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Exotica:

TARA Labs "The Zero" Interconnect and Omega Speaker Cable

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Reviewing interconnect and speaker cable is the closest thing to latrine duty that an equipment reviewer can pull. To compare two sets of wires—your references (which in my case are mainly Nordost Valhalla) and the set under test—literally requires you to listen to a specific cut or two of a given record or CD, turn off all your equipment, get down on your hands and knees and dig into the jungle darkness behind your equipment rack—trying, sometimes by hand alone, to pull every RCA connector out of the jacks on the backs of your components and fit other RCA connectors into the exact same spots—then turn everything back on, let it warm up, listen to the same cut or two, and repeat the whole process maybe a dozen times or so.

Imagine my delight when Jeremy Bryan of MBL America told me that—if it weren't too much trouble—he'd like me to try out an entirely different set of wires with MBL's superb 101 Es and its equally superb electronics. And imagine how much my delight increased when I learned that these new wires were so expensive that virtually no one could afford them. I am talking about TARA Labs' The Zero interconnect and Omega speaker cable, which, together, will put you out more than the vast majority of stereo systems (even the vast majority of expensive stereo systems).

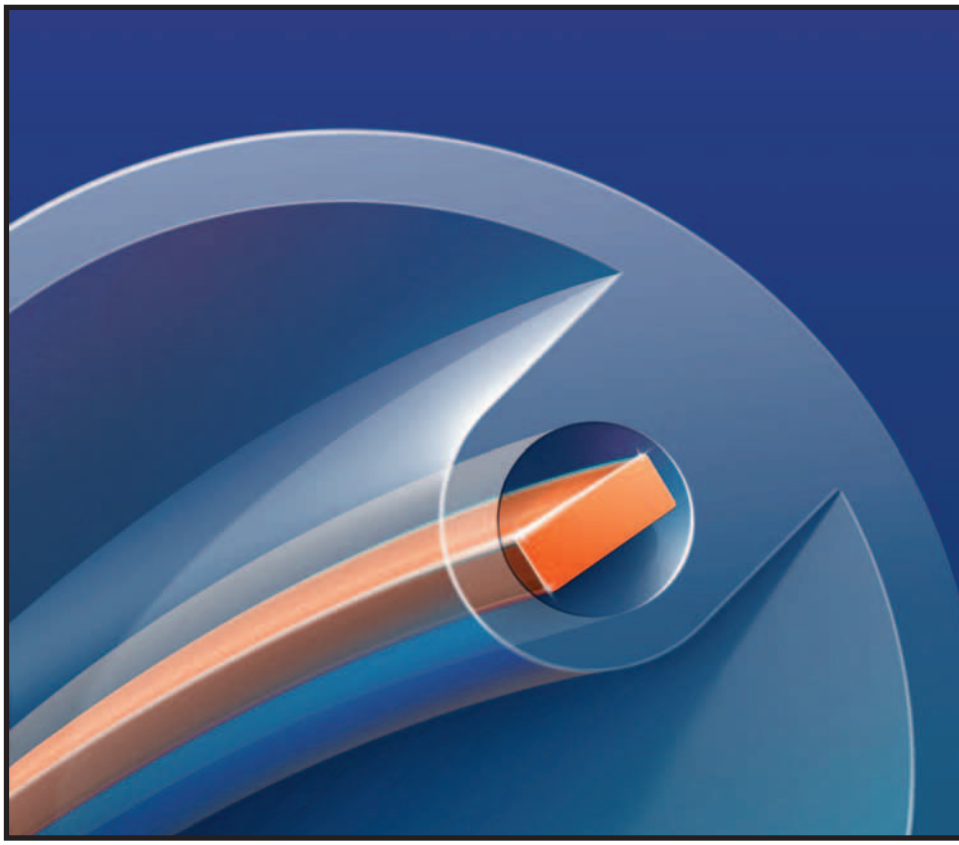

Illustration 1. Teflon air-tubes with rectangular solid-core conductors.

The job of any interconnect or speaker cable is to carry an audio signal from one component to another without adding any sound of its own. Doesn't

seem like a tough task, does it? After all, wires are, uh, wires. And yet all you have to do is listen to two sets of cables or interconnects from different companies (or, for that matter, from the same company) to realize that wires invariably do add sonic signatures of their own—and that these signatures are *at least* as marked as those of other, seemingly more significant pieces of gear.

There have been all sorts of explanations for why this should be the case, from engineering geeks who claim the whole phenomenon is a mass hallucination (just as the different sounds of amplifiers are a mass hallucination) to finger-pointers who single out the material the wire is made of, its thickness or thinness, its geometry, its inherent electrical properties, the properties of the materials (called the "dielectric") that insulate the positive and negative conductors from each other and from the shield that surrounds them, the properties of the shield itself (which is supposed to prevent the signal from being contaminated by RFI and EMI), or any combination of these usual suspects and a whole bunch of others.

As you might expect, cable manufacturers tend to emphasize those culprits that their products are designed to take care of. For instance, Nordost argues that the skin effect (the self-inductance of a conductor that causes nonlinear response in the high frequencies) and electrostatic-field interactions in large-diameter stranded cables are the chief problems, and that its flat, small-diameter, solid-core designs fix them, drastically lowering capacitance and greatly improving transmission speed. Transparent Cable, on the other hand, argues that noise and the electrical mismatching of cables to different sources are the main issues, and that its complex networks and elaborate shields lower RFI/EMI, while, at the same time, calibrating the cable or interconnect to work ideally into a given load.

Like Nordost's engineers, Matthew Bond, Chief Designer at TARA Labs, is fundamentally of the "lower capacitance school" of cable design, but with a difference. For him, thin is just half the answer because while thin conductors reduce the skin effect (and thereby linearize frequency response), they cannot carry current the way large-diameter conductors can (thereby reducing power delivery). His Rectangular Solid-Core conductors—made from "super-annealed," oxygen-free, eight-nines copper—are designed to combine the flat frequency response of small conductors with the current-handling capability of large ones.

According to Bond—who has spent 18 years researching the subject—once conductor size and shape have been optimized, "the conductor spacing and geometry, and the materials used to insulate and isolate the conductors within the cable, will be the remaining factors that…create differences in the sound."[1] With an interconnect, further reductions in capacitance (for even wider bandwidth and flatter frequency response) are achieved by increasing the distance between or among the conductors. However, if the conductors are positioned too widely apart and too close to the interconnect's shield, then the RFI/EMI noise in the shield will couple to the conductors more readily. The trick, then, is spacing the conductors a sufficient distance apart to ensure high bandwidth, while simultaneously keeping them a sufficient distance from the shield to avoid contamination from RFI and EMI.

TARA Labs' proprietary "Teflon air-tube" design—in which the positive and negative conductors are housed inside Teflon "galleries" (see Illustration 1), with no added insulating material (save air)—is claimed to reduce dielectric distortion while maintaining proper spacing between the conductors and between the conductors and the shield.

Just recently, Bond has improved upon his ingenious Teflon air-tube design. Though the air-filled Teflon galleries make for a very effective dielectric, they still affect the propagation of select frequencies, reducing linearity and adding a sonic character that one doesn't hear when comparing raw conductors to insulated ones. To reduce dielectric interactions (and fluctuations in flat extended frequency response) to an absolute minimum, Bond has developed special RCA and XLR connectors

The Zero's X-ray ability to clarify very-low-level tone colors and performance details is unrivaled.

equipped with valves (see Illustration 2) that allow a vacuum to be drawn inside the Teflon air-tubes, creating a theoretically ideal dielectric environment.[2] Very expensive to make (and purchase), TARA Labs' "The Zero" interconnects are the first to employ this vacuum dielectric technology, which Bond claims has been measured at less than 3.5pF/foot. (The Zero interconnects also use an outboard passive grounding station to terminate their shields.)[3]

I have to be honest: The first question that popped into my mind—after I removed the massive, incredibly high-tech, beautifully made Zeros from their foam-filled, luggage-style carrying cases and started plugging them in—was how long the vacuum inside them would survive the stresses and strains that any interconnect is subject to in real life. TARA Labs claims that the Zeros can be "bent" up to 90 degrees at the "flexible segments near the connec-

1 Matthew Bond, "The Zero White Paper," p. 1. Available as a download at taralabs.com.

2 "The plug itself comprises a clamping mechanism to fix itself to the air-tube and an internal chamber, which is sealed with O-rings. Through a specially designed valve in the plug, a vacuum is drawn within the chambers of the air-tube so that the conductors themselves are within a vacuum." Bond, "The Zero White Paper," p. 3.

Illustration 2. "The Zero" RCA plug, equipped with a valve that allows a vacuum to be drawn inside the air-tube.

tor ends" without causing vacuum leaks, but should not be sharply bent anywhere between these flexible end segments. Also, obviously, any attempt to remove the screw-down crowns of the valves on the RCA/XLR connectors—or to disassemble the connectors themselves—may result in loss of vacuum and the voiding of warranties.[4]

While I have no way of knowing for certain whether the vacuums in my Zero interconnects were, in fact, maintained throughout my tests, I can assure you that all of the interconnects were bent sharply at the "flexible segments," that the extremely hefty RCA and XLR connectors (which use screw-down tightening) had a good deal of pressure applied to them to make sure that connections were snug (the sheer mass of the RCA plugs necessitates this), and that, because the Zeros were under test and had to be periodically swapped out, they saw more bending and unbending and tightening, untightening, and retightening than any consumer would likely subject them to in several lifetimes of use. In spite of all this abuse, the Zeros never changed their sound, which may confirm that their vacuums are a lot harder to mess up than I originally suspected or, contrarily, that the Zeros sound more or less the same regardless of the condition of their vacuum dielectrics.

As for the sound of The Zero and Omega, let me begin with a confession: I do not know how to tell whether an interconnect or cable is faithfully reproducing all that is recorded on an LP or a CD or an SACD; all I can do is report on the differences between its presentation and that of my reference interconnect and cable (which, as noted, was primarily Nordost Valhalla), and compare these results with my impressions of the sounds of real instruments. Any reviewer or manufacturer who tells you differently—who claims that an interconnect or cable is 100% faithful to every source or has no sound of its own—is kidding you and him/herself.

It is my guess that because both the TARA Labs and Nordost are very low in capacitance, the differences in their presentations were, in certain regards (transparency, particularly), not as marked as the differences I've noted between certain other cables and Nordost. That said, there were differences.

To start at the bottom, the Nordost, though impressive, did not have the same degree of focus, detail, color, power, and grip on really deep bass notes (or mid- and upper-bass notes). On something like David Bowie's "Little Wonder" on *Earthling* [Virgin], where the synth goes so powerfully deep it feels like a lava flow under your feet, the Nordost just didn't pack the same floor-shaking power and presence as the TARA Labs. Ditto for the timps and bass drum in the closing movement of Frank Martin's masterpiece, *Concerto for Seven Wind Instruments, Timpani, Percussion, and Strings* [Ansermet, Decca], which sounded very close to real when played back on the 101 Es via the TARA Labs (and the MBL 9011 monoblock amps and 6010 D preamp, and the Lamm LP2 phonostage) and just a little less so—slightly more pallid and diffuse—via the Nordost. From Fender bass to timp, contrabassoon, kickdrum, and Steinway, the TARA Labs consistently offered more authority, definition, dimensionality, color, and transient speed, without any sacrifice of the fine inner detail and see-through-to-the-back-of-the-stage transparency that Nordost is so good at delivering.

In the midband, the differences between TARA and Nordost were less marked. They are both remarkably rich, full, and clear on voices, pianos, fiddles, cellos, brasses, and winds. The TARA Labs delivers slightly more detail and more tightly defined images; the Nordost is slightly airier and bloomier and a bit more expansive in its soundstaging. On this last point, on the "Katy Dear" cut from Ian and Sylvia's *Four Strong Winds* [Cisco], the Nordost images Sylvia's autoharp a bit farther to Sylvia's left (listener's right) than the TARA Labs does, as if she were cradling the instrument in her left arm rather

[3] Effective shielding against RFI and EMI are very important to me, since I live in a spot where RFI is intense and, perversely perhaps, listen almost exclusively to LPs. I'd found Nordost to be excellent at rejecting RFI/EMI. So is TARA Labs.

[4] The Zero interconnects are warranted against defects for five years, and, under a separate warranty, guaranteed to maintain their vacuum. The original purchaser can send his Zero interconnect to TARA Labs for a free diagnostic (including evaluation of vacuum condition) at any time during the first three years—and for a small service fee any time after that.

than holding it closer to her body. However, on the same duo's *a cappella* "Texas Rangers" from *Northern Journey* [Cisco], the TARA Labs recovers the echo of Ian and Sylvia's voices from *way* back at the rear of the stage—the echo is essential to the song, adding an appropriately lorn, high-lonesome quality to the dirge-like lyrics—far better than the Nordost. Better, in fact, than anything else I've yet heard. When it comes to the retrieval of very-low-level, deep-in-the-mix/back-of-the-stage information (including ambient information), nothing I've heard can beat out the TARA Labs Zero and Omega.

It is only fair to note that the TARA products add a slight attractive darkness and liquidity to the silences between notes and instruments that the Nordosts do not, though it's hard to decide whether these slightly darker interstices aren't a side effect of the TARA Labs' richer, fuller, better-defined reproduction of the bass octaves. With the Nordost, silences between notes and instruments tend to sound less darkly tinted but not as liquid, with just a hint of "cottony" grain. In the upper midrange, the TARA is, paradoxically, just a touch brighter than the Nordost (you hear this, occasionally, on violins), though the difference here is small and reverses in the treble.

In the topmost octaves the Nordost is substantially brighter than the TARA Labs, but also a bit airier and more open. The TARA sounds consistently tighter in focus (though it never miniaturizes instruments) and more dynamic, but both reproduce things like cymbals or top-octave piano with plausible realism. The call between the two here probably depends on speakers and amplification, for each is superb.

Though the analogy is old and tired (not unlike yours truly), the differences between TARA Labs and Nordost are really very similar to the differences between modern-day solid-state and tube amplifiers. While this may lead you to think that I prefer Nordost—tube maven that I am—in this application I do not. In my current reference system (MBL 101 Es driven by MBL electronics) I prefer the TARA Labs products. It's not just that they fully expose the slight overall brightness, vagueness, and insubstantiality of Nordost Valhalla (particularly in the bottom octaves); it's that they sound, for the most part, slightly more like the real thing.

Having said this, I should note that there is another interconnect that I am also high on—the Synergistics Research X2 Absolute Reference, which I will report on in due course—that has magical properties of its own when it comes to creating a plausibly realistic sense of midrange presence, though, as with the TARA Labs and the Nordost, its magic depends on the speakers and electronics with which it is used. I should also note, however, that the Synergistics does not have all of The Zero's X-ray ability to clarify very-low-level tone colors, dynamic nuances, and performance details way back in the mix, nor its remarkable level of ambience retrieval, nor its electrifying transient speed and definition, nor its front-to-back transparency, nor its bottom-octave color, clarity, and authority. In these regards, the top-of-the-line TARA Labs is unrivaled—thus far in my experience.

In spite of the remarkable level of engineering that TARA Labs' flagship cables represent, I'm fully aware that recommending any wires that put you out 40 to 50 grand is borderline insane. (Well, not even borderline.) However, if you have dough to burn, a screw or two loose, a truly high-resolution stereo system, and a taste for the best of the best, then TARA Labs' The Zero and Omega should be at the top of your list of "must-hear" interconnect and cable. Indeed, if the less-expensive TARA Labs products give you a fair sample of the sound of its flagships, I'd have to think they'd be well worth auditioning, too.

MANUFACTURER INFORMATION

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Prices: The Zero interconnect, $12,800/one meter ($1800 per extra meter); Omega speaker cable, $11,995/10 feet ($1000 per additional foot); The Zero digital cable, $5995/one meter ($1200 per additional meter)