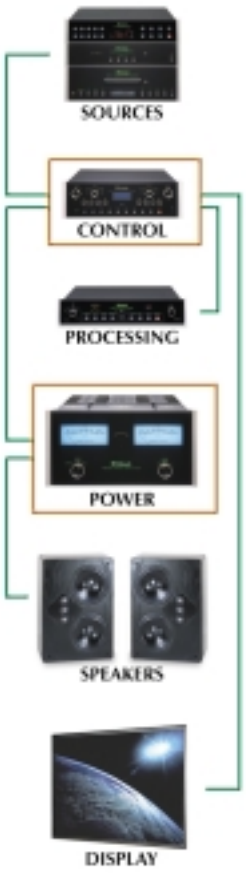
McIntosh®

THE GREAT AMERICAN POWERHOUSE

FIFTY-YEAR 50 ANNIVERSARY

MA6850/MA6800 Integrated Amplifiers



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

MA6850/MA6800

Integrated Amplifiers

MA6850

Those considering a McIntosh system for the first time will find integrated amplifiers a comfortable place to start. In virtually every respect the MA6850 and MA6800 perform as well as McIntosh separates. Both models incorporate premium McIntosh technologies – including autoformers, Power Assurance, and Silent Electromagnetic Switching – as well as several features that facilitate system integration and expansion.

Featured Technologies

EXCLUSIVE MCINTOSH OUTPUT AUTOFORMERS. An impedance mismatch between a power amplifier and a loudspeaker can cause distortion and a reduction in power. The legendary McIntosh autoformer is a hand-crafted transformer with output connections for 2, 4, and 8 ohms, allowing an ideal impedance match between amp and speaker. A McIntosh amplifier with an autoformer can also safely drive multiple speakers connected in parallel without shortening the life of the output stage. There is absolutely no performance penalty with an autoformer. In fact, its frequency response *exceeds* that of the output circuit itself, and extends well beyond the audible range. Distortion is so low it is virtually immeasurable.

EXCLUSIVE MCINTOSH POWER ASSURANCE SYSTEM. Power Assurance is a collection of technologies that enhance performance and reliability and protect the amp and the loudspeakers.

Power Guard® clipping protection. Power Guard ensures that the amplifier will always deliver full power without causing clipping distortion. If an amplifier channel is overdriven, Power Guard automatically reduces the input volume just enough to keep distortion below 2% and prevent any clipping distortion. Thanks to an optical resistor, Power Guard acts literally at the speed of light, producing absolutely no audible side effects. An amplifier with Power Guard will actually deliver clipping-free output well above its rated power.

Sentry Monitor® current protection. Sentry Monitor continually senses the voltage and current of the output stage and confines it to a safe limit. Sentry Monitor does not limit power output.

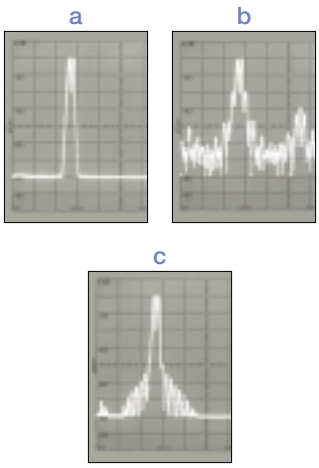
Thermal Cutout. If the cooling air is blocked and the power transistors become too hot, thermal cutouts protect against overheating until the amp cools.

DC Failure protection. In the rare event of an output circuit failure, any DC current that appears in the output is shunted to ground by the autoformer, protecting the loudspeakers from damage.

Turn-On Delay. This circuit delays operation for about two seconds after turn-on in order to avoid any pops or thumps generated as other equipment turns on.

Soft Start inrush protection. Thermistors in the power transformer act as a cushion against inrush current, eliminating component stress during turn-on. Soft Start is one of many design details that contribute to the remarkable longevity of McIntosh equipment.

ILLUMINATED PEAK-RESPONDING METERS. McIntosh meters respond 95% full scale to a single-cycle tone burst at 2kHz. Response is almost 10-times faster than a professional VU meter.



The patented McIntosh Power Guard provides real-time clipping protection without affecting power output or sound quality.

a) test signal

b) overdriven amp without Power Guard produces SEVERE clipping

c) overdriven amp with Power Guard produces NO clipping

About the MA6850/MA6800 Companion Products

The McIntosh products shown at right are logical companions for the MA6850/MA6800. Separate literature is available. Check with your McIntosh dealer for any late additions. McIntosh speaker systems are also covered in detail in separate literature.

MR7084 AM/FM Tuner. A natural companion for integrated amplifiers, the MR7084 tuner is a thoroughly engineered broadcast monitor that reveals the upper limits of AM and FM performance.

MVS3 A/V Selector. The MVS3 connects to the VIDEO data output of the MA6850/MA6800 and accommodates five additional A/V sources.

RCT3 Remote Translator. The Translator allows non-McIntosh components to be operated with a McIntosh handheld remote or keypad. It connects to the data outputs on the MA6850/MA6800.

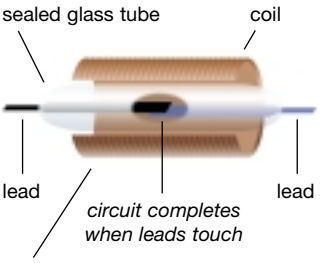
PC4 AC Power Controller. The PC4 provides five AC outlets (four switched) for turning non-McIntosh components on and off automatically when it is connected to the power control output of a Control Center or Integrated Amplifier.

HC1 Home Controller. The HC1 connects to the HOME data output and allows operation of other devices such as lights and movie screens via a McIntosh handheld remote or keypad controller.

SCR3 Speaker Relay *(not pictured)*. This connects to the main output of the MA6850/MA6800 to provide switching for two pairs of speakers. It also includes two switched AC outlets.

WK2 Keypad Controller or R649 IR Sensor. With switching for two pairs of speakers (using the SCR3), the MA6850/MA6800 can feed music to a second zone, with operation via keypad or sensor.

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



MR7084 AM/FM TUNER

MVS3 A/V SELECTOR

RCT3 REMOTE TRANSLATOR

PC4 AC POWER CONTROLLER

HC1 HOME CONTROLLER

WK2 KEYPAD CONTROLLER

R649 IR SENSOR

Featured Technologies (cont'd.)

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.

PRECISION-TRIMMED VOLUME CONTROL. Level differences among channels in a stereo or surround system compromise sound imaging. The left and right sections of McIntosh volume controls are electronically trimmed for superior tracking.

ACTIVE VARIABLE LOUDNESS COMPENSATION. Typical loudness circuits apply a fixed amount of compensation for listening at low volume. The MA6850 and MA6800 each have a *separate* loudness control that applies compensation proportionately. When off, the loudness circuit elements are *completely* removed from the signal path.

EXCLUSIVE MCINTOSH TONE CONTROLS. These offer ±12dB adjustments with fine resolution, yet in the "flat" position are *completely* removed from the signal path.

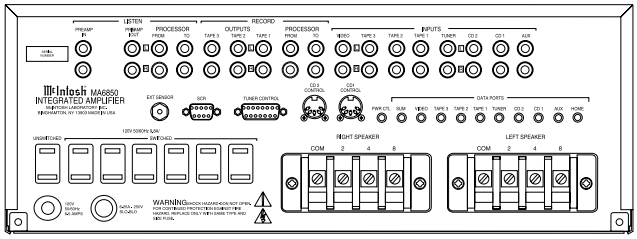
CONTROL DATA OUTPUTS. To facilitate system integration, the MA6850 and MA6800 output control data for source components. This allows remote operation of non-McIntosh components either by direct connection to compatible data inputs or via a McIntosh Remote Translator.

REMOTE POWER CONTROL. This enables the MA6850/MA6800 to turn other McIntosh system components on/off.

MA6850/MA6800 Integrated Amplifiers

MA6850

MA6800



MA6850 rear panel

FEATURES

2 x 150 watts (8/4/2 ohms)
Exclusive McIntosh output autoformers
Wide power bandwidth with ultra-low distortion
Exclusive McIntosh Power Assurance System:
- Power Guard® clipping protection
- Sentry Monitor® current protection
- Thermal Cutout
- DC Failure protection
- Turn-On Delay
- Soft Start inrush protection

Illuminated peak-responding meters
Silent electromagnetic switching
Precision-trimmed volume control with digital readout
Active Variable Loudness Compensation
Exclusive McIntosh tone controls
8 source selections (phono input on MA6800 only)
Switching for 2 pairs of speakers (with optional SCR3 Speaker Relay)
Independent listen and record selection
Dual processor loops
Accommodates more sources with McIntosh MVS3 A/V Selector
Control data output for source components
Remote power control
Remote operation of lights, screens, and drapes with McIntosh HC1 Home Controller
Power and mute indications shown on multizone keypads and sensors
Electronically regulated power supply with double-shielded transformer
Gold-plated input and output jacks
Fanless convection cooling
Modular construction with steel chassis
Glass front panel with illuminated nomenclature
Infrared remote control
Connector for external IR sensor or keypad controller
Headphone jack (MA6800 only)

SPECIFICATIONS

RMS Power Output (8/4/2 ohms)
150W min. sine wave continuous average power output per channel from 20Hz to 20kHz with both channels operating

Output Load Impedance
2, 4, or 8 ohms

Rated Power Band
20Hz to 20kHz

Peak Output Current
> 50 amperes

Total Harmonic Distortion
0.005% max. at any level from 250 milliwatts to rated power per channel from 20Hz to 20kHz with all channels operating

Intermodulation Distortion
0.005% max. if instantaneous peak power output does not exceed twice the rated output

Dynamic Headroom
2.4dB

Frequency Response
20Hz to 20kHz, +0 / -0.5dB

Input Sensitivity
High level: 250mV for rated output (1.4V at Main out)
Phono (MA6800 only): 2.5mV for 2.5V rated output (0.5mV IHF)
Main in: 1.4V for rated output

Maximum Input Signal
High level: 10V
Phono (MA6800 only): 90mV

S/N Ratio (A-Weighted)
Power amp: 110dB below rated output
High level: 100dB below rated output
Phono (MA6800 only): 90dB below 10mV input (84dB)

Damping Factor
> 40

Input Impedance
High level: 22k ohms
Phono: 47k ohms, 65pf
Main in: 20k ohms

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

Tone Controls
Bass and treble: ±12dB

Power Requirements
120V 50/60Hz, 6.5A

Dimensions (h x w x d)
inch: 7.062 x 17.5 x 20
cm: 17.9 x 44.5 x 50.8
knob clearance: 1.125" (2.9 cm)

Weight
70 lbs. (31.8kg) net
89 lbs. (40.4kg) shipping

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