

The Audio Beat



Shunyata Research Denali 6000S, 6000T and 2000T Power Conditioners

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Scottish percussionist Evelyn Glennie is a stunning performer. The Grammy-award winning musician has played in dozens of orchestras and collaborated with the likes of Bjork, Bela Fleck and Leonard Slatkin. She also happens to be deaf. How can she make such beautiful music, especially with musicians who would be lost without their own auditory faculties? It shouldn't be possible, but Glennie does it, playing in bare feet so that she can do what she calls "hearing with all parts of my body." In Glennie's TEDtalk, "How to Truly Listen," she

takes up her drumsticks and vividly demonstrates the difference between merely playing the notes *accurately* and playing them with emotional force and intuitive interpretation. Both of the versions she plays are true to what's on the composer's sheet, but only one raises the hairs on the back of your neck. How do you precisely measure hair raising and its causes? You can't. But that doesn't make the magical moments Glennie creates any less real.

Great performers like Glennie will tell you that even the tiniest noise can rob music of its magic. Consider how you feel when something like an air-conditioning system shuts off or the crowd quiets down during a performance. While you were certainly able to hear the music prior to that moment, the reduction of noise immediately causes your body to relax and your mind becomes more able to appreciate the entirety of what's reaching your senses. Silence is the musician's canvas. The purer it is, the more powerful the notes become.

I've been pondering the idea of the silence between musical notes ever since the latest power conditioners from Shunyata Research arrived on my back porch. Shunyata has christened them the Denali line and they utilize three main noise-reduction technologies. One of the two previous Shunyata power-conditioner owners will recognize: the noise isolation chamber or NIC. The Denalis contain second-generation patented NICs that are drastically smaller and more efficient than previous iterations. Essentially, the NIC utilizes ferroelectric substances to passively reduce high-frequency power-line interference in the megahertz and gigahertz range.

Another familiar Shunyata innovation is the Component-to-Component Interference (CCI) filter. According to Shunyata founder and chief engineer Caelin Gabriel, the CCI filter is "what absorbs noise from one component, preventing it from contaminating another component that happens to be connected to the same power conditioner or the same power line." These filters are also part of Shunyata's Triton line, but the CCI architecture used in the Denali incorporates advancements that resulted from Shunyata's latest venture: medical-grade power conditioners for applications such as electrophysiology, a development [TAB's Roy Gregory](#) covered. These units are currently installed in more than a dozen medical facilities in the US and abroad, where electrophysiologists use them to see diagnostic images with what they have termed "unprecedented clarity."

Want measurements? The new CCIs reduce interference levels by 60dB from 500kHz to 10MHz. Additionally, Gabriel uses an Entech Noise Analyzer to demonstrate how power-line noise at the outlet is reduced by a factor of 1000 by merely plugging a Denali power conditioner into any one of the adjacent outlets. At this point, those who want to discuss further whether these power conditioners actually "do something" should now retire to the epistemology section of their local library, where all manner of fun can be had.

The most intriguing technology appearing in the Denalis is brand new. Each conditioner contains what are called QR/BBs and, according to Gabriel, these devices improve component dynamics, particularly with respect to high-current devices like power amplifiers. This is a bold claim considering that the conventional wisdom has long been that amplifiers *always* sound best when connected directly to the outlet. When I asked Gabriel about the QR/BBs, he explained that the devices work as reservoirs or ballasts for current. The traditional approach to current storage would be to use coils, capacitors or chokes. But after ten years of research and development, Gabriel says he's created a better mouse trap that actually enables amplifiers to perform "at their peak, without any compression, without any drop in timing and actually improves the performance of amplifiers in a dramatic way." The promise of a better current-storage mechanism has understandably sparked the interest of other manufacturers, and Shunyata is working with a variety of companies that are interested in using the patent-pending QR/BBs in their products.

All of this redesign makes for a device that is smaller and dramatically lighter when compared to Shunyata's flagship conditioning systems of the past decade. For example, the Triton v2/Typhon combo weighed in at 84 pounds. By contrast, the pyramid-shaped Denali 6000/T and 2000/T tip the scale at just a hair over 23 pounds and 17 pounds, respectively. The rack-mountable 6000/S slides in at just over 12 pounds. Those familiar with what goes into designing audio equipment will recognize that shedding half of a component's heft without reducing performance is no small feat.

The 6000/T and 2000/T are equipped with large stainless-steel vibration-control feet that allow the conditioners to be placed directly on the floor. Additionally, all of the Denalis are chocked-full of improved custom isolation and constrained-layer-damping material that further reduces their susceptibility to deleterious vibrations. In a video on Shunyata's website, an accelerometer is used to demonstrate that the material's effectiveness is measurable.

While the Denalis' redesign makes them a great deal easier to maneuver and position than the previous flagships, there's one more tweak that not only improves installation but also enhances sound. Anyone who's ever tried to keep heavy aftermarket power cords fully plugged into a power conditioner has fallen back on the "good enough" standard, leaving the unwieldy fire hoses sagging in several directions, because, well, whaddya gonna do? Shunyata has solved this problem in the Denali line by designing rigid cradling supports for each outlet that keep all cords firmly connected and ensure that these connections do not degrade over time. In my experience, tighter electrical contacts always improve an audio system's clarity and dynamics. If you're skeptical, try this: have an electrician tighten the connections of all the breakers in your mains box. Then go listen to your system.

Finally, Shunyata is introducing a unique technology in the Denali line called the Kinetic Phase Inversion Process, or KPIP. Gabriel says the KPIP technology is one of the most important developments in the company's history because it eliminates what he calls "the terrible problem of break-in time" and produces performance gains that exceed those achieved by the company's previous cryogenic process. As a longtime user of previous Shunyata products, I can attest to lengthy break-in times that easily matched those exhibited by amplifiers containing Teflon capacitors. My listening sessions confirm that the Denali conditioners are at 99% of their peak performance immediately upon installation. This absence of break-in time made auditioning and comparing the Denalis significantly easier than any other audio component I've ever reviewed. Gabriel is so confident in the audible results of KPIP that Shunyata is selling off its expensive cryogenic equipment and plans to treat all future products with the new technology.

So, is this alphabet soup of inventions and innovations anything more than marketing hype? Based upon my experience with Shunyata conditioners reaching back to its Hydra 4 in the early 2000s, the company's upgrades are always substantial. After several conversations and interviews with Gabriel over the years, I always get the sense that he's a restless inventor with a strong competitive streak. It was just three years ago that the company unveiled its flagship power conditioning system, the Triton/Typhon combo. Two years later, Shunyata released the Triton v2, and I agree with my colleague Tim Aucremann's view that both [the Triton/Typhon system](#) and [the Triton v2](#) were serious steps up from previous Shunyata conditioners. Tim's vivid descriptions of what the Triton v2/Typhon system can do provide some idea of why you'll find it being used by mastering engineers at places like Sony Music in Japan and Astoria Studios in the United Kingdom.

Given the nearly \$12,000 price tag of the Triton v2/Typhon statement system, I was more than a bit surprised to see the prices of the Denali 6000/T and 6000/S come in at \$4995 and \$3995, respectively. If you add the \$3495 2000/T for stand-alone amplifiers, a Denali system is still 40% cheaper than the Triton v2/Typhon combo. While the 6000/S and 6000/T do have

two fewer outlets compared to the Triton v2, on paper they deliver everything the Triton and Typhon offer plus the host of new technical innovations I've already discussed. Could a high-end-audio manufacturer actually make a better product while cutting its price in half? I live in the Show Me State and come from a long line of tire-kicking skeptics who live by the motto, so it was time to taste and compare the pudding myself.

Unlike the Triton v2 and Typhon combo that came before it, the no-burn-in-necessary 6000/T is a single-box device you can assess the minute you hook it up. Accordingly, with my front-end components plugged in, I *immediately* noticed increased presence and improved pacing. On "I'm On Your Side" from Bonnie Raitt's *Fundamental* CD [Capitol/EMI Records 8563972], the bass and drum work never sounded as utterly *funky* as it did with the 6000/T in place. The texture and tone of the song's melodic, reggae-tinged bass lines worked in perfect tandem with the boom and bluster of the driving kick drum. Even with all that bump and grind going on, the Denali's reduction of noise enabled me to hear so deeply into the recording that I noticed the trailing of every single note and even the subtle, post-strike vibrations of the drum skins and resonating texture of plucked bass strings. This all added up to something that sounded strikingly like a real, live musical performance.

As shockingly good as the 6000/T is right out of the box, listeners will continue to be rewarded with subtle improvements like increased bloom, smoother highs and more forceful bottom-end weight. I often use Dave Alvin's wonderful *King of California* CD [Hightone/Shout! Records HCD 8054] as a test disc for how organic a component's presentation can be. The 6000/T aced the exam, conveying the deeply rich tones of Alvin's baritone while allowing plenty of room for the rich, wooden resonance of his acoustic guitar fills. The Denali exemplifies what I perceive to be Shunyata's obsessive mission: making music reproduction sound more natural, more engaging and bringing listeners closer to a recording's most essential qualities.

While listening to the Brad Mehldau Trio's new *Blues and Ballads* CD [Nonesuch #7559794650], I was struck by how deep Mehldau's lower register vamps at the beginning of "I Concentrate on You" actually go. It reminded me of a few years ago when I sat ten feet away from him during his performance at St. Louis's acoustically remarkable Jazz at the Bistro. Mehldau prefers a Steinway, and the Denali brought out the unmistakable weight and complexity that a Steinway Grand can produce in the hands of a master. Looking back at my review notes of the new album, I wrote about how elegant and lilting Mehldau's touch was and how delicate Jeff Ballard's cymbal fills were. Whenever I find myself using words like that, I know the component I'm evaluating is truly getting out of the way and letting the music through. Prior to the Denali's arrival, Mehldau's rich tones and phrasing were certainly there with the Triton v2/Typhon combo running the show, but I was not getting as close to the emotional, three-dimensional impact of the musician's performance as I experienced with the Denali in service.

After several weeks of listening to my front-end components through the Denali 6000/T, I unplugged my Conrad-Johnson Premier 350SA amplifier from its dedicated 20-amp line and then routed it through the two-outlet 2000/T, which was connected to that same 20-amp line with a meter-long Shunyata Sigma HC power cord. The Premier 350SA is one of a handful of universally admired, overbuilt amplifiers from the mid-2000s. It's famous for striking a balance between the romance of tubes and the precision of solid state. The idea that a power conditioner could actually improve the Premier 350SA's performance was definitely testing the limits of my credulity. "Never put anything between a good amplifier and the wall but a top-of-the-line power cord," I always used to say. The 2000/T just laughed at my orthodoxy. The moment I turned it on, the Premier 350SA was exhibiting the kind of bottom-end authority and effortless power one associates with the very best monoblocks.

The Thelonious Monk Quartet's live rendition of "Let's Cool One" from the *Misterioso* CD [Sony Music Distribution 4684062] was a revelation after I added the 2000/T. Johnny Griffin's sax solo and the rousing crowd applause put me directly on stage with the band. For a moment, I was standing next to Monk's chair, feeling the blare of Griffin's horn and hearing the crowd erupting with applause and shouts of approval. Roy Haynes' following drum solo was more thrillingly present than I'd ever heard it sound in my listening room.

The word *live* kept repeating itself in my head while auditioning the 2000/T, because it enabled the Premier 350SA to deliver stops, starts and transients with very nearly the same speed as one would experience them in a recording studio or performance venue. If you've ever had the privilege of sitting close to professional musicians as they play, bursts of notes will make you jump and, if the band members are good enough, their tightly syncopated rhythms are infectious. Your feet start tapping because you simply can't help yourself. The 2000/T offered repeated doses of that kind of seduction and excitement. Anyone who wants to supercharge an amplifier's performance should definitely give the 2000/T a spin.

So, what about the rack-mounted 6000/S Denali? It possesses all of the characteristics I've ascribed to the D/6000T and at \$1000 less, those on a budget should not hesitate to choose it *if* they have the rack space. If you're currently running out of room, like I am, the D/6000T's placement flexibility is well worth the extra grand. If pushed, I would concede that I noticed a tad more refinement in the upper register while listening to the D/6000T, but this could well be attributed to the performance differences between its excellent isolation feet and the very average rack where I placed the 6000/S.

Remember that the 6000/S also contains the same technology physicians are using in Shuyata's medical conditioners to improve diagnostic imaging. While I'm not even a doctor on TV, I *am* qualified to describe what happened when I used the 6000/S conditioner in my modest home-theater system, which includes a six-year-old Sony Bravia HDTV. I'd been considering an upgrade to Sony's 4K UHD set, but the saturated colors, vivid detail and crisp definition that appeared on the Bravia's screen when I hooked up to the Denali made me think twice. It's an old audiophile cliché to drag one's family into these sorts of stories, but the God's honest truth is that my wife asked, "What did you do?!" when she saw this year's Olympics on the Sony after the Denali was added. She marveled at being able to read distant writing on athletes' jerseys as well as being able to identify facial features of audience members. Everything appeared more three-dimensional, making it easy for us to imagine what such a device would do for diagnostic imaging in hospitals.

The effect the 6000/S had on our Marantz SR7001 surround receiver was equally impressive. We were able to hear what some audience members were muttering in the surround mix of some Olympic-event recordings we'd made, as opposed to the mere din we'd heard when we first auditioned them the night before. Bass was significantly tighter and the Marantz's overall DSP presentation sounded less glassy, less digital and more natural.

Most audiophiles I know keep a catalog in their heads of moments when something special happened during a listening session. The hair on the backs of their necks stands up. They get goosebumps. They might even tear up. These moments are what audio lovers live for. The Denalis delivered more of them to my living room than any power conditioners I've used. The sound was seductively subtle and delicate during quiet passages and then shockingly quick and forceful when musicians were pounding on drums or piano keys, or swelling in unison to a crescendo. Musicians and singers appeared and disappeared in my listening room more seamlessly, effortlessly and three-dimensionally than they did when the already impressive Triton v2 and Typhon were in place. This utterly relaxed and organic presentation is the hallmark of the Denali sound and what sets it apart from all of its predecessors.

As I look now at the literature that came along with the Denali 6000/T, 6000/S and 2000/T, the sheer number of technical innovations they contain reminds me of a military concept known as *force multiplier*. This term applies to any attribute that significantly improves the effectiveness of an army or its weapons, such that a leaner, smaller unit is able to defeat a much larger opposing force. It's a fitting phrase when you consider that Shunyata's founder has been at war with noise in audio reproduction for nearly 20 years. Caelin Gabriel's single-minded obsession with eliminating the deleterious effects of electrical products and power lines has culminated with the new Denali power conditioners. In a recent interview, Gabriel told me that his long-term goal has always been to make state-of-the-art products more affordable so that a greater number of listeners can get closer to the music.

I'm tempted to say "Mission accomplished." But Gabriel is never satisfied, and that's good news for audiophiles everywhere. 😊

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Another scaling of Denali

Caelin Gabriel established Shunyata Research initially on the strength of his large-diameter power cords. In more recent years, Gabriel's power conditioners have gained their own market and critical traction, to the point now that they are perennially among the highest-regarded designs regardless of technology, quite an achievement for a product line that has progressively dropped in price over time.

This point has been made once again with the new Denali power conditioners, whose various form factors will make one or more of them suitable for any system. If you need a unit to place on the floor near your rack, you will want the 6000/T. If you need a dedicated unit for mono amplifiers (an application for which the Denali conditioners are actually recommended), you will choose the 2000/T. If the only room you have left is on one of the shelves of your equipment rack, the 6000/S is the choice. As Vance Hiner covers in his review, these are the first audio products that take advantage of Shunyata's work in providing clean power for medical applications, and they employ diverse technologies with not just performance claims but objective advantages identified through measurement.

I used a pair of 2000/Ts and a single 6000/T in my system, the former with Lamm mono amplifiers and the latter with various preamps and front-end components. With the four-piece dCS Vivaldi 2.0 stack in the system, the 6000/T's six outlets weren't enough to include a preamp and full analog rig, but a second 6000/T would be easy to add and still keep the price of the entire power-conditioning system below that of many top-of-the-line single units.

Power conditioning occupies a unique place within an audio system because it literally touches every electronic component and its performance, so the effect of clean power is easy to hear. Even so, the effectiveness of the Denali products was startling, my first and persistent feeling being that every vocal or instrumental line was remarkably well resolved and delineated -- relieved of a scrim that wasn't even perceptible until it was gone. This brought unmatched clarity to all music, making for greater physical heft and size to symphonic recordings and greater intimacy and immediacy to solo guitar. The harmonies of the Wailin' Jennys on their cover of Neil Young's "Old Man" from *40 Days* [Red House Records RHR CD 177] were crystal clear and individual, but they still retained their unity and sense of group purpose, and the massive low end of "Words of Wonder" from Keith Richards'

Main Offender [Virgin V2-86499] had lightning-like force and a touch more pit-of-the-stomach weight. These recordings, and all others, also sounded more supple and natural, better variegated, and less strident (if any stridency existed in the first place). The various electronics I used sounded more like themselves, and that was probably the case, given the cleansing effect of the Denali conditioners on the AC feeding them.

The technology Caelin Gabriel has developed for cleaning AC, much of it patented, has steadily built upon itself. Gabriel's latest products are unequivocally effective at making any combination of audio electronics sound more singular and real. Denali really is the peak of power conditioning here and now.

-Marc Mickelson