McIntosh®

MC7300

Power Amplifier

The Mclntosh "Always In Style"

TIMELESS LOOKS
PEAK PERFORMANCE
OPTIMUM DEPENDABILITY
CLASSIC DESIGN

The classic appearance of a Mclntosh amplifier complements any home decorative scheme. Each component is selected for durability, as well as aesthetics.

Consider the construction and materials used in the front panel and knobs. Reverse silk-screened with thermal setting epoxy screen inks, the glass panels are meticulously hand inspected and are free from bubbles, flow marks and other faults. Anodizing, an electro-chemical process that leaves a color dyed and hardened surface impervious to attack from common household cleaning fluids, oils and acids from the skin, is used on the panel frame and aluminum knobs to maximize their resistance to wear.

This handsome combination of glass, anodized aluminum, and thermal setting epoxy inks requires very little maintenance to keep the MC7300 looking brand new. Its subtle yet sophisticated styling will remain in good taste throughout the years.

Rear view

Mclntosh Quality Begins With Careful Design For Cool Operation

An amplifier's life can be cut short without the proper ventilation for cool operation. In fact, as little as one degree centigrade rise in temperature can reduce the life of an amplifier by 10%. Mclntosh has designed its amplifiers to maximize trouble-free cool operation.

Output stages are mounted on super-sized heat sinks that have maximum surface areas of cooling capability. The sinks are placed in an air tunnel chassis that occupies the amplifier space from top to bottom. Cooling air, which flows through the air tunnel, dissipates life-limiting heat. This heat dissipation capability is coupled with a chassis construction that encourages ventilation. A Mclntosh designed and manufactured autotransformer matches the transistor output circuit to the loudspeakers.

The Mclntosh output circuit uses 20 metal cased bipolar epitaxial power transistors and 4 metal cased driver transistors. The output transistors feature high f_T (gain - frequency product) and large SOA (safe operating area). The power transistor characteristics, the power supply voltage used, and the output autoformer ratio have been matched for high efficiency, maximum power output with low distortion, and reliable long life operation.

Versatile Mclntosh Power Amplifiers Deliver Full Power — Always

The Mclntosh output circuit, superior in its performance, demands a superior method of coupling the amplifier output to the loudspeaker load. A Mclntosh designed and manufactured autotransformer ensures peak performance and protection, as well as outstanding compatibility between amplifier and speaker.

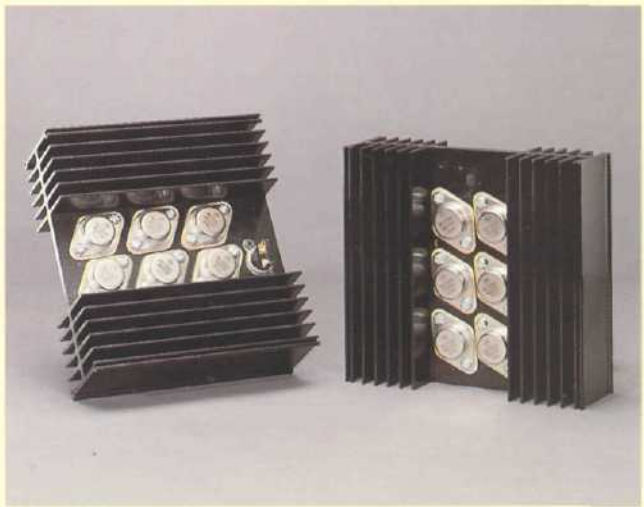
The Mclntosh autotransformer offers these benefits:

- Transistors, used in amplifier output circuits, are designed to work into an optimum low impedance load. Variations in frequency, or the use of multiple speakers (which modify the impedance as seen by the output of the amplifier), often compromise an amplifier's performance. The Mclntosh autotransformer prevents these variables from causing restricted performance, output transistor heating, and/or circuit failure.

- In the event of an output circuit failure, the Mclntosh autotransformer conducts the speaker-damaging DC (direct current) directly to ground, thus protecting expensive loudspeakers from potential damage.

- The Mclntosh autotransformer contributes a flexibility in loudspeaker connecting capability not otherwise possible. Here's how:

  Ordinary amplifier output circuits are usually restricted to operating in 4 or 8 ohms. In stereo, the Mclntosh autotransformer perfectly matches the output circuit to 2. 4, or 8 ohms. In mono the MC7300 autotransformers provide matching into 1, 2, 4, 8 or 16 ohms. In addition, the autotransformer can provide either a 25 volt or a 70.7 volt output that can feed multiple loudspeakers for background music applications.



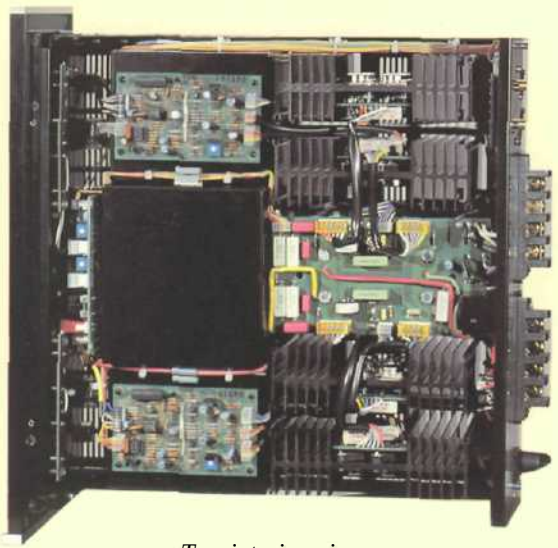
Heat sinks

The Mclntosh autotransformer is, quite simply, an engineering advance that enhances amplifier performance while maintaining technical and performance integrity.

Mclntosh's Exclusive Power Guard™ Music Protection Circuit

Improved recording techniques have imposed higher power demands on today's amplifiers. Other amplifier designs, of which there are many, can present music listeners with unpleasant distortion due to amplifier overload (hard clipping).

Clipping, which looks and acts like non-musical square waves (music produces rounded waves), is caused when the amplifier is required to produce more power output (with low distortion) than it is designed to deliver. Amplifiers, when driven to clipping, can deliver up to 40% harmonic distortion-distortion that significantly decreases listening enjoyment, and increases listening fatigue. A clipped



Top interior view

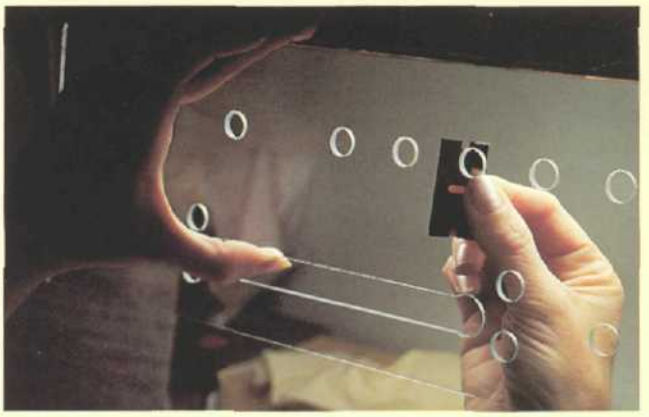
signal also produces extra distortion energy, which can damage speakers.

Mclntosh precision engineering has developed the Power Guard circuit* to prevent amplifiers from being overdriven into hard clipping; ensure that the amplifier produces its maximum output without increased distortion; and protect the speaker from excessive heating.

*(*Power Guard is a patented Mclntosh design, U.S. patent #4048573)*

Compact discs have a higher 'dynamic range' over records and audio cassettes. Most compact discs claim a dynamic range in excess of 90 decibels. In numerical ratio this is greater than 1000 times the ratio of popular commercial analog records.

For equipment to be digital ready it must handle overdrive without breaking up or grossly distorting the sound. Virtually all power amplifiers today are incapable of accepting 10 decibels of overdrive without gross distortion. Some amplifiers totally collapse under this punishment. Mclntosh has devised a test which shows an amplifier's spectral fidelity under stress -- one of the most important characteristics of an amplifier.



Every detail of the complicated panel is inspected and re-inspected.

The harmonic distortion and two-tone intermodulation measurements are important criteria in predicting the sonic performance. However, to obtain better correlation with human hearing response, we need to know not only the energy in the distortion spectrum, but also the number of discords and their frequency spacing from the desired tones. Spectral fidelity testing enlarges the scope of data and more fully clarifies its meaning.

It is no accident, then that a Mclntosh amplifier is a smart investment, one that will fill your home with years of audio excitement:

- It is more reliable than other amplifiers
- It has a longer, trouble-free life than other amplifiers
- It sounds better than other amplifiers
- Its resale value is the highest of all amplifiers

Mclntosh Patented Power Meters

In the past, ordinary power meters have been incapable of indicating the short interval information in a soundwave, which can have a duration of one-half of one thousandth of a second. And even if a meter were capable of such high velocity movement, the human eye would be unable to perceive the information.

Mclntosh engineering solved the dilemma by developing an electronic circuit that power meters can respond to with an accuracy of 98%. These circuits are time-stretched, which allows the meter pointer position to register in such a way that the human eye can register its high-speed motion.

The patented peak-reading, peak-locking meter circuit included in the MC7500 is yet another Mclntosh electronic design feature that maximizes your audio pleasure. . .and makes the MC73OO a sound investment.

If good enough will do, there are dozens of brands to choose from.

But if the best is what you need, there is only one to consider:

The Mclntosh MC73OO.

Performance Guarantee

Performance Limits are the maximum deviation from perfection permitted for a Mclntosh instrument. We promise you that when you purchase a new MC 7300 from a Mclntosh franchised dealer, it will be capable of or can be made capable of performance at or exceeding these limits or you can return the unit and get your money back. Mclntosh is the only manufacturer that makes this statement.

Performance

Mclntosh audio power ratings are in accordance with the Federal Trade Commission Regulation of November 4, 1974 concerning power output claims for amplifiers used in home entertainment products.

Power Output

Stereo
300 watts minimum sine wave continuous average power output, per channel, both channels operating into 2 ohms, 4 ohms, or 8 ohms load impedance, which is:
24.5 volts RMS across 2 ohms
34.6 volts RMS across 4 ohms
49.0 volts RMS across 8 ohms

Mono
6OO watts minimum sine wave continuous average power output into 4 ohms, 8 ohms, or 16 ohms load impedance, which is:
24.5 volts RMS across 1 ohm
34.6 volts RMS across 2 ohms
49.0 volts RMS across 4 ohms
69.3 volts RMS across 8 ohms
98.0 volts RMS across 16 ohms

Output Load Impedance

Stereo
2 ohms, 4 ohms, and 8 ohms; separate terminals are provided for each output.

Mono
16, 8, 4, 2 or 1 ohms by connecting to proper output terminals.

Rated Power Band

20Hz to 20,000Hz

Total Harmonic Distortion

Stereo
0.005% maximum harmonic distortion at any power level from 250 milliwatts to 300 watts per channel from 20 Hz to 20,000 Hz, both channels operating.

Mono
0.005% maximum harmonic distortion at any power level from 250 milliwatts to 600 watts from 20Hz to 20,000Mz.

Franchised Dealer:

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Intermodulation Distortion

0.005% maximum if instantaneous peak power output does not exceed twice the output rating for any combination of frequencies from 20Hz to 20,000Hz.

Frequency Response (at one watt output)

20Hz to 20,000Hz +0 -0.25dB
lOHz to 100,000Hz +0 -3dB

[Noise and Hum (A-Weighted)

105dB below rated output.

Ratings

IHF Dynamic Headroom

1.9dB

Damping Factor

Greater than 40

Input Impedance

20,000 ohms Unbalanced
40,000 ohms Balanced

Input Sensitivity

Switchable for either 1.4 or 2.5 volts

Power Guard

Clipping is prevented and THD does not exceed 2% with up to 14dB overdrive at 1kHz

General Information

Power Requirements

120 volts, 50/60Hz, 0.6 to 13 amperes

Mechanical Information

Size
16 3/16 inches wide (41.1 cm) by 7 1/8 inches high (18.1 cm) by 15 9/16 inches deep (4O.O cm), including connectors. Knob clearance required is 1 inch {2.54 cm) in front of mounting panel.

Finish
The front panel is a combination of glass and black anodized aluminum. The chassis is black.

Weight
79 pounds (35.8 kg) net, 97 pounds (44 kg) in shippingcarton.

The continuous improvement **of** its **products is the** policy of Mclntosh **Laboratory Incorporated who reserve** the right to **improve design** without notice.

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