

# GoldenEar Triton Two Loudspeaker

**Sophistication and Value by Design**

**Chris Martens**

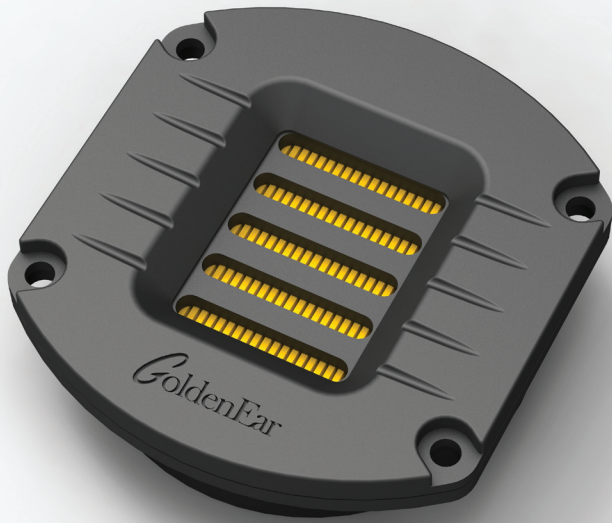
In the early 1970s Sandy Gross helped co-found Polk Audio and then teamed with Don Givogue in 1990 to found Definitive Technology. Now, Gross and Givogue have joined forces again to create a third loudspeaker company: GoldenEar Technology. At each step along the way, Gross and team have consistently pursue, an idea that I, for one, hold dear — namely, the notion that high-end audio should be a sport for all to play, not just an elite few with deep pockets. Naturally this means figuring out ways to build loudspeakers that deliver authentic high-end sound, yet sell at a sub-high-end price. Sadly, history has shown us that while many loudspeaker-makers have learned to talk the talk of “affordable high-end audio,” relatively few seem able to successfully walk the walk. Why, then, should GoldenEar succeed where so many have tried and failed?

Well, a big part of the answer is that Gross and Givogue are seasoned industry veterans who share a common goal and who complement one another perfectly. Sandy is the visionary, the one with the keen and discerning ears, and the one whose restless and inventive streak drives him to make good things better. He also has an uncanny gift for creating speakers that fulfill the aspirations and desires of music lovers, yet are priced within reach of enthusiasts of moderate means. Don, in turn, is the technically rigorous pragmatist, the no-nonsense engineer, and the one whose deep manufacturing expertise and discipline yields cost-effective speakers with sonic benefits that are observable, repeatable, and real. Putting their talents together, Gross and Givogue have come up with what may be their most accomplished loudspeaker to date: the GoldenEar Technology Triton Two floorspeaker (\$2499/pair) — a speaker that debuted last fall at CEDIA 2010 and has been impressing critical listeners ever since.





## EQUIPMENT REPORT – GoldenEar Triton Two Loudspeaker



The Triton Two is a three-way, five-driver, dual-passive-radiator-equipped floorstander with a built-in powered subwoofer. Highlights include an HVFR (High-Velocity Folded Ribbon) tweeter the design of which is patterned after Dr. Oskar Heil's famous "Heil Air Motion Transformer" tweeter. GoldenEar says the "HVFR tweeter propagates sound waves and moves the air by *squeezing* it with its accordion-like pleated diaphragm, rather than *pushing* it as conventional drivers do." The resulting driver is said to provide exceptional treble extension and transient speed, plus high output levels with very low distortion. Additionally, the Triton Two incorporates a pair of cast-basket, MVPP (Multi-Vaned Phase Plug-equipped) 4½" midrange drivers arranged in a D'Appolito-type configuration alongside the HVFR tweeter. GoldenEar says these midrange drivers "achieve smooth linear frequency response extending above 20kHz" (much higher than the upper limit of the driver's operating range in the Triton Two). The point of all that surplus bandwidth is to make sure the midrange driver offers sufficient transient speed and textural nuance to keep up with the lightning-fast Heil-type tweeter.

The lower part of the Triton Two tower houses a built-in powered subwoofer, which incorporates dual 5" x 9" woofers coupled with dual 7" x 10" passive radiators (which GoldenEar colorfully describes as "infrasonic radiators"). The oblong shape of the drivers and passive radiators is said to help resist certain types of diaphragm resonances and breakup modes that can occur with traditional circular woofers. The subwoofer is powered by a 1200-watt, DSP-controlled digital amplifier. Golden Ear says the amp has a "Programmable Logic Device (PLD) machine with a nearly instantaneous 278nS update time to perfectly manage a myriad of functions including soft-clipping, DC offset control, output-stage anti-saturation protection, and discrete multi-band

limiting." Together, these elements give the Triton Two bass that extends down to a claimed lower limit of 16Hz.

Like Henry Ford's famous Model T the Triton Twos are offered in "any color you want as long as it's black." The entire speaker enclosure, whose slender, tapered, airfoil-like shape is very easy on the eyes, is covered by a stretchy black fabric sleeve, which looks great and saves buyers the expense of costly lacquered or veneered cabinet panels. There is, however, a gloss-black trim plate that clips to the top of the speaker, covering the opening of the grille sleeve, thus giving the fabric cover a pleasingly organic and seamless appearance. A matching black floor plate, which is supplied with threaded spikes, helps stabilize the towers while making them more resistant to potential tip-over accidents. But enough of background; let's talk about the Triton Two's sound.

Starting with first things first, let me observe that — once you get the user-adjustable subwoofer output levels dialed-in properly for your room — the Triton Two system offers very smooth and neutrally balanced tonal response, with excellent extension at both frequency extremes. Better still, the Triton Two offer plenty of definition, detail, and resolution, but do so without imposing any of the rough edges or other painfully self-evident sonic compromises those qualities sometimes entail.

In a very real sense, the Triton Two has been voiced from top to bottom, with the sheer excellence of its sophisticated HVFR tweeter setting a high performance standard that the rest of the speaker reaches upward to meet. GoldenEar's HVFR tweeter provides sumptuous treble detailing and realistic high-frequency harmonics, as well as beautifully capturing the sense of "air" surrounding instruments, yet it does all this without the slightest hint of

### SPECS & PRICING

**Type:** 3-way, five-driver, dual-passive-radiator-equipped floorstander with built-in powered subwoofer

**Driver Complement:** One High-Velocity Folded Ribbon (Heil-type tweeter), two 4½" mid/bass drivers, two 5" x 9" woofers, two 7" x 10" passive radiators

**Built-in amplifier:** 1200-watt subwoofer digital/DSP-controlled amplifier

**Frequency response:** 16Hz-35kHz

**Sensitivity:** 91dB

**Impedance:** 8 ohms

**Dimensions:** 48" x 7.5" x 15" (height includes mounting base, without spikes)

**Weight:** 60 lbs.

**Price:** \$2499/pair

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edginess, stress or glare. The sound is so free from the usual treble problems of spotlighting, etching, or artificial edge-enhancement that some listeners perceive the speaker to be slightly rolled-off on top. While there may be a small (and I mean *very* small) grain of truth to this assessment, I think what's really going on is that listeners acclimated to sharp-edged piston-type drivers simply don't know what to make of the HVFR tweeter's almost eerie smoothness. Over time the HVFR tweeter will spoil you rotten, because it tends to make other high-frequency transducers (even some quite good ones) sound a little hard-edged, aggressive, or overstressed by comparison.

But a pleasant surprise is that the Triton Two's MVPP midrange driver matches the positive qualities of the HVFR tweeter step for step, so that it offers excellent transient speed, textural nuances aplenty, and wonderful qualities of easygoing purity and transparency. Most importantly, the midrange driver is fast enough and subtle enough to blend seamlessly with GoldenEar's Heil-type tweeter, so that I observed no textural discontinuities at all. This is saying a mouthful when you stop to consider that many speakers equipped with Heil-type tweeters (even some very costly ones) exhibit obvious discontinuity problems where the tweeters sound fine but make piston-type companion drivers sound sluggish by comparison. In the Triton Two, you hear an uncannily sweet, smooth, seamless marriage between GoldenEar's MVPP midrange driver and HVFR tweeter — a marriage responsible for much of the real sonic magic of which this system is capable.

What exactly is the nature of this sonic magic? I would say the speaker's most spectacular and compelling qualities involve its mind-blowing vivid imaging and effortless 3-D soundstaging. It is upon these twin virtues that all the speaker's other strengths hinge. Assuming you have the Triton Two reasonably well positioned in your room, you can expect to experience moments where sounds seem almost completely free from the speaker enclosures — as if they are originating on their own without any apparent effort or even involvement on the speakers' part. And once sounds have been liberated from the confines of the speaker enclosures, they unleash the kind of gripping, “sound outside the box” experience that many listeners will find revelatory.

Let me expand on this point for a moment. Many otherwise fine high-end loudspeakers leave me underwhelmed in that they strive to get most sonic virtues right, yet maddeningly produce left and right “blobs” of sound that cling to the speakers like spent chewing gum on a park bench — yecchh! In contrast, however, the Triton Two's demonstrate a nearly world-class ability to product downright spooky the three-dimensional soundstages — complete with the requisite depth, breadth, and height — and they do so without



requiring much if any tweaking. One practical upshot of this is that you can, if you wish, position the Triton Two's much farther apart than you would most speakers without causing the dreaded “hole in the middle” to appear. You can also use the separation distance between the speakers as a tuning tool that enables you to strike a realistic balance between imaging specificity (the closer the speaker are together, the more focused the sound will be) versus soundstage width (the farther apart the speakers are, the wider the soundstage becomes). Just find the appropriate balancing point in your room and *viola*: instant realism — or something pretty close to it.

To hear how the Triton Two's smooth yet revealing highs and mids coalesce to create such holography, try listening to “Solitary Orchid” from Zhao Jiazhen's *Masterpieces of the Chinese Qin from the Tang Dynasty to Today* [Rhymoi Music]. For those of you not yet acquainted with the Qin (pronounced, I am told, “chin”), let me mention that it is a remarkable, zither-like, fretless, stringed instrument, ancient in origin, and capable of astonishing range, dynamic subtlety, and delicacy. It serves not only as an acid test for imaging and soundstaging qualities, but also for timbral and textural accuracy. When reproduced accurately on this track, the Qin should present itself in a natural, moderately reverberant acoustic space, while exhibiting a certain hushed, focused intensity and a voice that is articulate and piquant, yet subtly sweet. (This is harder to do than you might think, since some speakers manage to make the Qin sound hard and screechy — like an alley cat stuffed into a bag of broken glass.) But happily, the Triton Two made beautiful sense of Zhao Jiazhen's performance, here.

Several aspects of the Triton Two's handling of “Solitary Orchids” were impressive. First, I was struck by the focused intensity of the image of the Qin at center stage that the Triton Twos achieved; many speakers claim to create “palpable” images, but the GoldenEars actually deliver the goods. Second, I was enchanted to





## EQUIPMENT REPORT – GoldenEar Triton Two Loudspeaker

hear the speaker faithfully capture the extremely rich and complex harmonies of the Qin, and to hear it reveal interactions between those harmonics and reflective surfaces within the recording venue, thus conveying a believable sense of the performance space. Third, I found that the GoldenEars captured even the smallest details of Zhao Jiazhen's performance, right down to the most delicate and intricate fingering noises, plucking sounds, glissando-induced string squeaks, and sustained high-pitched harmonic overtones (I'm told that, in keeping with ancient traditions, composers of music for the Qin provide detailed notes showing how and where such incidental performance noises should appear). In short the Triton Twos produced a rich, sophisticated, and profoundly evocative treble/midrange sound that belied their modest price.

Down below, the Triton Two's powered subwoofer section provides no-excuses full-range bass, without sounding thick, bloated, or overbearing. Unlike some speakers that claim to provide "full-range" bass but that exhibit substantial roll-off below 40Hz, the Triton Two offers significant bottom-octave output, routinely reaching *way* down low to reproduce deep bass notes you might not have known were present in your favorite recordings. For this reason, listeners will want to spend time judiciously adjusting the subwoofer's output levels (it is easy to crank in more low bass wallop than you bargained for, so restraint is the order of the day). The Triton Two's bass-to-midrange integration is very good, but not quite up to the standards established by standards by some of the best current \$5-\$10k/pair speakers. There's not much missing, though, apart from subtle touches of heightened midbass transient speed, textural finesse, and focus — qualities you might find and enjoy speakers such as the new Magneplanar MG3.7 (\$5500/pair). But note that the Maggies cost more than twice what the Triton Twos do, are much harder to drive, and deliver bass that doesn't actually go as low or play as loudly. My point is that while the Triton Two's low-end characteristics are not perfect, they strike an admirable compromise between depth of extension, power, and finesse — all of which can be achieved while driving the GoldenEars with very modest amplifiers.

To give the low end of the Triton Two's a meaningful workout, I put on the second movement (Scherzo: Allegro molto) of the Copland Organ Symphony [Michael Tilson Thomas, San Francisco Symphony, SF3 Media, SACD] and came away duly impressed. The final three minutes or so of the movement give you an opportunity to hear the low register of the organ in juxtaposition to the sound of loud low percussion instruments, which the GoldenEars handled with both grace and real gusto. There is sufficient pitch definition for you to hear the deep, well-focused sound of low-pitched notes emanating from the organ itself, followed a split-second later by

the slightly more diffuse rumble of those notes reverberating and then decaying within the recording space (Davies Symphony Hall, San Francisco). Similarly, the concussive "thwack" and "boom" of the large drums sounded just about ideal — clean and controlled, yet appropriately full-bodied at the same time.

Finally, let me draw your attention to two significant and interrelated aspects of the Triton Two's performance; namely, the fact that it is relatively high in sensitivity (91dB) and an extremely easy load to drive (in large part because the speaker's built-in subwoofer amplifier shoulders virtually all of the low-frequency workload). As a result, the Triton Two can be driven to very satisfying volume levels by only moderately powerful amplifiers, though it is — as you might expect — very sensitive to amplifier quality. Sandy Gross, for example, drives his personal pair of Triton Twos with a relatively small, low-output SET amplifier, which is the sort of option you can't realistically hope to pursue with such affordable high-end speakers as the excellent but decidedly power-hungry Magneplanar MG1.7s. In practical terms, this means the Triton Twos are not only fine value-priced speakers in their own right, but also make suitable platforms upon which to base excellent value-priced *systems* (this is in contrast to well-priced speakers that require a gazillion dollar's worth of amplification in order to sound their best).

One additional point to note is that if you choose to use one system for both music *and* movie playback, GoldenEar offers a set of voice-matched surround and center-channel speakers so that your Triton Two's can easily become the centerpieces of a superb multichannel surround system — one that, by definition, includes *two* built-in powered subwoofers. Interestingly, a complete Triton Two-based five-channel surround rig costs only \$3495 — an option that music-minded movie enthusiasts might want to consider.

GoldenEar's Triton Two system establishes what I consider new high-water marks in all-around performance per dollar. The system gets all the big things right, such as smooth and neutral tonal balance, good sensitivity, full-throated dynamics, and absolutely killer surround-sound imaging. But it also provides many of the small but significant performance touches that differentiate great speaker systems from merely good ones — such as transient quickness, textural subtlety and finesse, resolution of low-level sonic details, plus the ability to convey a desirable and elusive quality of sonic effortlessness. Once again, Sandy Gross and Don Givogue have managed to place the key elements of high-end sound within reach for music lovers not made of money. **tas**

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