

The Audio Beat

Shunyata Research Sigma Series Interconnects, Speaker Cables and Digital Cables

" . . . they remove a barrier between you and the utterly visceral, thrilling experience that is live music."

By Vance Hiner | January 11, 2018

In the world of high-end audio, cable brands are a bit like religious denominations. Each has its adherents and detractors. Some people use cables as tone controls, some apply them like Band-Aids, and others are looking for a way to eliminate their influence completely. After years of experimentation, I have found myself attracted to that last camp, even though I know it's hopelessly idealistic. The best cable is no cable sounds good on paper, but there will always be a transmission method and that method is bound to have an impact on the final sound. Even our own ears color what we hear. So, a more achievable goal would be to find a method of transmitting electronic signals that has the least possible effect on those signals.



Effect reduction, as I'll call it, is one of the reasons I've used Shunyata interconnects and speaker cables in various iterations for almost a decade. My previous reference wires were selected for their warm character, something I thought I needed for the relentlessly analytical solid-state front-end and unforgiving speakers I had at the time. Once my reference system improved a couple of notches, I began looking for cables that would begin to match the transparency of the better components. Shunyata's Python speaker cables and interconnects were just the ticket. From there, I graduated to the company's Zi-Tron® Python cables and most recently to its Zi-Tron Anaconda models. In the process, I became a believer in the "full loom" concept of cable upgrades after several less-than-successful attempts at mixing and matching brands.

It has been six years since Shunyata unveiled its Zi-Tron lines, and a lot has been going on in company founder Caelin Gabriel's Poulsbo, Washington, laboratory. In addition to incorporating innovations from its power products, several brand-new patent-pending technologies have been added to the latest flagship -- the Sigma Series cables.

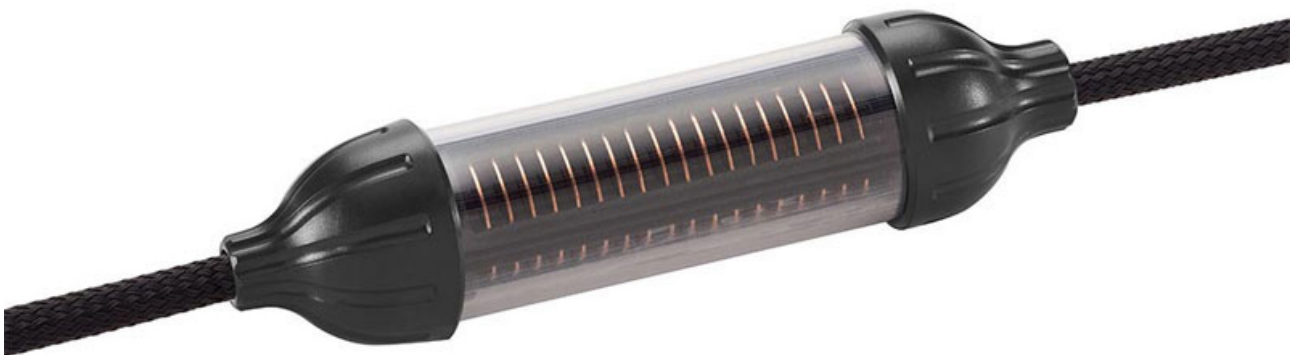
First, these new interconnects, speaker cables and digital cables all use Shunyata's VTX conductors, which first appeared in the company's best Zi-Tron power cords and are made in the form of virtual hollow tubes. Shunyata says these conductors eliminate random eddy currents and skin effects that can cause signal distortion.

While the Sigma cables continue to be based upon Shunyata's patented Zi-Tron circuit, which the company says "prevents dielectric absorption in signal transmission," they've also upgraded the speaker cables with the world's latest and highest-grade oxygen-free electrolytic copper alloy, known as OFE Alloy 101. Further, all Sigma interconnects are made with the Ohno continuous-cast process, which does not rely on common extrusion, but instead utilizes Japanese inventor Atsumi Ohno's method of using heated molds to cast the copper into a single crystalline structure. Shunyata believes this method results in sound that is especially pure and grain-free.

All Sigma cables also go through the company's proprietary Kinetic Phase Inversion Process (KPIP), which eliminates the break-in process typical of many high-end cables. Shunyata founder Caelin Gabriel is particularly proud of this breakthrough and says that cables treated with KPIP are far more transparent, stable and free of distortion than cables that are broken in by traditional playback or other burn-in technologies, regardless of how long those methods have been applied.

In addition to all of these innovations, Shunyata introduces in the Sigma line three new technologies. The first involves the elimination of soldering from its speaker cables, which has been replaced by a highly specialized sonic welding process that bonds metals together at the molecular level. One sonic welding unit costs in excess of \$60,000 and all Shunyata's techs must go through an extensive training process in order to use the devices. The result, according to Gabriel, is that the sonic signature of solder is entirely eliminated. Those who are skeptical must bear in mind that equipment designers from every field of high-end audio agree that the type of solder used can have a profound impact on a component's sound, so no solder at all should be a clear advancement.

Each Sigma analog interconnect and digital cable sports a Transverse Axial Polarizer (TAP), which looks a bit like the barrel of a ray gun. A gold-plated copper honeycomb disc is encased in a glass tube positioned on each cable near the upstream connection. According to Shunyata, the patent-pending TAP device modifies the electromagnetic wave field that surrounds a signal cable. Gabriel compares the TAP's sonic effect to how a good pair of polarized sunglasses alters sunlight; by correcting wave polarization, the TAP reduces what might best be described as sonic glare by altering the angle of the electromagnetic and inductive interaction with the signal. Finally, the Sigma speaker cables are equipped with another



patent-pending technology called HARP. Gabriel came up with the idea for this invention while researching current drift and current resonances that occur in speaker cables. The HARP technology is contained in a rectangular module located just prior to each speaker connection and works to diffract current modes, not unlike acoustic treatments used to diffract standing waves (modals) in a listening room. Gabriel says the result is a cable that has greater coherency and is more revealing of the fine detail that can otherwise be obscured by current resonances.

Now we come to the inevitable question: how do the Sigmas sound? The simple answer is that they sound like nothing I've ever heard -- nothing at all, in my experience. The more complicated answer brings me dangerously close to new-age philosophy, where metaphysics overruns good sense. If I tell you they sound like no cables, you have every right to smirk and ask me, "Well, what does that sound like?" The best I can do is offer an analogy and then some specifics.

Imagine for a moment that you've lived your life wearing surgical gloves. You've certainly been able to distinguish and appreciate a great deal of the objects you touch, but once the gloves are off, you discover just how much you've been missing. The surface of an apple looked smooth before, but then you discover that it really isn't. Ice was cold, but nothing prepared you for just how wet and cold it is against your skin. In fact, you're amazed to learn that ice can actually burn. This is what the Sigmas do: they remove a barrier between you and the utterly visceral, thrilling experience that is live music.

Now for some concrete examples of how the Sigmas changed my listening experience. Before I dove into a full-system installation, I decided to try the Sigma AES/EBU cable just to hear how it would stack up to my reference Anaconda cable, no slouch at taming ones and zeros. Fellow TAB writer Mark Blackmore happened to be in the neighborhood, so we put Rickie Lee Jones's Pop Pop CD [Geffen GEFD-24426] in my PS Audio PerfectWave transport and played a few tracks before the Sigma's installation. Then we returned to those tracks after the new cable was in place. Blackmore shook his head and said, "You can hear the difference in three bars." The difference was a smoother, less grainy presentation of the high frequencies, meatier, weightier bass, and a more layered soundstage. All in all, the sound was far less "digital." Not bad for one cable. As accomplished as the Shunyata Anaconda AES/EBU cable had been, the Sigma lapped it-- twice.

After Blackmore left, I continued to listen and noticed more depth and space in Blossom Dearie's delightful *Soubrette: Sings Broadway Hits* [Verve MG VS-62133]. The Sigma AES/EBU delivered a far more relaxed, natural and realistic representation of instruments in the Russel Garcia Orchestra. I could hear the internal resonances within a bassoon as it accented a line, more bell tone from a trumpet. When I returned to the Anaconda, it was clear that it was not conveying as truthful a version of those sounds, which resulted in a presentation that was less present and convincing.

The Sigma AES/EBU is the first digital cable I've heard that significantly narrows the gap between analog and digital. When I asked Gabriel what made the Sigma different, he explained that it was the culmination of a years-long quest to correlate what people hear in real, live music and design parameters like timing, velocity, total resistance, impedance and jitter. "Think of a digital cable as being like a table. The data is a ball you want to roll across that table as smoothly as possible. Imperfections are what cause things like jitter." With the Sigma, Gabriel says, he's worked to make that table as much like glass as possible. Other cables, Gabriel contends, "are more like wood, with divots and rough sections."

As impressed as I was by adding a single Sigma digital cable, I was not prepared for the outcome of adding all of the Sigma cables to my system. The Sigmas demonstrated more than any other wire I've used how important the "loom" concept is. In order to realize and appreciate the performance of the Signal interconnects fully, you need to be using the company's speaker cables, and vice versa. Some anecdotal evidence. Two weeks after installing the loom, the UPS driver delivered a back-ordered Sigma coaxial digital cable for my Auralic Aries streamer that had been running with a Shunyata Anaconda cable. Cueing up the title track of The War on Drugs' brilliant *Deeper Understanding* album on Tidal, I was not prepared for what I heard after making the swap. Everything I described about the Sigma AES/EBU performance was far more apparent when I compared the Anaconda S/PDIF to the new Sigma S/PDIF. The Auralic sounded like a much more expensive component. Digital grain was reduced and the background was even more deeply black. Prior to the Sigma S/PDIF, the streaming digital files of the War on Drugs album sounded somewhat homogenized and uninviting. Now, they sound much closer to the naturally warm and emotionally gripping vinyl version [Atlantic 7567866062].

Anyone who has bought a component that's truly transparent will appreciate how such equipment can be a bit unsettling. Transparency leaves nowhere for flaws to hide; on occasion, favorite recordings will show their weaknesses while underappreciated albums will shine in unexpected ways. For example, Toni Price's "Like You Used To" from her *Midnight Pumpkin* album on Tidal sounded pretty average before the Sigma cables arrived. After their installation, the upright bass purred and the mandolin had a wooden resonance I'd never noticed. Before the addition of the Sigmas, Price's voice could grate a bit. Now her voice struck me as silky and smooth. I heard added texture from instruments and vocal characteristics that I suspect were previously buried, perhaps by the skin effect the Sigma cables were designed to combat -- noise and jitter that even the Anaconda loom had been unable to eliminate.

Because the Sigmas are so transparent, they also required me to re-examine my previous judgments and assumptions about what I was hearing. For example, I've always loved Paul Simon's Here Comes Rhymn' Simon and I still do. But the Sigmas revealed that there is a brightness to some of the tracks. Things sound a bit tipped up in places, even on the excellent original LP [Columbia KC32280]. None of that detracted from my enjoyment of the music, but now I know that some other Simon records are more sonically balanced and consistent.

An example of how the Sigmas revealed hidden treasures would be "I Don't Believe" from Paul Simon's tragically underrated Surprise CD [Warner Bros. 9362499822]. Prior to the Sigmas' installation, the synthesizer loop at the end of the track had been unremarkable. Now I could hear the three-dimensional texture of the gate effect used and could identify the restart of the loop far more clearly. The result of adding the Sigmas was that Brian Eno's synthesized swells and swirls throughout the album sounded more corporeal and, consequently, had more emotional impact. Now I realize that this recording would be a prime candidate for being issued on vinyl.

The Sigma loom likewise revealed unheard detail from the music's lower registers. Singer Steve Tyrell was a longtime Burt Bacharach collaborator and the backup band on his Standard Time CD [Sony 86006] is one of the best in the business. In past listening sessions, Bob Magnusson's melodic and fluid bass lines sounded primarily like tones. With the Sigmas in place, those deep tones are now growling and bristling with string and fret textures, something you'll immediately recognize if you've ever sat in close proximity to a bass player.

Another characteristic of the Sigma loom is its ability to flesh out complex musical passages fully and naturally. During "It All Depends On You" from Standard Time, each and every member of the big band can be heard and appreciated without anyone being artificially spotlighted. And because the Sigmas are so tonally balanced, no instrument stands out, yet I felt as though I could almost walk up and examine each musician's performance, then return to my seat and enjoy the group as a whole.

A particularly rewarding moment after listening to the Sigma loom for several weeks was when I happened to pull out Joe Sample and Lala Hathaway's "Living in Blue" from their The Song Lives On CD [Pra 560701]. This strictly instrumental track demonstrates Sample's deft, elegant touch as well as the forceful bass of Jay Andersen and punch of drummer Wilfredo Reyes. The Sigmas brought out so much of the lush romanticism of this number that I went searching for the credits and noticed that it was mastered by the legendary Doug Sax. I'd heard this music many times, but the Sigmas brought me closer to the music's essence and deeper into the recording. And that was typical of nearly everything I heard while auditioning them. By removing so much noise and interference from the path, Shunyata's flagship cables renewed my passion for recordings I'd begun to take for granted.

And it's not just recordings that are vulnerable to the Sigma's truth serum. I've been slowly but surely moving into the analog realm. I love the midrange and pacing of LP playback, but I know the Rega Elys cartridge I've been using is a bit long in the tooth. I'm also using a '90s-vintage Bryston phono stage, and it clearly falls short of delivering the final word in low-level resolution. The Sigma cables provided a firm tap on the shoulder -- that it's time to upgrade the cartridge and have Convergent Audio Technology's Ken Stevens install a phono section in my SL1 Renaissance preamp. Clearly, the cables are ready to deliver more, even if the cartridge and electronics cannot currently oblige.

So what is all of this transparency worth? While an entire loom of Sigma cables would cost more than some people's entire systems, their price point is decidedly lower than what most competing companies are charging for their flagship wires. Still, even the folks at Shunyata are quick to point out that no one should spend this kind of money on interconnects instead of purchasing decent speakers and source equipment. They also say that

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their Alpha and Delta lines deliver a significant portion of the Sigma's performance for considerably less money. I'm not qualified to offer financial advice, but my experience with the Sigmas proves to me that they can elevate the performance of a very refined system to a level that equals similarly priced components I've auditioned. If you are pleased with your current rig and want to see just how high it can fly, auditioning the Sigmas would be a good place to start.

Toward the end of my listening, I wrote that the Shunyata Sigmas "open up an unrestricted channel in the signal chain, allowing my speakers to breathe in full, deep breaths of each recording." When it comes to music, it's often a combination of many small, yet true-to-life elements that can culminate in a performance's most magical moments. Shunyata's Zi-Tron Sigma speaker cables, interconnects and digital cables did a remarkable job of revealing those moments from every source and format.

Associated Equipment

- Analog: Rega RP3 turntable, Moth RB300 tonearm, Rega Elys phono cartridge, Bryston BP-1 phono stage.
- Digital: PS Audio DirectStream and Audio Research DAC9 digital-to-analog converters, PS Audio PerfectWave transport, Auralic Aries Streamer Bridge with Purer-Power linear power supply, Roon Labs data-management service and MacBook Pro running Core music-library software and Channel D Pure Music software, AudioQuest JitterBug USB filters.
- Preamplifier: Convergent Audio Technology SL1 Renaissance (Black Path Edition).
- Power amplifier: Conrad-Johnson Premier 350SA.
- Loudspeakers: Wilson Audio Sasha W/P Series 2.
- Interconnects: Shunyata Research Zi-Tron Anaconda.
- Digital cables: AudioQuest Carbon USB, Shunyata Research Venom USB, Shunyata Research Zi-Tron Anaconda AES/EBU and S/PDIF.
- Speaker cables: Shunyata Research Zi-Tron Anaconda.
- Power conditioners: Shunyata Research Denali 6000/S, 6000/T and 2000/T; Shunyata Research Defender used in associated wall outlet.
- Power cords: Shunyata Research Zi-Tron Alpha and Sigma.
- Equipment rack and supports: Solidsteel S3 Series and S4 Series equipment racks, Shunyata Research Dark Field Suspension System, IKEA Aptitlig chopping blocks, Stillpoints Ultra SS speaker risers and Ultra 5 isolators.
- Accessories: Acoustic Revive RD-3 disc demagnetizer, UltraBit Diamond-Plus Digital Systems Enhancer.