

Review of TAD' CE1 TX
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TAD Compact Evolution One TX Loudspeaker



Tokyo-based Technical Audio Devices Laboratories (a.k.a. TAD) is a company I've long admired. My first exposure to the brand occurred over a decade ago at CES in Las Vegas, Nevada—the first electronics show I ever covered. TAD's room in the Venetian Hotel, where the high-end audio exhibits were housed, featured their Reference One mk2 flagship loudspeaker, finished in gorgeous Beryl Red. I was gobsmacked by the outstanding clarity of its beryllium tweeter, which was nestled in the middle of a beryllium midrange in a coaxial configuration. Because I was mainly covering budget gear back then, the notion of reviewing a pair of TAD speakers seemed as remote as Pluto. But the seed had been planted. This year, when TAD demoed their new Compact Evolution One TX (\$32,500 per pair, all prices in USD) at [the Florida International Audio Expo in February](#), I got to meet the TAD team, including CEO Shinji Tarutani. Several months later, a pair landed on my doorstep. Game on.

Emphasis on the technical

TAD began as an offshoot of Pioneer Corporation. In 1975, Pioneer undertook the so-called TAD project to develop high-end loudspeaker drivers targeted at the professional market. This led to a series of compression drivers that, in the two decades that followed, were installed in more than 300 recording studios in over 20 countries. These pro beginnings very much inspired the first consumer product efforts TAD released around the turn of the century, which in turn influenced the company's current models. Their marketing material includes a quote from renowned professional audio engineer Bart Locanthi, who was invited to join the TAD project while it was still in its infancy: "Real technology should stick to basics, without being technology-oriented and always placing the highest value on sound quality." This remains TAD's guiding principle. The company's development philosophy is predicated on "an engineering approach backed by thorough theoretical evaluations and accurate testing."

The Evolution Series sits below the top-end Reference Series, which is fronted by the company's latest offering, the TX version of the Reference One speaker I was so taken with all those years ago. The Evolution line is anchored by the **Micro Evolution One**, a smallish standmount loudspeaker reviewed by my former SoundStage! colleague Jeff Fritz back in 2017. Jeff proceeded to review the line-topping, floorstanding **Evolution One TX** in 2019. Between these two models is a smaller floorstander, the Evolution Two, and the subject of this review, the CE1TX. The original Compact Evolution One was released in 2014, and while there are some subtle—and some not so subtle—changes to its successor, the recipe remains largely the same.

Despite being a standmounted loudspeaker, the CE1TX isn't small. It measures 11.4"W × 20.1"H × 17.6"D and weighs a whopping 64 pounds. While technically optional, the matching \$2500 stands that shipped with my samples are an extra most buyers will no doubt spring for. Each of these stands measures 23.3"H and weighs 41 pounds, so you're looking at over 100 pounds of hardware per channel.

The design of the three-way, bass-reflex CE1TX eschews the use of a traditional port. Instead, there's a clever venting system on either side of the speaker's complex cabinet—more on this later. Like all TAD loudspeakers, the CE1TX is equipped with a Coherent Source Transducer (CST) tweeter-midrange array, this one leveraging a 1.4" beryllium-dome tweeter situated in the throat of a 5.25" magnesium midrange cone. The beryllium dome, carried over unchanged from the original CE1, is fabricated using a proprietary method of vapor deposition purported to ameliorate unwanted resonances well above 20kHz for maximum linearity.



TAD claims that with its “chemical conversion and coating,” no chemical damping application is needed on the back surface of the midrange cone, so the TX version of the magnesium diaphragm is approximately 10% lighter than that of the outgoing model. The reduced moving mass allows for greater linearity over a wider frequency range. And whereas the original speaker’s midrange used a double-roll surround to suppress resonances between the body and the edge of the midrange diaphragm, the CE1TX’s midrange driver further addresses this with a tuned mass damper that drives down second-harmonic distortion in the all-important midrange by more than 10dB at 1.2kHz. The driver’s voice-coil position has also been optimized to reduce second-harmonic distortion in the lower-midrange region, between 200Hz and 400Hz, by more than 5dB. According to TAD, this design also improves the midrange time-domain characteristics. Lastly, while the geometry of the midrange cone is designed to align with the tweeter’s dispersion characteristics, the TX version uses a new CST trim-ring shape that aligns perfectly with the contours of the midrange diaphragm, allowing the tweeter to produce a clean wavelaunch with no irregularities.

The 7.1" Multi-layered Aramid Composite Shell (MACS) woofer, which sits just below the CST on the CE1TX's front baffle, has also been upgraded: the diaphragm surface has been bumped up to the "heavy-duty specification" used in the firm's Reference One TX 10" woofer. The aramid material on the rear of the diaphragm has also been optimized for rigidity. TAD has changed the driver's suspension, using a stiffened spider and a softer corrugated surround that is coated with damping material. The result, TAD says, is improved linearity and reduced distortion, especially at larger amplitudes.

Further improvements include refinement of the loudspeaker's crossover network and additional internal bracing in the top and bottom of the cabinet to improve structural rigidity.

The CE1TX employs an unusual, bilateral venting system, in which long, thin, slit-shaped ports are positioned centrally on the sides of the cabinet, with flared front- and rear-facing venting hidden behind an aluminum side plate. This symmetrical arrangement reduces turbulence and resulting port noise at high output, as well as internal standing waves. This suggests that the CE1TX should be able to play cleanly, even on bass-heavy material at high output, something that many smaller loudspeakers struggle with. Out back are two pairs of high-quality, five-way binding posts connected by jumpers.



Outwardly, beyond the changes to the trim ring mentioned earlier, with its high-gloss birch plywood cabinet, black trim, and aluminum side panels, the CE1TX appears identical to the original CE1. Other changes to the original design are subtle. The enclosure is 0.4" shorter than its predecessor and slightly more than 0.1" narrower, even though its internal volume remains the same. Moreover, the design of the aluminum side panels has been altered aesthetically, and the clearcoat application has been modified to provide a more mirrored finish than the original Compact Evolution One.

In aggregate, the CE1TX has a distinctive design. The wood finish of my review samples was lush and beautiful, with no orange-peel effect to speak of. While the overall aesthetic is a bit busy, given the use of varied materials, textures, and colors, this Japanese-built loudspeaker is made to an unquestionably high standard with excellent fit and finish, and there's no mistaking it for any other speaker on the market. The matching—and effectively obligatory—stands are seemingly high quality and get the job done. In for a penny, in for a pound, right?



And finally, the specs. The CE1TX has a listed frequency response of 34Hz–100kHz (no deviation spec is specified). No filter topology is noted, but the standmounted speaker’s crossover points are 1.8kHz and 250Hz. It has a nominal 4-ohm impedance, which, combined with its 85dB (2.83V/m) sensitivity, implies that this loudspeaker should be partnered with beefy amplification. Maximum input power—presumably RMS—is stated at 200W. The CE1TX carries a five-year warranty.

Setup

The speakers and stands arrived on a pallet. Each CE1TX was well packaged, and each box contained a manual and a magnetic woofer grille. Setting up the stands and speakers was a cinch, and their placement ended up being the same as the outgoing [Vivid Audio Giya G3 Series 2 loudspeakers](#): 10.5’ apart, 11’ from my listening position, 2’ from the front wall, and approximately 3’ from the side walls. I canted each speaker such that I could still make out the inner baffles from my sitting position, and I was satisfied with the results.

I partnered the CE1TX loudspeakers with two integrated amplifiers on opposite ends of the audiophile spectrum. The first was Audionet’s burly class-AB Humboldt (\$58,000), which produces a mammoth 300Wpc into 8 ohms (review pending). The second was my reference Devialet Expert 140 Pro (\$6,495), a skinny little thing that uses a clever hybrid class-A/class-D amplifier circuit to generate around 100Wpc into 8 ohms (Devialet lists the Expert 140 Pro as outputting 140Wpc into 6 ohms). My source was an old Intel NUC running Roon and Tidal HiFi, and the cords and cables wiring everything together were all from Siltech’s Classic Legend series. Also on hand were [Perlisten S5t](#) and [KEF Reference 3](#) loudspeakers, the latter being my reference.

Listening

Because they come from a company with an extensive background in professional audio, I expected the CE1TXes to sound, well, like pro monitors: super clear and resolving but perhaps tending toward the lean, clinical side of neutral. And yet, when I began playing my usual review tracks through them, they proved to be anything but analytical.

Nini Fabi’s vocal on “Hemiplegia,” from Brooklyn-based duo Haerts’s eponymous debut album (16-bit/44.1kHz FLAC, Columbia Records / Tidal), was fulsome, richly textured, and replete with inner detail. There was an inherent rightness to her pitch and timbre that led me to quickly conclude that through the mids, the TADs presented themselves as some of the most neutral speakers I’d ever heard. Repeatedly listening to this track highlighted that the TADs’ stereo imaging abilities are up there with some of the best loudspeakers I’ve ever experienced. Indeed,



Fabi's central vocal was incredibly well defined in space, and in its presentation of this aspect of the track, the CE1TXes bested all but the Vivid Audio Giya G3 Series 2s, which are \$10,500 more expensive—the Giyas' inimitable cabinet shape contributed to a greater sense of cabinet detachment. The Vivids aside, however, the TADs painted a beautifully defined soundstage. And that beryllium tweeter really is something. I'm used to hearing beryllium domes exhibiting an inherent shimmer and brilliance that —while I find them pleasurable to listen to—contribute to a sonic signature of sorts. But the CE1TX seemed to lack that beryllium sheen in the treble and instead sang in seamless harmony with the surrounding magnesium midrange driver so that the drivers sounded as one. In terms of frequency response and dispersion, the CST is a bona fide diamond of a transducer array.

With its atmospheric electronic sound and pounding dance beat, the title track of Odesza's third album, *The Last Goodbye* (16/44.1 FLAC, Ninja Tune / Tidal), poses a different set of challenges than the indie pop vibes of *Haerts*. It features wailing samples of Bettye LaVette from her 1965 song "Let Me Down Easy" interspersed with various electronic transients. While the TADs could handle dynamic material with ease—even at very high volume—that vented porting system left no evidence of port chuff. The CE1TXes weren't defined by their handling of the leading and trailing edges of the track's synths, which were clearly, yet smoothly defined in space and time. As I alluded to earlier, this isn't a speaker that sounds fast or slow, warm or cool. LaVette's vocal was imbued with a tangible suppleness that felt utterly natural and tonally pure. Even the track's exuberant bass line was more linear than punchy, with no apparent goosing of the mid or upper bass to speak of. As listening companions go, this is an honest yet involving piece of kit.



While listening to Adele’s “Rolling in the Deep,” from her second album, 21 (16/44.1 AIFF, Columbia Records), I reveled in the CE1TX loudspeakers’ soundstaging prowess. From the plucks of Ben Thomas’s acoustic guitar that open the track to the Tottenham-born songstress’s powerful opening verses—presented front and center in vivid detail—and the backing drums behind her that resound with ample reverbed spatial cues, each component of the track was laid out before me with assiduous precision. This exactness did nothing to rob Adele of her vocal power as the TADs propelled her into my listening room in all her soulful glory. The backing tambourine lent a touch of trebly splash that punctuated my deep enjoyment of the CE1TXes’ efforts. I would have enjoyed a touch more shove in the mid-bass, as the hearty kick drum on the track felt a bit lightweight, but it’s also worth noting that my basement listening room—a space measuring roughly 16.5’W × 14’L × 9’H—is part of a larger, L-shaped space measuring 29’ at its longest and 37’ at its widest. Put plainly, my room tends to swallow bass energy at certain frequencies, and I suspect that was a partial contributor here.

“Dreaming of the Crash,” the lead track from Hans Zimmer’s fabulous original soundtrack for Christopher Nolan’s film *Interstellar* (24/44.1 ALAC, Warner Bros. / Tidal), opens with the film’s theme meandering in and out of sounds of overlain wind and rustling crops. At the 1:55 mark, that theme is brought sharply into focus with the introduction of a powerful bass line, which is ultimately joined by a huge organ chord. Played loudly through a big set of floorstanding loudspeakers, this track literally rattles my fixtures and stirs my insides. To the TADs’ immense credit, they played the track cleanly with my Devialet Expert 140 Pro showing an indicated volume level of 0dB.

Although the amp was running flat out, the TAD-Devialet combo sounded phenomenal, with the abbreviated bass line nonetheless remaining remarkably taut. While the TADs provided meaningful output that extended all the way down to 40Hz and deeper, there is an intentionality to the way the CE1TX is voiced. Candor and control are TAD's mantra. Pushing those 7.1" woofers deeper at lower volumes would make them even more difficult to manage at higher ones. Considering these speakers are intended to be used in the small- to medium-sized listening spaces more common in Japan and Europe, I believe TAD made the right choice.



To round out proceedings, I sprung for “Within” from Daft Punk’s Random Access Memories (16/44.1 ALAC, Columbia Records). Chilly Gonzales’s strokes on his piano were rich and weighty, lending the instrument a more visceral sound than it had through my KEF Reference 3 or Vivid Audio’s Giya G3 Series 2 loudspeakers, both of which imbued Gonzales’s instrument with a lighter, airier feel. I also enjoyed the chimes around the 1:30 mark, which pop up several more times later in the cut. These were positively sparkling as they rang from right to left across the soundstage behind the vocodered vocal. Given the subtle cymbal, I could easily imagine hearing the simple, spare arrangement in a jazz club, and I found myself playing several more cuts from Daft Punk’s final album out of sheer enjoyment, getting lost in the moment as a result. This is the strongest endorsement I can bestow on TAD’s CE1TX. Despite its significant technical and acoustic achievement, it’s an eminently listenable loudspeaker you can enjoy for hours on end without listening fatigue. Like a well-worn leather couch, it just doesn’t get old. And that’s a special trick.

Comparison

Kharma's Elegance dB7-S retails for \$40,000 and offers something of a counterpoint to the TAD's metered excellence. The 2.5-way floorstander has a more cohesive design aesthetic than the busier-looking TAD CE1TX, with a raked stance, a simple single-color finish, and classy chrome accents that look distinctly automotive in inspiration. Like the TAD, the dB7-S sports a beryllium-dome tweeter, but the similarities end there. Its 7" midrange-woofers offer more surface area for greater bass shove. Sonically, the two speakers could not be more different. If the TAD's Japanese roots shine through via its modest, measured sound profile, the Dutch-built Kharma is more of a flamboyant playboy, with a prominent top end that turns every track into a laser-guided fireworks show. Indeed, it exhibits terrific spatial precision and is highly revealing, but neutral is not a word that jumps to mind—the Dutch speaker seem to favor edge definition and front-end attack with voices and instruments, compared to the CE1TX's more supple and textured shadings. Differences abound in the bass, too, as the dB7-S dials in a dollop of mid-bass emphasis that makes the speaker sound bigger and ballsier than you might otherwise expect. The benefit is that at lower volumes, the Kharma floorstander produces what seems to be a more full-range, punchy sound than the CE1TX can provide with its linear sub-100Hz performance. On the other hand, as the volume rises and the TAD begins to benefit from room gain, the Kharma's bottom-end eagerness can become too much of a good thing; it can occasionally excite room modes and become a bit loose with the wrong material.

Conclusion

This loudspeaker's signature CST point-source array is a gem, with fabulous on- and off-axis response and terrific coherence from the upper bass right up through the treble. It also boasts high source transparency, uncolored bass extension, and neutral frequency response. But at the end of the day, it was the CE1TXes' utterly natural, high-resolution sound that unfailingly won me over each time I sat down to enjoy their company. The CE1TX channels TAD's decades of studio and engineering expertise to produce music that just sounds right. This is the reason Technical Audio Devices Laboratories' Compact Evolution One TX is the finest standmount loudspeaker I've heard. If you have a smaller listening space and the financial means to consider a pair of CE1TX loudspeakers, you owe it to yourself to hear these gems from Tokyo. Emphatically recommended.

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