

# McIntosh

C 32

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**The most significant  
breakthrough in  
*State of the Art Technology*  
for this decade**



Shown in optional  
walnut veneer cabinet.



# C 32

## MORE THAN A PREAMPLIFIER

The C 32 is the finest expression of stereo engineering and craftsmanship. Direct consumer contact, continued market analysis and aggressive, advanced research established the requirements for flexibility and high performance levels of the C 32. Extensive testing leading to the careful selection of materials and circuit components combined with dedicated craftsmanship maintains the McIntosh reputation for excellence in performance, flexibility, quality and

reliability. The McIntosh extensive planning and research, skilled engineering and careful manufacturing has been recognized internationally.\* But, the C 32 is more than just a high quality stereo preamplifier with a wide range of functions and controls. It has signal processing and musical spectra shaping circuits found only in separate units, with each unit being a separate investment. The C 32 is truly a breakthrough in state of the art technology.

- A McIntosh developed logarithmic expander restores program dynamic range and reduces background noise.
- A five band equalizer gives musical expression control that was never possible with bass and treble controls. From your preamplifier you can now adjust small portions of the frequency spectrum to correct program material imbalance or compensate for some listening room influences.
- A low distortion, wide band monitor amplifier feeds the front panel headphone jacks for private listening and has sufficient power to drive extra loudspeakers.
- The C 32 is a very flexible stereo preamplifier, with complete and separate listen and record control functions. The tape recorder control functions are separate and independent from all listening functions. From one to three tape recorders can be used in any combination of record and listening conditions.



\*dB d'Honneur • "Revue du Son"  
Grand Prix Award • Japan Stereo Components Grand Prix Commission



### **1. 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 printed circuits. Tracking accuracy and quiet performance are permanently maintained. Use does not affect performance as in ordinary volume controls.

### **2. True Loudness Compensation**

In the past, loudness controls have typically used simple passive circuits connected to a portion of the rotation range of the volume control. As a consequence, loudness compensation accuracy was dependent on many variables such as speaker efficiency, amplifier gain and differences in input level. The C 32 loudness control is continuously variable, operates independently of the volume control, and its contour is accurately modeled after the Fletcher Munson family of "Equal Loudness" curves.

### **3. Five Band Program Equalizer**

Five separate controls permit individual musical spectra shaping in two octave segments to satisfy personal preference or program limitations. There is 12 dB plus or minus control at center frequency of the individual segments. The center frequencies are 30, 150, 500, 1500 and 10,000 Hz. The program equalizer and filters can be switched out expanding the frequency response to 10 Hz to 100,000 Hz.

### **4. Low and High Frequency Filters**

The low frequency (LF) filter attenuates the program material at 12 dB per octave below 50 Hz to help eliminate rumble, acoustic feedback and other similar unwanted noises. Above 7000 Hz the high frequency (HF) filter attenuates hiss, scratch and such unwanted noise at 12 dB per octave. The LOUDNESS, PROGRAM EQUALIZER and HF/LF filters all use ion implanted junction field effect operational amplifiers (op amps) which have a 6 dB better signal to noise ratio than the usually used op amps.

### **5. Triple Shielded Power Transformer**

A solid copper band, a silicon steel band and a mild steel outer casing confines the magnetic field of the power transformer to reduce the potential for hum pickup in either the C 32 or associated equipment. This expensive construction assures that you are not limited on how or where to install your equipment. The power transformer feeds a regulated power supply.

### **6. Silent Turn On/Turn Off**

A relay, time controlled by a transistor switch, delays the connecting of the preamplifier output to the output jacks to eliminate turn-on noise, clicks and pops. The same circuit turns the relay off before the main power supply has time to discharge.

### **7. Auto Turn On/Turn Off**

Power to the entire stereo system can be controll-

ed from either the front panel power switch or the turntable's power switch. A current sensing relay connected to the turntable AC power outlets is controlled by the turntable power switch. The relay, in turn, controls the AC power to the remainder of the system.

### **8. Electronic Input Selection**

Both LISTEN and RECORD input selectors control low DC voltages that electronically control Field Effect Analog switches. Because the FET analog switches are located near the input jacks, the length of leads are very much reduced. Noise, switch clicks and pops are eliminated while the potential for hum pickup is substantially reduced.

### **9. Very Low Impedance Phono Preamplifier**

Four specially selected transistors are arranged in a low impedance circuit to reduce noise to the lowest achievable level of any pre amp. The circuit follows the RIAA equalization curve precisely.

### **10. Monitor Amplifier**

A wide band, very low distortion 12 watts per channel power amplifier feeds the front panel Headphone jacks, the 600 ohm line outputs and monitor outputs. You can listen in private to headphones with the main power amplifier turned off, use the Monitor Output to feed remote loudspeakers or in association with audio time delay devices and many other applications.

### **11. Expander**

Recording imposes dynamic range limitations on most program sources, causing unwanted noise or hum to be heard during quiet passages. The McIntosh logarithmic expander restores the dynamic range and reduces the unwanted noise. Controls are provided that adjust the expansion ratio, the attack time and level matching.

### **12. Separate Listen/Record Program Lines**

Record on up to 3 tape recorders from any connected source or copy from one tape recorder to another with complete independence from the program being listened to. The RECORD and LISTEN input selector switches operate without any interaction. The program being recorded can be monitored easily by pushing the appropriate monitor pushbutton.

### **13. Two Turntable Facilities**

With either input selector switch in the PHONO position the front panel pushbutton selects between two turntables. This convenience makes it easy to go from one record to another without interruption. While tape recording it is easy to intermix cuts from different records without any clicks, pops or noise.

### **14. Program Output Switching**

Special rear panel jacks may be connected to two additional power amplifiers to feed program material to remote areas. Front panel pushbuttons will turn the program on or off to the remote amplifiers. Alternately, the pushbuttons can control remote speaker systems when used with an accessory switching relay (the McIntosh SCR 2).



# C 32 PERFORMANCE LIMITS

## THE McIntOSH PROMISE OF PERFORMANCE

We promise you that the C 32 you buy must be capable of performance at or exceeding these limits or you get your money back. McIntosh PERFORMANCE LIMITS are the **maximum departure from perfection** permitted for a McIntosh instrument.

## PERFORMANCE

### FREQUENCY RESPONSE

+0 -0.5 dB 20 Hz to 20,000 Hz  
(with Equalizer Out: +0 -1 dB from 10 Hz to 100,000 Hz)

### DISTORTION

.05% maximum, at rated output level, 20 Hz to 20,000 Hz

### INPUT SENSITIVITY AND IMPEDANCE

PHONO 1 and 2: 2 millivolts at 47,000 ohms 65 pF; AUXILIARY, TUNER, TAPE 1, 2 and 3: 250 millivolts at 50,000 ohms

### HUM AND NOISE

AUXILIARY, TUNER, TAPE 1, 2, and 3: IHFA 100 dB; unweighted - 90 dB. PHONO 1 and 2: IHFA 90 dB; unweighted 80 dB below 10 millivolt input or equivalent to less than 1 microvolt at the input terminals

### OUTPUT LEVEL AND IMPEDANCE

MAIN Output: 2.5 volts with rated input, 220 ohms source impedance, to operate into 5,000 ohms or greater  
TAPE Output: 250 millivolts with rated input to operate into 5,000 ohms or greater

### PROGRAM EQUALIZER

Five, 2 octave frequency bands, each band has 12 dB of boost or cut at 30, 150, 500, 1500 and 10,000 Hz

### LF FILTER

Flat or roll-off at 12 dB per octave below 50 Hz

### HF FILTER

Flat or roll-off at 12 dB per octave above 7000 Hz

### VOLTAGE AMPLIFICATION in Decibels

(at)

Input	Main Output	Tape 1,2,3	Monitor Amp
Auxiliary, Tuner Tape 1, 2, or 3 Phono 1 or 2	20 dB " " 62 dB	0 dB " " 42 dB	20 dB " " 62 dB

### MONITOR AMPLIFIER

MONITOR, HEADPHONE, LINE Output: 12 watts per channel, continuous, into 8 ohms at 0.1% harmonic distortion 20 Hz to 20,000 Hz or 5 volts RMS into 600 ohm line — level controls provided

## FACILITIES AND FEATURES

### INDEPENDENT RECORD/LISTEN INPUT SELECTOR

Totally independent program selectors permitting recording one program source while listening to a second program source without any interference

### MODE SELECTOR

Seven positions - Left channel only to both speakers. Right channel only to both speakers, STEREO REVERSE, STEREO, MONO (L + R), L + R to Left speaker only, and L + R to Right speaker only

### PROGRAM EQUALIZER

Five frequency band program equalizers to modify the signal to suit your taste

### VOLUME

Step attenuator with matched elements for precision tracking at all listening levels. Does not change stereo balance as volume is changed

### MONITOR AMPLIFIER

Very high quality amplifier that provides power to the HEADPHONE JACKS, the LINE OUTPUT and the back panel MONITOR OUTPUT connectors

### HEADPHONE JACKS

For listening with either low or high impedance dynamic stereo headphones. Power to this jack is supplied by an amplifier provided in the C 32. Headphone listening can be accomplished without the use of an external power amplifier

### FRONT PANEL TAPE JACKS

Allows connection to input and output of a tape recorder from the front panel

### EXPANDER

A logarithmic expander that restores the dynamics that were lost to the program material in the broadcast or recording process

### AUTOMATIC SYSTEM TURN ON/OFF

A current sensing relay turns the entire stereo system AC power on or off controlled by the turntable power switch

### LOUDNESS

Flat response or continuously variable loudness compensation accurately following the family of Fletcher Munson "Equal Loudness" curves

## GENERAL INFORMATION

### SEMICONDUCTOR COMPLEMENT

67 Transistors  
35 Integrated Circuits  
62 Diodes  
2 Field Effect Transistors  
1 Silicon Controlled Rectifier (SCR)

### AC POWER OUTLETS

2 Automatic current sensing (green)  
4 Switched (black)

### POWER REQUIREMENTS

120 volts, 50/60 Hz, 25 to 85 watts

## MECHANICAL INFORMATION

### SIZE

Front panel measures 16 inches wide (40.6 cm) by 5-7/16 inches high (13.8 cm). Chassis measures 14-3/4 inches wide (37.5 cm) by 4-13/16 inches high (12.2 cm) by 13 inches deep (33 cm), including PANLOC shelf and back panel connectors. Knob clearance required is 1-1/4 inches (3.2 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

27 pounds (12.2 kg) net 39 pounds (17.7 kg) in shipping carton

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

# McIntosh

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