

Shunyata Research Zi-Tron Cobra Interconnects and Speaker Cables

by Marc Mickelson, April 21, 2012

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When you read the coverage we post on *The Audio Beat* of various audio shows, it probably seems as though we spend all of our time flitting from room to room in search of flashy new products. Actually, what we're seeking are new products with *stories* -- angles or hooks that pique interest beyond the fact that the products have just been introduced. One of the stories from last year's CES, a show where stories abound, was of Shunyata Research's new "inexpensive" cables -- three complete lines of them, in fact: Anaconda, Python and Cobra. They received the "inexpensive" tag because they all cost less than the cables they replaced -- much, much less -- and yet still occupied the highest price points in terms of Shunyata's "signal cables," as the company calls its interconnects and speaker cables.

While such a massive price decrease seemed like a blatant acknowledgement of the worldwide economic

situation (although one competing manufacturer remarked cynically that it was "a sign of desperation"), it was, in fact, the outcome of a new circuit that Caelin Gabriel, the founder of Shunyata Research, developed. I'd call Caelin a tinkerer, but that implies a level of casualness to his work that doesn't reflect its scientific rigor. This circuit, called **ZI-TRON™** (pronounced "Zi-Tron"), is said to address a form of distortion that comes from the insulating dielectric's storage of the electromagnetic field that's created by the conductor itself. Zi-Tron is a patent-pending circuit that neutralizes the electric charge differential between the conductor and the dielectric. A second conductor carries a signal derived from the main conductor, and the fields generated by the two of them cancel each other. The huge drop in price is due to this circuit, which eliminated the time-consuming and very costly hand-braiding that earlier Shunyata cables employed. But there was also a larger question regarding cable pricing that



Shunyata wanted to address: do you price your products to include an aggressive marketing campaign and its attendant costs, or do you price based on the actual cost of materials and manufacturing? Shunyata's position was the latter.

As if to speak to cable nonbelievers and general naysayers who will question such a circuit, at this past year's CES, Shunyata Research was at the center of another story that grew out of Zi-Tron: a demonstration that addressed both subjective and objective evaluation of audio cables. First, Shunyata employee Mino Christante, a talented guitarist, played a short number twice. The first time through, the link between guitar and amplifier was a Mogami instrument cable of the type that musicians the world over use. For the second playing, he used an identical length of Shunyata's Zi-Tron Cobra interconnect. From my CES blog: "It didn't even take careful listening to hear the difference, with the Shunyata cable displaying much greater clarity, which translated to a more complex harmonic structure and better integrated bass."

What followed was even more persuasive. Using a digital oscilloscope, Caelin ran a 10kHz signal through his Cobra speaker cable with and without the Zi-Tron circuit in use (it was reconfigured as a plug-in module that could be quickly inserted and removed). A camera was fixed on the 'scope's screen and the output was fed to a laptop, so it was easy to see the difference in the displayed square wave, which the Zi-Tron circuit made noticeably more square. "We're really trying to take all this [audio cables in general] out of the realm of spook science," Caelin proclaimed after the demo, and it was difficult to believe that he hadn't.

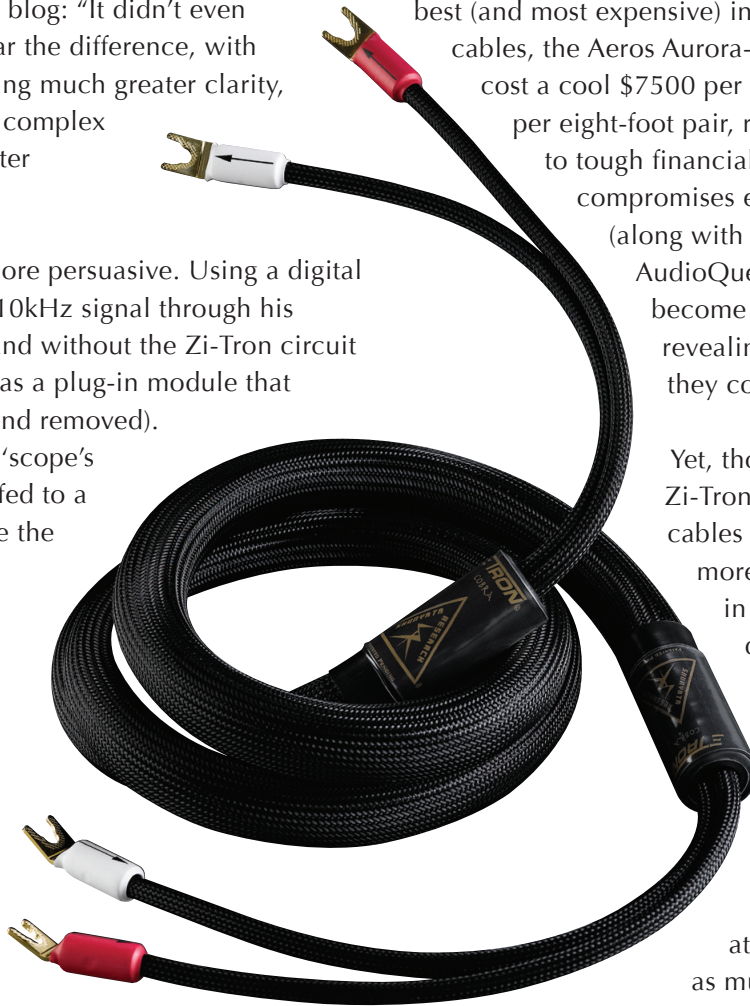
The Cobra line is Shunyata's least expensive to employ Zi-Tron technology, but it doesn't cut corners when it comes to two of Shunyata's core design features. Like earlier and much more costly

cables, Cobra uses Shunyata's own über-purity copper wire drawn from CDA 101 ingots. This wire is said to improve resolution "by reducing eddy-currents and waveform reflections." The wire is cryogenically treated to -310 Fahrenheit, another Shunyata tenet. The chief differences between Cobra and the pricier Anaconda and Python lines is that the conductors for those are heavier and they utilize Shunyata's "hollow virtual tube geometry." The core technologies -- Zi-Tron, CDA 101, cryo treatment -- are the same for all three.

Shortly after the Zi-Tron cables debuted at CES 2011, I received pre-production versions of the Anaconda interconnects and speaker cables, as the finished products weren't shipping yet. Immediately before, I was using Shunyata's previous best (and most expensive) interconnects and speaker cables, the Aeros Aurora-IC and Aurora-SP, which cost a cool \$7500 per meter pair and \$15,000 per eight-foot pair, respectively. No bowing to tough financial times here, and no sonic compromises either, as these cables (along with the equally pricey AudioQuest WEL Signature) had become my reference, always revealing the nature of the products they connected.

Yet, those not-quite-finished Zi-Tron interconnects and speaker cables were clearly more resolving, more focused, more defined in the bass and more finely drawn in the treble than the Aeros cables they were set to replace. I went back and forth several times to verify what I was hearing, and the Anaconda cables only widened the gap -- and at a projected price one-third as much.

I used those cables for many months; you can see them listed in a number of my reviews as "PowerSnake series Anaconda" -- the Zi-Tron circuit had yet to be named. Then, shortly before the first of





this year, Grant Samuelsen, Shunyata's sales and marketing director, called to tell me that they would ship me production-version Anaconda interconnects and speaker cables to replace those I had been using. As we talked, the Cobra cables dominated the conversation, as both Caelin and Grant were giddy over what they achieved at the cables' reasonable price. Given that Anaconda was already in reviewers' systems, Grant wondered if I'd rather hear Cobra -- a proposition that didn't require any arm-twisting. Thus, I've been using the Cobra interconnects and speaker cables since shortly after the first of the year -- along with a roster of electronics and speakers that are in another price galaxy altogether.

While it is unlikely that an owner of a \$25,000 Audio Research Reference Anniversary preamp will use \$998-per-pair Cobra interconnects in his system, the combination, as part of *my* system, raised some interesting

questions about the relationship between cost and performance. I firmly believe that no matter how much money we audiophiles have to spend on our systems, we all possess a latent desire to discover products that offer outrageous value by outperforming others that cost much more. Because of their straightforward yet mysterious nature, audio cables are the source of skepticism that doesn't plague speakers and amplifiers to the same degree, but this doesn't mean you never get what you pay for when you plunk down the cost of a midsize sedan on a set of interconnects and speaker cables.

After hearing those pre-production Anaconda cables, any skepticism regarding the value, both in sonic and monetary terms, of Caelin Gabriel's Zi-Tron circuit vanished, and the finished Cobra cables have only intensified my feelings. These reasonably priced cables

earn their place in a high-priced system. However, this is the case not so much for what they do but rather what they *don't*.

I'll explain. I've never been sure that the best interconnects and speaker cables I've heard have had "a sound" of their own, or if they merely let the electronics and speakers communicate their essences, and the essence of the music, in a less embellished way. Experience makes me *think* it's the latter, but how to know for sure when cables are necessary for connecting

the pieces of an audio system? A direct nerve-fiber link to the cerebral cortex is for future audio entrepreneurs to invent.

The Cobra interconnects and speaker cables do effect a certain musical perspective, one that's more about unforced clarity, spatial perception, image dimensionality -- things that help suspend disbelief -- than ballsy bass,

dazzling treble or other qualities of commission. They are more about poise than pyrotechnics, allowing - - encouraging -- one to ease into the music instead of being blown back by it.

Still, no excuses need to be made for the musical detail they display -- or rather, help each part of the system display. You'll hear gobs of information about the texture, dimension, placement and tonality of every part of the system -- and the recordings, of course. A potent illustration of this came from two reissues of the same album, *Everybody Digs Bill Evans*. I've owned the 180-gram Analogue Productions LP for a few years [Analogue Productions AAP] 1129], but this didn't stop me from buying a used Doxy reissue [Doxy 820] that someone had dumped at a used-record store. I've seen these Doxy records at Half Priced Books stores in Minnesota, Wisconsin and Arizona, where they normally



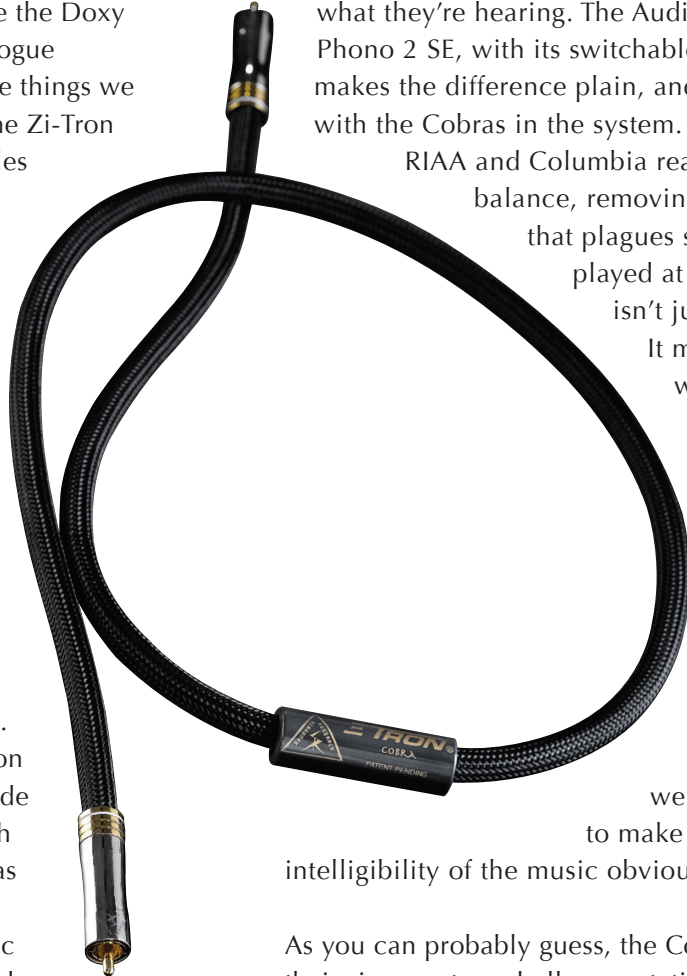


sell for around \$15, making my \$2.99 copy all the easier to buy “for my own edification,” I told myself. I refrain from accumulating multiple copies of the same LP *unless* I see one cheap. Who among us can say no to a great record that costs only a few bucks?

In any case, I was anxious to compare the Doxy pressing of *Digs* to the one from Analogue Productions -- comparing is one of the things we audiophiles *do*, after all. I only had the Zi-Tron Cobra interconnects and speaker cables in for a couple of weeks, so perhaps not even halfway burned in, but they were still up to the task. While there is no indication anywhere on the Doxy LP that it was cut from a digital source, I would bet my turntable that it was -- and not a very good one at that. It sounded grayish and brittle, especially compared to the tonal color and liquidity of the Analogue Productions LP. In any qualitative sense, the two weren't close, and the Doxy LP might be on its way back to the record store from whence it came. I will say that it was a quiet pressing on gleaming 180-gram vinyl, but this made it all the more a waste of time for both me and the people who created it. Has the vinyl-reissue market reached the point where a poor version of a classic title will still sell? The Doxy record did serve two purposes: as a harbinger of the resolving power of the Cobra cables and as a hindrance to buying more Doxy reissues.

Resolution can easily be faked, however, by cables that emphasize high frequencies, which then become more about perceived than actual resolution. From my earliest days as a civilian audiophile, I've been very sensitive to peaky treble, a malady that the Cobra cables come nowhere near. Their presentation has real insight into the music and the equipment that makes it, revealing the finely shaded top end of the Ypsilon Aelius monoblocks as easily as the denser, more corporeal highs of the Lamm M1.2s. And when the amps were the Atma-Sphere MA-2 Mk 3.1s, the

Cobras were part of an astonishingly transparent presentation, though not one forgiving of failings like those of the Doxy LP -- or Columbia six-eye pressings of Dave Brubeck's catalog. When people who praise these early Columbia LPs don't acknowledge (or know) that they use an EQ curve specific to them, I wonder what they're hearing. The Audio Research Reference Phono 2 SE, with its switchable Columbia curve, makes the difference plain, and all the more so with the Cobras in the system. Toggling between RIAA and Columbia realigns the spectral balance, removing the treble overhang that plagues six-eye Columbias played at RIAA. However, this isn't just a tonal aberration. It muddles the music, which sounds, at best, like a collection of discrete notes, instead of a sweeping entirety. In isolation, the difference between the EQ curves seems small, but like the Atma-Sphere amps, the Cobra cables were discerning enough to make its effect on the intelligibility of the music obvious.



As you can probably guess, the Cobras are not forgiving; theirs is a warts-and-all presentation. But they also aid in achieving the see-through quality that defines the Atma-Sphere amps, especially in the mids, where they do their very best work. When the MA-2 Mk 3.1s are part of your system, you want the other parts to stay out of their way and let the density of information -- and splendor of the music -- come through. Again, the Zi-Tron Cobras oblige with splendid nothingness. This progresses down to the bass, where a sinewy sense of speed reigns. The only tipping point of the Cobras, which go very deep, is a touch less midbass punch than the much pricier Shunyata Aeros-series cables. This, along with the resolving power, tonal evenness and transparency, characterizes the Cobras' "sound," such as it is, and the ways in which they differ from and improve upon those earlier Shunyata "signal cables."



Owners of those cables aren't going to want to hear this, but the Cobras, at a small fraction of the price, are better, ceding only a dollop of midbass power to them. There is a family resemblance across the generations, defined by poise, balance, and ultimately the lack of an overt personality -- but that's no comfort for those who paid much more for the previous generation. We are used to succeeding products justifying their existence by improving upon those they replace, but not to this degree when the cost differential is so immense. But Caelin

Gabriel has a history of this that stretches all the way back to his original Hydra, which was not just equaled but soundly eclipsed by a model that cost considerably less. We were all put on notice -- and so we have been again.

The most salient issue may be how the performance of the Cobra interconnects and speaker cables relates to that of Anaconda and Python. Again, I haven't heard the finished versions of those cables, but I can say that Cobra leaves precious little room for improvement.

Price: Interconnects, \$998 per meter pair; speaker cables, \$2400 per eight-foot pair.

Warranty: Two years parts and labor.

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Associated Equipment

Analog: TW-Acoustic Raven AC turntable, Graham B-44 Phantom Series II Supreme and Tri-Planar Mk VII Ull tonearms, Dynavector XV-1s (stereo and mono) and Allnic Puritas cartridges, AudioQuest LeoPard and Nordost Odin phono cables, Allnic Audio H-3000V and Audio Research Reference Phono 2 SE phono stages.

Digital: Audio Research Reference CD8 CD player, Ayre Acoustics DX-5 "A/V Engine," Esoteric K-01.

Preamplifiers: Audio Research Reference Anniversary, Convergent Audio Technology SL1 Legend, Lamm Industries LL1 Signature, Robert Koda Takumi K-10.

Power amplifiers: Atma-Sphere MA-2 Mk 3.1, Audio Research Reference 250 and Lamm Industries M1.2 Reference monoblocks.

Integrated amplifier: Tube Technology Synergy Carbon.

Loudspeakers: Wilson Audio MAXX 3.

Interconnects: AudioQuest William E. Low Signature, Shunyata Research Aeros Aurora-IC.

Speaker cables: AudioQuest William E. Low Signature, Shunyata Research Aeros Aurora-SP.

Power conditioners: Essential Sound Products The Essence Reference, Shunyata Research Hydra Triton. Power cords: Essential Sound Products The Essence Reference and MusicCord-Pro ES, Shunyata Research CX-series (various) and Zi-Tron Cobra.

Equipment rack and platforms: Silent Running Audio Craz² 8 equipment rack and Ohio Class XL Plus² platforms (under Lamm M1.2 amps), Harmonic Resolution Systems M3 isolation bases.