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## SA Equipment

### Furutech Flux Series Cables

**Furutech Powerflux, Lineflux, Speakerflux, Digiflux, And GT2 USB**

**Furutech cables impart neutrality and transparency to your music.**

**Review By Tom Lyle**

I consider it a privilege to be selected to review the top-of-the-line Flux Series cables by the Japanese high-end manufacture Furutech. There are at least three groups of people that might find that statement a bit odd. First, there are the seasoned audiophiles, who must think I'm crazy for volunteering to swap each and every reference cable out of my system, install the sample cables, and then replace them with the reference. And then perhaps once more install the samples. And of course when the review is finished, once again remove all the sample cables from the system. Is all this trouble one must go through to write a review worth it? The second group that might find this statement odd are the non-audiophiles, many scratching their heads as to why one would "review" not only "a" cable, but a host of cables where each wire might cost more than their entire sound system (if they even have a system). Of course there is that third group, audiophiles (Flat Earthers, some may derisively call them), and non-audiophiles alike that get quite agitated as they implore that cables make no difference in the sound of a system. As far as they're concerned, as long as one uses a sturdy cable with reliable connectors, one's system will still perform at its best. One can attain good sound without using pretentious audiophile-approved cabling. I'm all for using sturdy cables with reliable connectors, but experience has proven again and again that cables can make a very positive difference in the sound of a high-quality audio system.



I usually start a cable review by insisting that changing the cables on one's entire system is the best way to evaluate a particular brand of cables. But since I am not a salaried employee of Enjoy The Music where my entire day consists of busying myself with my systems intersperse with listening to full album sides, then writing about my experiences, I instead installed the Furutech cables in small batches. Usually a cable company will send me enough cable as to supply the most important links in my system, for example, the power amp, the DAC, linestage and phono preamp, speakers, etc. Scot Markwell of Elite AV Distribution, Furutech's US distributor, was nice enough to send me a slew of cables, more than enough cables to re-wire my entire system with no input, receptacle, or output left untouched, including most of my second system downstairs. I swapped them for my reference cables over the course of a few weeks, instead of spending an entire evening (or two or more) genuflecting behind the equipment racks. Thankfully, Furutech cables are quite flexible, even though most of them are rather thick in diameter. These flexible cables made them much easier to install than some of the garden-hose-thick cables with the intractability-of-pipe-cleaners I've had the pleasure of installing in the past. The only problems I had installing them was not the fault of Furutech -- the back of my equipment racks have the look of disorganized phone closets. And so we return to the notion that certain audiophiles must think I'm crazy that I volunteered to undertake such a task, and there were times during this review that I tended to agree with them.

### Furutech Powerflux Power Cable

The impressive looking Powerflux power cables are made from a 68-strand Alpha-OCC (OCC is an acronym for Ohno Continuous Casting, which is a modern method of casting copper that was developed in Japan) twisted around mu-conductor strands with a "special-grade" PE dielectric insulation. The Alpha conductors are fine OCC wire that have been cryogenically treated and demagnetized. An inner sheath of RoHS-compliant PVC surrounds the dielectric, and incorporates a carbon powder that enhances dampening, and then is covered by a full Alpha conductor wire braid shield. The flexible PVC outer sheath and a Nylon braid jacket cover the exterior of the cable. At the ends of the Furutech Powerflux power cable is their top-of-the-line FI-50M(R) Piezo Ceramic Series Power Connector, the "R" indicating their Rhodium-plated non-magnetic conductors. Many audiophiles might have seen these Furutech connectors on other brands of cables or a friend's DIY cabling, evidence that Furutech has been very successful in marketing their parts to worldwide high-end audience. The connector housings are made of many layers of carbon fiber in a damping and insulating acetal-copolymer, which is surrounded by nonmagnetic stainless steel bands. The bodies of the connectors have nano-sized ceramic particles and powdered carbon, both of which are active materials. Nylon and fiberglass are used to form a mechanically and electrically non-resonant connector body that Furutech claims "may just be the most sophisticated in the world".

I used the Furutech Powerflux power cables in every available component in my main system that had an IEC outlet, other than the Sound Lab electrostatic speakers. A Pass Labs X350.5 power amplifier's power cord was connected directly to the Virtual Technology wall receptacle which was one of two dedicated 20 amp lines in this listening room. A Balanced Audio Technologies (BAT) VK-3iX preamplifier, Pass Labs phono XP-15 phono preamplifier, and the DAC *de jour* which these days is a Wadia 121 Decoding Computer, but occasionally a M2Tech Vaughan or Benchmark DAC1Pre, had their power cables connected to a PS Audio Power Plant AC Regenerator, which in turn had its Furutech Powerflux power cable connected the wall receptacle of the second dedicated power line. The Basis Debut V turntable has an AC motor, its Furutech power cable was connected to a separate PS Audio Power Plant, and then another Powerflux cable connected the Power Plant to the wall receptacle.

### Furutech Lineflux Interconnect

The Lineflux interconnect uses solid-core Alpha-OCC conductors, double-layer shielding, and a "high-grade" polyethylene dielectric with insulating materials to dampen the transmission line. I used in my systems with both their RCA and XLR connectors, which are finished in layered carbon fiber and stainless steel with rhodium-plated pins. Furutech stresses that the construction of these interconnects enable "extremely fine resolution down and through the very low noise floor", and also state that the cables improve soundstaging and imaging capabilities of one's system. They go on to say that one will also hear improvements in the midrange and bass frequencies, and "power and dynamics to spare". Furutech uses some flowery hyperbole on their website regarding the Lineflux, coming fairly close to claiming that these cables will evoke a sense of spiritual enlightenment with their claims of "verisimilitude to the original event, a sense of engagement promoting suspension of disbelief, a visceral immersion in the audio video experience".



Lineflux interconnects with XLR termination was used between the DACs and the preamplifier, the phono preamp and the preamplifier, and to connect the preamplifier to the power amp. Interconnects terminated with RCA were used mostly in my second system, and there this system used only one sets of interconnects, to connect the DAC's variable output to the PrimaLuna DiaLogue Six monoblock tube amps.

### Furutech Speakerflux Speaker Cable

Speakerflux cables share many of the same features as the Powerflux and Lineflux cables. On Furutech's website, their marketing department once again went all out with the description of these "meticulously engineered" cables. Again Furutech uses OCC Pure Transmission conductors, which are terminated with rhodium-plated non-magnetic copper spades finished with carbon fiber and stainless steel. The dielectric/insulation of the cables are "high-grade" PE reducing capacitance, which is designed to improve mechanical damping "for greater resolution, clarity, powerful dynamics, plus an ultra-quiet soundstage in which music develops fully without artificial upper-frequency "presence region" glare". There's more, but I'll spare you. But the Speakerflux cables are, thankfully, as flexible as the Powerflux power cables and Lineflux interconnects, which, along with their fine connectors made installation a relative breeze. Since Mr. Markwell of AV Distribution was unable to locate a long run of speaker cables that I would need for my main system, I used the short run of Speakerflux speaker cables in my second system to connect the power amps to a pair of EgglestonWorks Isabel Signature floorstanding speakers.



### Furutech Digiflux Digital Cable

These days, digital interconnects aren't just for connecting a CD transport to a DAC, although a good digital cable is paramount in getting good sound from the pair. In this review I used a Furutech Digiflux "High Performance Hyper Coaxial" 75-Ohm digital cable with RCA connectors in both my systems. In the main system I connected an Oppo BDP-83 Special Edition universal player to a DAC. Many might use this player to feed the digital signal from a DVD's soundtrack, but I'm more likely to use it to listen to the few DVD-Audio discs that I listen to quite often in my collection. Sometimes, but not nearly as often, I use the Oppo to decode the audio signal of a video DVD. In the second system the digital interconnect plays an important role, linking the Logitech Squeezebox Touch to the DAC, which decodes files with a sample rates as high as 96k with a word length as high as 24 bit wirelessly through the home network.



Furutech stresses mechanical integrity in the construction of their Digiflux cable, and this enables their "Pure Transmission" technology to enhance not only each element of signal transfer, but to deal with problems such as contact resistance, grounding, and noise rejection. Furutech accomplishes these tasks by constructing the cable with a double-layer shield to deal with the noise, plus, there are three layers of insulation; a polyethylene skin, air foam polyethylene, and a skin of high-density polyethylene. The connectors are nonmagnetic rhodium-plated Alpha OCC conductor carbon-fiber finished RCAs.

## Furutech USB Cable

I have a strong feeling that cable companies are selling lots of USB cables these days. In my experience the differences between a stock USB cable and even the least expensive offerings from any known audiophile manufacturer are far from subtle. Furutech's GT2 is far from the most expensive USB cable that is for sale to audiophiles these days. Nevertheless, the Furutech GT2 is far from lightweight in the specifications department, as these cables have many of the same features as their top offerings. The GT2 has "specially engineered" 24k gold-plated USB 2.0 connectors, along with silver-plated Alpha-OCC conductors. The three-layer shielding of the cables and the "special-grade" polyethylene insulation keeps "mechanical ringing from affecting the sound", and Furutech also claims that their cables lead to "improved frequency extension and tonal balance". I used a GT2 cable between a USB output on my Dell Studio XPS computer and the USB input on the DAC located on the equipment rack a few feet away. FooBar 2000 reads FLAC files that are stored on a few external hard drives that are hardwired to the PC.

## Time For A Listen

I'm fairly sure that all the Furutech cables I was sent were already broken in. Even so, I've plenty of experiences with gear that was supposedly broken-in that needed to "settle in" before it sounded its best. Even the most open minded audiophiles, including myself, might find this last statement a bit dubious, and so I'll just assume that it was me who was settling in to the sound of the Furutech cables, not the other way around. But there is no doubt that my impressions of all the cables were very positive. There are many who would be interested in my thoughts as to which cables, interconnects, speaker, power, etc. make the most difference in my system. I'm not sure I can answer that since everything in a finely tuned audiophile system makes a difference. But one thing I'm sure of is that the Furutech cables did not make a *dramatic* difference in the overall sound of my system. But this is a good thing. When I audition a set of new cables in my system and they make a dramatic change, 99% of the time I grow tired of this "new" sound. This is mostly because before the installation of the new cables I was by no means unhappy with the sound of my system. And a good set of cables should not be used to "repair" the sound of a system. What a good set of cables will do is make each component sound its best by connecting the components to each other, or in the case of a power cord, connecting the component to the power source, in the most transparent way possible (things are a bit more complicated in regards to power cords, but more about that later). There is much wisdom in the axiom that the best cable will perform as if there is no cable at all. Since this is idealistic, the next best thing is to have a cable or cables that will not interfere with the music signal that is being transferred, and let the components perform their best. The Furutech cables seem to be able to do this without imposing their own "sound" onto the sound that is already present. To my ears, the Furutech cables seem to let the music flow more freely to my speakers, and there are ways in describing this. And describe this I will.

## True Sound

A common audiophile phrase -- or perhaps it might be a paraphrasing of the Hippocratic Oath -- "First, do no harm", is certainly true in regards to cables. And this especially rings true when it comes to interconnects. I mentioned above that in general the Furutech cables did not dramatically change the inherent sound of my system. Rather, the Furutech Lineflux interconnects have the ability to sound as if the music has a flow to it, that it's signal is less impeded than before these interconnects were a part of the system. This manifested itself in a more transparent sound along with other audiophile attributes -- soundscape and imaging prowess, a sharper transient response, greater extension of the frequency extremes, etc. all leading to a more realistic sound coming out of the loudspeakers. But again, there was no drama associated with these changes, as the general character of the system remained unchanged. There was simply more of the system's character to appreciate. The unchanged traits of the system were a good thing, as I'm proud of the way I've assembled my stereo systems, especially the larger of the two in the main listening room. This is where I used the balanced version of the Lineflux cables with their XLR connectors hooking up the very important link between the amp and the linestage, and also between the linestage and my two major sources, the phono stage and the DAC. It is very important to note the way in which the Furutech Lineflux cables are able to preserve the sound of my system while at the same time increasing all of its positive aspects. This has not previously occurred with any cable I've ever tried to the same extent as the Furutech Lineflux. Yes, there have been improvement in one aspect or another with other brands of cables, and at times the dreaded dramatic changes that I spoke of have also occurred. But this magic that the Furutech managed to accomplish is definitely a first.

When installing the Lineflux cables into the system I felt as though privileged to use them, as these interconnects definitely have the look and feel of a lavish, cutting-edge audiophile product. The cables had weight, the connectors attached smoothly, and when locked into place each connection seemed seamless. Combined with the sleeve's "feel" made me confident in using them. These intangibles may be very meaningful to an audiophile who just paid good money for these luxury goods.

## Power Cable

The Furutech Powerflux power cables are a sight to behold (at least to me, and perhaps some other audiophiles). Some cables might look more "ultramodern", but the Powerflux cables can pride themselves with their robust, top-of-the-line FI-50M(R) Piezo Ceramic Series Power Connector. A good reason why the Furutech Powerflux cables might not seem so uncommon looking is because of Furutech's OEM sales. On Furutech's website it seems as if cable parts coexist with their finished cable sales, and I have seen these connectors on more than one make of cable that wasn't branded as Furutech. As with the Furutech's Lineflux interconnects, the construction of the Powerflux should give confidence to an audiophile who just paid good money for these wires. Their substantial diameter, combined with their impressive connectors gives these cables a sophisticated mien.

The sonic benefits of the Powerflux cables are very similar to the Lineflux interconnects in that rather their presence drawing attention to themselves, they "merely" increase the benefits present in the components in which they supply power. The word merely is in quotes because, as I mentioned above, this is a trait that is more difficult to achieve than one might assume. Although I stated that Furutech's Lineflux interconnects were a paradigm of "do no harm", yet the Powerflux power cables may be the cable that displays this characteristic to the greatest degree. OK, I'm aware that I can't objectively measure how much a power cable comes to the unattainable absolute of a direct connection to the power supply that is coming into one's home. In fact, I doubt that any audiophile would want this direct connection in that the raw power supplied to one's home, because it is, as a rule, garbage – loaded with radio frequency interference (RFI, or sometimes called electromagnetic interference (EMI)), other noise, and irregularities that a power cable may be called upon to "clean up". Furutech manages the signal by insulating, shielding, and mechanically and electrically reducing the distortion that is caused from the raw power lines. The sound of both my systems was improved by supplying this cleaner power to every component to which they were connected, and as they were able to accomplish with the interconnects, let each component sound more like the component it was meant to be.

The benefit of the Powerflux was patently evident when connected to the Pass Lab X350.5 power amp. This beast draws quite a bit of current from the wall – its power consumption is rated at 600 Watts, and can power the speakers with its 350 Watts per channel at 8 Ohms, and a prodigious 700 Wpc into 4 Ohms. The Sound Lab electrostatic hybrid speakers present to the Pass Labs amplifier, as they would to any amplifier, a difficult load. The Sound Lab speaker's impedance dips very low, even when playing music rather softly. The sound of the system with the Powerflux power cables enabled the amp to perform its best. Best of all, the Powerflux cables did not change the character of the amp in that it didn't sound brighter or duller than usual, nor did it sound more detailed. But it did sound more musical, in that the instruments sounded more like real instruments being played by human beings. Even when playing electronic music, where the "naturalness" of the music cannot be appreciated in any form whatsoever, the music had more impact, and sounded more as the musician or musicians (programmers?) intended. I felt as if I was being drawn into the music rather than just a passive observer. The Sound Labs have always sounded enveloping; their forward character is a benefit rather than a detriment, in that they envelope the listener in sound. Using the Powerflux to power the amp, the speakers continued to behave as they normally do. But now, their sound was even more enveloping, with a soundstage that placed me inside the venue of the recording if the recording was up to it. These subjective impressions were dramatic, but changes to the inherent sonic character of the power amp were not.

### Heaven Sent

As for the Speakerflux speaker cable, I was only sent a short length, and so I was not able to use it in my main system. My second system is no slouch, with the tubed PrimaLuna Six monoblocks connected to two-way floorstanding EgglestonWorks speakers it is more than a cut above a budget system. Still, it's not nearly as revealing as the Big Rig located upstairs. To be honest, the second system is in a common space where music played through it is more likely to be listened to off-axis. Yes, I've reviewed and continue to review equipment in this system, and it can be a helpful tool in assessing gear that is sent to me for review. And so it was with the Furutech speaker cable, which along with it was a pair of the Furutech Lineflux interconnects connecting the DAC's variable outputs to the PrimaLuna monoblock amplifiers.

It might just be the audiophile in me, but this is impressive-looking cable. It is a weighty, thick speaker cable with a purple-hued outer sleeve, and like the other Furutech cables connection was a breeze, and very uneventful – other than me gushing over the appearance of the cable itself. And even through this is a "modest" system, it was evident that the Furutech Speakerflux cable was a fine sounding cable, much better than even the Cardas cable I use on and off as a reference. The Cardas cable is far from one of the most recent offerings from this brand, so it's hardly fair to compare them head-to-head, but still, the Cardas made a very nice speaker cable even as far back as when this model was manufactured. Yet the Furutech was light-years ahead of it, even if just considering something as simple as its blacker background. The lower noise floor was not immediately noticeable; it wasn't until other traits such as an increase in microdynamics brought this aspect of its sound to the fore.

I've been on a John Zorn kick of late; I'm not sure why that is. Perhaps because he's been in the local arts news due to his 60<sup>th</sup> birthday celebrations, but since he's *always* in the local arts news that might be the case. One album I played was his recent *The Concealed* in which in 2012 he composed pieces for a group of musicians which featured the Nova String Quartet based in Omaha Nebraska, the drummer Joey Baron, and pianist John Meldeski. This is an interesting combination of players, not to mention the music they play on this album, which mixes modern classical, klezmer, jazz, Sephardic and Spanish flavored dance, along with what only can be described as John Zorn's personal approach to composing. After listening to the entire album in one sitting, it was obvious that I might want to reconsider calling this system "secondary", as it delivered one of the most convincing Red Book performances in my home that I can remember. All the instruments sounded more lifelike than I ever remember them, all this from a recording that to its credit was likely recorded using Pro Tools, nary a morsel of analog recording equipment to be found in the control room. I wasn't able to use Furutech power cables in this system, "only" the interconnects and speaker cable, but they transformed the system in ways I did not expect. The system now had an ease about it that seemed to bring me closer to the recording, and somehow, without changing any of its intrinsic character, bring me closer to the musicians and their music coming forth from the speakers. I realize this is, again, an *über*-subjective way of describing the changes that occurred, yet I can only explain this because the Furutech cables, especially the Speakerflux, lowered the background noise of the system, and thus increased not only its micro- and macro-dynamics but also increased its transparency to the source. If one were to place themselves in the studio with all of the musicians of the Zorn album, most likely the balance between the instruments would be much different than what is presented through the EgglestonWorks speakers. The recording's sound quality is excellent, but as expected this studio recording's soundstage is man-made. Nevertheless, the instrument balance is perfect, and there is enough studio ambience to imagine the ensemble recording the piece in the same room donning headphones, with Mr. Zorn nodding his head in rhythm to the music. The instrument's timbre was quite realistic, especially the tonality of the strings, made possible at least in part because of the Furutech cable's ability to be true to the source.



## Changes

I learned a few years ago that describing the changes that occur from putting into service a new digital cable is not exactly the same as describing an analog cable. Of course transparency is a chief concern. But besides an increase in transparency, when putting the Furutech Digiflux into service I was also aware of an increase in resolution, the trails of notes seem to last longer, and I could hear further "into" the recorded space. But as with the analog cables there was an almost indescribable feeling of getting closer the intensions of the musicians and the recording engineers, as if there was more physical space placed between the instruments and groups of instruments on each recording. As with the interconnect, speaker, and power cable, it also helps that the Digiflux is a handsome looking cable, its impressive looks makes a strong case for being able to do the job at hand.

As I mentioned earlier, I do listen to electronic music. It seems as if lately I've been listing to it almost as much as music created in real time in a real space. The extremely prolific electronic composer Pete Namlook, who died unexpectedly at the age of 51 of a heart attack, had by this time released 135 albums with his name somewhere in the credits, most of it on his own Fax label. His music, both via digital and vinyl, spends an inordinate amount of time playing on both my systems (Pete Namlook's given last name is Kuhlmann, which is pronounced "cool man"; he simply reversed it and uses the "k"). He uses a mixture of vintage and modern synthesizers to create his genre of music, which had its heyday in the mid to late 1990s. His is very unique, but can be compared to others in the field of European ambient electronic musicians who with he often collaborated. Soon after I installed the Digiflux, I put on his 1995 release *Ambient Cookbook*, a four CD set where he compiled his work along with others he has worked with over the last few years. For an album that has "ambient" in its title, it's awfully difficult for me to delegate it to the background, and I have a pretty good feeling that many other listeners of this album, as well as the rest of his music, are playing it at full volume while paying full attention. The Digiflux didn't seem to increase the frequency response of the system, nor did it change the character of the source or DAC. It made the music more intelligible, and made it easier to appreciate the music's inner details. There were points in the music where the reverb trails seemed to go on forever, and could easily be heard underneath the next note that came after it, whether it was coming from the same instrument track or not. I've been listening to this type of music long enough were I am sometimes just as interested in the sound that he is creating as the musical composition. Yet he has a style that enables me to get lost in the music very easily regardless of why that is. The Digiflux made it easier still, because it enabled me to appreciate the individual sounds and the composition at the same time, creating an organic whole out of a music that is as man-made as it comes.



## Steps

Over time I've made incremental steps in improving the USB cable in my main system, starting way back when with the least expensive cable I could find on a computer supply website. I quickly learned that using a USB cable manufactured by an audio company is essential, as this cable brings about many improvements -- such as increased transparency, along with traits one would expect when using a better component, such as soundstaging, imaging, frequency response, rhythm and pace, and musicality. But what I notice most of all is that it seems as if an aural scrim is removed from between the music and my ears. And removing that scrim allows real instruments to sound more like real instruments.

The same goes for the Furutech GT2 USB cable. I feel when using the Furutech, with its 24-carat gold plated connectors, the connection between the USB output on the computer and the USB input on the DAC are making as much contact as is possible and so all the signal that could possibly be transmitted is being transmitted. My faith in this excellent connection, along with the silver-plated Alpha-OCC conductors that are doing their job, makes me rest easier because I feel as though the cable is delivering every digit to the DAC. Yes, this might sound simplistic (it is), but to be honest, the sound of the USB cable didn't impress me as much as the other Furutech cables. But still, it's much better than the generic verity, and on par or better than any other mid-priced USB cable I've heard. In fact, as Furutech is well known as a company that sells cable components, it is no accident that my reference USB cable looks awfully similar to the Furutech.

Just for fun I burned a 192kHz/24-bit file of the *Abbey Road* LP from the relatively new digitally mastered Beatles *Stereo Vinyl Box Set*. Rather than join the on-line skirmish as to whether this record was a blessing, curse, or somewhere in between, I'm just enjoying it for what it is, a new issue from Apple Corp. from a 2009 48kHz/24-bit digital re-master of what some call the greatest rock album ever. I lucked out in that my pressing has a very low amount of surface noise, and since my LP playback system blows away my digital front-end in most respects, I often feel I'm listening to a 192kHz/24-bit digital copy of the album as close to this new digital master tape as any ordinary citizen is likely to hear. This "experiment" yielded what I thought it would -- a replica of the LP, the only difference was it was being played through my DAC. The GT2 does a fine job of not injecting any of its own personality into the playback chain, but if you reread the rest of the review this is one of the greatest, but not only, strength of the Furutech cable line. Admittedly, the (much) more expensive Furutech interconnect, power, speaker, and digital cable have much more "more" going for them over the affordable GT2 USB cable, but still, the GT2's strengths lie in its transparency.

