

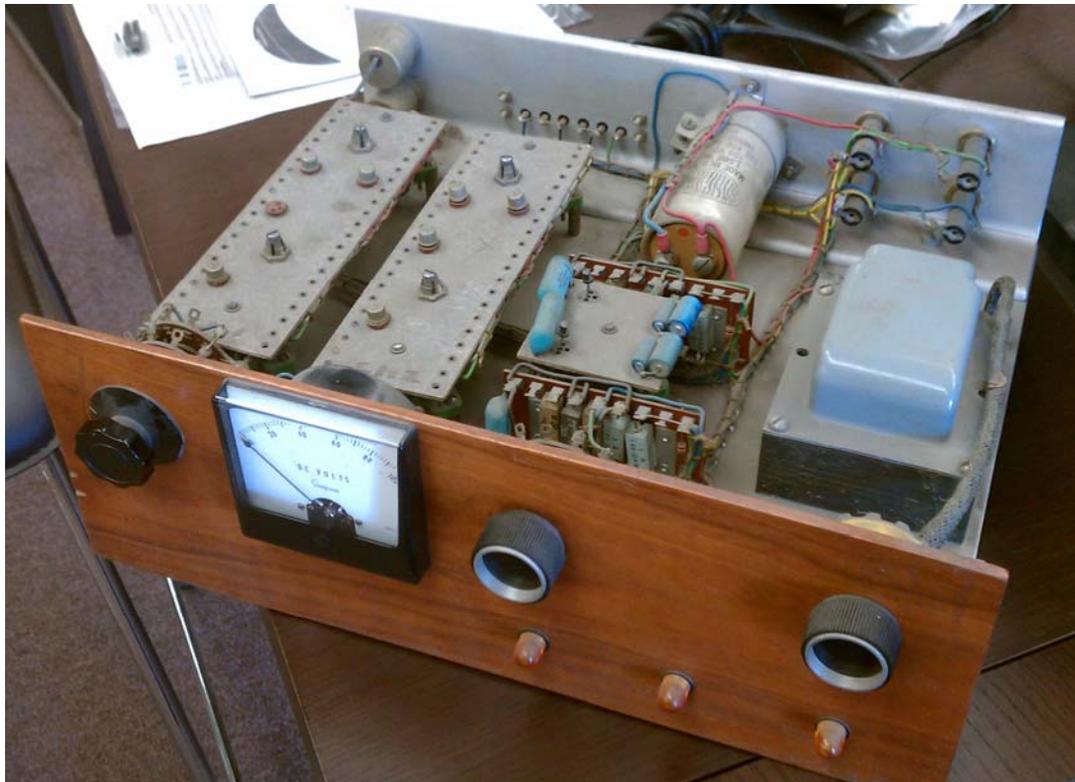
This is the story of a man, Morris Kessler, the companies he built and the audio components he offers.



In 1959, at the age of 15, Morris was hired for part-time work at the Hi-Fi Corner in Los Angeles. His first job was packaging LP records. With an active interest in electronics, Kessler was soon selling and repairing audio components and driving visiting audio executives around town. His customers included such luminaries as Ray Charles and he became friends with noted speaker designer Paul Klipsch.



Kessler designed his first solid-state amplifier in 1962. Foreshadowing his later work, the amplifier channels were built on plug-in modules. In this case, they plugged into the sockets that were normally used by vacuum tubes.



By 1967, Morris had raised his sights. He and a partner started SAE (Scientific Audio Electronics) in his apartment in Los Angeles to market an amplifier he designed.

By all descriptions, the best amplifier in the world then was the Marantz Model 9, a monophonic tube amplifier rated at 70 watts. It became Kessler's target. When his first commercial product, the 60 watt SAE Mark 2 solid state amplifier was praised by J. Gordon Holt in *Stereophile* as a legitimate Model 9 rival, SAE sales took off.



The Marantz 9



The SAE Mark 2



**from the Sublime . . .**

comes a sweeping line of high end components covering the extremes of audio excellence. Rugged, Daring, Distastakably majestic.

Beginning with the basic system — a 3200 FM Digital Tuner with LED signal-strength and center-tuning indicators for accurate, crystal clear FM reception; a 3000 Preamp, with 3-way tone controls and tape EQ which allows you to equalize both record and playback; and a 3100, 50 watt\* per channel Stereo Power Amplifier with fully complementary design for 80-ohm sound — mounted in our sturdy, professional R-1 equipment rack all for a suggested price of \$1300.†

**to the Ridiculous**

which some people would say is extreme. But to the true audiophile it is the ultimate answer. Bold, Sophisticated, Sonically elite.

This super system features an 8000 FM Digital Tuner with steep quieting and phase lock loop for low distortion; a 2100L Preamp with LED level display and a two stage phono circuit; a 2800 Parametric Equalizer, developed in the recording studio to provide the maximum flexibility obtainable in tone control systems; a 5000 Impulse Noise Reduction System which dramatically reduces the effects of record scratches; a 2200, 100 watt\* per channel fully complementary Stereo Power Amplifier; a 4000 Electronic Crossover to make even the best speakers sound better; a 2600, 400 watt\* per channel super high power amplifier; a 4100 Time Delay Ambience System for the recreation of a live environment; and a 2400L, 200 watt\* per channel fully complementary Stereo Power Amplifier pictured in the professional's choice, our 60 inch C-10 equipment rack all for a suggested price of \$6250.00†.

The extremes of audio excellence—and everything in between— from SAE.

For more information about the sublime to the ridiculous, write:

**SAE**  
Scientific Audio Electronics, Inc.  
201 2nd Street, Los Angeles, California 90012

\*Maximum RMS output per channel into 8 ohm load at 1 kHz.  
†MSRP. Excludes shipping and handling charges.  
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Among other firsts, Kessler's SAE company introduced the world's first graphic equalizer, the first digital read-out tuner and the first phonograph pop-and-click filter.

As a pioneer in the new world of high-end audio, this ad illustrated SAE's prowess. The SAE equipment in the rack at the right had a retail price of \$6,000.

That same year, a new Cadillac top-of-the line automobile also sold for \$6,000.



**AMERICAN MUSCLE**  
Designed, Engineered and Assembled in the USA

In 1988, Kessler sold SAE to Giorgio Moroder who was best known as Donna Summer's record producer and retired from audio to buy and sell Ferrari's.

After one year, Moroder, who did not have Kessler's passion for audio components, closed the company.

Ultimately Morris repurchased the rights to the SAE brand name but there are no current products produced with that brand.



A business slowdown in the early 1990's damped Kessler's interest in the automobile business and he designed a stereo amplifier entirely on a Mac computer, took the amplifier to CES and ATI was born. At a later show, George Feldstein, president of Crestron, took notice. He told Morris Crestron was interested in a 16 channel amplifier that could deliver 60 watts RMS per channel into 8 ohms and 90 watts per channel at 4 ohms. No such amplifier existed.

90 days later Kessler's prototype for what was to become the Crestron CNAMPX was complete and ATI had a new OEM customer.



*The Crestron CNAMPX 16x60 amp pictured here was a huge commercial success. To date, ATI has built over 35,000.*



It is interesting to read Crestron's description of their Morris Kessler designed amplifier as it highlights a typical ATI designed and built amplifier. It reads:

"The CNAMPX-16X60 delivers a robust 60 watts per channel into 8 ohms, and 90 watts per channel into 4 ohms...Its massive twin toroidal power transformers feature MOH cores for maximum efficiency, with bifilar windings directing pure, continuous power to each of the eight stereo amplifier modules. Each module includes its own power supply fed by a separate set of transformer windings, producing astounding dynamic range and very low distortion in every room, all the time.

The highest grade components mounted to multi-layer FR-4 glass epoxy circuit boards help guaranty a long life of trouble free operation. With more than 300 square inches of heat sink surface area per stereo module, cool, quiet, and reliable operation is ensured. Gentle power-up is achieved through a "soft-start" inrush current limiting circuit. Quick-response opto-coupled output protection on each channel prevents failures caused by speaker line faults or signal spikes, providing exceptional dependability with no compromise to sound quality. In the unlikely case of a failure, Crestron's Detachable Modular Component design allows for rapid repair in the field."

We will return to these concepts repeatedly as we explore ATI's design philosophy.



ATI's initial offerings, the AT1502, AT1504 and AT1506 were competitive 150 watt per channel (8 ohm) 2, 4 and 6 channel amplifiers that enjoyed good commercial success.

Crestron was not ATI's only OEM customer. The best of America's high-end beat a path to Kessler's door.

In response to one request, Morris designed the world's first high powered 5-channel amplifier. In response to another he designed the first high-powered 7-channel amp.



*The world's first  
high-powered 5-  
channel amplifier.  
Designed by  
Morris Kessler.*



In the nearly 50 years Morris Kessler has been designing and manufacturing audio components, his skills and abilities have made him the “go-to” amplifier guy for many of North America’s strongest brands. Here is a partial list of the brands that have used Morris and his companies to design and/or manufacture their amplifiers:

Clair Brothers, Hervic, Dynaco, Aragon, Adcom, Integra Research, Crestron, Outlaw Audio, Theta Digital, BGW, B&K and a number of other brands too sensitive to mention.

Overall, including branded and OEM, Kessler’s companies have manufactured over one-half million amplifiers—all of them in Southern California, USA.



## ATI's Design Philosophy

- Audio quality is our first priority.
- Output circuitry is full complementary (for every NPN transistor there is a corresponding PNP) *AT602, AT1202 AT1800 series* or Pure Balance™ (each channel is actually two amplifiers; one for the positive half cycle and the second for the negative) *AT2000 and AT3000 series*.
- Signal-to-noise ratio is exemplary. S/N in at ATI amp is typically rated at 120 dB referenced to full-rated output. As a consequence, ATI amplifiers have a reputation for being dead silent. It is said that even with your ear pressed against the speaker and the system set for full volume, most users cannot hear any hiss when using an ATI amp.
- THD plus noise is extremely low. A typical ATI amplifier has less than 0.03% THD at full output.
- There is no current limiting in any ATI amplifier.
- Power at 4 ohms is at least 50% greater than at 8 ohms.



## ATI's Design Philosophy (continued)

- Nothing intrudes on circuit purity.
- The protection circuitry is optically coupled and looks for amplifier faults from outside the audio path. If it finds any, the affected channel is immediately disconnected and the fault is monitored every 10 seconds. When the fault is cleared, normal operation is restored automatically.
- Even the Softstart module which allows gradual turn-on to minimize any electrical disruption from the in-rush current is removed from the active audio path once the amplifier is fully on.
- Each amplifier is made up from modules that include all active circuitry and the power supply for a single channel. The module, with its own heat sink, is pre-built and pre-tested. In the unlikely event of a failure, the module can be removed and replaced.
- To insure long life, all ATI amplifiers are built from heavy gauge steel with all connectors mounted directly to the chassis.

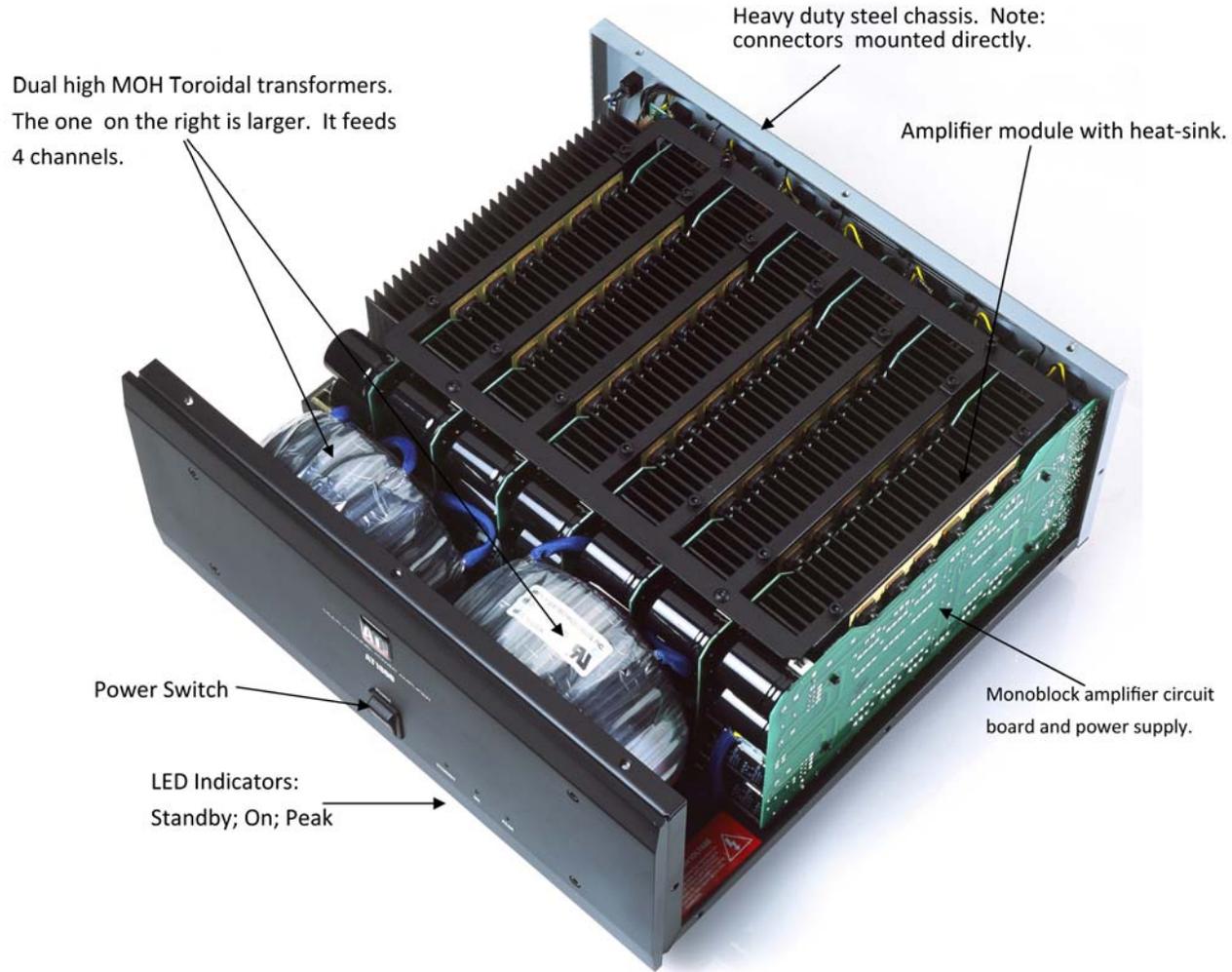


## **ATI's Design Philosophy (continued)**

- There is virtually no point-to-point wiring in an ATI amplifier.
- We use only high MOH toroidal transformers in all units. These are either wound in-house or a manufactured to our specifications. While each transformer has a single primary winding, we use multiple secondary windings so effectively each amplifier module is fed by a single transformer.
- We use only multi-layer gold-plated FR-4 glass epoxy circuit boards. The boards are stuffed, wave soldered and inspected in-house to help assure proper operation and a long trouble free life. As proof, we offer a 7-year warranty on ATI amplifiers.
- After assembly, proper operation of each amplifier is verified using our Audio Precision test equipment.



# Anatomy of an ATI Amplifier



*Note the virtual absence of point-to-point wiring.*



## The ATI Product Line-up

**AT3000 series** Pure Balanced™ amplifiers available with 2 to 7 channels. Each channel is rated at 300W RMS from 20 Hz to 20 kHz with no more than 0.03% THD at 8 ohms with 450W RMS available under the same conditions at 4 ohms. S/N is better than 123 dB.

**AT2000 series** Pure Balanced™ amplifiers available with 2 to 7 channels. Each channel is rated at 200W RMS from 20 Hz to 20 kHz with no more than 0.03% THD at 8 ohms with 300W RMS available under the same conditions at 4 ohms. S/N is better than 123 dB.

**AT1800 series** Full Complementary amplifiers available with 2 to 7 channels. Each channel is rated at 180W RMS from 20 Hz to 20 kHz with no more than 0.03% THD at 8 ohms with 270W RMS available under the same conditions at 4 ohms. S/N is better than 120 dB.



## The ATI Product Line-up

**AT6012** Full Complementary multi-zone amplifier available with 12 channels. Each channel is rated at 60W RMS from 20 Hz to 20 kHz with no more than 0.03% THD at 8 ohms with 90W RMS available under the same conditions at 4 ohms. S/N is better than 120 dB. Has 6 motorized stereo volume controls on-board.

**AT1202** Full Complementary 2-channel amplifier rated at 120W RMS from 20 Hz to 20 kHz with no more than 0.03% THD at 8 ohms with 180W RMS available under the same conditions at 4 ohms. S/N is better than 120 dB. Includes rear-panel level controls and built-in clip limiter.

**AT602** Full Complementary 2-channel amplifier rated at 60W RMS from 20 Hz to 20 kHz with no more than 0.03% THD at 8 ohms with 90W RMS available under the same conditions at 4 ohms. S/N is better than 120 dB. Includes rear-panel level controls and built-in clip limiter.



## New for 2013

Morris has designed a new topology utilizing current feedback instead of the more commonly used voltage feedback. It makes an amplifier that is faster with wider bandwidth and lower distortion than any amp he has designed before. Most remarkably, the signal to noise ratio for the new AT6007 exceeds 128 dB. That is his signature on the front panel.

The AT6007 rated at 300W RMS x 7 into 8 ohms with 450W RMS at 4 ohms under the same conditions will be available in the second quarter of 2013.

