TECHNICAL AUDIO DEVICES LABORATORIES, INC.

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TAD

Reference Series

TAD Compact Reference One

TAD-CR1TX

Yet another culmination of the point-source sound concept

For decades, TAD (Technical Audio Devices) has hard earned the considerable respect and trust of the world's leading artists and studio engineers. In 2019, we introduced to the consumer market the critically acclaimed TAD Reference One flagship speaker system, the culmination of our point-source sound concept achieved by combining TAD engineers' wealth of experience and expertise in speaker design with leading-edge speaker technologies to create the ideal audio experience in a home environment.

Now we have reached another milestone with the introduction of the TAD Compact Reference One, which has taken advantage of every element of advanced technologies incorporated into the design of our flagship model.

The TAD Compact Reference One delivers the rich point-source sound with the quality that makes the listeners forget they are listening from a speaker system. Its extraordinarily resonant sound will satisfy even the most discerning audiophile.

TAD collaborates with Tendo Mokko in crafting the enclosure

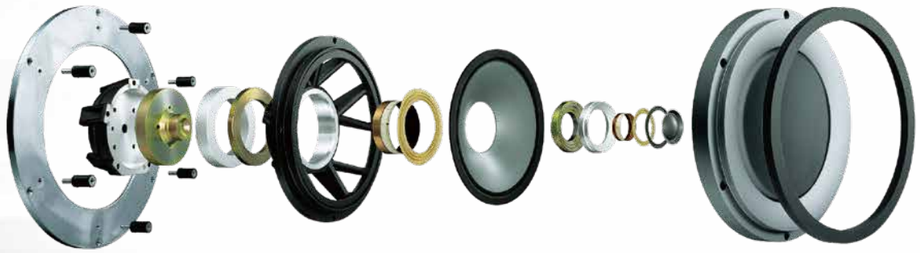
Tendo Mokko is one of the most prominent manufacturers of luxury furniture in Japan, established in Tendo, Yamagata Prefecture, in 1940. The company has been creating a series of highly acclaimed pieces of furniture, including works with globally renowned designers and architects such as Sori Yanagi and Kenzo Tange, respectively. Now TAD celebrates collaboration with Tendo Mokko. Their skillful techniques of artisan craftsmanship are incorporated into our SILENT Enclosure for the TAD Compact Reference One, elevating the supreme functional beauty to yet another level.

The refined CST Driver achieves superior wide-range reproduction with well controlled directivity

The CST (Coherent Source Transducer) Driver is a major step forward in coaxial speaker design that achieves the optimum balance between creating an ideal sound image and creating an ideal sound field by controlling the driver unit's phase and directivity over a wide frequency range. The design of the midrange cone is based on detailed calculations resulting in the unique shape that produces superior acoustic characteristics and precise control of the directivity of the concentrically mounted tweeter. This configuration unifies the acoustic center of the tweeter and midrange and reconciles the phase and directional characteristics through the crossover range. The CST Driver enables ultra-wide-range reproduction of 250 Hz to 100 kHz, accompanied by a directivity pattern that neatly dampens without disruption across all bands. The result is extremely clear and stable imaging, a wide frequency response, and natural-sounding music reproduction.

Exceptionally transparent sound produced by the beryllium diaphragms

Diaphragms of the tweeter dome and midrange cone are made of beryllium, the lightest and most rigid of metals. Our proprietary vapor deposition technique refined over several decades gives the metal superior strength and uniformity as well as high internal loss and high-frequency resonance-damping characteristics. The tweeter's diaphragm shape is derived using an advanced optimization method based on HSDOM (Harmonized Synthetic Diaphragm Optimum Method) computer analysis. It accurately controls differential vibration produced by the diaphragm, providing uniform response to as high as 100 kHz. The large midrange cone features a direct-radiation, vapor-deposition beryllium diaphragm. The resulting sound is astonishingly transparent, direct, and precise across a wide frequency range.



ISO drive technology unlocks the full potential of the CST Driver

In order to maximize the capability of the CST Driver, we developed the new ISO (isolation) drive technology that involves including a mechanism that blocks vibration produced by the driver unit from entering the enclosure, thus structurally separating the CST Driver from the cabinet. The CST Driver, with its powerful drive capability, is prevented from exciting the enclosure, which reduces the radiation of secondary sound. It also limits the influence of the energy from the powerful bass drivers. Delivering only sound radiated from the CST Driver diaphragm, which is the source of single-point sound, improves resolution to convey accurate detail, allowing, for example, the differences in tone color that vary subtly according to how the performers play or sing to be heard with unmatched clarity.

A speaker system designed to convey all the nuances of the songwriter's creative intentions and the artist's performance

20 cm (7.9 in.) woofer with exceptional strength produces rich bass with great clarity

The bass driver has achieved the highest linearity in the performance of its magnetic circuit, diaphragm, and suspension. First, the magnetic circuit features our unique short voice coil OFGMS (Optimized Field Geometry Magnet Structure), which linearizes the magnetic flux density along the 20 mm (0.8 in.) long gap. This circuit stabilizes drive performance from small to large amplitudes, achieving high linearity and producing signal waveforms correctly. Second, the TLCC (Tri-Laminate Composite Cone) aramid diaphragm has a triple-laminated construction that provides near ideal physical properties. It delivers not only rich and clear bass but also low-coloration sound extending through to the midrange. Third, the suspension employs TAD's signature corrugated surround, which further contributes to exceptional linearity in woofer cone movement.

Bass driver unit

Elegantly crafted SILENT Enclosure enables immersive sound field reproduction

The TAD Compact Reference One is housed in the 60 cm (23.6 in.) tall SILENT (Structurally Inert Laminated Enclosure Technology) enclosure, the technology inherited from the TAD Reference One. This cabinet is constructed of parts of different materials to achieve exceptional strength and better resonance-dispersion and vibration-damping performance; its rigid internal frame is made of 21 mm (0.4 in.) thick birch plywood and clad with CNC-processes veneer panels glued to laminated MDF panels bended using high-frequency hot pressing. The flowing teardrop shape of the enclosure makes the entire cabinet sturdier, reduces sound diffraction anomalies, and eliminates unwanted resonance and the formation of standing waves inside the enclosure. With a beautiful piano-like finish of natural Pommele Sapele wood, the cabinet imparts an air of elegant craftsmanship.

Vivid, elegant color tones add flair to interior décor

The outer surface of the enclosure features natural Pommele Sapele wood, which imparts an artistic air of elegance with its unique wavy pattern similar to that used in the construction of high-end cabinetry and top-grade musical instruments. In the finishing process, skilled artisans meticulously perform dozens of finishing steps for each enclosure. The enclosure comes in two colors—Emerald Black and Beryl Red—both of which derive from beryl, a rare ore that is the raw material used for the beryllium diaphragm. It adds a sparkling accent to the user's audio collection and interior décor with its beautiful texture unique to natural wood and deep gloss with color tones that exude elegance.

Color Variation

Emerald Black (TAD-CR1TX-EB)

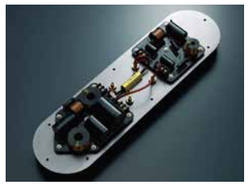
Beryl Red (TAD-CR1TX-BR)

Aerodynamic port system contributes to deep, clear bass

In order to take full advantage of the linear performance of the 20 cm (7.9 in.) bass driver and its suspension, the flare-shaped bass-reflex port is aerodynamically optimized by using the fluid design technology originally developed for professional TAD systems. This port effectively eliminates air noise and helps the bass driver unit perform smoothly and deliver a clean, crisp bass sound—even at the limit of its excursion range. In addition, the heavy 27.5 mm (1.1 in.) thick aluminum base at the bottom lowers the center of gravity of the entire speaker system and minimizes changes in tonal quality regardless of how the speaker is positioned, contributing to incredibly tight bass.

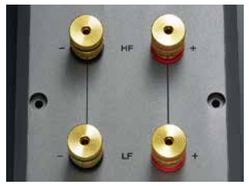
Carefully selected acoustic parts inherited from the TAD Reference One

- Isolated bass, midrange and treble crossover networks eliminate electrical and magnetic interactions.
- Rear panel with the network installed is made of 27mm (1 in.) thick aluminum that doubles as a heat sink.
- Custom-made parts include air-core coils, non-inductive resistors, and PP film capacitors.
- Large custom machined speaker terminals have thick gold plating to ensure reliable connections.
- The speaker system and all drive units also are subject to strict quality control based on serial numbers.



Crossover networks (CST Driver)

Crossover networks (Bass driver)



Large machined speaker terminals

Aluminum base

Speci fication s

[Model Number]TAD-CR1TX-BR, TAD-CR1TX-EB
[Model] Three-way bass reflex compact speaker [Drive Units] • Bass: 20 cm (8.0 in.) driver • Midrange/Tweeter: concentric 16 cm (6.5 in.) cone/3.5 cm (1.4 in.) dome
[Performance Data] • Frequency response: 32 Hz to 100 kHz • Crossover frequencies: 250 Hz and 2 kHz • Maximum input power: 200 W • Sensitivity: 86 dB (2.83 V @ 1 m)
• Rated impedance: 4 Ω [Physical Data] • Weight: 46 kg (101 lbs.) • Dimensions: 341 mm (13.4 in.) (W) x 628 mm (24.8 in.) (H) x 446 mm (17.56 in.) (D)
[Accessories] • Accessory kit: cleaning cloth, shorting links x 2, cone spikes x 3, round spikes x 3, spike holders x 3, cork sheets x 3, owners manual • Warranty • Woofer grille

Option

TAD-CR1TX Speaker Stand
TAD-ST1 (sold separately)
Embodies the same concepts as the TAD-CR1 to achieve high vibration control performance accompanied by high strength. This dedicated speaker stand maximizes the performance of the TAD-CR1TX.
[Model number]TAD-ST1
[Specifications] • Weight: 16 kg (35.3 lbs.) • Dimensions: 407 mm (16 in.) (W) x 532 mm (20.9 in.) (H) x 525 mm (20.7 in.) (D)
[Accessories] • Accessory kit: cone spikes x 3, alignment pins x 2, Allen head cap screw, hexagonal wrench, owner's manual