

TAD

Reference Series

TAD

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PREAMPLIFIER
C700





Fully balanced and symmetrical design allows extremely accurate signal transmission and near-perfect stereo reproduction

TAD's goal is to design a best-in-class preamplifier capable of remarkably accurate signal transmission from input to output. To this end, we have taken extra steps to achieving ultimate uniformity in circuit topology and right-and-left channel layout. First, the C700's fully balanced circuit amplifies positive and negative signal waveforms individually to ensure identical dynamic circuit properties for both signals. Secondly, the wire length and dressing are identical between positive and negative signal paths and between both channels, to achieve an ideal signal path from input to output. Thirdly, the dual-mono construction design of circuitry achieves maximum symmetry to provide identical amplification, both electrically and mechanically, to positive and negative signals and to both channels, which results in a near-perfect stereophonic sound reproduction.

The sound purity has reached new heights

In designing high-end speakers and hi-fi components, TAD has pursued a perfect merger of sound image and field since early days. It is a relentless approach to achieving the highest level of sound purity without taking anything from or adding anything to the original sound that an artist intended. This means TAD recreates the sound image and field in which each element of the sound created by an artist or artists is reproduced with unmatched clarity and definition — and exactly where it should be.

The new Reference Series TAD-C700 preamplifier follows this long-standing TAD tradition faithfully to take the sound purity to new heights. It incorporates a slew of uncompromising refinements and enhancements to the preamplification circuit, dual-mono construction, power supply, and vibration-suppression techniques down to the smallest detail, setting the new standards that all other preamplifiers should be compared to.



A slew of refinements and enhancements made to the preamplification circuit, dual-mono construction, high-purity power supply, and custom-made parts all combines to deliver a new level of performance.

Simplified Signal Transmission

Extremely simplified circuit topology eliminates any chance of signal degradation from input to output

True to TAD's fervent belief that "a signal path with minimum functionality is the surest way to achieve the highest level of accuracy and quality in sound," in the C700, input signals, after their level is adjusted by the electronic volume control, are amplified by a single-stage voltage amplifier before output. Furthermore, a dedicated output amplifier circuit provided to each of the two line outputs prevents signal branching and interference from connected equipment from deteriorating sound quality. In order to transmit music signals in a straightforward and accurate manner, a monitor switch is not available for recording output on the C700, due to its potentially adverse effect on sound quality. Moreover, the audio pass-through mode outputs input signals from a pre-out jack without changing the signal level, eliminating the need for a switching circuitry.



Fully balanced output circuit

Elaborate Noise-Suppression Techniques

The dual-enclosure design that separates a power supply from the amplifier unit is just one of many techniques for minimizing noise to achieve ultimate signal clarity

The C700's power-supply unit is physically separated from the main amplifier unit. This ingenious design prevents vibration and magnetic flux leakage from the transformer from adversely affecting audio circuits inside the main unit. The outboard power-supply unit houses a large, powerful toroidal transformer with a 400 VA power rating—not uncommon in power amplifiers but unheard-of in preamplifiers. To increase the purity of power supply, the internal coil of the transformer is directly connected to the power supply circuit, minimizing the contact points with leading wires. Moreover, terminals for leading wires, mounting terminals for motherboards, and clamping screws are all made of oxygen-free copper coated with nonmagnetic materials to eliminate even the slightest magnetic distortions. All these refinements incorporated into the power-supply design enable the faithful and accurate transmission of signals regardless of sudden changes in their level. The combination of the ingenious power supply and the fully-balanced circuit design that eliminates unwanted noise currents delivers noise-free performance.



High-output toroidal transformer

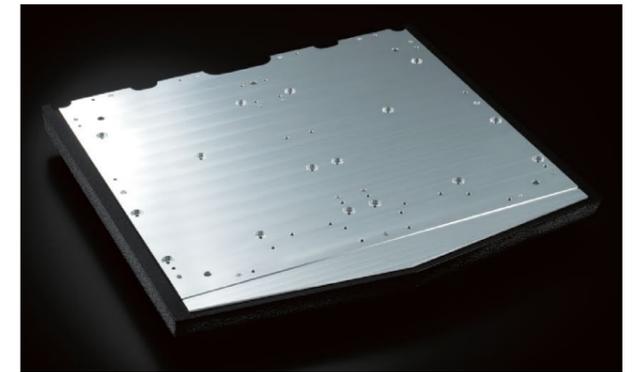
The control keys and LED display operate on direct current. Control wires are housed in a central shield to prevent undue interference

In the main amplifier unit, the control keys, LED display, and indicators operate on direct current, minimizing their effect on sound quality. The control circuit wires and power supply are housed in a shielded box placed in the middle of the enclosure. This design prevents interference with the circuit boards, enhances separation among circuits, and gives additional sturdiness to the enclosure.

Meticulous Vibration Control

A machined aluminum sub-chassis and three-point support insulators block external vibration and noise, and ensure electrical stability

The C700's main amplifier circuit is mounted on a sturdy 33-mm-thick sub-chassis weighing 15 kg, made to precision from pure aluminum ingots, to achieve outstanding vibration control that minimizes the effect of vibrations from speakers. The use of pure aluminum ingots provides a stable ground path. In addition, other parts of the enclosure are made to the same level of precision, serving to reduce the effect of external vibration and noise and thus contributing to the reproduction of music with the highest level of purity and faithfulness to input signals. Furthermore, the spike-shaped three-point support feet ensure the C700's mechanical stability on any surface. All these meticulous designs combine to free the C700 from undue external influences and enable it to perform to its full potential.

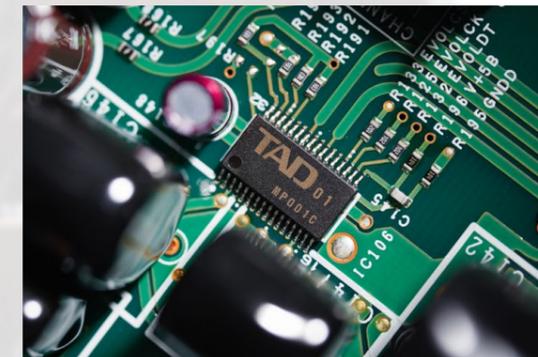


Precision-processed machined aluminum chassis

High-Quality Precision Parts

Carefully selected high-quality custom-made parts include an electronic volume control and ultra-precision ball bearings

The C700's custom-made electronic volume control boasts ladder-resistance switching that achieves an absolute error of 0.1 dB or less even at attenuation of more than 100 dB, attenuation deviation beyond measurement limit between right and left channels, and an ultra-low distortion of less than 0.0005% at 1 Vrms input. This volume control is designed to not affect impedance at the input and output terminals and deliver well-balanced sound even at low-volume-level listening. An independent electronic volume control is provided each to the right and left channels to ensure uniformity between them, as well as superb sound-image localization and sound-field reproduction. The input selector and volume control knobs each incorporate a 41 mm-diameter high-precision ball bearing, giving them a smooth and elegant rotary feel that you may expect from high-end audio components.



Ladder-resistance switching type electronic volume control circuit



Advanced Operation Technology

Extreme Link allows synchronous control of multiple C700s

Extreme Link enables a master C700 to control several slave C700s connected to its MASTER OUT jack to provide a dual-mono configuration for monaural power amplifiers or to deliver three-or-more-channel sound reproduction in a high-end audio system or home theater system setting.

Independent sensitivity adjustment available for each input terminal

The C700 enables independent pre-adjustment of sensitivity for each input terminal, so that listening level does not vary much when switching between different sources.

TAD-C700 Specifications

■ Input terminals: Balanced input x 4, Unbalanced input x 2 ■ Output terminals: Balanced output x 2, Unbalanced output x 2 ■ Rated output voltage: Balanced output 1.5 V, Unbalanced output 0.75 V ■ Maximum output voltage: Balanced output 20 Vrms, Unbalanced output 10 Vrms ■ Input impedance: Balanced input 100 kΩ, Unbalanced input 50 kΩ ■ S/N ratio: 120 dB ■ Frequency response: From 10 Hz to 100 kHz (-1 dB) ■ Power source: AC 120 V, 60 Hz (USA); AC 220 V to 240 V, 50 Hz/60 Hz (Europe, Asia) ■ Power consumption: 52 W (Power consumption during standby: 0.5 W or less) ■ Dimensions: Main amplifier unit 450 mm (W) x 150 mm (H) x 440 mm (D) [17-23/32 in. (W) x 5-29/32 in. (H) x 17-21/64 in. (D)], Power-supply unit 220 mm (W) x 185 mm (H) x 430 mm (D) [8-21/32 in. (W) x 7-9/32 in. (H) x 16-59/64 in. (D)] ■ Weight: Main amplifier unit 29.0 kg (63 lb 15 oz), Power-supply unit 15.0 kg (33 lb 1 oz)



Remote control

Power supply rear panel

Main unit rear panel