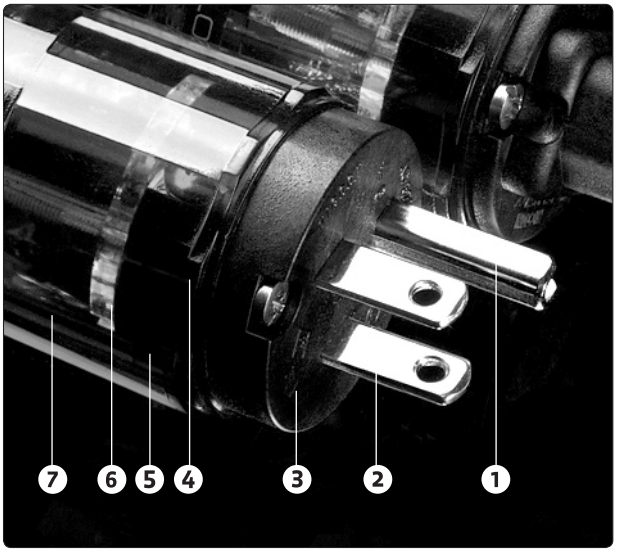
Difficult Design Decisions

How Ultimate Performance is the Result of Countless Minutiae

Of an assortment of more than 20 different types of power plugs from all over the world, we carefully considered the aspects of design which yield audible performance differences. Several models by Wattgate, Furutech, Oyaide, and other manufacturers were compared against each other using the same Skin-filtering cable design. Contrary to their pricing, and to the expected gradation of quality amongst them, the winner was not the top of the line connector from any of the several manufacturers investigated. The clear winner was the dark ruby colored Oyaide model 079.

Our findings agree, but also differ So why Oyaide?

The quality achieved by using the 079's is due not only to the highly polished metal parts used, but also because of the 30% glass content in the polybutylene terephthalate crystalline polymer housing. This results in a stable plug which is mechanically strong and heat-resistant up to 200 degrees Centigrade. The combination of these features result in a synergy effect which yields a very natural and luxurious sound. In a high performance product such as the DFPC, much care has been taken to go the last step and to scrupulously do the homework to find the solution which serves our purpose best.



OYAIDE P-079 / P-079E FEATURES

1. Double hand polished contact surfaces
2. Double gold plated contact surfaces
3. Rock solid Polybutylene Terephthalate crystalline polymer housing
4. 30% glass for added structural stability
5. Up to 200°C heat resistant structure
6. Non-magnetic parts throughout
7. Crimp pull strength: >30 Kg

Oyaide power plugs Performance that works

The contact pins themselves are made out of deoxidized phosphorous bronze and are each individually machined out of a single piece for the best possible conductivity. No nickel plating is used between the bronze and the gold. Instead, the surface is twice polished by hand. There are two layers of gold and two polishing processes involved to yield the mirror perfect finish. The rhodium plating of the other models, due to its being less conductive, sounds a bit harsh. Switching to the gold gives the true warmth back to the sound, without a trace of false muddiness.

The body of the connectors are made of high density PBT with 30% glass particle filler. This results in a high resonance absorption factor while maintaining good rigidity and stability when used with warm gear, especially important in warm climates. Regarding the IEC connectors, it is the pressure of the contact surface area which defines much of the quality. This was found through our own experimentation to be as audible in the ground connection as it is in the two power connections L and N. Oyaide does not compromise on metal costs. The very generous thickness of metal used results in a spring action of the IEC plugs which is so strong that even hundreds of connections in and out do not compromise their grip.

Hand polishing is carried out to a perfection which the audiophile will appreciate. Does this seem unnecessary? Nobody would go to this trouble if it weren't audible. For more detailed information please see the manufacturer's website: *www.Oyaide.com*

079 vs. 004 and M1/F1 Power plug shootout

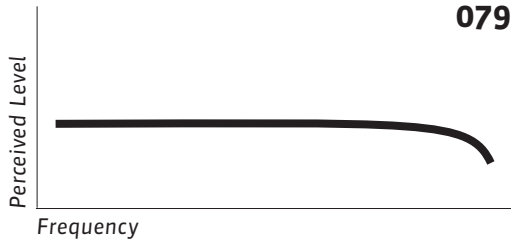
Many years of critical hands-on experimentation have led us away from "top-of-the-line" connectors. The 079 uses two layers of gold plating on deoxidized phosphorous bronze metal contacts. The 004 and the M1/F1 connectors each have beryllium copper contacts which are then plated with platinum and palladium. One could consider that choosing copper over bronze would result in a more conductive connection. But one could also consider that comparing gold and the combination of platinum/palladium gives you the reverse. In this case, gold is the more conductive. So, first, there's that to consider.

Also to consider is the fact that the 004 is sonically very similar to the the M1/F1. Electrically, regarding their contact's platings, the 004 and the M1/F1 are identical. The only difference is in the structure of the outermost shell. The parts crimping the cable and making electrical contacts are in both cases identical. Because the 004 and M1/F1 sound so similar, and their cases are different, and the 004 and 079 sound so different, and their cases, apart from color, are identical, it is easy to deduce that the primary factor for sonic influence is found in the difference between the conductive metals and their platings. This makes the largest difference of all.

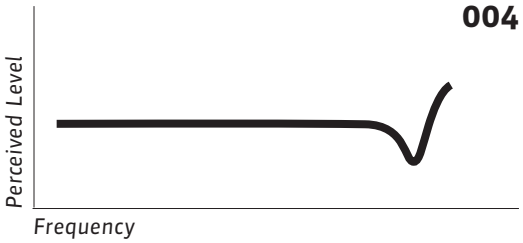
Through years of crucial listening tests on many very different audiophile systems in many countries, ranging basically the entirety of audiophile culture, from full-range electrostatic loudspeakers to one-driver Lowther horn systems, from the most exotic CD transports to high end computer audio playing from RAM on battery power, from hand made ribbon tweeters to highly efficient horns, transistor amps to single-ended tube solutions, large dedicated rooms, small rooms, headphones, and so on: the results were unanimous. In our informed opinion, the 079 outperforms both the 004 and the M1/F1.

Not necessarily at first But you'll see...

Upon listening for only 2 minutes, most any audiophile will at first greatly prefer the 004 to the 079. There is a brilliant and sweetly extended high frequency sound which is immediately appealing and seems at first to reveal more nuance and flavor in the recordings. The bass is very robust as well, but this turns out to be an illusion brought about by manipulation of harmonic content. The following is given as a "poetic" way to describe the subjective sound imparted by the two differing plugs. It is by no means a measured quantitative finding, but rather a way of depicting in clear terms the subjective resulting sound difference between the two. In reality we are dealing with different fine shades of distortion, which are truly beyond measurable quantities, but for the sake of simplicity, we present you with a drawing of frequency response so you could get a feel for what it is we mean.



After 2 min.: *"something's missing?"*
After 20 min.: *"I'm relaxed and hear everything!"*



After 2 min.: *"Wow! I can hear so much more!"*
After 20 min.: *"I have a splitting headache!"*

As you can see, the 079 gives the subjective impression of being, overall, the more natural of the two. There is nothing really artificial for the ear to "hold on" to or to perceive directly. With time, any of the slight roll-off effect one might initially perceive is quickly forgotten due to the natural smooth decline we share in our own natural hearing. It can be said that the gold plated 079 emulates the natural function of the ear more closely, and therefore sounds more natural and tolerable to the listener over time. This is not to be confused with any failure to reveal high frequency content. We are speaking only of the color of this content.

In contrast, the 004 sounds initially much more sparkling. However, as we enter the 20th or 30th minutes of the listening session, more and more, we realize the true sonic signature of this connector. A persistent element in the sound begins to grow on you. This is brought forth even more if there are 4–6 such cables powering the system. There seems to be a sort of "dip" followed by an unnatural excitation of the topmost harmonics. This beautiful, detailed sound then quickly becomes tiring and fatiguing to the ear. Over the long run, it is definitely not as natural to the ear as the 079. And it is exactly the long run that we as audiophiles are most interested in. If a solution makes it impossible to enjoy music in a natural relaxed state of listening over the long run, it is not desirable even if the initial impression is one of "more detail". Sonic detail should be tolerable over the long run in order that it prove itself to have been natural all along.

Had this comparison been carried out on only one system, there may be a plausible explanation elsewhere, such as in some other system fault which is simply being revealed by the 004. However, we emphasize that up to 20 radically different systems were used to gather this experience. These tests were carried out on systems ranging from “Panasonic boom boxes” all the way up to systems costing over half a million Euros. We have been very careful in our analysis. Over 25 talented listeners took part, amongst which were audio professionals as well as musicians and life-long audiophiles, and equipment designers passionate in their art.

Because the LessLoss Dynamic Filtering Power Cable needs the most natural, and not necessarily the most expensive, connector solution to accompany its already extraordinary performance, we are sure you will be happy with our choice of the Oyaide 079 connectors for their natural depiction of the recorded material. Enjoyment over time is more important than hearing very much “embossed detail” for a few minutes and then suffering a headache the rest of the time. After a pleasant evening of listening, we are sure you will agree that it’s all there, as it would be upon listening naturally, without the means of electronics.

Length vs. Sound Considerations for best results

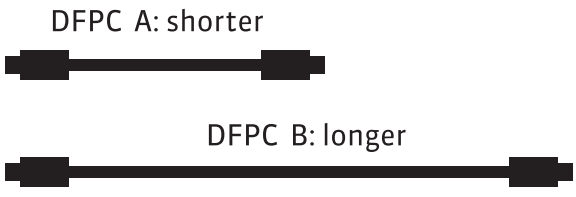
It is true that the longer lengths of the DFPC sound just a little bit better than the shorter lengths, but only by a very small degree. For example, changing only one of the connectors on the DFPC to any other type makes a much larger and more noticeable difference in sound than the smaller difference which is perceivable through length differences. The pricing of the LessLoss DFPC is the same for any length up to 2m. 2.5 and 3m have extra charges associated with them. However, the difference in sound quality due to the added length alone will not justify purchasing the longer lengths based solely on pursuit of better sound. It is our recommendation to purchase whatever length is physically best fitting in your system. The LessLoss DFPC is very flexible and will pose no problems upon installation, which is a factor known to be difficult with some other after market power cords. The LessLoss solution does not fear bending and so a 2m length is easy to install even if you might not presently need the entire 2m of length in your application.

DFPC LENGTH VS. SOUND EXAMPLES

These three “rules” are an attempt to illustrate sound quality difference magnitudes, and provide a rule of thumb, a sort of guideline, to go by when making your own choice of length.

1 **LONGER IS BETTER**

All things being equal, the longer of two DFPCs will always sound a little bit better.



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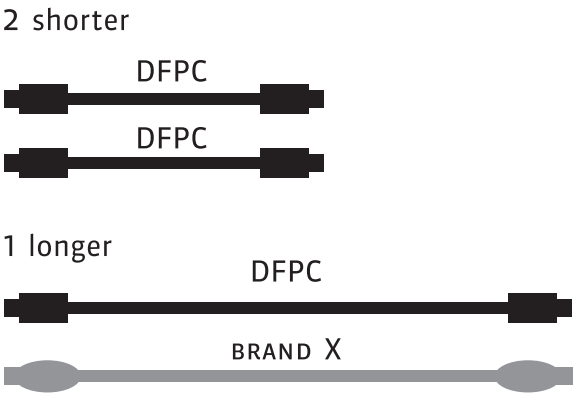
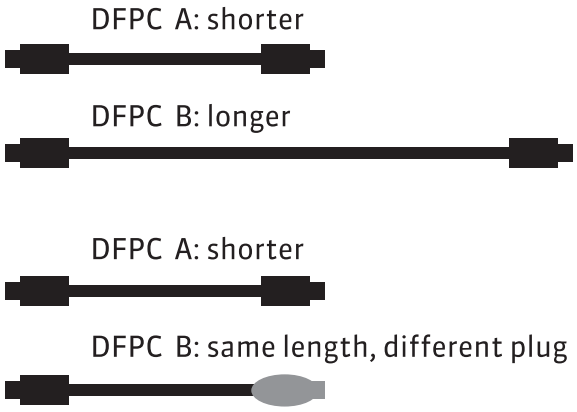
❷ USING MORE NUMEROUS SHORTER CONNECTIONS IS BETTER THAN USING FEWER LONGER ONES

The more components that receive power through DFPC power cables, the better the resulting sound. This, regardless of their length. Two shorter DFPC's powering two pieces of equipment will yield far superior sound to using just one, albeit longer, DFPC.



❸ PLUG DIFFERENCE IS GREATER THAN LENGTH DIFFERENCE

The amount of difference in sound due to length alone is less than the sound difference obtained by changing just one plug to another type. Where in the length example a quantitative difference of the same Skin-filtering noise floor reduction technology is perceived, the swapping of only one plug in a same length DFPC will result in a much more obvious qualitative difference in sound quality.



The reason that the longer lengths sound slightly better is twofold. For one, a lengthier skin is present and as this is the crux of our technology, the noise floor will be lower. However, the net amount of metal is also increased, another aspect of design which is also audible in our solution. So the net effect is twofold – the dynamics as well as the filtering are slightly better with a longer LessLoss DFPC.

In order to be complete, we think it is important to also state that putting a LessLoss DFPC of 3m on one component (say, the DAC) and comparing that to, say, two units of LessLoss DFPC of 1.5 meters each, one powering the DAC and the other the amp, the system with the two 1.5 meter cables will sound better than the one with only one DFPC of 3m length. This is said to provide you with a proportionate understanding of the improvement of the sound regarding the length. The more components which receive power from the LL DFPC, the better the sound quite noticeably, whereas the addition of extra length to only one DFPC results in but a minor improvement in sound. Indeed, it is possible for even the best listeners to mix up the lengths in a blind test, whereas it is less likely to mix up the fact that one or two LessLoss DFPC's are powering the system's different components, even if these are much shorter.

Only proper connection Yields top performance

There is a proper way, and an improper way, to connect the DFPC cables to your power outlet. The only correct way to connect the DFPC is such that the Live line from your local power station is fed through the cable into the hole marked with a small "L" on the IEC connector. To make sure this is so, it is recommended to test your power outlet using a receptacle tester. These cost about $5 at your local electronics store. *This is the type of device we are talking about (http://goo.gl/bnRa7)*

Upon insertion into a power outlet, the receptacle tester's three LEDs show whether any of the three contacts are broken, or whether the L and N connections are reversed. There is a standardized, proper, connection of the L and N lines and the LessLoss DFPC adheres to this standard. Make sure your power outlets do, too. Many electricians will scoff at this, claiming that with AC power there cannot possibly be a difference in sound quality either which way around. We urge the audiophile to please heed this instruction, as it is vital to achieving top performance. LessLoss has scrupulously incorporated this design aspect into all DFPCs. For best results, heed the L and N rule.

This holds especially true for those who live in countries where the European Schuko outlet is used. If you can invert the L and N lines simply by plugging in the plug into your symmetrical outlet the other way around, you need to first investigate your outlet to determine which contact is L and which is N, then you need to make sure you are plugging in the DFPC such that the contact pin on the Schuko cable plug which is marked "DVE" is the one which receives the L line. Only in this way will the L line exit the cable's IEC ending through the hole which is marked "L". This is of utmost importance for top performance.

Burning in and settling Opening up and singing

With every high performance audio equipment solution (cables included), the better the gear, the more the burning in process becomes apparent. It is suggested that the user burn in the LessLoss DFPC to be able to appreciate best what it does in all respects. After several years of feedback from a worldwide audience of audiophiles, it can be said that the following generally holds true as a guideline.

GENERAL LESSLOSS DFPC BURN-IN AND SETTLING SCHEDULE

1. First impression right out of the bag: quiet background, super high resolution, details in program material unheard or not appreciated before. Midrange clarity, resolution, and naturalness are most immediately evident.
2. After about three days of use: somewhat more organic sound, better system synergy and smoothness, the high resolution perceived to be more liquid (sort of as if a speaker crossover were somewhat upgraded for better synergy between the components / drivers). Bass is more controlled and gains expression with less monotony.
3. After about a week of use: depth and dimensionality of soundstage profoundly impressive, last hint of graininess gone, voices more "chesty" and with more "volume," depth of bass impressive because of its tightness, control, and because it now more organically meshes with the highs.

These differences are meant as a general average to give you a feel for what can be expected with the LessLoss DFPC solution. Obviously, we all have our own wording to explain the subjective nature of these differences, but on a whole the average feedback has again and again pointed in a direction very similar to the three stages of qualitative sound development depicted above. Of course, these will not be perceived as discrete steps, but all the while the performance continues to become more refined.

It has been noted that the DFPC power cables tend to burn in more quickly on higher current drawing equipment, such as power amps. Thus, if the final application will be that of a CD player, it is advisable to use the power cord on the power amp for a couple of weeks before applying it to the CD Player for good. This is in the interest of speed. Using the DFPCs directly where they are intended to be used is also just as good. The burn in period may be longer, though.

Upgrade Option available

We offer an attractive upgrade option to the DFPC Signature.
For details, please write Louis Motek at *info@lessloss.com*.