

# FURUTECH

AV Guide USA – Chris Martens  
GT2 USB Cable Review

Continued

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## Making the Most of USB

December 21st, 2009 -- by Chris Martens

Source: Playback

In October, 2009 I posted a blog on the AVguide.com Web site describing my initial reactions to Furutech's GT2 high-performance USB cable, which were favorable. I thought then, and think now, that the cable made positive differences that most any listener with a reasonably decent sound system could hear and enjoy.

Little did I know at the time that the blog would become a magnet for critical commentary from self-proclaimed "real electrical engineers" eager to stamp their feet, make disparaging comments, and to argue (or even to "prove") that high quality USB cables can't possibly make an audible difference. My thought: perhaps engineers—like politicians—would be better creative problem solvers if only they were not blinded by what the late President Reagan might have termed "the things they know that just aren't so."

Thus far, my practical observations have been that A) there *are* indeed sonic differences between USB cables (despite what some techno-pundits would have you believe), and that B) good digital audio cables can and do make beneficial sonic differences you can easily hear. Can I explain why the cables make a difference? Not necessarily, but that doesn't change my observations.

Thus, my challenge to skeptics is a simple one: set aside your preconceptions and carefully compare USB cables playing actual music through your preferred reference USB DAC in a good sound system. See what (if any)

differences you observe. If one cable does consistently sound better to you than another, then you've found a good thing. If not, then no real harm has been done (apart from having enjoyed a good evening of music, which is surely not a bad thing).

Having lived with the Furutech GT2 USB cable for several months now and having tested it with a number of USB DACs, I've decided to expand my original blog comments into the review you're reading now. But before I go any further, some background is in order.

## **USB for Digital Audio: Terrific Convenience, But What about Sound Quality?**

Millions of music lovers have found it desirable to store their music collections on the hard drives of their computers (or on attached outboard storage devices), and more often than not USB has become the digital audio interface of choice for those PC-based music systems. Most if not all of today's computers sport USB ports, so it comes as no surprise that, among audiophiles who favor computer-based music systems, there has been an explosion of interest in USB DACs. There's no denying the appeal of having all your music stored in one place, neatly cataloged, and ready to play at the click of a mouse button—provided, of course, that there's no penalty in sound quality. Ah, but there's the rub.

Many audio reviewers and other music lovers have discovered that when you play identical digital audio files through USB and then through S/PDIF interfaces on the *same* audio DACs, the resulting sounds you'll hear through those interfaces are *not* identical. While user comments vary somewhat, many listeners perceive that the "S/PDIF sound" is typically smoother, more focused and refined, and more three-dimensional than the equivalent "USB sound"—differences that might be attributable either to the interfaces themselves or the quality of the cables used to carry the digital audio signals (or perhaps both).

Some readers will find these statements unbelievable—or perhaps the products of overactive audiophile imaginations. But again, I would encourage skeptics or really anyone interested in PC-based audio systems to conduct the experiment for themselves. Get a DAC that has both USB inputs and S/PDIF inputs and then try playing identical lossless audio files through one interface and then the other. Take notes on what you hear. My bet is that you'll find differences that are real, easy to observe, and that follow roughly the pattern I've sketched above.

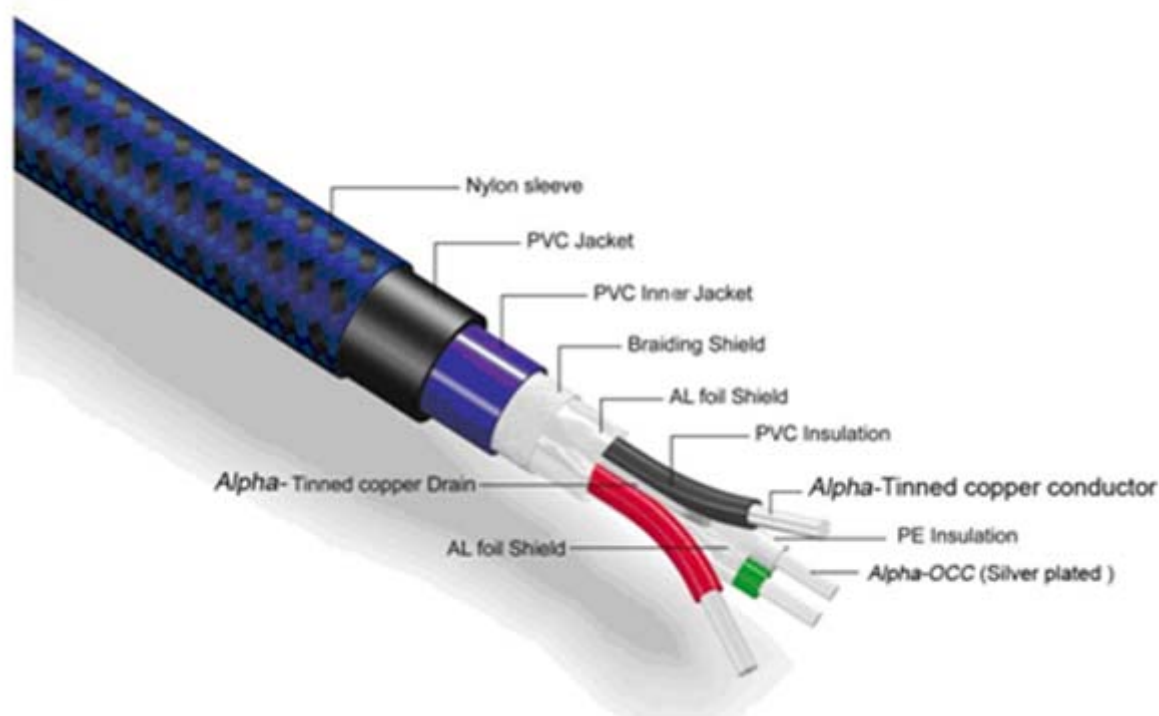
## **Helping USB Be All It Can Be**

On one hand, USB interfaces are extremely convenient and more or less ubiquitous. On the other hand, it seems the sound quality of digital audio as played through USB interfaces, though admirable in many ways, is really not all that it could or should be—and typically not as good as what you'd hear through S/PDIF interfaces. Now obviously few of us are in a position to influence or improve the USB interface specification, but one thing we *can* control is the quality of the USB cables we use—essentially trying to remove the cable as a potential source of noise, jitter-inducing internal reflections, or other digital audio data transmission problems. Furutech believes USB-based audio systems are potentially "capable of smooth and detailed sound," but contends, "you need quality, well-engineered and built USB cables to get there." This, of course, is where the Furutech GT2 USB cable comes in.

## OVERVIEW

**Consider this USB cable if:** you find upper midrange and treble sounds through USB interfaces tend to sound overly bright, edgy, and two-dimensional, and would like a cable that can help address these problems *without* having a negative impact on low-level sonic details.

**Look elsewhere if:** you seek a “silver bullet” solution that will magically turn USB into the highest quality digital audio interface there is. Furutech’s GT2 cable improves sound quality in USB applications, but it is not a panacea. Other digital audio interfaces such as S/PDIF may still offer greater performance potential. Nevertheless, the GT2 cable helps USB “be all it can be.”



*Furutech GTS USB Cable, internal construction*

## FEATURES

Furutech’s GT2-series cables provide:

- Furutech’s signature Alpha-process, silver-plated, OCC (Ohno Continuous Cast) high-purity copper conductors.
- What Furutech describes as a “special-grade high-density polyethylene insulation/dielectric.”
- The GT2 cable’s main conductors are surrounded by a three-layer shielding system.
- The cables provide a cable wrap that “includes damping and insulating materials keeping mechanical ringing from affecting the sound.”
- Cable terminations: GT2 cables are terminated with “24k gold-plated USB 2.0 connectors” said to improve grip and to keep “mechanical and electrical distortion at bay.”

Note that Furutech has also developed a sister-line of GT3 cables designed for use in upcoming USB 3.0 applications. The higher specification GT3 cables are designed along similar lines to the GT2 cables, but provide a more elaborate five-layer shielding system.

## SONIC CHARACTER

I personally have found that PC-based, USB-driven digital audio systems tend to offer solid, well-resolved bass, clear mids with stable imaging positions, and a good measure of rhythmic drive. The Furutech cable builds upon these core sonic strengths of USB, while contributing clear-cut improvements in two important areas.

First, the GT2 cable attacks the most fundamental problems of USB sound: thin, edgy, and occasionally strident-sounding upper mids and highs. With the GT2 cable in play, these “sins of omission” are mitigated or tempered to a point where the overall sound becomes noticeably smoother and more enjoyable to hear. Even with the GT2 cable in use, one could argue that S/PDIF interfaces still sound better, but the key point is that GT2 cable helps narrow the perceived gap between USB and S/PDIF performance. Forward progress is a good thing.

Interestingly, the GT2 cable does *not* appear to function as any sort of “filter”—at least not in the sense that it removes unpleasant sonic artifacts, but at the expense of lost musical information. On the contrary, musical information is left intact, while subtle, low-level details seem to be transmitted more effectively than before, which brings me to the second point I want to mention.

With the GT2 cable in play, low-level details, such as subtle ambience or reverberation cues within the music, become easier to hear and more smoothly integrated with the musical whole. Since we are, after all, talking about digital and not analog signals, I cannot explain how or why this happens on a technical level, but it is nevertheless a sonic outcome I have observed. The result is that the system sounds noticeably more nuanced and also more three-dimensional, with more effective rendering of soundstaging cues in the music and a more refined ability to capture the sense of air surrounding instruments and voices.

As I write these comments, I have been doing back and forth listening comparisons between the GT2 cable and a high quality “data grade” USB cable. Perhaps the most obvious difference I’ve observed has nothing to do with tonal balance or frequency response, but everything to do with nuance and subtlety. The data-grade cable gives music a flat, two-dimensional, “color by numbers” quality, while the GT2 cable allows continuous shadings of textures and tonalities to come through more clearly. How it pulls this off remains an unexplained mystery, but I’m glad for the sonic improvements nonetheless.

## MUSICAL EXAMPLES

In the “Stepping (Isise)” track from Babatunde Olatunji’s *Circle of Drums* [Chesky], you’ll hear a wide variety of drums and percussion instruments enfold you, with the ensemble of drums playing complex rolls—panning from stage left to stage right—as one instrument takes up the rhythmic pattern where another leaves off. Occasionally a high cymbal will punctuate a phrase, while the sounds of a high-hat opening and closing will periodically press forward within the ensemble to supply an insistent, rhythmic pulse.

Through a conventional USB cable the soundstage for these left-to-right drum rolls was relatively flat, spreading out in a plane positioned just slightly behind my system’s speakers. With the GT2 cable in play, however, the rolls swept through a much wider and deeper arc behind the speakers, giving the presentation a more realistic sound and feel. The sound of the cymbals and high hats, in turn, seemed somewhat two-dimensional and wiry through the conventional USB cable—more like bursts of white noise than real cymbals. Through the GT2 cable, however, I could hear more of the initial “ping” as the cymbals were struck and more of the shimmering, metallic decay as their sound faded away. Similarly, the GT2 cable passed digital audio data that allowed me to hear the delicate “shusshh”

of the high-hat mechanism opening and closing. Granted, these are perhaps small sonic details, but they are important ones, too—details that mark the difference between “pretty good” sound and sound that has serious elements of realism.

One of the most realistic and beautiful recordings I’ve run across of late is Christopher Roberts’ *Last Cicada Singing* [Cold Blue], which presents Roberts performing a selection of four of his own compositions written for a fretless Chinese stringed instrument called a Qin. The instrument, which is typically plucked, has a distinctive and almost chime-like voice, with a terrifically evocative quality that becomes apparent whenever the performer slides (or bends) a note upward or downward in pitch, evoking a rainbow-like swirl of harmonics and overtones.

Frankly, *Last Cicada Singing* sounds quite good through the conventional USB cable—good, that is, until you hear the same track with the GT2 cable in the system. The conventional cable captures much of the harmonic information as well as plectrum noises as the Qin is played, but it does so in a way that makes the plucking noises sound overly sharp-edged and prominent, while presenting the harmonics in a disembodied way—almost as if they were somehow disconnected from the instrument that produced them. But play the same album through GT2 cable and you’ll hear the sound become more integrated, organic, and whole. The plucking sounds, while still crisp and distinct, lose their artificially glassy-sounding edges, while the harmonics of the Qin sound—both in pitch and texture—like natural extensions of the fundamental sound of the instrument. Perhaps for this reason, the presentation takes on a heightened quality of “reach-out-and-touch-the-performer” palpability, which is well worth experiencing.

## **BOTTOM LINE:**

*While not a panacea, Furutech’s GT2 USB cable addresses and helps to mitigate some sonic problems commonly associated with USB digital audio interfaces. For those who may have questioned whether USB can be an enjoyable interface for use by demanding audiophiles, the GT2 cable goes a good way toward answering the question in the affirmative.*

## **SPEC & PRICING**

### ***Furutech GT2 USB Cable***

**Price:** .6 meter cable, \$100; 5 meter cable, \$240; other intermediate sizes are available.

**Furutech**

[www.furutech.com](http://www.furutech.com)

<http://www.avguide.com/review/furutech-gt2-usb-cable-playback-26>