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**GoldenEar Technology**

**Triton Three+ Floorstanding Speaker**

One speaker to rule them all, Review By Steven R. Rochlin



There's no way to start my review of the GoldenEar Technology Triton Three+ loudspeaker without a bit of background about Sandy Gross, Founder and President of the company. Sandy has been a loudspeaker designer for decades and his successes includes co-founding Polk Audio, and later co-founding the highly successful Definitive Technology brand. Many years ago, while working at a high-end audio store, I sold Definitive Technology speakers along with Klipsch, KEF, Apogee and others. Bringing beauty and style with a great sound at reasonable pricing was a strength of Definitive Technology loudspeakers. Sandy Goss eventually sold Definitive Technology years ago and he had every right to retire into the sunset knowing his legacy would be secured as an impressive loudspeaker designer who could also produce successful market products. Fortunately for us music lovers, Sandy decided on building his next Act in the Play of Life. This is where we arrive at GoldenEar Technology.

Sandy's passion for music and technology is akin to my own personal love for race cars, or perhaps fine Swiss mechanical timepieces. There's always room for another one, or a way to tweak what you have in some way. Yes I had a Ferrari yet poured equally as much 'value' into modifications to keep her on the track approximately 60

days a year. Sandy is perhaps no different in a sense as he'll start with a basic loudspeaker design within his head and as the design evolves, it becomes far more than first envisioned. During discussions with Sandy at a recent show, I was praising him on the use of the modern High-Velocity Folded Ribbon tweeter. Sandy confided in me that using this driver was one of the prerequisites of the Triton line of loudspeakers. Of course a complete design is not just grabbing some individual parts from a shelf, it is in taking advantage in design expertise, high parts quality, and then fine-tuning my ear and the best gear you can access to so that the sum of the parts work in harmony to produce a grander achievement. GoldenEar Technology also takes advantage of a highly specialized anechoic chamber! More on that later.

#### **Not Just Another Me-Too Design**

GoldenEar Technology's Triton Series Towers are not just another me-too design. This very specialized tweeter is mated with a cone midrange above, yet an oval-shaped active subwoofer/bass unit below. The slender cabinet ensures low reflections and reduces time-smearing of the drivers. For deep bass to support these three drivers we have a set of inertially balanced passive radiators on the sides of the cabinet. Got that? Ok, let me break it down for you a bit more. On the lower sides of the slender-yet-deep cabinet are two 6.75" x 8" quadratic planar infrasonic radiators. On the front of the cabinet just below the tweeter is an active upper-bass / subwoofer driver. At the topmost is a 4.5" high-definition cone midrange driver. Right at ears level, where tweeter belongs imho, is the High-Velocity

Folded Ribbon (HVFR) unit. If you think about it, the only 'normal' cone driver within the Triton Three+ is the cone midrange, as all the others are of the oval or ribbon variety. So obviously this is no ordinary design!



But wait, there's more! Sandy Gross and his design team did not stop there as the woofer/subwoofer drivers are powered by a 800 watt ForceField amplifier, one per cabinet. This allows the GoldenEar Triton Three+ to have an easy-to-drive 90dB/W/m sensitivity and a *nominal* 8 Ohm load for your chosen amplifier or home theater receiver. These speakers can easily be driven with a small 25 Watt per channel amplifier, yet go ahead and juice it up to 50 or 100 Watts and you room, plus surrounding walls, better be ready for some good vibrations. The subwoofer amplifier's built-in 48-bit DSP design yields an extremely linear and low distortion response, plus ensures the drivers are dynamically controlled for optimum performance. On the rear of the speaker cabinet are very high quality gold-plated loudspeaker binding posts, bass output control, plus an RCA input if you want to use a special subwoofer output from your home theater receiver or preamplifier. A detachable, and supplied, IEC chord on the rear panel is for feeding power to send power to the subwoofer amplifier.

#### Getting Back To The Cabinet Design

As for why the slender front, yet deep side panels on the Triton Three+? It is long known that the front wave of a driver can reflect off the front panel of a loudspeaker cabinet. This causes undesirable time-smearing of said driver's output. GoldenEar Technology's solution is to mount the largest drivers on the side of the cabinet so that the front panel can be as slender as possible. This also means care needs to be taken for room placement as

the output of the bass/subwoofer drivers interact if there is a wall nearby.

Personally, I'd like to focus more on the High-Velocity Folded Ribbon (HVFR) tweeters as this design has been my fave for years. Within my digital audio workstation, this tweeter design replaces my fave silk-sift dome year ago, which by-the-by was also Sandy's choice for the Definitive Technology brand of speakers. The new HVFR tweeter, to quote GoldenEar Technology's website, "propagates sound waves and moves the air by squeezing it with its accordion-like pleated diaphragm, rather than pushing it as conventional drivers do. Greater efficiency, lower distortion, improved dynamics and superbly detailed sound are the result of this amazing technology". Designers at the company chose to place this special tweeter at ear level, which seems to always be the very best placement in my decades of reviewing speakers. So now we know the placement of the drivers, yet making them all work together seamless is not an easy task.

GoldenEar Technology works hand-in-hand with their Canadian engineering facility utilizing a full-size anechoic chamber, which is *an exact duplicate* of the famous chamber at the N.R.C. in Ottawa. For those unfamiliar, an anechoic chamber is beneficial for loudspeakers designers as it is a room that is non-reflective, non-echoing (echo-free). This provides a way to measure and hear the output of a

loudspeaker design as the absorptive material generally eliminated sound reflections that can color the sound. These rooms are also very quiet so there are no unwanted outside noise to disturb the purity of the speakers output.



Oh, and while you'd think all the above means the GoldenEar Technology Triton Three+ costs upwards of \$5000 each, how does \$1249 per unit sound to you? Sounds good to me too! Then again after years of knowing Sandy and his products, they have always been in the extremely high value for the Dollar, Yen, Euro, Pound Sterling... variety. So yes, for \$2498 you get a pair of good-sized floorstanding speakers with powered bass drivers in a visual styling that will easily look the part in even the finest of decors. And before I forget to mention, all Triton Towers are finished with a stylish yet subdued black designer cloth and lovely piano-black base and top cap. The speakers also come with hardware for floor spikes so they will work optimally with hard flooring and/or carpet. The review system consisted of my NAS drive running my proprietary DAC into the Rogue Audio Cronus Magnum II 90 watt per channel vacuum tube integrated amplifier (\$2500). Was hoping to get my review of the Rogue Audio unit completed within this month's edition of Enjoy the Music.com's Review Magazine, yet time simply ran out due to covering AXPONA and HIGH END shows plus the usual workload. So look

for my review within the July issue. As a quickie for those curious, am very much loving this KT120-based unit and she is powerful! Truly great sound for such an extremely reasonable price too! More on the Rogue Audio Cronus Magnum II within my full review next month.

### The Terrific Triton Three+



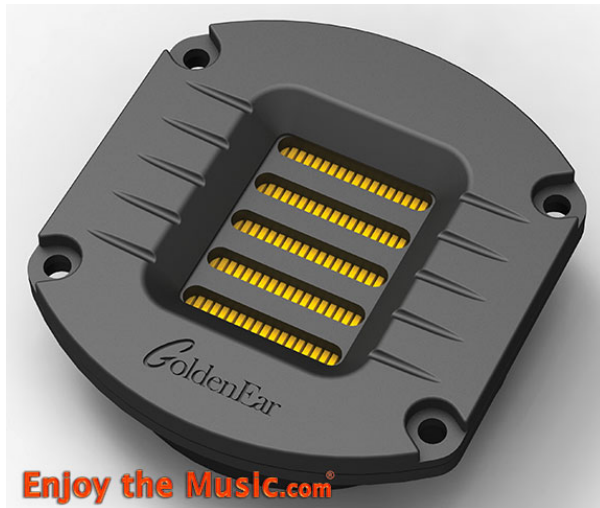
Sandy Gross' speakers I have heard over the many years have a 'family' trait. Smooth highs that are never offensive, clear midrange and excellent midbass. The GoldenEar Technology Triton Three+ of course adds an abundance of deep bass. In fact the deep bass my wife loves so much, the Triton Three+ could produce more than she 'wanted', so upon tuning the bass output volume level I set it accordingly so it was enough for me and just enough for her. For the record, she seems to enjoy about 1.5dB more than I do within the frequencies below 80Hz. Well, I did marry far below my own age and so as expected, well... these young kids and their pop music with super deep, throbbing bass notes and all that. But let's start at the bass and move up the frequency spectrum. Deep bass? Oh my,

there is plenty of it for your choosing! Armed with a 48-bit DSP plus powerful 800 Watt ForceField amplifier and specially-designed drivers what did you expect? It was perhaps not the tightest bass I have ever heard, yet far more tight and tuneful at low, medium, and especially high output than you'd expect from a floorstanding speaker costing \$1249. When pushed hard it never became oversaturated and mushy. Considering the size of the 'room' being 16' x 20' with 8' ceiling within a fairly open-air



layout behind and around it (total 'room' is about 26' x 16', with hallways and whatnot extending the 16' area further plus an opening to go downstairs so there is a massive amount of 'air to load' where, frankly, virtually nothing could overload this area in the bass department. Moving up the frequency spectrum, and with normal deep bass at sane levels, everyone within our home was rewarded with very tuneful bass that did not overstay its welcome. One of the keys here is careful attention paid to loudspeaker placement. Be sure you experiment with moving them closer and further away from walls until you find what works best within your listening room. Depending on the listener, remember what I said about my wife (let alone her 15 year young daughter), the bass was perfectly mated in output to the upper frequencies. When turning up the bass control on the rear of the speaker, it could become very powerful and dominating. This is one of the great benefits of self-powered lower frequency design, as some listeners might prefer more bass than others (read: my wife and 15 year old daughter). Furthermore, you can very easily tune the bass output to your room and so overall, deep bass support for pipe organ, acoustic jazz, 2Pac, Drake, Ariana Grande or Nickelback was easily accommodated.

Midbass, one of Sandy Gross' specialties, was excellent! This gave a natural fullness to all genres of music from acoustic to 90's to, yes, Drake (does Drake's music even have much upper midbass? I guess so). Acoustic guitar has nice warmth and body, Geddy Lee's bass during another one of my Rush-fests was fast-n-furious, and of course symphonic and acoustic jazz was perhaps a touch warm in a very enjoyable manner.



Oh that glorious tweeter, how do I love thee? Let me count the ways. GoldenEar Technology's HVFR (folded ribbon driver) is glorious. Very fast, clean, and richly extended highs is your reward. Even Drake's music sounded good(!). Ok, that might be stretching it for my personal preferences in music, yet what I mean is that everything from Kraftwerk to orchestral bells/chimes and the grinding guitar of Steve Vai came through without the dreaded harsh irritants I tend to associate with hard-dome tweeters or lackluster speaker designs. When I say fast, I mean super duper fast come-and-go with nothing overhanging type of highs.

### Sum Of The Parts

Ok, so you just read about the individual frequencies and some music impressions, yet you could have the best ingredients and put them together and come up with a lousy meal as it were. With the GoldenEar Technology Triton Three+ you get a wonderfully rounded meal. The sum of the parts make for a great 'whole' experience. Obviously there is some magic happening between the powered low frequencies and their DSP with the crossover section of the upper frequency drivers ensuring everything is delivered properly to each driver. Whatever it is, my ears sure do like it a lot! Dare I say this, if you've read other magazine reviews of the GoldenEar Technology Triton series you'll read time and again how their earning awards and accolades worldwide. Sandy Gross and his R&D design team truly have found a great formula that more than just works. It teamwork of all parts working together form a strong relationship to ensure the end result is success. So can this design also boogie and deliver that toe-tapping experience that seems to beg you to get up and dance?

### Imaging, PRAT And That Other Stuff

Imaging is excellent, as the soundfield is more than just between the speakers. GoldenEar Technology's Triton Three+ produces a wide and deep soundfield that also extends a bit into the room in front of the cabinet's location. During such 3D audio trickery as Q Sound (Madonna and Roger Waters to name two) plus other psychoacoustic-encoded music the room lit up aurally. During Heather's 15 year old enjoying gameplay via the latest Xbox there is quite a bit of such audio encoding, which greatly helps you hear things all around you including cars passing by during my fave racing games or, yes, things to eliminate during FPS titles. The Triton Three+ are far more than just

audiophile speakers, as they are excellent for home theater, your game room, etc. As for bass timing, as said earlier you need to take a bit of extra care in loudspeaker positioning within your room to achieve the best results. Once you have the bass properly integrated within your room, Sandy, rightly, suggested a bit of front cabinet toe-in towards the listener and I wholly agree that many loudspeakers sound best this way provided you also have them positioned correctly in distance from the listening position. Within our room, the cabinets were about two feet from the sidewalls and three feet from the rear wall. Typical 60 degree angle / triangle from the listening position, so very normal stuff here. This gave the bass the right timing and oomph with balance to the front cabinet mounted midbass and other drivers. One thing I will say is that even my tiny little 25 Watt per channel solid-state unit drove the Triton Three+ to a good output level, yet was a bit limited if you really wanted to crank things up to 11. The Rogue Audio Cronus Magnum II 90 watt per channel vacuum tube integrated amplifier had no problem achieving far more volume output than I could ever see being needed, yet perhaps just right in that there was plenty of headroom to ensure clean output during all listening sessions. Yes, even Drake at, well, the kind of output levels you'd expect a 15 year old to crank things up to while listen to music and dance around the room... as kids do when they're really happy in life. She does this quite a bit by the way and far be it for me to ask others to turn the music down.

### One Hellofva Speaker

GoldenEar Technology's Triton Three+ floorstanding speaker with 48-bit DSP and powered bass is one hell of an amazing package for only \$1249 each. While my only hardcore complaint would be the challenge in positioning to achieve the very best deep bass and in keeping it tight, everything from around 60Hz on up is far more impressive than I felt possible within the price range. Dare I say this, at 160Hz on up the Triton Three+ is right up there with some far higher 'reference' loudspeaker designs that will set you back a small fortune. Imagining is outstanding and the Three+ easily works for audiophiles, home theater enthusiasts and video gamers. Just like the Founder and President of GoldenEar Technology, Sandy Gross, the Triton Three+ floorstanding speakers are no one trick pony.

With elegant visual styling that works within even the best decors, sound quality that is by far an overachiever within its class, and plenty of deep bass for pop music and home theater, the Triton Three+ is a real winning package. Bravo to everyone at GoldenEar Technology for producing one of the industry's best bargains within DSP-enables powered bass floorstanding speaker design. Being one of the smaller models in the Triton range, I can only image what one of the upper line and top models has to offer. At \$1249 each, the GoldenEar Triton Three+ is enthusiastically recommended for audiophiles, home theater enthusiasts and gamers alike.

