

TAD

TAD

TECHNICAL AUDIO DEVICES LABORATORIES, INC.

TAD LABS
2265 E. 220th Street
Long Beach, CA 90810
800.745.3271

For more information, visit www.tad-labs.com or email info@tad-labs.com.

Note: Specifications, design and screenshots subject to modification without notice.

Copyright © 2009 TECHNICAL AUDIO DEVICES LABORATORIES, INC. All rights reserved. Printed in USA.



MONAURAL POWER AMPLIFIER

M600

TZM001

Our Goal: Providing Music in Its Purest Form



MONAURAL POWER AMPLIFIER
M600

TAD's philosophy has remained unchanged for over 30 years: deliver sound that conveys the full range of emotions without alteration. This philosophy has driven us to develop technology for reproducing music in its purest form.

Over the past three decades our technology has advanced the ultimate limits of quality sound reproduction, to achieve the finest in performance.

The result is the 600W/4 ohm total balance M600 Monaural Power Amplifier, transforming the ideal into reality and offering the guaranteed quality and uncompromised design that only TAD can provide.



Duallogic-Circuit Technology

A fully symmetrical design that provides the perfect speaker drive

The basic concept of the TAD M600 is the realization of total symmetry and the fusion of technologies into one perfect form to achieve the ultimate in sound reproduction. The BTL (Bridged transformer-less) design is created with total symmetry. Every aspect has been examined and optimized: The twin power transformers, the parallel positioned electrolytic capacitors, and the layout of the components on the circuit board. All are designed to be symmetric with regard to influences such as temperature change, magnetic fields and vibration.

Testing and research bring audio theory into reality thanks to TAD's superior design and technology.

Vibration damping Technology

With heavy cast-iron monocoque construction, all elements of the design and structure eliminate vibration

The M600 employs a 35kg graphite cast-iron monocoque construction to reduce the effects of vibration to the absolute minimum. Compared to regular cast-iron, inner loss is increased making it extremely effective at vibration damping and resonance control. The 18mm (0.7 in.) thick aluminum front panel, the low center of gravity brought about by the adjustable spikes extending downwards from the wide-stance chassis and the aluminum plating in the spaces between the chassis and the components (such as the power transformers and capacitors) all act together to minimize the influence of any vibration. The independent chimney-style heat sink completes this total defense against vibration.

One Step Amplification and Simple Circuitry

Voltage amplification in just one stage, a shortened signal path and the elimination of the output choke contribute to the simple circuitry.

For an amplifier to transmit the input signal with complete accuracy to the speakers the circuit should be as simple as possible. To this end the M600 is designed to achieve its voltage amplification in just one stage. Combined with current feedback, the amplification stage achieves extremely stable performance. This makes it possible to simplify the phase compensation circuit and eliminate the output choke. Additionally situating the circuit board directly in front of the rear panel allows the shortest possible signal path from input to output. With the large heat-sink separating the circuit board from the power circuitry, interference from magnetic and electric fields is minimized.

High Quality Custom-Designed Parts

Both the power transformers and the printed circuit boards are created from custom-designed parts.

In order to bring the ideal into reality in design and construction the M600 relies on parts of only the highest quality. PPE (Polyphenyl Ether), commonly used in communication satellites, is combined with 135um thick oxygen-free copper foil to create our unique circuit boards. Permittivity is reduced, the capacitance of the pattern is as small as possible and signal transmission losses up to the very high frequencies are minimized. The core of the 10kg (22 lb) transformer is wound with insulating sheets and 2.6mm diameter heavy copper wire to form our exclusive independent winding power transformer. With a power supply using four custom built 33,000uF capacitors, every circuit detail has been studied and optimized to ensure the highest quality.



33,000uF capacitors



Graphite cast-iron monocoque chassis



Independent chimney-type heat sink

Total Common Impedance Ground Technology

C2I Ground Technology : eliminating potential difference to provide speakers with ideal power.

The greatest benefit of balanced circuitry is that virtually no electric current flows through the ground. The self-contained heat sink shields the circuitry from the large signals that powers the speakers, thus preventing any potential difference. The balanced amplifier's ground potential is thereby completely isolated.

Handmade by Master Craftsmen

Hand assembled by skilled audio craftsmen in a special workshop. Total precision is maintained in everything from parts quality control to assembly.

In order to ensure the absolute maximum product quality the M600 is the beneficiary of total precision at every point in its construction process. The utmost care is exercised in maintaining the quality of every part. One example is the extremely high level of technology that is utilized for the cutting of the ventilation ducts in the aluminum top panel. To achieve the absolute quality demanded by TAD products all components are developed in a custom workshop and hand assembled by veteran engineers worthy of being called audio craftsmen. This meticulous assembly process uses torque-regulated screws to prevent any distortion in the casing, resulting in a product that truly can be considered a masterpiece.



Precision-cut aluminum panel heat ducts

TAD-M600 Specifications

Power output	600W (20Hz to 20kHz, THD 0.2%, 4Ω) 300W (20Hz to 20kHz, THD 0.2%, 8Ω)
Frequency response	1Hz to 100kHz, +/-1dB
Rated distortion	Less than 0.03% (20Hz to 20kHz, 300W, 4Ω)
Gain	29.5dB (Input sensitivity 1.5V)
Input terminal	XLR/220kΩ x 1
Output terminals	Custom large screw terminal x 2 pair (bi-wire connection available)
Dimensions (with spike bases)	516mm (W) x 307mm (H) x 622mm (D) (20-5/16 in. (W) x 12-1/16 in. (H) x 24-1/2 in. (D))
Weight	90kg (198.4 lb)



Rear panel