

Dual-Logic Circuit Technology

**A fully symmetrical design provides
the flawless speaker-driving capability.**

The basic design concept of the TAD M700 and M700S is to realize end-to-end symmetry, unifying our wealth of proprietary technologies into a coherent form to achieve the ultimate in sound reproduction. First, we have chosen the BTL (bridged transformerless) configuration as a basis for achieving total symmetry. Second, we have meticulously examined and optimized every aspect of amplifier design—from input through to output, which led to the fully symmetrical design, right down to the circuit topology and PC boards, including the twin power transformers and the parallel-positioned electrolytic capacitors. All these elements are designed to be symmetric with regard to influences of temperature changes, magnetic fields, and subtle vibration inside the case.



TAD

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TAD

Reference Series



POWER AMPLIFIER
M700/M700S



Bringing Reproduction of Music in Its Purest Form to a New Height

TAD's philosophy has remained unchanged for over 40 years, and that is to deliver sound that conveys the full range of emotions without alteration. This philosophy has driven us to develop technology for the reproduction of music in its purest form. Over the past four decades, we have advanced the ultimate limits of quality audio reproduction to achieve the finest in performance. And now, our efforts have culminated in the fully balanced M700 monaural power amplifier with an output of 700 watts at 4 ohms and the M700S two-channel power amplifier. These two amplifiers have converted into reality the ideal attributes in providing flawless speaker-driving capability, symbolizing uncompromised design and quality that only TAD can provide.

We conduct testing and research to turn audio theory into reality.

Our hard-earned technology advances TAD's design and quality to the next level.

Elaborate Vibration-Suppressing Technology

The newly designed cast-aluminum chassis suppresses even the slightest vibrations.

The M700 and M700S employ a newly designed cast-aluminum chassis that boasts a high internal loss factor for vibration, eliminating inherent sympathetic vibration at unwanted frequencies. Components are laid out optimally inside the chassis to stubbornly resist vibrations induced by sound pressure from a speaker system. The low-impedance aluminum chassis demonstrates high electric stability. Moreover, these amplifiers are supported by four height-adjustable spike feet, each having a single point of contact with the surface on which it stands. This ingenious design keeps vibration transmitted through the floor from affecting the components inside the case and keeps delicate audio signals from being masked by vibration-induced distortion. The result is more condensed and energetic audio reproduction and yet with spatial nuance of the music retained intact.



Cast-aluminum monocoque chassis

Lower Center of Gravity

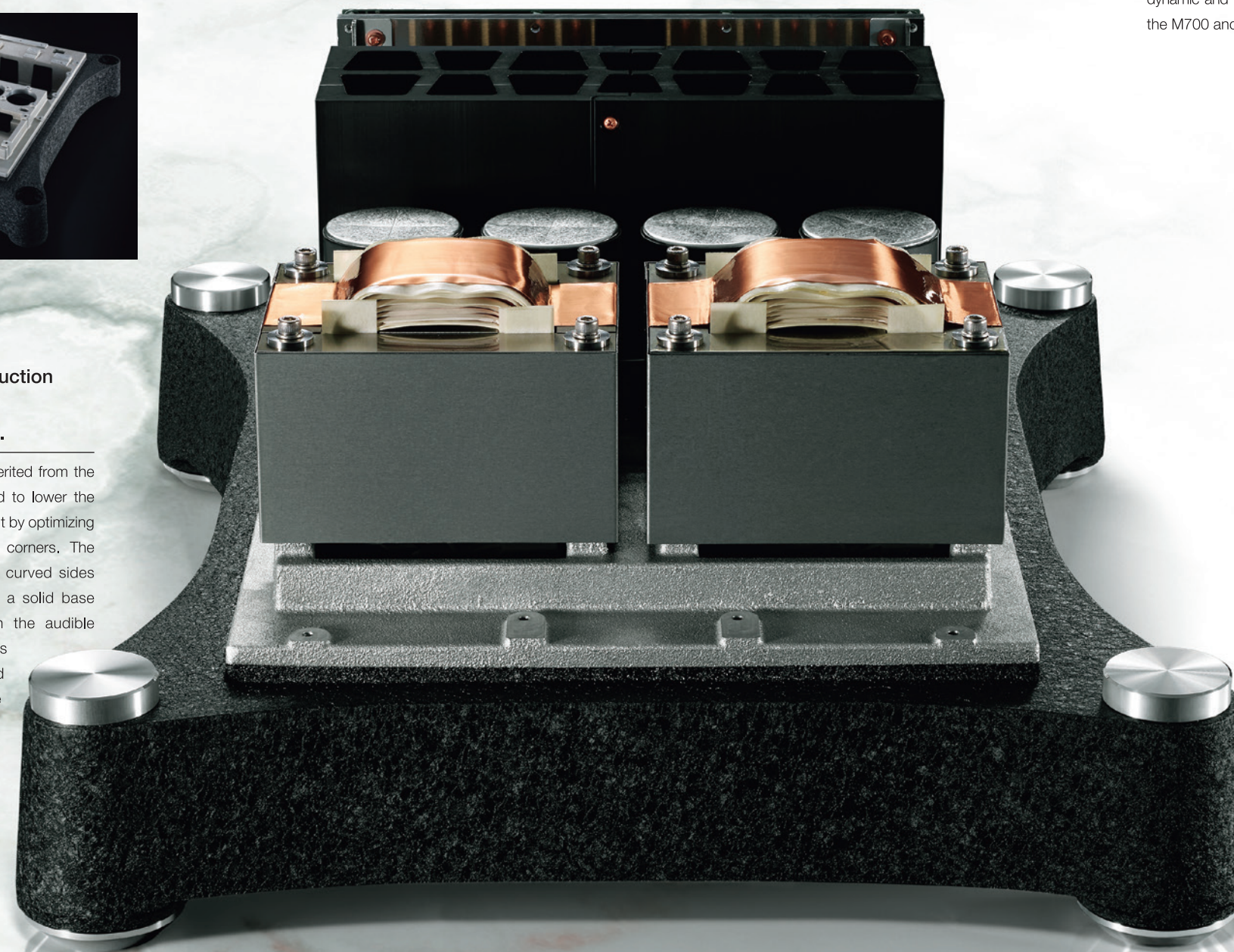
Redesigned wide-stance construction provides a solid base that suppresses resonance vibration.

The wide-stance chassis construction, inherited from the TAD-M600 power amplifier, was upgraded to lower the already low center of gravity of the whole unit by optimizing the slant angle of the four feet at the corners. The cast-aluminum chassis with more gently curved sides than those of the predecessor provides a solid base that suppresses resonance vibration in the audible frequency range. This sturdy construction is responsible for producing full-bodied sound that characterizes every TAD Reference Series amplifier. The redesigned emblem on the front panel and slits for the heat sink on the far side of the top panel represent the visual statement of the advanced low-center-of-gravity design.

High-Power Amplification

Balance-connected amplification enables powerful driving of speakers.

The balance-connected power amplification circuits of the M700 and M700S use high-power multiple-emitter transistors with superior high-frequency performance to produce an output of 700 watts at 4 ohms in the former and 350 watts per channel at 4 ohms in the latter. In addition, a non-magnetic resistor made of newly developed hybrid resistor elements is used for emitter resistance in the final output stage. All these components of high reliability employed from the input through to output stages combine to deliver the powerful driving of speakers, which translates into reproduction of energetic yet smooth and graceful sound with excellent transient response.



Extra-Large-Capacity Power Supplies

Twin gigantic power transformers and four large-capacity capacitors

Our years of expertise in achieving audio quality and reliability has culminated in twin gigantic power transformers with the total ratings of 2.8 kVA. In the production line of the M700 and M700S, our certified artisans manually wind insulating sheets around the core of the transformer, eliminating the need for a bobbin so as to increase the binding between the primary and secondary coils. The coil is directly connected to the first stage of amplification to increase the purity of power supply and achieve more responsive and consistent audio reproduction. In addition, four custom-built, sturdy 33,000 μ F capacitors help effortlessly deliver dynamic and smooth sound with excellent transient response for which the M700 and M700S were designed.



33,000 μ F capacitors

Simplified First-Stage Circuitry

A matched pair of FET devices makes it possible to design an input circuit using as few elements as possible.

True to TAD's long-held design philosophy of "Simple is best," the M700 and M700S reduce the number of components needed for the first stage down to a minimum so as to allow music signals to be amplified in their purest form and go through the circuit without losing even the subtlest information. A pair of FET devices carefully hand-picked by our certified artisans in the production line was incorporated into the amplifier's input circuit, which improves the operational stability of amplification. As a result, every production unit of the M700 has identical performance characteristics, and the M700S delivers identical performance between the left and right channels. In addition, the new DC servo circuit stabilizes amplification, resistant to changes in the operating temperature and magnitude of input signals and eliminating fluctuations in sound intensity. All this attention to detail ensures that these amplifiers produce a powerful, condensed sound with deep, rich bass, allowing the listener to have a truly immersive stereophonic experience.



TAD-M700's voltage-amplification circuit



TAD-M700S's voltage-amplification circuit

TAD-M700 Specifications

Power output : 700 W (1 kHz, 4 Ω)
350 W (1 kHz, 8 Ω)

Rated distortion : Less than 0.005% (1 kHz, 350 W, 4 Ω)

Signal-to-noise ratio : More than 125 dB

Frequency response : 1 Hz to 100 kHz, +0/-3 dB
Gain : 29.5 dB

Input terminal : Input sensitivity: 1.5 V, 100 k Ω

Dimensions : 516 mm (W) x 296 mm (H) x 622 mm(D)

Weight : 74.5 kg

TAD-M700S Specifications

Power output : 350 W/ch (1 kHz, 4 Ω)
175 W/ch (1 kHz, 8 Ω)

Rated distortion : Less than 0.005% (1 kHz, 175 W, 4 Ω)

Signal-to-noise ratio : More than 125 dB

Frequency response : 1 Hz to 100 kHz, +0/-3 dB
Gain : 29.5 dB

Input terminal : Input sensitivity: 1.5 V, 100 k Ω

Dimensions : 516 mm (W) x 296 mm (H) x 622 mm(D)

Weight : 75.5 kg



TAD-M700's rear panel



TAD-M700S's rear panel