

HERB REICHERT

GoldenEar Triton Five

LOUDSPEAKER

With each review I've written for *Stereophile*, I've redoubled my efforts to choose my adjectives prudently—to curb my penchant for overstatement. I've been feeling a need to speak more concisely and maturely about what my ears, mind, and heart experience while listening to music through a component that's new to me. So today, at the start of this review, I ask myself: What adjectives must I use to describe the character of GoldenEar Technology's new Triton Five tower loudspeaker (\$1999.98/pair)? Which words will best use our shared audiophile lexicon to give you a working vision of what I experienced?

As I type, I'm listening to a mad, hypnotic, avant-garde classical/Neolithic jazzphonic album—Moon-dog's *The Viking of Sixth Avenue* (2 LPs, Honest Jon's HJRLP18)—and trying to nail the gestalt of the sound of GoldenEar's Triton Five loudspeaker. The Five has a difficult-to-pinpoint GoldenEar Triton sound that affects every record I play in an extremely subtle but similar fashion, and I will consider myself a failure if I can't describe it to you. I mean, what do I need to say? "It has a velvety midband"? Or it has "silky highs" and "great low-level dynamic performance"? The Triton Five has all of those! I want to describe the sound as *relaxed*—but when I change amps, that description no longer fits; what I hear is instantly more "strained." I could pick another word—*soft*—but when I change records, that adjective becomes *harder* to justify. I could say *forgiving*—but maybe if I change DACs, *forgiving* would turn into *wrathful*. Do you sense my dilemma?

Description

There are three drivers in each 40lb GoldenEar Triton Five: two 6" cast-basket woofers, plus what



SPECIFICATIONS

Description Two-way, reflex-loaded, floorstanding loudspeaker. Drive-units: High Velocity Folded Ribbon (HVFR) tweeter, two 6" woofers, four 8" planar passive radiators. Frequency range: 26Hz–35kHz. Sensitivity: 90dB/2.83V/m. Nominal

impedance: "compatible with 8 ohms." Recommended amplification: 15–400Wpc.

Dimensions 44.25" (1135mm) H by 6.625" (170mm) W (front) by 8.125" (210mm) W (rear) by 12.375" (320mm) D. (Height includes base, no spikes.)

Weight: 40 lbs (18.2kg) net, 56 lbs (25.5kg) shipping.

Finish Black cloth.

Serial numbers of units reviewed BLEA N1 0115 00300 & 00301.

Price \$1999.98/pair. Approximate number of dealers: 150.

Manufacturer

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GoldenEar calls a High Velocity Folded Ribbon (HVFR) tweeter. Mounted on the speaker's sides are four 8" "Planar Sub-Bass Radiators," which are passive and reflex-load the woofers. The Triton Five is 44.25" high by 6.625" wide (front) by 8.125" wide (rear) by 12.375" deep, and is really a sealed box in a sock: A polyester sleeve is stretched to cover the entire speaker, except for the top and base—just like the old Vandersteen 2, DCM Time Window, and Quad ESL-63, all of which I thought looked *très moderne* in a wide range of domestic environments. The whole sock idea appeals to me: I think it makes all of those speakers look timeless (even a bit genderless?), while avoiding the dings and scratches inherent to wood-clad boxes. The Triton Five is a big tower speaker, but without the polished giant-robot look I find so immature and obtrusive. Obviously, GoldenEar doesn't feel the need to show off all their drivers and radiators to prove the speaker's worth.

The first time I peeled down a Triton's stocking, I spied that sexy-looking ribbon-esque tweeter . . . and the ghost of Dr. Oskar Heil. In the 1970s, Heil was the physicist behind a clever variation on the ribbon, planar, and electrostatic



Behind the sock: The Triton Five's upper section comprises a D'Appolito array.

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technologies that were flourishing at the time. Heil's innovative design employed a thin, ultralight, conductive membrane of polyethylene, folded like an accordion bellows and radiating sound from its entire surface area. The accordion-like folds were pure genius—they allowed Heil's Air Motion Transformer (AMT) to move a lot more air more quickly, and with less nonlinear motion, than could flat or domed tweeters.¹ Heil's clever design was the aesthetic and engineering cornerstone of the ElectroStatic Sound Company's (ESS) AMT1 speaker. I remember the AMT1 as sounding exceptionally smooth and easy-flowing.

I also remember the first tightly spaced, midrange-treble-midrange (MTM) driver-array designs developed by Joseph D'Appolito and published in *Speaker Builder* maga-

¹ The ratio between the total surface area of the AMT tweeter and that of its aperture is 5 to 1.

MEASUREMENTS

I used DRA Labs' MLSSA system and a calibrated DPA 4006 microphone to measure the GoldenEar Triton Five's frequency response in the farfield; and, for the nearfield responses, an Earthworks QTC-40, which has a 1/4" capsule.

The Triton Five's voltage sensitiv-

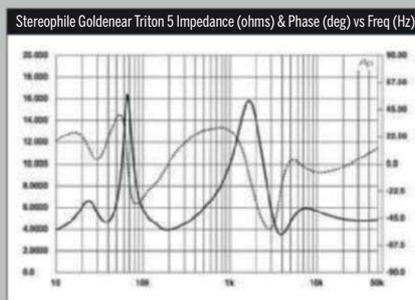


Fig.1 GoldenEar Triton Five, electrical impedance (solid) and phase (dashed) (2 ohms/vertical div.).

ity is specified as 90dB/2.83V/m, which is high; my estimate was slightly higher, at 90.8dB(B)/2.83V/m. This is a speaker that will play loudly on just the few watts provided by the tube amplifiers Herb Reichert prefers. The GoldenEar's impedance is specified as being "compatible with 8 ohms." Fig.1 shows my measurement of the Triton Five's impedance magnitude (solid trace) and electrical phase angle (dotted). The magnitude remains at or below 6 ohms for much of the midrange and from the mid-treble upward, with minimum values of 3.86 ohms at 195Hz and 3.5 ohms at 3.9kHz. With the speaker's high sensitivity, the impedance should not be a problem for low-powered amplifiers. However, as there is a combination of 5 ohms and a -51° electrical phase angle at 3.15kHz,

a frequency where music can have high energy, a tube amplifier will probably work best with the Triton Five when the speaker is driven from the amp's 4 ohm output-transformer tap.

As the Triton Five is covered with a black cloth "sock," which gives my accelerometer no firm surface to which to be attached, I rolled the sock down to examine how lively the enclosure was. There were a couple of high-Q resonances on the cabinet, these highest in level on the rear panel (fig.2). However, because these are high in frequency and will be damped by the sock, they shouldn't affect the GoldenEar's sound quality.

The red trace in fig.3 is the summed output of the four passive radiators on the Triton Five's sides; the blue trace is that of the woofers; all six units were

zine. The Triton Five's upper section comprises just such a D'Appolito array, which, when used with a properly implemented third-order crossover, is intended to deliver a more coherent and vertically symmetrical wave launch centered directly on the tweeter's axis. I've listened to a lot of MTM speakers—even built one myself—but to my bewilderment, I usually experienced an incoherence that suggested irregularities in phase or dispersion.

Listening

The GoldenEar Triton Fives have been in and out of my system for months now. I've listened critically and uncritically, with and without the sock. (Actually, they look pretty smart and sound more lively and detailed when they're stripped nude.) But until now, I hadn't interrupted my listening to think about the Triton Five's dispersion, which always seemed okay. The tweeters are 36" above the floor; my ears are 35"–37" high when I sit in my main listening seat, and 44" when I'm at my desk, to the right of the right speaker. Moving my head from side to side and up and down while sitting at either place produced an unstressed evenness of response that I associated with an absence of obvious peaks or dips. But when I sat down to write this review, recollections of my earlier MTM experiences caused me not to believe my ears.

Curious, I hauled out my trusty copy of *Editor's Choice Sampler & Test CD* (Stereophile STPH016-2) and listened to "Dual-Mono Pink Noise." Now, when I moved my ears up and down about 14" from the front baffle, everything sounded surprisingly clear and even—except for a tiny dip just above the tweeter axis. At my main listening position, about 8' from the Triton Fives, which were toed in to fire directly at my ears, moving my head right, left, up, and

down revealed nothing unusual. It would seem that Sandy Gross—GoldenEar's founder, CEO, and resident golden ear—and chief engineer Bob Johnston have conquered what I believe to be the D'Appolito array's propensity toward unpredictable dispersion behavior.

WITH THE LINE MAGNETIC LM-518 IA: I first met Sandy Gross only about a year ago, and liked him right away. He's an aesthete: a connoisseur of world art, diverse music, fine wines, exotic beauty. These traits have given him the ability to connect the dots between the ancient and the modern as well as between the quotidian and the sublime. Gross's wide-ranging connoisseurship has allowed him to study high-level art and still get his hands dirty designing speak-

Sandy Gross is an aesthete: a connoisseur of world art, diverse music, fine wines, exotic beauty.

ers and starting one successful audio business after another. (GoldenEar Technology was preceded by Polk Audio and Definitive Technology.) When I grasped this, I guessed that it was Gross's discriminating taste and worldliness that had made the Triton Five exactly what it is; when he told me he'd used a Line Magnetic LM-219IA as his reference integrated amplifier while voicing the Five, I felt certain that guess was correct.

For the record: The LM-219IA is a more deluxe version of my own reference integrated, the LM-518IA (\$4450), which I reviewed in the October issue. During my listening, the single-ended, 845-tube LM-518IA had driven the Triton Fives with extraordinary precision, charm, and grace. The trump cards of this combination were more saturated

measurements, continued

measured in the nearfield and their outputs were scaled in the ratio of the square roots of the total radiating areas. The slight notch at 35Hz in the woofers' response suggests that the passive radiators are tuned to that frequency, though their output actually covers a wider bandpass than the norm for a reflex design. The black trace below 300Hz is the complex sum of the outputs of the woofers and radiators; as expected, it is down by 6dB at the radiator tuning frequency.

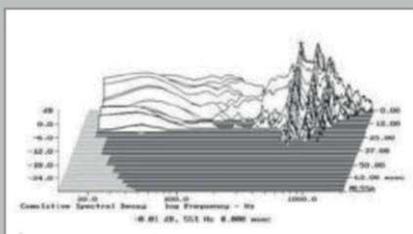


Fig.2 GoldenEar Triton Five, cumulative spectral-decay plot calculated from output of accelerometer fastened to center of rear panel behind tweeter (MLS driving voltage to speaker, 7.55V; measurement bandwidth, 2kHz).

The black trace above 300Hz in fig.3 shows the Triton Five's farfield frequency response on the tweeter axis, averaged across a 30° horizontal window. Though some small peaks and dips can be seen, the response is impressively flat from the lower midrange through to the beginning of the top octave. The broad peak between 1 and

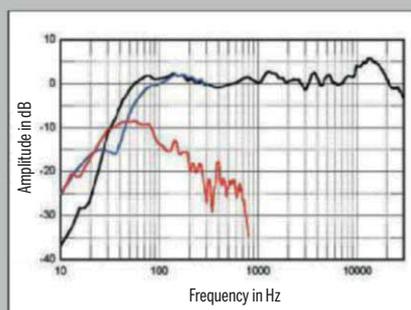


Fig.3 GoldenEar Triton Five, anechoic response on tweeter axis at 50", averaged across 30° horizontal window and corrected for microphone response, with: nearfield responses of woofers (blue), passive radiators (red), and their complex sum (black), respectively plotted below 300Hz, 800Hz, and 300Hz.

2kHz might make the speaker sound a touch forward, but I note that HR actually found the speaker's overall balance neutral. The excess of energy in the top octave actually compensates for the folded-ribbon tweeter's lack of output off axis in this region, as can be seen in fig.4. Other than a slight flare at the bottom of the tweeter's passband—the corresponding slight lack of energy at the top of the woofers' passband might correlate with HR commenting that some singers sounded "ghostly, and

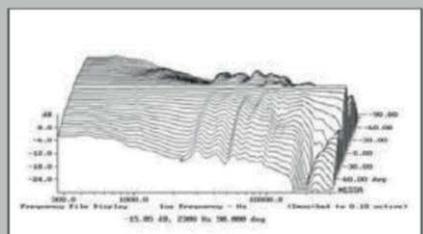


Fig.4 GoldenEar Triton Five, lateral response family at 50", normalized to response on tweeter axis, from back to front: differences in response 90–5° off axis, reference response, differences in response 5–90° off axis.

instrumental and vocal colors. These speakers liked the fiery kiln of a tube amp behind them—even if it was only 22W.

This was the beguiling amp-speaker combo that spurred my rediscovery of Moondog (Louis Thomas Hardin, 1916–1999). Moondog’s Neolithic rhythms, Arapaho Sun Dance beats, homemade drums, 25-string harps, swing-bop saxophones, seven-stringed zithers, homemade keyboards, metal cans, traffic sounds, chanting, and singing propelled me daily through this review process. (*Be a hobo and go with me / from Hoboken to the sea.*) Before he left New York, in 1973, Moondog performed regularly on the sidewalks of Sixth Avenue, near 53rd Street, close to Carnegie Hall. His compositions inspired John Cage and Charlie Parker. Charles Mingus touted him as an innovator; minimalist composers Philip Glass and Steve Reich recorded with him. He shared the stage with Ravi Shankar and William Burroughs. Arturo Toscanini championed him.

The Viking of Sixth Avenue defined my experience with the Triton Fives. They showed me everything, letting me sense Moondog’s considerable height and unique energy. They showed me his spirit. His instruments seemed tangible and real—positioned right there on the concrete in front of me. The Triton Five was a perfect match with the Line Magnetic 845-based amps.

WITH THE VINNIE ROSSI LIO: Vinnie Rossi’s 25Wpc LIO integrated (\$7750 as reviewed in *Stereophile’s* September, 2015 issue²) is one of the most grainless, pure-sounding amplifiers I have heard. Driving the GoldenEar Triton Fives, it created a modestly priced system capable of elite audiophile sound. Crystalline images sat in real acoustic spaces. Vocal and instrumental timbres were exact and attention grabbing. I got lost in Yehudi Menuhin’s recording, as violin soloist and conductor of the Robert Masters Chamber Orchestra,

of J.S. Bach’s Violin Concertos 1 and 2 and the Double Concerto (with Christian Ferras) (LP, Seraphim S-60258). This recording sounded so natural and beautiful it drew me in uncontrollably, like a riptide of Protestant ethos. A very recommendable combination.

WITH THE PARASOUND HALO INTEGRATED: Easygoing low distortion meets easygoing low distortion. Strangely, with the Parasound Halo Integrated (160Wpc into 8 ohms, reviewed in November), the GoldenEar Triton Fives went all shy and soft and excessively mannered. I like more kicking, biting, and dish-throwing in my music, but this combo’s personality was more “Yes, dear; whatever you say, dear . . .”

This same Halo Integrated had driven the Magnepan .7 speakers with more swing and sway than any amp I could find other than the Pass Labs XA100.5s; in contrast, with the Triton Fives, the Halo Integrated played competently and enjoyably, but didn’t open my chest or stimulate my heart, as had the Line Magnetic or Vinnie Rossi amps.

“Sweet kisses I missed”

If I told you that the GoldenEar Triton Fives sounded so balanced and natural that they effectively reproduced existential rock ennui, would you think I was spouting crazy talk or would you give me a chance to explain? Well then, let me plead the case for you to find and listen to Buddy Holly’s noirish cover of Bo Diddley’s “Love Is Strange” (7” 45rpm, Coral 62558).

With the Triton Fives powered by Simaudio’s Moon Neo 340i integrated (\$5400; review *still* in process), this iconic song escaped its 1950s suburban normality and slipped into a surprisingly 21st-century poetic netherworld. The

² See www.stereophile.com/content/vinnie-rossi-lio-modular-integrated-amplifier.

measurements, continued

(strangely) more generalized” than the DeVore O/93—this graph reveals that, below the top octave, the Triton Five has wide, even dispersion.

In the vertical plane (fig.5), the GoldenEar’s output suffers from a broad suckout in the crossover region more than 10° above the tweeter axis, which is 36” above the floor. (A survey performed in the 1990s by *Stereophile* contributor Thomas J. Norton found that 36” is the height of the ears of the average listener sitting in an average

chair—not a so-called director’s chair, whose seats tend to be significantly higher.)

Turning to the time domain, the Triton Five’s step response on the tweeter axis (fig.6) suggests that the tweeter is connected in inverted polarity, the woofers in positive polarity. However, as the decay of the tweeter’s step doesn’t quite blend with the start of the woofers’ step, this driver’s acoustic center appears to be a little too forward

compared with that of the woofers. Still, fig.3 indicates that the frequency response in the crossover region is well managed. Finally, although the GoldenEar’s cumulative spectral-decay plot (fig.7) reveals the presence of some low-level delayed energy in the low and mid-treble, this graph demonstrates an impressively clean initial decay overall.

GoldenEar’s Triton Five Tower appears to be another well-engineered loudspeaker from Messrs. Gross and Johnston, offering excellent measured performance at an affordable price.

— John Atkinson

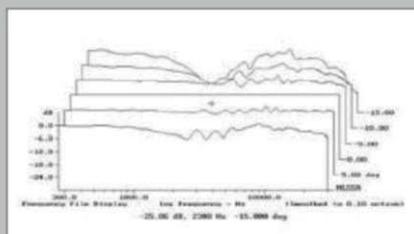


Fig.5 GoldenEar Triton Five, vertical response family at 50°, normalized to response on tweeter axis, from back to front: differences in response 15–5° above axis, reference response, differences in response 5–10° below axis.

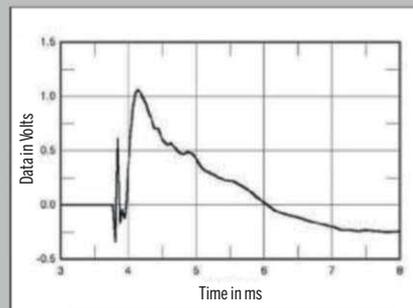


Fig.6 GoldenEar Triton Five, step response on tweeter axis at 50° (5ms time window, 30kHz bandwidth).

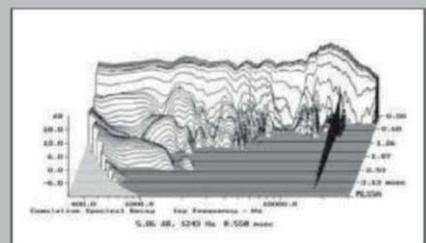


Fig.7 GoldenEar Triton Five, cumulative spectral-decay plot on tweeter axis at 50° (0.15ms risetime).

Simaudio added at least 30% to the size of the soundstage, solidified image boundaries, and added presence and mature authority to the teen idol and his band. The Triton Fives plus Neo 340i turned sock-hop Holly into Lou Reed. I had never before experienced a 7" 45rpm single produce so much transparent air and space. The Triton Five–Neo 340i pairing burned the melody and bleak mood of “Love Is Strange” into my head. More than any of the other combinations, this one reproduced musical instruments and voices at their own natural sizes.

The Triton Fives seemed to like the Neo’s 125W, so I played the lyrical, bass-driven *Cou\$ins Presents . . . A Tribute 2 Studio One & Treasure Isle Records* (LP, Cou\$ins COU-DLP037). What ensued was pure, ganja-fueled early Rastafarianism. The bass bounced and flowed as it framed these rocksteady ballads in a just-right manner. I have always argued that listening to music in the home should make me dance and transport me to faraway places—and that is what the Triton Fives did. Their pacing and forward momentum made my hips sway. I dreamed of giant spliffs, overproof rum, grinding voodoo sorceresses. The Moon Neo 340i produced from the Triton Fives more physical presence and fleshy rhythm than any of the other amps, and pushed more microdetail out of those HVFR tweeters—which, I suspect, is what made the bass attacks, tone decays, and sweaty mid-range textures more pronounced.

This combination parlayed a very clean, hyperdetailed, audiophile sound into a surprisingly satisfying tropical-night experience. My only criticism of the sound of the GoldenEar Triton Fives as handled by the Moon Neo 340i was that it was maybe a little bit *too* refined for these slinky Studio One dancehall melodies.

In comparison to . . .

When I review audio gear, I’ve found that it’s always wise to finish by returning to where I started.

I put the GoldenEars and Simaudio aside, and returned to my reference Line Magnetic LM-518IA and trusty DeVore Fidelity Orangutan O/93s (\$8400/pair, reviewed by Sam Tellig in March 2013). Playing the Cou\$ins Records compilation, I felt I was listening via Studio One’s paper-coned monitor speakers. I was immediately struck by how much raw *Jamaicanness* appeared in my room. Wooden drumsticks slapping snare rims sounded distinctly more real and tangible. Electric-bass harmonics were more fully developed and corporeal. Offbeat rhythms and staccato chords volleyed for my attention. Percussion harmonics became suddenly *visible*.

That switch to the four-times-as-expensive DeVores put the Triton Fives in broader perspective. The Orangutan O/93s delivered a martial prowess and an extra-drunk dancing quality that the GoldenEars didn’t. With the DeVores, there was more flesh and blood. I played *King Arthur*, by Henry Purcell, that prodigy of London’s Old Pye Street and Devil’s Acre, as recorded in 1979 by Alfred Deller and the Deller Consort (LP Harmonia Mundi HMC E200). This



GoldenEar’s High-Velocity Folded Ribbon tweeter is a variant on the Heil AMT.

The GoldenEar Triton Fives played enjoyably but very differently with every amp I tried, and that is good.

work, based on the poem by John Dryden, is neither opera nor play but one of those charming hybrids (semi-operas?) that Purcell and Deller seemed to specialize in, and features kicking horses and ritual sacrifices by the Saxon army. The Purcell was 100% enjoyable via both pairs of speakers, but the DeVores brought something extra—something more corporeal—to the

presentation. The GoldenEars generated a big, open, fully constituted London-theatre space, filled with nicely articulated musicians and singers. But compared to the DeVores, the Triton Fives made Deller and his performers seem ghostly, and (strangely) more generalized.

Unless there’s a dip at 1–2kHz in the Triton Five’s frequency response, what I was hearing was probably not something John Atkinson can measure. The Triton Five’s tonal character was conspicuously well balanced and authentic, entirely smooth and easy flowing, and the bass was admirably detailed and extended. Inarguably, the GoldenEar Triton Fives imaged better than the DeVore Orangutans, but they lacked a measure of the O/93s’ punch, texture, and raw *drive*. Compared to the DeVores, the Tritons sounded a bit dark. The GoldenEars did audiophile-checklist stuff with unquestionable aplomb; the DeVores did dirt, dreads, colored lights on wires, and Red Stripe Jamaican Lager with greater realism. But again, the DeVores cost more than four times as much as the GoldenEars.

Conclusions

Have I elucidated the sound quality of GoldenEar Technology’s Triton Five? Not really? Well . . . for those of you who didn’t read between the lines, let me make one point above all others: No amplifier or loudspeaker makes music all by itself. There’s no such thing as a universally good-sounding amp or speaker. There are only marriages of amps and speakers of widely varying compatibilities. The GoldenEar Triton Fives played enjoyably but very differently with every amp I tried, and that is good. At their best, they were musically transcendent—they loved Bach, Bruckner, Thelonious Monk, and Moondog. At their worst, they sounded beautiful but kind of soft and accommodating. When someone says such-and-such speaker sounded too dull or too bright or too analytical, ask: “What amp was driving them?” If the speaker was well engineered, as the Triton Five appears to be, it was probably the *combination* of amp and speaker they were describing. But sometimes, the cause is simply the tweeter.

Ever since 1982, when Celestion introduced the SL-6 loudspeaker with its copper-dome tweeter, metal-dome tweeters have dazzled audiophiles with their faux clarity and

high-definition effects. But when (*ca* 2005?) the patents ran out on Dr. Heil's Air Motion Transformer, a whole slew of inspired speaker-makers were quickly up and running with their own variations, more than happy to adopt the AMT's smoother, more softly detailed elegance. Sandy Gross has made the AMT technology the *axis mundi* of his GoldenEar line. In fact, GoldenEar's HVFR tweeter may be the most important ingredient in the Triton Five's overall sound character. It may be what makes the Five sound so velvety and delectable—and it's surely what makes the Five throw such enormous soundstages. I feel the GoldenEar's HVFR is everything feminine and sexy that, say, some beryllium tweeters are not.

And I suspect that the HVFR's precisely dimensioned shape and wide dispersion in the horizontal axis is part of the reason the Triton Five's D'Appolito driver array works so well. I'm 90% certain that the "GoldenEar Triton sound" I mentioned at the beginning is a result of the skillful implementation of the AMT technology by GoldenEar's chief engineer, Bob Johnston. But likewise, the most consistent sound character I heard from the Triton Five was a modicum of contrast reduction and a slight lack of punch and sparkle, which could also be tweeter related.

In the end, I believe the biggest differences among combinations of amps and speakers always come down to which pairings drag the most feeling, beauty, and artistry from a recording. Some pairings *sound* really good but play music indifferently—while other amp-speaker combos will tear your heart out, make you cry, and give you goose bumps. The GoldenEar Technology Triton Five is a modestly priced audiophile speaker that can either be extremely compelling

ASSOCIATED EQUIPMENT

Analog Sources Acoustic Signature Wow XL turntable, TA-1000 tonearm, Ortofon 2M Black cartridge; VPI Scout Jr. turntable & tonearm, Ortofon 2M Red cartridge; Technics SL1200MK2 turntable, SME M2-9 tonearm, Soundsmith Carmen cartridge.

Digital Sources Burson Audio Virtuoso Conductor DAC-headphone amplifier, Line Magnetic LM-502 CA DAC.

Preamplification Blue Horizon Ideas Profono, Schiit Audio Mani, Soundsmith MMP3 phono stages.

Integrated Amplifiers Line Magnetic LM-518 IA, Parason Halo Integrated, Simaudio Moon Neo 340i, Vinnie Rossi LIO.

Loudspeakers DeVore Fidelity Orangutan O/93, Falcon Acoustics LS3/5a, Magnepan .7.

Cables Interconnect: AudioQuest Cinnamon, Big Sur, Golden Gate; Auditorium 23; Kimber Kable Silver Streak. Speaker: AudioQuest Type 4, Auditorium 23, Kimber Kable 8TC.

Accessories Sound Anchor stands, Dr. Feickert Analogue Protractor & Adjust+ cartridge-setup tools. —Herb Reichert

or slightly indifferent, depending on the choice of amplifier or music. Most important, at \$1998.98, a pair of Triton Fives could be worth several times that price—especially if you take care to audition them with a range of amplifiers. Recommended, particularly for lovers of jazz, classical, and avant-garde music. ■