The Ultimate System

Our products were born in a science lab. They were conceived by scientists. They were nurtured by scientists. And the end result is a product that is literally "King of the Hill" when it comes to scientific measurements. They are measurably the most accurate cables available. But not too many audiophiles put their faith in scientific measurements. And that's just as well. We aren't willing to reveal how we got from "A" to "B", and our measurements are a big part of that story. But it's not the whole story. Many of us are musicians and music lovers too. And we too understand that even if something measures perfectly, if it doesn't sound like live music, it just isn't going to cut it. So we're going to describe for you how we went about proving to ourselves that these cables are the best in real world situations as well. In other words, how we know that they are the best cables as being judged by the ear!

But first, let's define what "best" is. To us, the best is simply the one product (within its category) that makes a stereo system sound the most like a live performance. No editorializing. No "I prefer warm versus detailed". We want it to sound like the performers are right there in front of our noses. A lot of the audiophile community now claims that this is impossible and that we should strive for "what sounds best to our ears." We were brash enough to reject that claim. And we're glad we did.

In order to know if our system was truly accurate we had to start with known source material. This isn't really anything new. There are at least a couple speaker manufacturers that we know of who diligently make recordings of their local symphony or other such bands. And in order to arrive at a truly accurate system, this part is absolutely indispensable! After all, how many audiophiles can claim to actually have been at the performance of their favorite CD or LP? Extremely few, to say the least! So then, how can this audiophile claim to actually know what all the fine detail on that recording is supposed to sound like? That's why these speaker manufacturers MAKE their own source material. But here's another question? Do those speaker manufacturers have a solid grasp on exactly how all of the electronics and cables preceding their product are affecting the final sound? Or are they compensating for the sound of the electronics in their speaker design? (The same could be asked of the electronics manufacturers.) We know that some of the most dedicated ones go to great extent to avoid these biases. We can't claim to know exactly what this extent has been for others. But we, being scientists, know how we would approach just such a dilemma. We couldn't help but go the full monty. Any unknowns in our inquiries are simply intolerable. So while we were working on the cable design itself we had a side project going. Building the most accurate system we could conceive of. And it too, all started with the source material.

Within our group of contributors are musicians, recording artists and recording engineers. So we made a habit of going to as many of their performances as possible. And we're not talking about once a month here. Even now, years later, we're attending and average of 3 shows per week of various musical groups. There isn't a week that goes by where we are not intimately acquainted with the live sound of our "source material". So we have a very solid grasp on what a good portion of our test collection is supposed to sound like. From there, we had to understand exactly what the contributions were of the next link in the chain.

Here we surveyed what was commercially available in digital playback systems. And we narrowed the field by choosing the company that had the most sound (no pun intended) applications of digital technologies. And once we had decided on one, the first thing we did was, we took it apart! We let our engineers play with it until they knew exactly what was going on inside. And then we started listening to it. But even the way we did this was unique. Because we had to narrow the sound down to JUST the playback device, we had to eliminate as many ancillary items as possible. And to do this, we used a modified pair of in-ear monitors. So we eliminated all room acoustic interactions. We eliminated all speaker interactions, all crossover interactions, all amplification interactions. We had as direct a system as possible, straight from the source playback to the eardrum with only a tiny, near massless, transducer in between. We spent at least two years listening to nothing but this minimalist system, testing power cables, and the wires connecting the playback device to the in-ear monitors. But it wasn't just our own project wires we were testing. During these years we were constantly modifying various parts of the playback device. Each new modification had but one constant, it had to make the music being played sound more like the way we knew it should sound live. Over the course of several years, the only thing left of our original playback device was its Digital Signal Processing board. (The one thing we chose it for.) Everything else, from power supply to I/V conversion and from input topology to output circuit was swapped out with a new circuit or a better part that made the device more accurate. It made the voices and instruments of our musical contributors and friends sound exactly like the real thing in our ears. And at some point, it just got eerie.

Eventually we knew we were going to have to put together an actual stereo system. So we basically repeated the process. We chose an amplifier design that met our specific needs, one with plenty of power but with as simple and elegant a design as possible. And then we took it apart too. We applied much of what we learned in modifying our digital front end. We also started consulting (real) experts in vibration control, modifying the chassis and various parts to make it as inert as possible. (We went back and applied the same ideas in vibration control to our digital front end as well. Making it, almost unbelievably, better still.) And once we had the amplification as transparent as possible, we finally turned to the speakers.

Some of us already had decades of experience in trying out different speaker designs. So right from the start we had a short list of suitable contenders. But a strange thing happened when we started taking a closer look at various speakers. By this point, we had grown so accustomed to the sheer realism that our primary playback device was eliciting that it was hard not to notice specific characteristics of the various speaker designs we were auditioning. Let it be known, no component has the ability to color the sound of the music quite like the speakers can! One had excellent dynamics and precision, but the ceramic drivers being used were now a glaringly obvious coloration. Another used a driver material that was less coloring but other aspects of its design were contributing colorations in an obvious way. And while a third seemed to have near colorless sounding materials throughout its construction, there were weird things going on with the tonality. In other words, the voices we had come to know so well live just didn't sound like themselves on the recording. So, after a couple years failing to find a suitable speaker, we let our team go about designing its own pair. And, yes, we cherry picked some design aspects that we recognized as being very desirable. But the ultimate goal was to get the whole stereo system, including

the speakers, to sound no different in level of dynamics, detail and tonality as listening through the in-ear monitors. And after much trial and error, and several years of deep research, we had finally pieced together a truly inspiring test system.

We started with musicians and instruments that we are very familiar with live, people that we see, talk to, and listen to on a near daily basis. We adapted and modified our DAC until it sounded just like them while live, adding or subtracting nothing from the performance. We added amplification and worked on it until it was as transparent as possible. And then we added the speakers. Of course, our cable research was paralleling all of this. And many of the things learned in one pursuit became applicable to the other, both benefitting from the parallel design projects.

And this is how we know and can confidently say that our cables are the most accurate and transparent cables available. Period. Not only because we've tested them against all other types in the lab. But because when inserted into this remarkable system that we've created, practically from scratch, the end result is that the music we hear on this system is so life like in its rendering that we still sometimes marvel at its realism. Every subtle variance and intonation of one of our test vocalists, every different shimmer and tone in the cymbals of a very specific drum set. The logical deduction is that if it sounds like we know it's SUPPOSED to live, then all parts contributing (including and, in this case, especially the cables) can be called accurate. We set out to eliminate as many unknowns as possible in a system. We had to in order to truthfully claim that we had a truly accurate cable. And what's more, in an industry full of products that must be paired with others, leading to an infinite spectrum of performance possibilities and thus limited understanding of exactly what each piece is contributing, we can predict with confidence exactly how our products will respond in any situation.

They just sound more like Live Music.

Epilogue: While the above system is still our primary source when testing new designs, it is not our only source. Our products get extensive testing in a variety of systems. From tube to solid state, digital to analogue, planar to horn to dynamic transducer, they are all included in our testing. Going beyond our primary test system, the one thing that remains consistent is the performance of our cables. No matter where you place them you will hear more detail, greater separation, greater dynamics, and a whole lot more toe tapping. Kind of like what you experience live!

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