

Digital Gold
The Audience Au24 Digital Cable
by Greg Weaver - OnSoundandMusic.com - Aug. '04



Prospecting...

My first thought when I saw the Au24 designation was that this top-of-the-line digital S/PDIF cable from Audience was another in the growing list of cables utilizing gold conductors—Au is the atomic symbol for that precious metal. Over many communications with Audience President John McDonald and designer Richard Smith, I came to learn that the conductive materials are not drawn from gold. Rather, they are fashioned from OHNO continuous cast single-crystal copper, now a staple in the cable business, and for good reason.

From the very first glance at any Audience cable, it becomes evident that they are not "me too" products. First, they are uncommonly small in diameter—at least in the high-end cable game where gargantuan has come to be synonymous with quality. No, this cable is just an eighth inch in diameter!

While the accompanying product literature goes to great lengths to beseech the new user of this cable (the entire line, in fact) to not be negatively influenced by its slight physical appearance, it was all just so much preaching to the choir. I have long known that dimension alone cannot forecast the characteristic sound of any cable.

In fact, several of my most popular Do It Yourself projects have helped to dispel that notion, rather handily. You can build a killer budget interconnect set or S/PDIF digital cable, each for less than \$20 bucks, using 30 AWG (.009 inch diameter!) magnet wire and some RCA Plugs from Radio Shack. Or, if you really wanna' splurge and get some bang for your buck, you can take a step up by replacing the enamel coated copper with some solid silver wire of the same diameter. So, music fans, this was one trooper who was properly open-minded and prepared.

Taken to its essence, bigger isn't necessarily better. For an overview on loudspeaker cable characteristics (not necessarily germane to this particular discussion), you may find more than you want to know at my reprinted 1992 essay, Loudspeaker Cable: Simple Passive Connection or Complex Dynamic Component . Low DC resistance can be relatively unimportant, taken on its own. As music is, after all, a complex AC signal, what is more important to this discussion is the AC resistance of a cable, or its characteristic impedance. Scores of those large-diameter/low-DC-resistance speaker cables have excessively high characteristic impedance—many ranging from 100 to over 600 ohms, with some even measuring in the 1000s of ohms. While the Au24 cables are only 4 mm (1/8") in diameter and do offer a slightly higher DC resistance than the garden-hose variety speaker cable, their characteristic impedance is a low 16 ohms. This permits musical signals—from the deepest of bass to the most complex overtones—to pass through this cable with less actual impedance than those cables possessing only a lower DC resistance.

Another close-to-home issue the included product literature dealt with was an inference that "few people" are aware of just how strong a role the cable construction geometry plays in its resultant sound. Once again, I was already on that wagon; have been since 1990 (see the above loudspeaker cable article). I have found that the type of physical construction used makes at least as large a contribution to resultant cable sound as do the quality of the conductors themselves. This was getting' interesting!

Further reading proved one of my visual hypotheses to be correct. Given the small diameter, my assumption was that the products were of the coaxial geometry. The Au24 cable is indeed coaxial, with the OCC copper cased inside polypropylene insulation and a cross-linked polyethylene jacket material. Richard says that the Au24 products are designed to optimize the ratio of inductance to capacitance (L:C) to allow for the lowest possible eddy current resistance at the specific frequencies, rather than just to have the lowest inductance or capacitance they might otherwise achieve. This brings us to the fulcrum of Richards design—eddy current.

An eddy current is a swirling current set up in a conductor in response to a changing magnetic field. Following Lenz's law, the current swirls in such a way as to create a magnetic field opposing the change; to do this in a conductor, electrons swirl in a plane perpendicular to the magnetic field. This magnetic field grows and collapses as the signal varies through the conductor. As the field collapses around the conductor, it induces an opposing voltage back into itself. This opposing voltage creates the eddy currents within the conductor.

It is this late arriving, opposing voltage that disrupts the original signal by inducing a time-smearing artifact. The argument is that these effects are clearly audible, and I concur. Richard says cables that sound "detailed" or "powerful in the bass" are usually victims of high eddy currents. His contention is that eddy currents, especially when combined with high capacitance, can cause a cable to sound overly "relaxed." He also asserts that the particular type of coloration caused by eddy currents is dependent on the materials, construction techniques and the geometric configuration of the cable.

One final note in the product literature touches on the honest attempt at keeping it simple. Fancier, more massive, more impressive looking connectors and layers of cosmetic sleeving might have made the cable look more expensive, and thereby, more marketable. Richard reports, however, that every time he tried such things it resulted in degraded sound. He went on to exclaim how truly amazed he was at the sonically detrimental effects caused by bulky, high-end connectors and decorative sleeving. As a result, Audience uses an exclusive connector, minimalist in design, with excellent grip and low contact resistance, on all cables requiring RCA terminations. On Sound and Music 's own Steve McCormack comments on this very topic while examining the new WBT NextGen RCA connectors.

One last technical note I need to make: this one about run-in time. Digital cables are odd beasts in that regard. The nice thing is that you don't have to be actually playing music to run them in. So long as the cable provides a lock between the transport and DAC, and they are both powered on, you are runnin' the cable in. The literature states that the Au24 cables begin to improve after 2 to 3 hours playing time, but that they will continue to improve for approximately 50 hours. I can verify this assertion, and say that in my system, the magic commenced almost right out of the box. By the end of the first several hour listening session I knew something special was happening. By the end of the first week, it was full on glorious. Let's talk about the music now, shall we?

The Mother Lode

Bass with the Au24 is not so much deeper as it is fuller and more harmonically rich. This results in a more notable "heft" in the bottom-most octave, with no smearing or bloating.

Vocals are more specific—in both size and in their sense of "body." To make a visual comparison, it is as though the performers have stepped out of a pall of smoke that was previously clouding the venue. This is not because of a more forward presentation; it is truly a more "refined" view. Miking techniques are much more obvious, as are venue signatures.

Strings, brass, winds, cymbals, et al., are move vivid in tone. Guitar strings are more clearly discernable. Gut more "guttly." Fingering work cleaner—more "in the spotlight" in its execution. Brass and reed instruments have more of that signature "bite" and more complex underlying overtones. Cymbals have a "creamier" bronzy sound, much more like the real thing, again pointing to a more correctly recreated harmonic texture.

Anyone who knows either my work or me will know what an importance I place on staging and imaging. Those who see these attributes as 'merely' artifacts of stereo recording haven't been 3rd row center at an orchestral performance, or had a special table near the stage for a James Cotton show. Spatial cues with the Au24 are rendered both more openly and with unmistakable delineation. Q-Sound effects on recordings like Roger Waters guilty treasure, Amused to Death or Pink Floyd's Pulse, offer more pronounced locations, both in terms of lateral placement through the listening room and in the reconstitution of that disembodied voice (be it human or instrument). The size and scale is more real-life and less "sound-effect," focus is more precise, and the overall sense of body is greatly augmented.

Backgrounds are quieter, especially on older analog recordings. Micro dynamic events are rendered with superior detail and in more realistic scale, and thereby take on a greater musical significance, most likely attributable to the enhanced sense of the "darker" background. There is a general sense of ease and organic-ness to the overall presentation; it is akin to the sound of good analog in that respect. Whether that is due to an overall coherence the cable offers, or perhaps a very good impedance match (no reflected RF bouncing end to end, "ringing" in the cable), I can't say. But, it offers a more nuanced presentation, much closer to live music than I have had with any other cable I've auditioned, and believe me, I've played with a few!

Overall, it was repeatedly apparent to me that I was further from an electro-mechanical system and closer to a musical event. While this cable neither highlights nor restrains any specific bandwidths, it does seem to offer a more detailed view at the same time that it renders more harmonic complexity and musical richness. Relaxation and involvement are both heightened. That to me is a paradox, as I cannot point to a significant number of other products that can do both those things at the same time. Welcome to the Audience, my friends.

Though my initial assumption proved wrong about the nature of the conductive material, it did prove to be spot-on about their precious musical nature. Inserting the Audience Au24 S/PDIF digital cable between my transport and upsampler, it is as if I have found the musical mother lode. The nuances and balance the Au24 communicates are so immediately apparent and welcomed that I am just in awe of this cable right now. I have never noted a greater step toward musicality with any other digital cable at any price. This may sound cliché, but it is as if I am hearing my CD collection anew with this splendid rebel from Audience.

Audience Au24 - S/PDIF Digital Cable - 1 meter

\$341 - RCA/RCA
\$386 - RCA/BNC
\$430 - BNC/BNC