

EQUIPMENT REPORT

TAD Evolution One Loudspeaker, C2000 Preamp, and M2500 Amplifier

Power-Lifter

Neil Gader

Part of being an audiophile means that at one time or another we've all experienced a pivotal event that extends our appreciation and understanding of music and high-end audio reproduction, reigniting our passion for the hobby and raising it to new levels. For me, number one was the summer of 1967, the year the Beatles released *Sgt Pepper* [August, 1967 saw the release of not just *Sgt Pepper* but also *Surrealistic Pillow* and *The Doors* debut album—RH]. Another was hearing for the first time HP's IRS V reference system in Sea Cliff in the 1970s. Attending a symphony at the Musikverein in Vienna was yet another.

This is a roundabout way of saying that I had such an "a-ha" moment during T.H.E. Show in Newport Beach. I stepped into the crowded TAD (Technical Audio Devices) room and stood near the back. This is pretty much standard operating procedure as TAD's room is invariably packed to the gills and the music demos run by the company's gregarious chief engineer Andrew Jones are always tasteful and illuminating. What is also unique to these demos is that you won't hear a TAD speaker driven by just any big-name set of electronics, as you would in a Focal, Rockport, Magico, or Wilson demo. The systems are invariably all-TAD—usually the Reference One or Compact Reference speakers driven by TAD's D600 CD player, C600 preamp, and M600 monoblocks.



However, as the music was cued up—a cello concerto no less—the crowd turned its attention to TAD's latest loudspeaker, the Evolution One. Normally cello is not an instrument exhibitors use to show off their wares, at least not for more than a few bars. It's notoriously difficult to capture the full character of this instrument—from the slightly gritty transients off the bow, to the hints of nasality from an upper register vibrato, to the deep, woody resonance of its body, so reminiscent of that of a barrel-chested bass/baritone vocalist. As the cellist launched into an extended solo, what struck me most emphatically was the outpouring of wave upon wave of resonant dynamic output and the unflagging tonal linearity in the range below middle C. The cello can hit a 65Hz note at its lowest pitch, but the TAD was doing much more than hitting numbers. I knew then and there that I needed to spend some serious time with this system.

The Evolution One signals the first in a new series that brings much of the innovation and technology of the TAD Reference Series to a relatively more affordable price point. (Affordable in the sense that you don't have to be filthy rich to afford these products, only *merely* rich.) At the same time the Evolution One marks the completion of the Evolution system, which includes the C2000 preamp/DAC and M2500 stereo amplifier, which I will also discuss as part of this system review.

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The Evolution One loudspeaker is a large, three-way bass-reflex design. Large in this instance connoting a nearly 46" tall, 100+ pound enclosure. It physically slots in comfortably between the sumo-wide \$78k Reference One and the \$42k stand-mount Compact Reference One. Visually the E-One evokes TAD's Reference-level speakers from the heavy, black, curved front baffle to the thick, secondary wraparound enclosure that enfolds the primary enclosure like a fine-grained vise in stunning wood veneers. TAD reports that the only significant difference in construction between the Evolution One and Reference is the former's slightly thinner cabinet walls, but you wouldn't know this by giving its enclosure a rap with your knuckles.

All the drivers are manufactured in TAD's Japanese factory. But economics also inform some elements of the transducers. The CST coincident 1 3/8" tweeter retains the beryllium dome of the Reference line. This unit is formed by TAD's own vapor-deposition process, which TAD states yields a superior grain structure compared with conventional stamped beryllium domes. It also allows TAD to make larger beryllium diaphragms, as large as the 6.5" midrange cone of the Reference series. Alas, the Evolution One has to manage with a 5.5" midrange cone with a magnesium diaphragm rather than the price-prohibitive beryllium. Similarly the twin 7" bass drivers opt for a multilayer Aramid cone rather than the Ref's larger, more sophisticated, tri-laminate sandwich cone. The voice coils are also reduced to

2.5" instead of the Reference 4", and are overhung versus the Reference's larger underhung coils. In this context underhung means that the coil height is less than that of the magnetic gap—the coil literally remains fully immersed in the gap, the flux remaining near constant. This also tends to decrease sensitivity but the benefits from the coil's lower mass offset this. (Overhung means a heavier coil and less than ideal linearity.)

Sonically the E-One sound is incisive and transparent. It's high in resolution with just a light, warm kiss of romance. But most importantly it's dynamic at all levels. There's no mistaking that this is a direct radiator, either. Where a speaker like the brilliant omnidirectional mbl 120 (Issue 228) invites the listener to lean in and come a little closer, the more assertive Evolution One takes the initiative and comes to the listener—and does so strongly. Listen closely and you can hear hints of TAD's professional-audio products in the clean, somewhat dry lower treble presentation. But this is not aggressiveness in my view; it's the calculated precision that is the birthright of the CST concentric driver. It aligns and stabilizes musical images in space in the same way a Leica crisply freezes an instant in time. It's a veritable showcase for full-spectrum dynamics. Across any octave, I found my ears perking up every time a bow was applied to a violin or cello string, a flat-pick to a mandolin, a mallet to a tympani, or lips to a reed. During *Horns for the Holidays*, the new Reference Recordings disc, the E-One delivered a range of dynamics from brass and wind sections with an effortless and carefully weighted intensity. The brass never turned brittle at dynamic peaks—and the beryllium tweeter never went rogue.

SPECS & PRICING

Evolution One

Type: Three-way bass reflex.
Drivers: 1.3" tweeter/5.5" midrange, coaxial; two 7" woofers
Frequency response: 28Hz-100kHz
Impedance: 4 ohms
Sensitivity: 88dB
Dimensions: 13.2" x 45.9" x 20.2"
Weight: 118 lbs.
Price: \$29,800

C2000 Preamp

Analog inputs: Two each, RCA and XLR
Digital inputs: USB, SPDIF, XLR
Outputs: Two each, RCA and XLR
Dimensions: 17.3" x 5.5" x 15.5"
Weight: 52 lbs.
Price: \$29,000

M2500 Amplifier

Power: 250Wpc into 8 ohms, 500Wpc into 4 ohms
Inputs: RCA, XLR
Dimensions: 17.3" x 6.7" x 18.4"
Weight: 95 lbs.
Price: \$24,000

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As I listened to the title track from Shelby Lynne's *Just A Little Lovin'* I conjectured that tonally there's a suggestion of darkness over the sonic canvas, but I think that's largely attributable to the fullness of the E-One's overall response. Most speakers only hint at the actual power of lower midrange and upper bass energy that this

track contains. The Evolution One doesn't hint—you'll feel it and later be asking whether anyone got the license plate. In a way, it's a lesson that most of us need to re-learn each time we hear live music. Whether it's a chamber group, a jazz combo, a piano recital, or an orchestra going at full tilt, the takeaway is that live sound always heads for middle ranges, is securely weighted, and grounded in an unshakeable physical foundation.

With the Evolution system there's weight behind every image, measurable as if to the ounce. During the piano intro to Lyle Lovett's "North Dakota" single notes are conveyed with a physical vibrancy underlying each one—an implacable force bearing down on the keys. Singers are represented with every ounce of physicality securely in place—the chest and diaphragmatic resonances that define the timbre and texture of the performance are fully realized.

Perhaps the key strength of the TAD Evolution System is the way it balances extremes like the scope of large-scale musical events with the finely articulated eloquence of small-scale acoustic music. And it does so better than any speaker I've had in my room up to this point. Take for example, the piano soundboard during Norah Jones' "My Dear Country" [Bluenote]. It's the sound of sustained harmonics heaped on top of harmonics, slowly filling and overwhelming the surrounding acoustic space. Or take the bass viol and trombone duet in Stravinsky's *Pulcinella* Suite [Argo]. More like an out and out duel, these instruments converse back and forth in an absolutely delightful display of grunts and blats joined by waves of deep resonances. But there is one particular image that gripped me throughout—and that was the physical presence, height, width, and depth of the chugging bass on the right of the stage.

Bass is propulsive and extended but precisely measured. It's extremely linear with virtually no drop-offs or flat spots in response from the lower mids into the midbass, which allows the Evolution One to display the darkest underpinnings of music. Like the Reference models, the Ref One and CR-1, the Evolution One is a bass-reflex design. There is no evidence of port anomalies or specific tuning, and certainly no overhang or chuffing effects. Yet it doesn't sound like a sealed-box, either. It has a warmer and more naturally controlled sound. There's grip but it doesn't sound over-tightened. It descends mightily into the mid-20Hz range in my room. Basically, you just gun this baby and it goes. This speaker

TAD Power!

The C2000 preamp and M2500 stereo amplifier are nothing short of vault-like in design and execution. Simultaneously austere and posh, the casework exudes an air of purpose and permanence. The textured and beveled aluminum is evenly split between natural top and black anodized bottom sections. The chassis is machined from solid blocks of aluminum (a 47-pound block in the case of the M2500), with massive partitions rising up in its interior to maintain isolation for specific circuitry and power supplies, and analog and digital sections. Internals are affixed directly to this architecture eliminating the potential for vibration from subchassis fixtures. Footers with cast-iron insulators support each component at three points only, dampening vibrations; the mass-loading also adds to stability.

The C2000 is a linestage preamp bundled with a USB/DAC—a music-server-based approach that is growing increasingly commonplace in the high end with each new product cycle. The DAC stage uses a Burr-Brown 1794A chipset in a dual-differential configuration. Data transfer is asynchronous, and sampling rates up to 24-bit/192kHz are accepted. It is a true dual-mono design; the fully symmetrical analog circuitry is completely balanced from input to output. There are separate boards for right and

left channels and identical wire lengths for each as well. The LCD-illuminated front-panel display is highly readable even from a normal distance. One silken turn of the heavy input and volume knobs reinforces the premium nature of these components. The back panel is easily navigable with plenty of room between L/R inputs to accommodate the thickest of cables.

The M2500 amp outputs 250Wpc into 8 ohms which doubles into 4 ohms (the Evolution One is nominally rated at 4 ohms) and uses a Class D output stage in what it describes as “a completely balanced structure.” That includes not only separating left and right channels throughout but also independent power supplies and transformers separated between left and right channels and positive and negative rails. Configured as a hybrid design—the prevailing direction for upper-end Class D—it’s equipped with large power transformers, plus a linear power supply that gives up little in the way of energy conversion loss due to the strong coupling between primary and secondary windings of the power transformer. TAD also selected very low on-resistance power MOSFETs. Amazingly for an amp of such power it produces so little heat that no heat sinks are required. **NG**

dredges the low end, picking up timbral minutiae and micro-information like buried treasure. If it’s possible to be explosive yet nuanced, the Evolution One is it. A favorite test of mine for low bass transients (only for full-range speakers, by the way) is the last bar of Rutter’s “A Gaelic Blessing,” when the organist suddenly releases the pedal point. With the E-One it was a heart-stopping suspension of low-frequency energy that, in its wake, almost vacuumed the air from the room.

But it’s the *quality* of the bass octaves that are such a standout. To my mind the Evolution One combines the slam of bass-reflex enclosures with the nuance of acoustic-suspension designs without sounding like either one. It mixes control with just enough low-end slack that deep bass has a chance to breathe. It follows a rhythmic bass line with suppleness and control, yet it doesn’t seem to be clamping down hard on the note. It allows it to fully open, sustain, and decay yet not over-bloom or cast a dark shade upon the musical canvas.

In acknowledging the strengths of the E-One I by no means mean to suggest that the contributions of the C2000 and M2500 are minor ones. They are not. This tandem offers a level of background quiet, transient speed, and low-level resolution and control that verges on the current state of the art. The Evolution One is not an especially difficult speaker to drive but it benefits from the control that seems to characterize the M2500. (Without it, it can sound a little loose in the bass.)

I tried a couple other high-power amps on the Evolution One, including the Vitus RI-100 integrated and the recently reviewed mbl C21, and while these amps have their own specific sets of virtues neither provided the same grip and pitch articulation in that sub-40Hz range that the M2500 had. The USB/DAC stage

of the C2000 was among the best I’ve heard in this rapidly evolving segment. It was quiet and refined, and exhibited a focused and grounded sonic picture, without any of the slightly phasey image artifacts or slouchy soundstaging that earlier USB efforts were pining for.

Having now had the privilege of evaluating both the Evolution One and the CR-1, how does it compare to the CR-1, TAD’s flagship three-way stand mount? Would the state-of-the-art midrange and nimble balance of the CR-1 carry over to the Evolution One intact? I would say mostly. Without doubt the E-One scales images more grandly, digs deeper, and mounts percussive onslaughts in ways that the Compact Reference can not. The Evolution can easily overdrive smaller rooms. But in my room, a smaller one to be sure, the CR-1 is more of a single piece. Inter-driver transitions were seamless, invisible to the ear. The E-One, on the other hand, had a slightly more clinical, drier character in the mids and up—the smaller coincident driver stepping a bit more forward than it does in the CR-1. Is this attributable to the downgrade in diaphragm materials or the smaller size of the CST midrange versus the larger, all-beryllium CR-1 coincident? All I know is that the CR-1 conveys a slightly warmer, fuller overall signature through the mids, and slightly sweeter and better integrated upper midrange. But it also has dynamic limits that the E-One merely laughs at.

Evolution is an apt name for this stellar system. By using many of the physical assets, principles, and sonic gifts of its Reference line, Andrew Jones and the TAD team have adroitly brought the breed to a more accessible price point. This is the kind of system that makes every listening moment a special occasion. That’s what I call evolution. **tas**