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Furutech NCF Clear Line AC Power Line Optimizer Review

A skeptic gets his comeuppance.

Review By Paul Schumann



If you've read any of my previous reviews, you know that I'm a bit of a skeptic when it comes to audio. More than one time I've read about some amazing piece of gear, rushed down to the high-end audio parlor (remember those?) to take a listen, and came away disappointed. It's not that it always sounded bad (although, sometimes it did), it just didn't wow me as I was expecting. Where I especially cast a wary eye is an accessory item that promises to improve the overall sound of the system. The Furutech NCF Clear Line is just such a product. So when Steven asked if anyone wanted to review it, of course, I said yes.

Okay, full disclosure here, I have been wanting to review a power conditioning device for quite a while. One area I have been remiss in the development of my system is the AC end of things. I've almost bought one a couple of times, but always backed off. Then during the middle of summer, when the AC quality goes dramatically down because of all the air conditioners I start kicking myself. Yet I never seem to pull the trigger on getting one when I have the chance.

Furutech is a well-known Japanese cable company that has products reviewed by *Enjoy the Music.com* over the years, and for good reason. The NCF Clear Line is part of their power conditioner line. Taking it out the box, it's one of the most unassuming audio products I've ever had in my home. From the outside, it appears to be just a plastic cylinder with a plug at one end. But that belies all of the serious engineering put into it. The key to the function of the NCF Clear Line is the proprietary Nano Crystalline Formula, hence the moniker NCF. This special crystalline material is used throughout and is a key to Clear-Line's performance. The outside is not made of plastic, but actually nylon and glass fiber incorporating nano-sized ceramic particles and carbon powder for their additional "Piezo Effect" damping properties. There's a lot of other cool design features that you can read about on Furutech's website that I won't delve into here. When you look at them all you will see a lot of thought went into this interesting product.



1. The special T10 tamper-proof stainless steel self-tapping screws and washers
2. NCF (multi-material hybrid structure): NCF formulated nylon resin (Body).
 α (Alpha) Pure-Copper Rhodium-plated Conductor
3. Coils: α (Alpha)-OCC conductor enameled wire; outer layer coated with polyurethane western paint, and then sprayed with a special acrylic paint.
4. NCF (multi-material hybrid structure) insulation plate: Anti-static and resonance suppressing qualities.
5. Housing: NCF formulated nylon resin and special texture carbon fiber housing, incorporating a special nylon resin insulation ring. The best of damping and insulation materials improve frequency extension and tonal balance.

So what exactly does the NCF Clear Line do? NCF Clear Line is an audio-grade passive AC optimizer that is designed to enhance the quality of your power supply. It is simply designed to be plugged in an outlet and let it do its thing. Well, not any outlet. It has to be an outlet on the same circuit as your system. Furutech was kind enough to send me two, so I plugged one in the surge protector that I use for my low voltage equipment, and one into an adjacent outlet that I know shares the same breaker. That's it for setup and installation. I'm currently reviewing a turntable. As you know well, turntables are fussy beasts that require tweaking to get them properly dialed in. So I greatly appreciated the plug-and-play aspect of the NCF Clear Line.

Furutech claims that as soon as you plug the NCF Clear Lines into the proper outlets, you should be able to hear an immediate difference in your system. I plugged them in on a Saturday morning and forgot about them over the weekend because I was messing with the turntable. Then something interesting happened.



It just so happened that the Tuesday after I plugged them in, I got my first 2021 vaccination shot. I had many mixed emotions getting that shot with all that had transpired over the past year. On the way home, the song "Break It Down Again" by Tears for Fears had been running through my head. By the time I came home, I was exhausted and needed some downtime. I dropped the CD *Elemental* [Mercury 314 514 875-2] in the player, put on my trusty Grados, leaned back in the recliner, and hit play. The tom drums that open the title track practically jumped out at me. Then I heard Roland Orzabal's voice with a new immediacy. This album has always come across as "hot" with a noticeable edge to the vocals, but now that edge was almost completely gone. What the heck was going on?

At first, I chalked it up to my emotional state, but as I waded deeper into the album, I realized there was a lot more happening there. With each track, I was sucked deeper into the music. This is one of those moments we audio geeks live for when you connect in a new way with the artist and their music. By the time I was done listening, I was emotionally spent. When I took off my headphones, I remembered the NCF Clear Lines. Could that have been the difference?

The next day when I got home, I was eager to test my hypothesis. This time I chose Britten's *Works for String Orchestra* [Nimbus 5025]. I've always loved this incredibly atmospheric recording since it was done in the Great Hall of the University of Birmingham. Listening to this album in the past, I've sometimes felt that the natural reverb in this recording obscured separate instrumental lines. Where I always had particular difficulty was the beautiful rendition of "Lachrymae". This piece features a brilliant solo viola part that is full of heartbreak. As soon as I started to listen to this piece with NCF Clear Lines in place, I was able to easily pick out the soloist and hear how his part intertwines with the rest of the ensemble. Once again, throughout the entire disc, I felt more connected to the music.

After round two, I was now convinced that it was not merely my emotional state that changed my hearing, but the NCF Clear Lines themselves. The next day I sat down with Radiohead's *Kid A* [Capitol Records 7243 5 27753 2 3]. Once again I was transported to another dimension, with Thom Yorke's vocals leading the way. The emotional catharsis of this album is the song "How to Disappear Completely". At the start, Yorke's voice is tired and drained of all emotion, struggling to stay above the ominous strings that threaten to engulf the entire song. As the song progresses, Yorke's voice starts to gain strength as he battles the strings. Finally, he breaks through at the end with a beautifully pure full-throated high note that sends chills down my spine.

















Sure, I've heard all of this before, but this time the emotional heft of this song slammed into my soul like a sledgehammer. Yorke was singing about the pressures that overnight fame brought him after "OK Computer", but all of us have been there, so overwhelmed the moment that we have to temporarily disconnect. Only then can we emerge on the other side intact.

Needless to say, no matter what disc I put on, I experienced the same impressions each time. After about a week, I realized I had heard some of this before. A couple of years ago I reviewed the [Metronome LeDac](#), a truly high-end digital converter. At the time, I observed that it almost brought a surreal vividness to the music. Since the LeDac left my system, I made an upgrade in the CD transport, and that, paired with my trusty iFi Audio iDSD Micro, I was able to come pretty darn close to the performance of the LeDac. Now, with the NCF Clear Lines installed, I feel like I might even be surpassing the heights achieved with the LeDac.



So the big question is this, how are the NCF Clear Lines doing this? My first thought is that the Clear Lines are acting as some sort of high-frequency filter, but after consulting with Graeme Coley of Furutech, he disabused me of that notion. Since the NCF Clear Lines are never part of the circuit, they don't act as a current-limiting filter. Instead, the Clear Lines dampen resonances occurring in the AC lines and at the outlets. These resonances are noise that sneaks its way past the power supplies of equipment. This noise has a particularly nasty effect on source components that work in the millivolt range. By lowering the noise floor, the NCF Clear Lines improve dynamics and help with the retrieval of more harmonics. Hence, more drama to the music. This noise reduction eliminated a lot of the harshness so common in pop and rock albums.

As you can probably guess by now, the skeptic in me has been won over by the NCF Clear Lines. The improvements they made to my system were more dramatic than I had anticipated. Their ability to draw me deeper into the music blew me away. Considering their modest price tag, I consider them one of the great bargains in audio.

Furutech NCF Clear Line AC Power Line Optimizer	
Sub-bass (10Hz – 60Hz)	
Mid-bass (80Hz – 200Hz)	
Midrange (200Hz – 3,000Hz)	
High Frequencies (3,000Hz On Up)	
Attack	
Decay	
Inner Resolution	
Soundscape Width Front	
Soundscape Width Rear	
Soundscape Depth	
Soundscape Extension Into Room	
Imaging	
Fit And Finish	
Self Noise	
Value For The Money	

Specifications

Type: AC power supply optimizer

NCF Clear Line-US (NEMA AC male version)

NCF Body (multi-material hybrid structure): NCF formulated nylon resin

Coils: α (Alpha) Pure-Copper Rhodium-plated Conductor electrodes and passive "Air Coils" constructed with α (Alpha)-OCC enameled wire coated a silver color resonance damping material.

The special T10 tamper-proof stainless steel self-tapping screws and washers

The internal air chamber is pressure sealed to for additional damping effects.

Housing: Four-layer hybrid NCF carbon housing composed of an outer hard clear coat over a NCF textured carbon fiber particle composite layer with another layer of NCF and 3K carbon fiber layer beneath that. Inner surface is NCF Nylon insulation. The best of damping and insulation materials improve frequency extension and tonal balance.

NCF End Cover (multi-material hybrid structure): Anti-static and resonance suppressing qualities with molded channels to increase the surface area of the NCF material by 76% for improved effectiveness – ultimate resonance damping for improved tonal balance.

Dimensions: 88.4 X 39.5 (LxW in mm approx.)

Weight: 69 grams

Price: \$250

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