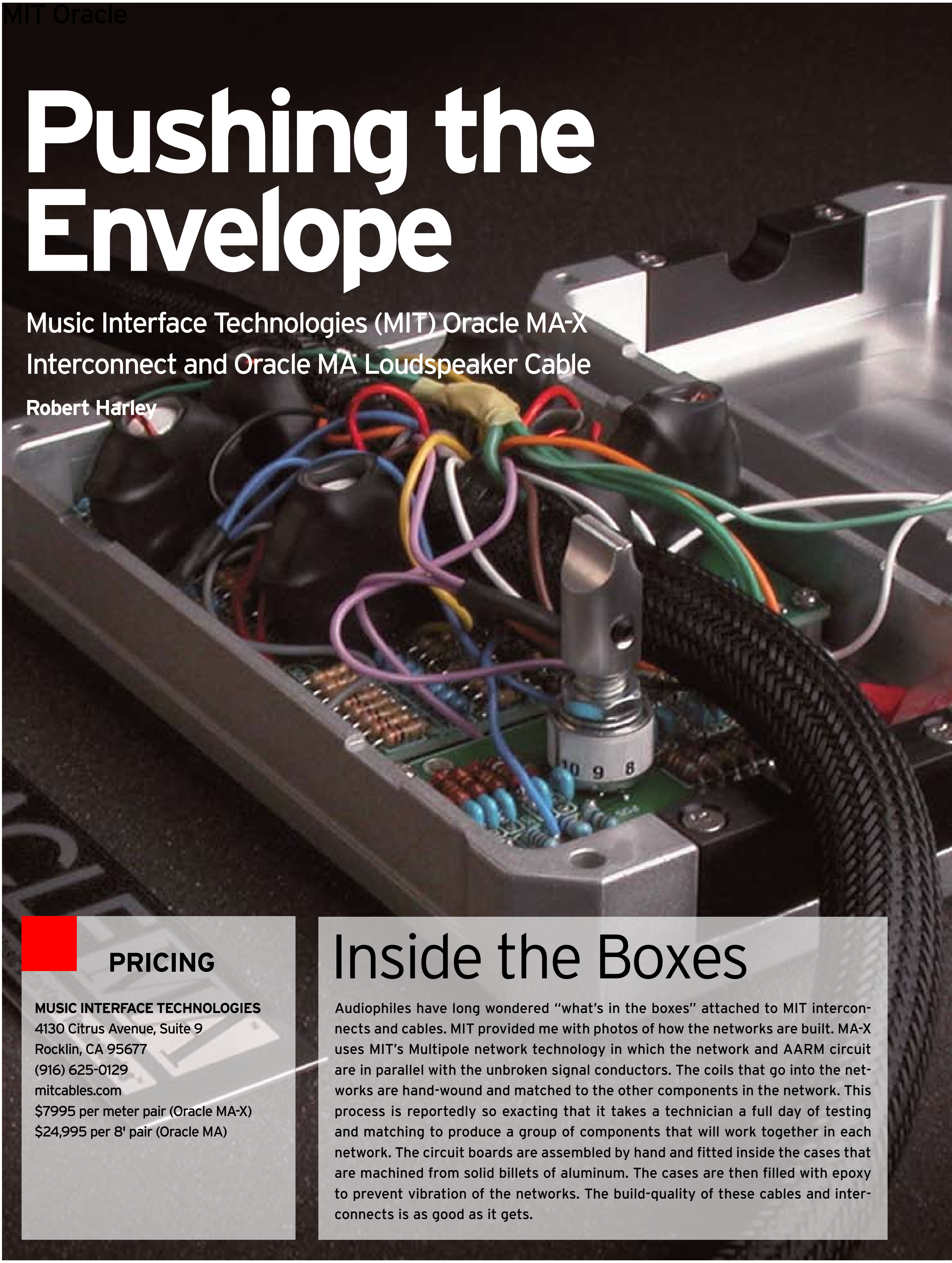
Pushing the Envelope

Music Interface Technologies (MIT) Oracle MA-X Interconnect and Oracle MA Loudspeaker Cable

Robert Harley



PRICING

MUSIC INTERFACE TECHNOLOGIES
4130 Citrus Avenue, Suite 9
Rocklin, CA 95677
(916) 625-0129
mitcables.com
$7995 per meter pair (Oracle MA-X)
$24,995 per 8' pair (Oracle MA)

Inside the Boxes

Audiophiles have long wondered "what's in the boxes" attached to MIT interconnects and cables. MIT provided me with photos of how the networks are built. MA-X uses MIT's Multipole network technology in which the network and AARM circuit are in parallel with the unbroken signal conductors. The coils that go into the networks are hand-wound and matched to the other components in the network. This process is reportedly so exacting that it takes a technician a full day of testing and matching to produce a group of components that will work together in each network. The circuit boards are assembled by hand and fitted inside the cases that are machined from solid billets of aluminum. The cases are then filled with epoxy to prevent vibration of the networks. The build-quality of these cables and interconnects is as good as it gets.

Music Interface Technologies (MIT) has an extensive history in high-end audio. Founder Bruce Brisson's patented cable designs were the foundation of Monster Cable's products in that company's early days. Brisson went on to create MIT, one of the first high-end cable manufacturers, and a company that pushed the state-of-the-art in cable design. The culmination of Brisson's 30 years of research is the Oracle MA-X interconnect and Oracle MA loudspeaker cable reviewed here—MIT's top-of-the-line statement products.

MIT has also had a long association with Spectral Audio. Spectral's super-wideband preamplifiers and power amplifiers (reviewed in this issue) require terminated interconnects and loudspeaker cables that low-pass filter the audio signal. Although MIT interconnects and loudspeaker cables are essential on a technical level to making a Spectral system work correctly, I also found them essential to getting the best musical performance from the Spectral components.

I have extensive experience with these interconnects and cables with a wide variety of electronics, sources, and loudspeakers. MIT Oracle MA has been my cable reference for several years. I've never found another speaker cable that approaches its fundamental harmonic rightness or spatial resolution. In fact, Oracle MA sounds different from other cables, tonally and spatially. It has a warmth and weight in the bass and midbass that to me sound more like music and less like hi-fi. Instrumental timbres, particularly those with a preponderance of low-order harmonics, are rendered with a wonderful warmth, richness, sense of body, and density of tone color. The sound of Oracle MA is the antithesis of thin, threadbare, lightweight, or analytical. Despite the cable's warmth, it has exceptional clarity and resolution—qualities that often exclude warmth. In addition, Oracle MA has tremendous heft and power in the bottom octaves which seemingly sets the tonal foundation for the rest of the spectrum. Although full, rich, and warm, the bottom end is extremely articulate, with exquisite rendering of texture and clarity of pitch.

Oracle MA also excels in soundstaging. This cable fully reveals the size of a recorded acoustic. But it's not just sheer soundstage depth and width that are Oracle MA's strong suit; I've never heard another cable that is as adept at resolving dimensionality—the sense of three-dimensional images inhabiting a real space. Oracle MA seems to reveal the spaces between instruments in a way that better defines the placement of those instruments. In addition, images are presented as fully fleshed out three-dimensional objects rather than cardboard cutouts. No other cable I've heard has this quality.

The top-of-the-line Oracle MA-X interconnect is similarly impressive. The MA-X's network module contains a five-position switch that allows you to dial-in the interconnect's articulation response to suit your system. MIT calls this AARM, for Adjustable Articulation Response Module. The switch's effect was subtle, with the "higher" settings producing a progressively more incisive and up-front presentation. In addition, MA-X is custom-tailored to your particular electronics, specifically the preamplifier's output impedance and the power amplifier's input impedance, and the type of electronics. For example, the optimum speaker cable bandwidth for the Spectral electronics is 350kHz; for a tubed amplifier it might be 150kHz.

Sonically, MA-X interconnect has the same attributes as Oracle MA speaker cable: a full-bodied and richly saturated rendering of tone color, extraordinary bottom-end extension, startling dynamics, and tremendous resolution of low-level detail without any analytical sound. MA-X also has spectacular soundstaging. During the setup of the Wilson Alexandria X-2 loudspeaker, we found that no other interconnect came close to MA-X in getting the system's tonal and spatial qualities exactly right. In fact, the MA-X arrived early the morning of the second day of setup, and installing it in the system immediately rendered a wholesale advance in achieving the sound X-2 designer David Wilson was pursuing.

I know that these cables and interconnects are insanely expensive, but in the context of reference-grade components such as the Spectral electronics and Wilson X-2 loudspeakers, they are essential to realizing the ultimate performance of which these extraordinary products are capable. You should know that MIT's Magnum MA speaker cable has many of Oracle MA's qualities at a third the price. Similarly, Magnum MA interconnects (which lack the AARM feature) deliver much of MA-X's performance for far less money. Still, if you have a no-compromise system, MIT's top-of-the-line products are well worth the investment. **TAS**

MANUFACTURER COMMENTS

Emerald Physics CS2 Loudspeaker (Issue 189)

I would like to thank Robert Greene for his terrific review of our CS2. It is rare to find a reviewer that is so knowledgeable about how a design actually achieves its goals. I'd like to add a few additional points on the CS2 that will interest your readers.

As Robert noted, the first arrival of the signal is extremely important. This is controlled through our digital crossover along with the tweeter waveguide and woofer dispersion characteristics. Additionally, several other important design features contribute to its performance. High sensitivity, bi-amplification, and boxless open-air woofers achieve both significant dynamics and the ability to hear high levels of musical information retrieval. Typically, box speakers lose information due to the smearing created by cabinet resonances. This smearing and dynamic compression that all passive crossovers add to reproduced music is avoided in the CS2 design. We believe that the CS2 is one of the only speakers to allow the user to hear the full dynamics available in a recording. Our design does not require extremely expensive amplifiers to give superior results as noted by Robert's use of a relatively inexpensive multichannel amplifier in his listening tests.

The final engineering goal was value, and at $3500, the CS2 was designed to achieve a level of performance that is not available from competitively priced speakers. Robert has clearly understood this achievement by comparing the CS2 to significantly more expensive speakers. For those listeners that want to have performance down to 15Hz, they will just have to wait for the introduction of the CS1. Using four 15-inch woofers, a newly designed custom waveguide, and compression tweeter, the CS1 will outperform the CS2, but at a price of approximately $10,000.

Again, thank you for your fine review of the CS2.

Clayton Shaw
Emerald Physics

Esoteric X-05 CD/SACD Player

In 1987, Esoteric introduced the first Vibration-free Rigid Disc-clamping System (VRDS). Targeting lighter weight and lower cost, we spent more than two years in development for the VRDS-VMK5. The MK5 used in the X-05 is a reduction of our P-03 transport from a cost perspective, with little sacrifice in performance. To achieve cost efficiencies we had to find new ideas. In the P-03, the motor is above the turntable and the turntable and spindle motor are integrated. In the MK5, we have changed the motor position and moved it below the turntable. As a result, turntable and motor separate when the disc loads. Once a disc is loaded, it is fully clamped with the new turntable, the motor is reconnected, and from that point forward the transport operates like a P-03. A hybrid structure for the turntable and steel bridge, with a full size polycarbonate and aluminum clamp, helps suppress vibration and resonance. These innovations have allowed us, for the first time, to offer the benefits of VRDS accuracy to a wider range of audiophiles.

We thank the editors for the opportunity to comment and we are grateful to be associated with *The Absolute Sound.*

Mark Gurvey
Esoteric

MIT Oracle MA-X Interconnect and Oracle MA Loudspeaker Cable

First I would like to thank Robert Harley for his thorough review of the MIT Oracle MA-X Interconnect and Oracle MA Loudspeaker Cable. Because Robert pretty much said it all regarding the sonic qualities of our Oracle cables in his review, I would like to offer the following comments regarding cable distortion mechanisms for the benefit of TAS readers.

MIT cables incorporate technologies that address fundamental distortion mechanisms that occur in all speaker cables. Let's first look at the problems with speaker cables in the low frequencies where they function as a low-pass series filter. Somewhere above zero hertz the phase changes from a negative (capacitive) phase value to a positive (inductive) value. A perfect low-pass filter for audio would remain inductive (positive phase) and not show a zero phase until DC, or some fractional hertz just above DC. When terminated into a low 4- to 8-Ohm load, all speaker cables, unless they have compensation networks (as does MIT) that optimize their series-resonance points, show a series resonance in the region of 150–1500Hz. These series resonances are very damaging to the audio signal, causing sine waves to become discontinuous at the zero crossings when the frequency is below the series resonance. It's analogous to jitter in a digital audio system. Series resonances degrade tonality, imaging, and soundstage size. There's a noticeable increase in clarity and articulation above the cable's series-resonance frequency because the impedance is low and current is maximum at the series resonant frequency. Simply put, and as RH pointed out in his review, this is why MIT networked cables tend to have more energy and control in the low frequencies than do ordinary cables.

Ordinary cables suffering from this problem, even networked cables which do not thoroughly address these engineering issues, tend to diffuse individual images and push the soundstage behind the speakers, projecting very little music in front of the speakers, and even less outside the speakers. Cables that are advertised as being "fast" and reference their speed as a percentage of the speed of light are the worst offenders when it comes to these series-resonance problems because they have very little inductance and very little capacitance. As mentioned, a perfect low-pass filter used for audio should not exhibit zero phase until DC, or some fractional hertz just above DC. It doesn't matter if the audio signal is delayed a few nanoseconds; what matters is that all frequencies are delayed by the same amount of time!

As the frequency climbs the cable naturally becomes more and more inductive, and once again the cable resonates, but now we have a parallel resonance and the impedance has become infinite. Unlike the series resonance, where the only element left in the cable is the resistance of the conductor because the reactances (+ & –) have canceled each other and maximum current is passed, a parallel resonance is highly reactive, infinite in impedance, and no current can be passed. Consequently, extraneous noise generated by the audio components, as well as by the cable itself, is reflected back to the amplifier and is "mixed" in with the audio signal now coming down the cable. This parallel resonance not only compromises the quality of the audio signal, but can also be dangerous to the amplifier—as the voltage at a parallel resonance rises to its maximum value, the energy that is reflected back to the amplifier may also be multiplied by the cable's Q (quality) at resonance unless anti resonant measures are engineered into the cable to optimize the Q.

All MIT cables designed since the early 1990s are based on solutions to these problems. Our recently developed Multipole Technology, incorporated in the Oracle products, builds on our previous work by solving another set of problems. But that's a story I'll save for another day, as I am sure that this reply is now running too long.

Bruce A. Brisson
Music Interface Technologies