

Furutech NCF

Marc Philip

These days, you would be hard pressed to find an audiophile who doubts that power quality can affect what we hear in our audio systems. After spending the last 25 years examining many under-appreciated aspects of audio reproduction, I've found it to be the inescapable foundation for building a true high-fidelity system. After considerations of power quality, there remain acoustics, support systems, coupling / decoupling and cable design to be dealt with. In 2005, I decided to share results from my years of investigations and thus was born Audio Conseil and my company, inoaudio ®, a registered Canadian trademark. The years were put to good use in validating each step on the path to building acoustic diffusion panels, tripod support furniture, stainless steel spikes, tri-material counterpoints, support shelves and, finally, distinct cables. Magazine-Audio is the communication vehicle for these products and those of other top audio manufacturers. There, the stage is set and you know a little more about who I am and what I do.

The audio world is not only changing, but doing so at a faster rate than before, taking us further and more accurately into music playback. So we have to adapt to this new reality by using the right tools. Whether played back locally or streamed, high-resolution audio (beyond 16 bit / 44.1kHz) is invading the mass market. So, by definition it is no longer a niche product. That said, I want to reassure you that a good CD player can perform very well and provide long-term musical satisfaction that a music lover would expect of a good 16 / 44.1 recording. I can demonstrate this to you whenever you want. End of parenthesis.



Personal Playlist also called "emotion playlist"

To make the most of hi-res audio requires a system that is more than coherent and that is able to “digest” this huge amount of data. I strongly suggest that you equip yourself with a good USB DAC or DSD-capable DAC, as this is now more than ever the centrepiece of a hi-fi system. Prices of top-tier DACs range from \$1,000 to \$40,000. I will return to this subject in detail in a future article.

I address this discussion to those who are passionate about music replay in the home, those who push the limits, those for whom “good enough” will simply not do, those who want music to be the centrepiece of their homes. You are the epicureans who appreciate true value, the beautiful, the good and great technologies. You are travellers, educated, curious and cultivated, in short, you are the aesthetes of life.

I go through this preamble to set the scene, as the following is not addressed to the chronically sceptical, those who literally poison their entourage by their falsely limiting beliefs. We will never get far with people who do not want to go anywhere. In this case, we know exactly where we're going.



Furutech NCF series

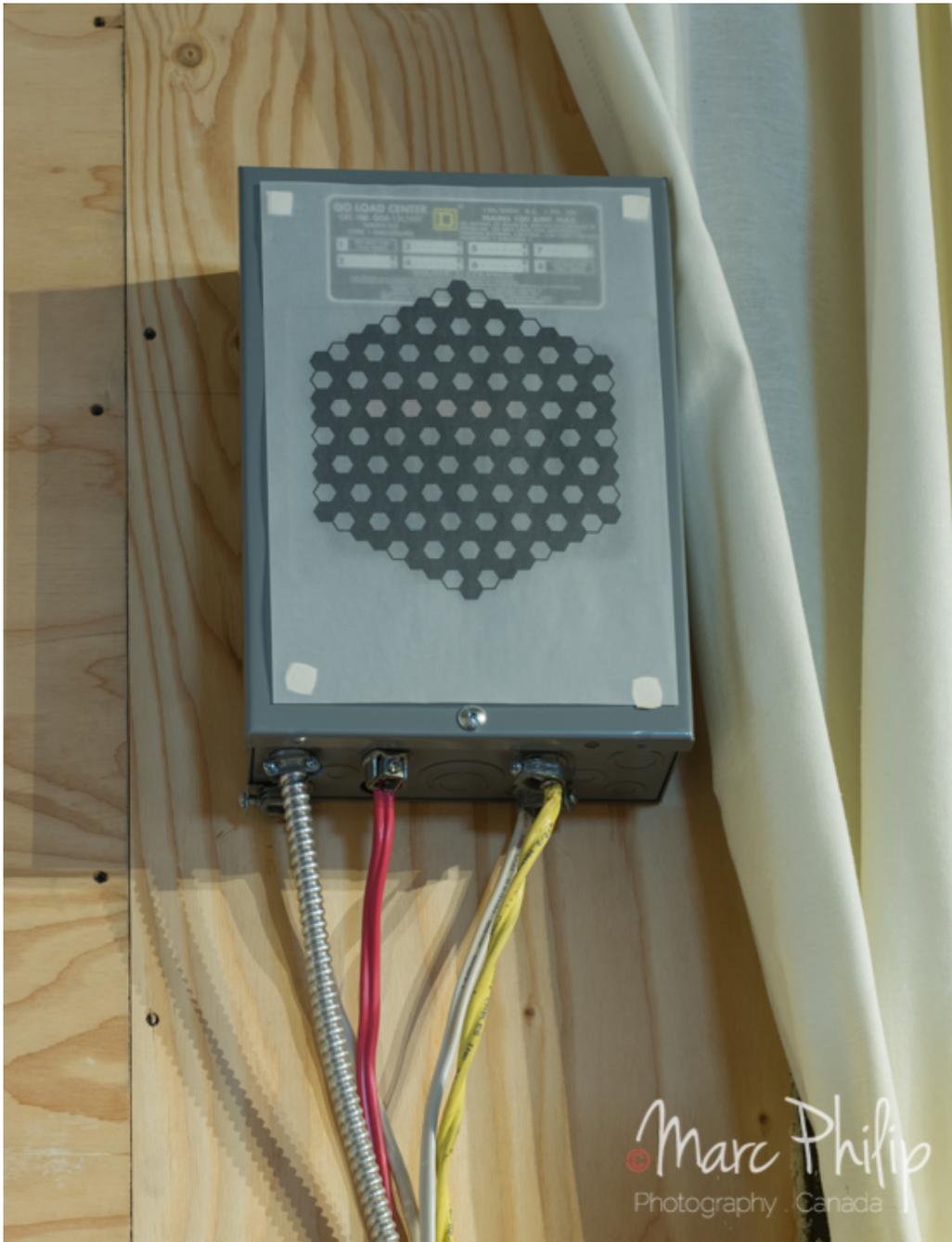
Because it's my singular goal, I often talk about maximizing emotion during music playback. Achieving this requires hard work, strict rules and a systematic approach, which starts with the electrical supply that feeds your electronics. Despite being the critical starting point, it is often treated lightly by audiophiles and music lovers, and remains the commonest conceptual error in our quest for musical emotion. Why should we worry about the last leg of electrical supply in the home, when there are hundreds of kilometres of wires passing from transformer to transformer before reaching our house?

How could improving the last leg possibly make a noticeable improvement? Once you've experienced it for yourself, you know the answer.



Furutech FI-50-NCF(R) male plug and IEC connector

As an analogy, do you think that a high-performance automobile will be at its best if the fuel is low octane or medium quality? OK, so you can see where I'm going, now let's remove a little mystery and look deeper at the requirements for a top-notch electrical supply. During many years of investigating power cables, I found that manufacturers such as Nordost, Shunyata, Siltech, Blueberry Hill Audio and Cardas provided the best references for me to empirically develop my own products. The goals were multiple: to limit losses wherever they arise, to limit any risk of disturbance (colouration or edginess), but mostly, to leave nothing to chance. For my electrical supply, I applied the classic approach of a single circuit for the stereo system, basically four or five devices permanently connected with the possibility of connecting several others as needed. Each outlet has its own phase via a breaker.



Dedicated electrical load centre for the audio system

So far, the best electrical outlets I've found are the Rhodium Furutech GTX, which I use with great satisfaction. Recently, Furutech announced an improved version of the GTX, designated by the NCF suffix. The full appellation is the GTX NCF-D (R) Ultimate Duplex Receptacle, where the 'R' refers to rhodium, the metal used for plating all parts in contact with electric current.

Furutech provides the following technical information on the NCF Piezo Ceramic (R) series:



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Furutech NCF series

Furutech's ultimate damping material - Nano Crystal² Formula Eliminates static, "interconverts" thermal, mechanical and electrical energy and damps vibrations.

- Rhodium plated α (Alpha) Pure Copper Conductor (0.8 mm)
- Non-magnetic stainless spring conductor system
- Body material: Nylon / fiberglass with piezo ceramic and carbon damping material
- Cover material: polycarbonate with a special anti-resonance nano-sized crystalline material "NCF"
- Units set with 2.0 mm-thick non-magnetic stainless flat brace
- Specified for wire diameters of 4 mm (set screw)
- Dimensions: 104.0 mm (W) x 47.2 mm (W) x 28.0 mm (H)
- Total attention to detail and build quality extends right down to a specially designed patent-pending conductor pressure plate that increases touch area
- Furutech spade terminal FP-209 recommended for 10 AWG wire

- Type: 2-pole + earth
- Rating: 20A / 125V AC



Furutech FI-50-NCF(R) IEC connector & male plug

At the time, I thought “were Furutech having us on?” How could they do better than the GTX model? Was it a marketing stunt? After reading a little more carefully through the data sheet, I realized that Furutech had lavished great care on construction and on background noise rejection. All indications are that the Alpha treatment and the type of material used - rhodium, I believe - help in significantly reducing colourations in the signal, those that produce edginess at high volume levels, as we have heard when using certain bronze or brass connectors.

Sceptical, I started with a single wall outlet that I installed in the Furutech R-TP6 housing next to the GTX. The object is physically well built and gives great confidence, we are obviously dealing very high-end hardware. The only distinguishing feature is the blue NCF logo on the top of the socket, the rest is inside. It is easy to switch from one outlet to another to see if there is a difference, and determine whether it is an improvement or not.

Once this step completed, I set up a GTX-NCF(R) wall outlet with its 104-D demagnetized plate and cover as recommended by Furutech. I connected this to the electrical panel via a 12-gauge cable that I deliberately hand twisted, to limit the risk of background noise from EMI-RFI, a useful precaution particularly when one lives near an industrial environment.

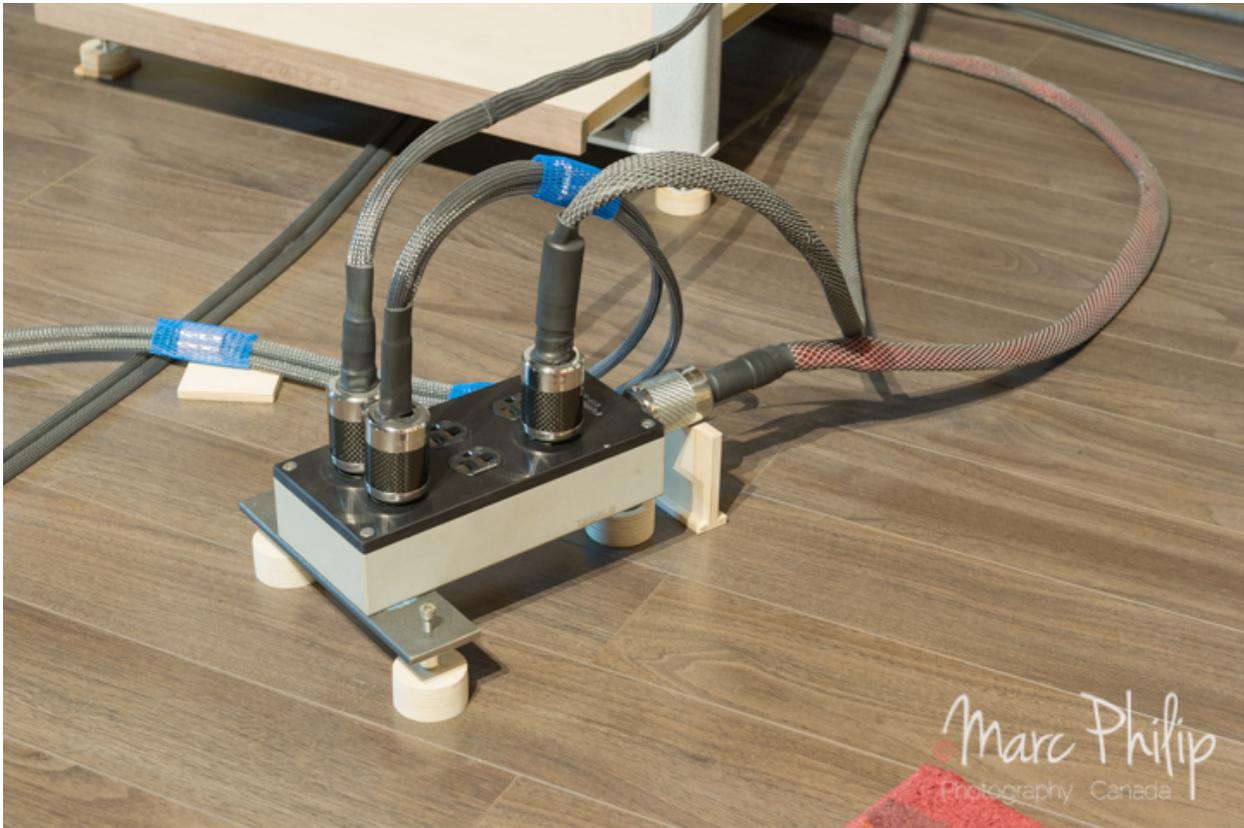


Furutech wall outlet and NCF connectors

The double NCF outlet is surface mounted on a metal box provided for this purpose, as electrical standards require. So far, nothing is complicated. While installation is accessible to everyone though, I suggest you contact a electrician in all cases.

All that remained was to design a new power cable equipped with an FI-50M NCF(R) & FI-E50 NCF (R) plug. This cable is designed to connect the Furutech RTP-6 multi-outlet distribution box, which I use to feed the Integris CDP, the DAC and the amplifier. Specific length, specific shielding, surface treatment, double protective sheathing, AVM treatment (Anti Vibration Magic) on all endings, tightening all screws by hand in order to control the force... I leave as little as possible to machine if I can do it by hand.

You will have gathered by now that it was easier in my case to replace only the AC cord that feeds the multi-outlet distribution box than connect each device individually. Moreover, this approach will teach us more about the actual performance of said AC cord, without it costing an extra arm! (see why below).



Furutech RTP-6 multi-outlet distribution box and AC cord fitted with NCF connectors

With this setup I could switch between the GTX-NCF(R) system and my old GTX(R) in a few seconds. And it didn't take long to evaluate the sonic results, the GTX-NCF(R) assembly was obviously best. Better how? Best in what?

The GTX-NCF(R) is *best* on the key points that make all the difference in high fidelity, those intangibles that matter when we're dealing with emotion. We only have our senses to perceive the outer world, so it's a *feeling* that touches us, as much as a *look*, a *touch* on the skin, two lovers meeting... It can't be explained but it can certainly be felt. And in music, emotion can only arise if we physically feel the music.

Subjectively we perceive less noise and more detail in the musical message without having to listen harder. It comes naturally to us without effort, we just slip into the mood. The dynamics leap forward and it only takes a few seconds for a normal person to grasp. Bass transients gain sharpness, becoming swift and straightforward, moving from approximate and heavy to clear and articulate. Stereo imaging blooms in three dimensions.

A wide range of music was used during this test: “La Follia - Vivaldi” and “Ana Caram - Correnteza”, “Jeff Buckley - Hallelujah”, “Scott Hamilton, Andrea Pozza - Who Cares”, “Michel Jonasz - Le Passe-Temps”, “My Dream John Lee Hooker - The Healer”, “Jen Chapin - revisions, Songs of Stevie Wonder”, “Larry Carlton / Sapphire Blue”, “Keith Don’t Go - Nils Lofgren”, “Anne Bisson - September In Montreal”, “Vincent Bélanger - Ave Maria (96k-24b)”, “Rossini's L'Italiana in Algeri - Sinfonia by Foné”, “Vincent Bidal Trio - Nouvelle Vie”, “Patrick Husson-Ave Maria”, “Blue Coast Records - Collection”, “Incredible Music Recordings - STS & Digital”, “Tomasz Stanko Quartet - Soul of Things”, “Michel Petrucciani, Steve Gadd, Anthony Jackson Trio in Tokyo”, “Hoff Ensemble - Quiet Winter Night (2012) [Lindberg Lyd AS 24-192]”, “Patricia Barber - Live A Fortnight in France”, “Patricia Barber - Companion”, “Snip Records Sampler One Year Anniversary - Studio Master Quality”, “Linn 24-bits of Christmas (2014) 24-192”, “JB Brombo Project 2”, “Jenna-Mamma Close Your Eyes Complete 5.6MHz-DSF”... among others.

Context of this evaluation



Context of the Jean-Marie Reynaud Offrande Supreme V2 evaluation

The test system consisted of the following equipment:

- Aurum Acoustics CD player, DAC & preamplifier (made in Canada)
- Bryston 14B SST3 Cubed series amplifier (made in Canada)
- B & K Reference 200.2 S2 amplifier (made in USA)
- Matrix DSD USB DAC, personally optimized (made in China)

- PureAudioProject Trio15TB open-baffle speakers with some personal modifications (made in Canada)
- Jean-Marie Reynaud Offrande Supreme V2 speakers (made in France)
- inoaudio "Amadeus" tripod furniture by Marc Philip Design (made in Canada)
- inoaudio acoustic diffusion panels by Marc Philip Design (made in Canada)
- Juniwave 2 virtual earth and harmonizer by Junilabs (made in France)
- Complete wiring by inoaudio (made in Canada) except the USB cable (DH Labs Mirage)

The better the electronics that are connected to the NCF, the better will be the results. We were able to verify this over a six-month period with all kinds of audio gear. The improvement affects all devices, but you can hear it more clearly with high-end components, those with more elaborate construction and better parts. The Bryston 14B SST3 Cubed series amplifier, for example, has greatly benefited and delighted us throughout this period, it was simply magnificent.

To validate if our subjective results were consistent and not just imagined by a single individual, several other male and female listeners of various age groups lent themselves to the exercise, confirming our findings.



AC wall outlet and power cord fitted with GTX-NCF(R) as used in our tests

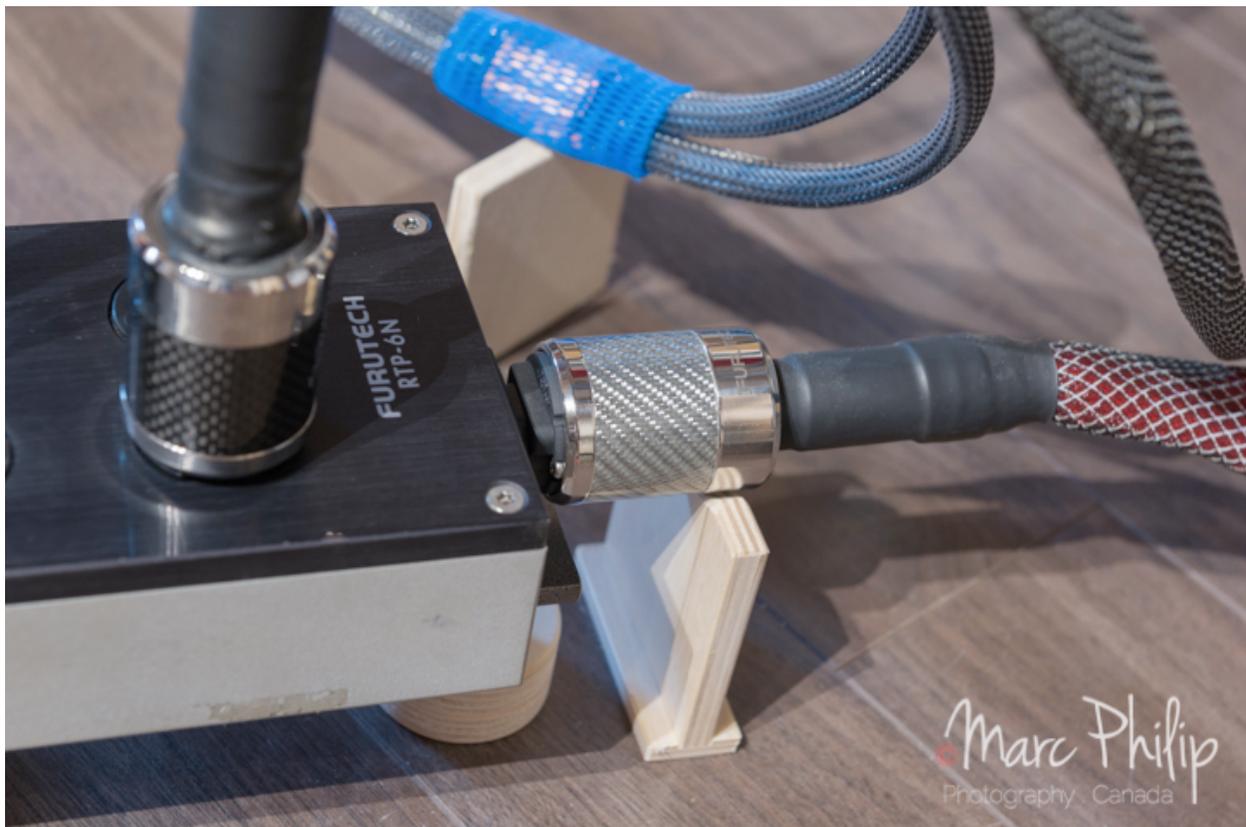
Verdict on the Furutech NCF

Strengths:

- Manufactured to an exceptionally high quality,
- Dynamics subjectively superior to the GTX version,
- Superior background noise rejection to the GTX version,
- Patented Alpha process,
- Induces no colouration in the sound, top-rank tonal balance,
- Non-magnetic mounting plate and cover (optional),
- Addictive for the right reasons.

Weaknesses:

- Price,
- Relative fragility of the clamping screw (Philips star head).



Furutech RTP-6 + GTX(R) + GTX-NCF(R)

Conclusion

In Formula 1 racing, where mere seconds separate winner from also-ran, performance gains generally come at a high cost. So it is with high fidelity. If you want the most authentic sound possible, the one that brings the most emotional impact, you can expect to invest a lot of time and money. But ultimately, you will rediscover your system and your favourite music, and it all starts by paying careful attention to the power input to each device (regardless of price). Only then will you have laid the proper foundation on which you can build your system. After that comes the question of acoustics, but that's another discussion.

Reducing background noise equates to hearing more signal, thus more music. When we improve our systems, we strive to remove barriers between what we hear and reality. Minimizing background noise means, wherever possible, avoiding colourations and edginess, removing the veils and ultimately revealing the true emotional message.

The fact is that if you can optimize your audio devices to reveal their true dynamics, rendering them noise-free and devoid of colouration, even at very high listening levels, then you will have achieved a true high-fidelity system.



inovaudio AC power cord, NCF connectors by Furutech

To help find the right words, I spent a lot of time comparing different connectors on the same AC cable. I built eight models of the same length, each with different connectors and over a period of three years, I compared them extensively and lent them to other music lovers and music professionals who knew nothing of the price, technical details or brand. The aim was simply to determine their preference. Their sole mandate was to connect the cable, listen and note their impressions. This is how the Furutech GTX connector was revealed to the public, rapidly becoming a new reference. We still do not know exactly why, but the fact remains that 100% of respondents preferred it after extensive subjective listening.



Listening session using the Ceolbox music server, a project by Michel Forbes

In summary

Furutech's NCF series pushes the boundaries of what is possible in transmitting electrical current. Of a much higher level of performance than I ever imagined, there are significant gains in the truthfulness of music reproduction, gains that are, in a word, addictive. The atmosphere is palpable in each track selected, at least in the context of my system. Music flows freely and full-bodied, without limitation, without colouration or edginess. More than once during our comparative listening sessions, we wondered whether what we were hearing was real or the figment of our imaginations. Confirmed by other listeners, this concern was laid to rest.

Furutech NCF is the product of the moment, the best solution currently available on the high-end market. It opens the door to full expression of what the English call PRaT: Pace, Rhythm and Timing. I

remind you that my listening system does not cost a fortune, it is accessible to almost everyone. Even when pushing the volume to indecent levels, listening pleasure remains intact.

Yes, Furutech NCF is high-end both in the technological and financial senses. The investment can add up quickly, so brace yourself...

Canadian prices

- GTX NCF-D (R) double wall outlet: \$280 + taxes
- FI-50M NCF (R) High End Carbon Fiber / Stainless Steel Performance Male connector: \$407 + taxes
- FI-E50 NCF (R) High End Carbon Fiber / Stainless Steel Performance IEC connector: \$407 + taxes

After spending several years on the subject, I am confident that the AC cord developed with the FI-50 NCF(R) connectors for the purposes of this comparison is simply the best that I've ever had, no matter the price. You really do have to hear it to believe it.

Furutech NCF Ultimate Reference 2016



Music is a fundamental part of our existence ; it is the fuel that powers our passions. It's no surprise then that we want to push the limits of the possible. And besides, what can be cooler than inviting a different artist into your living room every day?

Thank you Furutech for constantly pushing the limits of high fidelity and propelling us closer to the emotional message. One last piece of advice: after sorting the power supply, a proper acoustic treatment of your listening room will pay huge dividends. You'll be ready to live the adventure of high fidelity at home like you've never experienced it before.

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