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Shunyata Research Hydra Power Distribution System

If there’s one thing I love about my fellow audio reviewers, it’s how comprehensive their technical knowledge is. No matter how abstract the physics, metallurgy, material science, or technology employed by a high-end product, a reviewer will be happy to explain it to you.

I’ve done it too -- in fact, I believe that one of my most important functions is to serve as a bridge between my readers and the manufacturer. There’s a temptation inherent in this position, however, which is for a reviewer to try too hard -- to buy completely into a manufacturer’s explanation and offer it as fact, even when he or she (or I) hasn’t completely understood it.

I’ve been playing with several generations of Shunyata Research power products -- various AC cables and Hydra distribution boxes -- for nigh on two years now, attempting to get a handle on what they do and how they do it. In terms of the effects of the Shunyata AC products, I feel I now grasp precisely what they do in my system; as to how they do it, I don’t have a clue.

As a result, I’ve been conflicted over how to proceed in writing a review of these products. I have no doubt about the quality of the Shunyata products or their effects on my audio system -- I’ve even demonstrated it to visitors, who, with not any prompting from me, have described the same changes that I’ve been hearing.

Scientific? No, just more anecdotal evidence -- but I found it encouraging nonetheless. Just don’t ask me to explain it.

Ladies and gentlemen, attention please / Come in close so everyone can see

The Shunyata Research Hydras are completely passive devices, each with a single 20A AC input and two, four, six, or eight AC outlets, depending on the model. The Hydra Model-2 will probably
be used primarily at the power-amp end of a system, while the Models 4, 6, and 8 will end up near the source components and preamp.

The Hydra chassis are constructed from heavy-gauge aluminum; in the case of the Model-8, there’s a second, inner chamber enclosing a massive distribution bus system and FeSi-1002 compound (more on this later).

The Hydras employ Shunyata’s Venom outlets, heavily plated in silver and rhodium -- these are reportedly produced by Hubbel to Shunyata’s exact specifications, with all ferrous metals and carbon removed. Caelin Gabriel also states that he specifies that the outlets’ chassis be oversized to increase internal airflow and reduce heat at the contact points. When Shunyata gets its outlets from Hubbel, it treats them in its own computer-controlled deep-immersion cryogenic facility. According to Gabriel, Shunyata’s triple-plating process lowers junction impedance, improves durability, and facilitates a more linear, transparent signal transfer over that of standard- or hospital-grade outlets.

The innards of the various Hydras differ. Unlike the others, the Model-2 does not use an internal bus, but rather connects its Venom outlets to heavy-gauge silver wiring directly through its passive filter and protection network.

The Hydras Model-4 and -6 use Shunyata’s proprietary silver-plated bus-jumper system connected directly to the individual Venom duplex outlets. These support massive current loads, Shunyata claims, and present a non-resistive load to the AC signal.

The Hydra Model-8’s use three two-pound bus bars of solid copper, machined from Shunyata Research’s own ingots of CDA-101 copper -- the same high-purity copper Shunyata uses for everything it makes.

The biggest change in the latest iteration of the Hydras is Shunyata’s three-stage Trident Defense System, which consists of the Venom filter, NextGen TMOVs, and a Carling Electromagnetic Breaker (on the Models 8, 6, and 4).

The Venom filter is a multi-element capacitive array designed to reduce broadband noise and transient voltage spikes. The capacitors, produced to Shunyata’s specifications, are special metalized-polyester designs "capable of repeatedly absorbing high-energy spikes in excess of 1000 volts . . . without damage or deterioration."

Shunyata also points out that the Venom filter performs its function of eliminating spikes and noise without introducing ringing or grain, common problems associated with conventional power-line capacitors.

The second stage of the TDS is a multi-element array of massive (20mm) thermally protected metal-oxide varistors (TMOVs) that provides 6000V of overvoltage transient protection and up to 60,000 amps of transient over-current protection. The Venom filter can theoretically handle "voltage events" of 1000V.

The TDS’s third stage is a custom-manufactured Carling electromagnetic circuit breaker that uses a separate current-sensing circuit located outside the current path. The circuit breaker saved me quite a few steps during my audition because it worked as designed, tripping itself when I managed to introduce demand overages in my system -- rather than hike down to my basement breaker box, all I had to do was reset the Hydra 6 or 8.

The Hydra Model-8 also incorporates the synthetically manufactured ceramic beads made of what Shunyata Research calls FeSi-1002 compound. Shunyata explains FeSi-1002’s action thusly: "Although the substance has no metallic content, it has a similar effect as ferrites in that it absorbs electromagnetic noise within its molecular structure. The FeSi-1002 compound’s passive noise reduction avoids the dynamically compressive effects commonly associated with ferrites, transformers, chokes and coils."

You’ll note that I don’t offer detailed descriptions of why all of these technologies work. Despite the strong opinions held by many audiophiles, I can’t sort the fact from the fiction among the plethora of audiophile superstitions concerning the “sounds” of metals and suchlike.
Marketing director Grant Samuelsen told me, "We do not claim that one technology or the other is responsible for our results, rather it is the accumulation of all the specialized parts and custom processes we employ that account for the performance of our products."

The Shunyata Research Hydra Model-2 lists for $395 USD, the Hydra Model-4 for $695, the Hydra Model-6 for $995, and the Hydra Model-8 for $1995.

I got a tale to tell / A listen don’t cost a dime

I’ve used both a Hydra Model-6 and Hydra Model-8 in almost every system I’ve reviewed in the past year. Big solid-state amps such as the McCormack DNA 500 and Perreaux 750 monoblocks, tube products like the Blue Circle BC3 Galatea MKII, CD players like the Ayre Acoustic CX-7 or Classé -- you name it, I’ve tried it with and without the Hydras.

Well I’ve got a little somethin’ / Guaranteed to ease your mind

The two Hydras I auditioned were the Model-6 and the Model-8, which are quite similar to one another. The big difference is the presence of the FeSi-1002 compound around the Venom outlet’s inner housing in the Model-8 -- although, quite late in the review process, I discovered that the Model-6’s bus bars are directly connected to the AC inputs, while the Model-8 employs CDA-101 copper wiring connecting the inner box’s bus bars to the input connector. I’d like to think that’s why I didn’t find the two products sonically identical, but I’m not sure that’s the case. I did feel that the Model-8 sounded more “tubelike” and three-dimensional and the Model-6 more crystalline and detailed, but the differences were minor -- at least compared to the difference between using them and not having the devices in the power chain at all. That difference was consistent: Backgrounds were quieter, soundstages were deeper, and I could more easily hear musical details that were MIA when the Hydras weren’t in the chain.

That sounds like new-age audio hooey, but I’m not talking about frippery -- I’m talking about real musical details. Take the Credo from Bach’s B-Minor Mass, as performed by John Eliot Gardiner [CD, Archiv 415 514-2], for example. Superficially, the Credo is a look back to Gregorian chant. However, the real action doesn’t take place in the notes that are sung and played, but in the harmonic overtones generated by them. In contrast to the solemnity of the Credo’s text, there’s quite a jolly little dance going on “upstairs.”

If I listened to the Credo in a high-resolution system sans Hydra (McCormack UDP-1, Blue Circle BC3 Galatea MKII, Perreaux 750 monoblocks, Aerial Model 20Ts, Shunyata audio cables), I could hear the harmonic dance, but it was on the same dynamic level as the notated melodic figures. Adding the Model-6 brought the dance into sharp relief -- not only was it more audible, but it seemed to surf along on top of the fundamentals with greater verve.

Another impressive trait of the Hydras was that, unlike just about every active power conditioner I’ve used, they conferred their benefits on power amplifiers, even high-current designs. With the active units I’ve heard, amplifiers have always sounded duller, slower, and less detailed than they did plugged straight into the wall outlets. Every power amp I plugged into a Hydra sounded noticeably better when connected to the Hydra than when fed straight from the wall.
If you ain’t impressed yet, just tell me what you wanna hear

Yeah, yeah, I hear you saying. You’re an audiophile -- you’ll believe anything.

Maybe so, but I performed a piece of legerdemain with a few visitors. I’d play them a straight system, having removed the Hydras prior to my guests’ arrival. Then I’d say that I wanted to play a different component (the story would change, but it was usually a different CD player). I’d plug everything into the Hydra and play the same track at the same settings.

What surprised me wasn’t that everyone heard a difference, but that everyone used the same words: quieter and clearer. This is quite different from the usual "I hear something, I guess."

Two of these guinea pigs were audiophiles, so we can easily discard those results as the ravings of lunatics. But the other six test subjects were "normals" -- and that unanimity was astonishing.

And if you believe that, we’re gonna get along just fine

The Hydra power-distribution products did what Shunyata Research said they’d do. I can’t tell you why, but I don’t believe that my lack of imagination poses any sort of limit on how the universe functions. As J.B.S. Haldane observed, "The universe is not only queerer than we imagine, but queerer than we can imagine."

If the only Hydra available were the $1995 Hydra Model-8, I might have some questions about the value of the changes wrought by the Shunyata devices. But the $395 Hydra Model-2 is a different kettle of fish -- even modest systems would benefit from having it in the chain.

More ambitious systems will definitely benefit from the use of a Hydra. Counterintuitively, the better the resolving power of the system, the greater the benefits -- but I haven’t been able to find any components below the Hydras’ threshold of efficacy. They just flat-out work.

And if I seem to be having a bit of fun at Shunyata’s expense by quoting Steve Earle’s "Snake Oil" as the section headers for this review, it’s precisely because I know that the Hydras offer real improvement -- even if it does seem too good to be true.

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Shunyata Research Hydra Power Distribution System
Warranty: Five years parts and labor.

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Shunyata Research responds:

We’d like to thank Wes Phillips for investing his time and experience in evaluating our system of power products, including the Hydra series, in a variety of contexts and with a broad range of electronics.
Wes's comments mirror those of our many professional clients, including Sony Music Mastering, Philips Crest National Studios, Astoria, Lookout Studios, Skywalker Sound, James Guthrie, Rick Rubin, Peter McGrath and many others who depend on Shunyata products' consistent performance in their recording, test, and mastering systems.

We agree that there is no simple buzzword or defining technology that accounts for the Hydras broad success and strong performance. Instead, it is the many custom-designed parts and exclusive processes, combined with a direct, uncomplicated approach to power distribution, that explain Hydra's accomplishments. For those seeking full technical details, measurements, and applications, please see our website.

Again, we would like to thank Wes Phillips for his informative and thorough review and comments.

Best Regards,

Grant Samuelsen
Shunyata Research