal to noise ratio
- Individual channel output level controls**  
perfect balance from your stereo always
- Individual channel tone control switches**  
complete, repeatable flexibility
- New compensation control**  
one position for loudness compensation, one position is flat and a third position that adds presence compensation!





PRICE: 499.00 CABINET: 29.00

## NEW LOW NOISE PHONO CIRCUITS

New records and tapes with greatly increased dynamic range demanded new low noise circuits. McIntosh scientists developed a new DIFFERENTIAL INPUT CIRCUIT that reduced phono input noise levels from approximately 2.4 microvolts in an excellent preamplifier to a new level of only 1.2 microvolts! The differential input circuit has only been used in very sensitive professional test equipment and in medico-electronics. The preamplifier will not overload or change distortion for any phono input signal from 2 millivolts up to 500 millivolts. This represents a dynamic range of approximately 3000 to 1 on a voltage basis. This fantastic improvement necessitated extreme care in layout and manufacturing. The signal circuits need careful shielding and wiring with coaxial cable to prevent noise and crosstalk in the preamplifier from destroying the low noise advantages of the input circuit.

## NEW TAPE FLEXIBILITY

With the C28 you can copy from one tape recorder to another while listening to a completely different program! In addition, you can monitor the recording by simply pushing a button. In addition, an input circuit has been provided to accept the signal from a tape playback deck.

## NEW HEAD PHONE AMPLIFIER

Use your headphones for private listening. Ample power has been provided to power today's high quality headphones. All this plus a separate power switch in the preamplifier to turn the power amplifiers on or off. It is not necessary to operate the power amplifiers while listening to headphones.



# PERFORMANCE LIMITS

## PERFORMANCE GUARANTEE

Performance Limits are the maximum deviation from perfection permitted for a McIntosh instrument. We promise you that the C28 you buy must be capable of performance at or exceeding these limits or you get your money back. McIntosh is the only manufacturer that makes this guarantee.

## FREQUENCY RESPONSE:

+0 -0.5 dB 20 Hz to 20,000 Hz

## DISTORTION

Will not exceed 0.1% at rated output level, 20 Hz to 20,000 Hz.

## INPUT SENSITIVITY AND IMPEDANCE:

Auxiliary, Tuner, Tape 1, Tape 2, 0.25 volts; 250,000 ohms.  
Phono 1 and Phono 2, 2 millivolts; 47,000 ohms (1,000 Hz).  
Microphone, 2.5 millivolts; 500,000 ohms.  
Tape Head, 2 millivolts; 500,000 ohms (500 Hz).

## HUM AND NOISE:

Auxiliary, Tuner, Tape 1, Tape 2: 90 dB below rated output.  
Phono 1, Phono 2 and Tape Head: 78 dB below 10 millivolts input, equivalent to less than 1.2 microvolts at the input terminals.  
Microphone: 1.5 microvolts at the input terminals.

## OUTPUT LEVEL AND IMPEDANCE:

Main Output: 2.5 volts with rated input, 100 ohms source impedance, to operate into 47,000 ohms or more. Tape Output: 0.25 volts, 150 ohms source impedance, from low level inputs, to operate into 47,000 ohms or more. Headphone/Line Output: 0.75 volts into 8 ohm load or 2.5 volts into 600 ohm line, 0.2 ohm source impedance, level controls provided. Center Channel Output: 1.25 volts with rated input to both channels, to operate into 47,000 ohms or greater, level control provided.

## AMPLIFICATION IN DECIBELS:

Auxiliary, Tuner, Tape 1 and 2 to Main Output: 20 dB. Auxiliary, Tuner, Tape 1 and 2 to Tape Output: 0 dB. Auxiliary, Tuner, Tape 1 and 2 to Headphone/Line Output: 17.5 dB.  
Phono 1 and Phono 2 at 1,000 Hz to Main Output: 62 dB. Phono 1 and Phono 2 at 1,000 Hz to Tape Output: 42 dB. Phono 1 and Phono 2 at 1,000 Hz to Headphone/Line Output: 59.5 dB.

## Microphone:

to Main Output 60 dB.  
to Tape Output 40 dB.  
to Headphone/Line Output: 57.5 dB.  
Tape Head at 500 Hz.  
to Main Output: 64 dB.  
to Tape Output: 44 dB.  
to Headphone/Line Output: 61.5 dB.

## POWER REQUIREMENT:

117 volts, 50/60 Hz, 45 watts.

## FACILITIES AND FEATURES

### BASS CONTROLS:

Separate 11 position rotary switches for each channel, +20 dB to -20 dB at 20 Hz.

### TREBLE CONTROLS:

Separate 11 position rotary switches for each channel, +18 dB to -18 dB at 20,000 Hz.

### COMPENSATION SWITCH:

Three position switch for Flat, Loudness, or Presence. Loudness position boosts low frequencies for low level listening. Presence position boosts mid frequencies 4 dB to increase "presence" effect. This control operates as a function of volume control position so full compensation is obtained at lower volume levels and flat response is obtained at full volume.

### BALANCE CONTROL:

Natural balance at center position, attenuation of left or right channel by rotating control.

## VOLUME CONTROL:

Precision "tracked" at all listening levels (0 to -65 dB). Does not change stereo balance as loudness is changed. The power ON/OFF switch is coupled with this control.

## INPUT SELECTOR:

Six positions: Auxiliary, Tuner, Phono 1, Phono 2, Microphone, and Tape Head.

## MODE SELECTOR:

Seven positions: Left channel only to both speakers, Right channel only to both speakers. Stereo Reverse, Stereo, Mono, L + R to left speaker only, and L + R to right speaker only.

## TAPE MONITOR SWITCHES:

Two push button switches. Either of two tape recorders can be monitored by selecting the TAPE 1 push button or TAPE 2 push button. They are mechanically interlocked to accept only one push button at the IN position at one time.

## TAPE COPY SWITCH:

Two push button switches. Either of two tape recorders can be connected to copy from tape machine 1 to tape machine 2 or vice versa. They are mechanically interlocked to accept only one push button at the IN position at one time.

## LF FILTER SWITCH (Rumble Filter):

Flat or roll-off at 12 dB per octave below 50 Hz, down to 18 dB at 20 Hz.

## HF FILTER SWITCH (Scratch Filter):

Flat or roll-off at 12 dB per octave above, 7,000 Hz, down to 18 dB at 20,000 Hz.

## FRONT PANEL TAPE JACKS:

Allows connection to input and output of a tape recorder from the front panel of the C28. Inserting plugs into their jacks disconnects the TAPE 2 circuits from the rear panel of the C28 and uses the TAPE 2 facilities for the front panel jacks.

## HEADPHONE JACK:

For listening with either low or high impedance stereo headphones. Power to this jack is supplied by an amplifier provided in the C28. Headphone listening can be accomplished without the use of an external power amplifier.

## LOW FREQUENCY TRIM CONTROLS:

Increases the output below 100 Hz up to 6 dB. Use to compensate for unequal speaker response or the unequal influence of room acoustics.

## PHONO 1 AND PHONO 2 LEVEL CONTROLS:

Adjust for variations in the phono cartridge output up to 10 dB. Provides for optimum signal to noise ratio and proper balance of the channels of the phono cartridge.

## HEADPHONE LEVEL CONTROLS:

Adjusts the level and balance of the headphone/line output.

## TRANSISTOR COMPLEMENT:

26 silicon-planar transistors, 4 silicon diodes, 2 silicon bridge rectifiers.

## MECHANICAL INFORMATION

### SIZE:

Front panel measures 16 inches wide (40.65 cm) by 5-7/16 inches high (13.8 cm). Chassis measures 15 inches wide (38.1 cm) by 5 inches high (12.7 cm) by 13 inches deep (33.1 cm) including PANLOC mounting brackets and back panel connectors. Knob clearance required is 1½ inches (3.85 cm) in front of the 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:

25 pounds (11.34 kg) net, 39 pounds (15.88 kg) in shipping carton.

FRANCHISED DEALER

# McIntosh

 Laboratory, Inc.

2 Chambers St., Binghamton, N. Y. 13903

Phone 607 723-3512