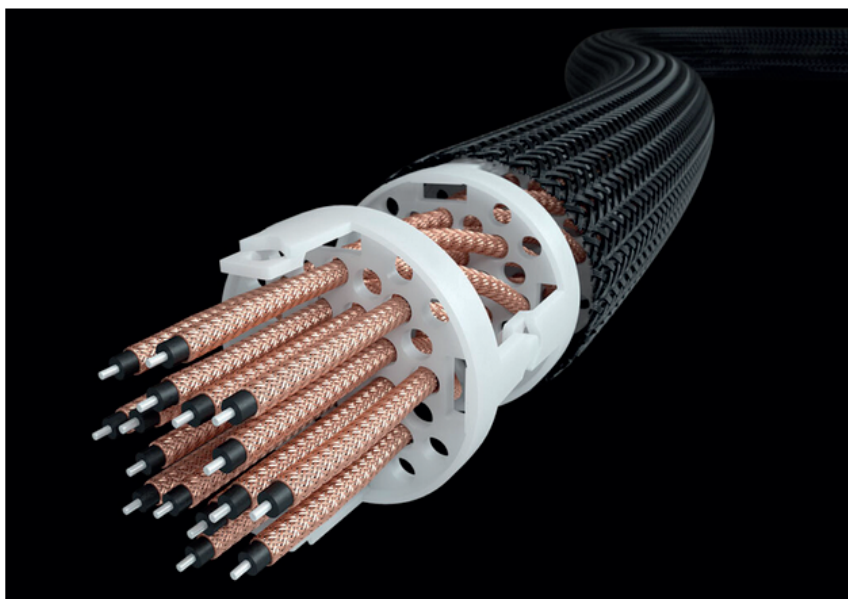




Inakustik Reference LS 4004 Air Speaker Cable, Reference Digital 2404 Air Coax cable and Reference High Speed USB cable Review

[Print Article](#)

By: Ed Momkus | January 2021



Inakustik Reference LS 4004 Air speaker cable

Synopsis for those who hate to read

The Inakustik Reference LS 4004 Air, Reference Digital 2404 Air, and Reference High Speed USB are all not only among the best audiophile cables I've heard, they are also among the best values in high-end components that I've encountered in the last several years. I have no compunction about naming each of these three cables as one of my NBRs: ("No-Brainer Recommendations"). Let me expound.

A few weeks ago, I was asked if I wanted to review a full loom of cables. I was told that the products were by a German company I had not previously encountered: Inakustik. "Sure, send them over," I said.

After I received the products, I immediately encountered some limitations. Not all of the cables with their lengths and types would work in my main system. Although I could install some of the cables in my secondary systems, initial listening quickly made it evident that these cables should be evaluated in the main system. Consequently, I was disappointed to be unable to give the Reference NF 2404 Air interconnect a thorough test, though based on the results obtained using their USB, digital coax, and speaker cables, I have no doubt that the companion interconnect is quite good. I decided to start with the easiest cable to evaluate in my main rig — the USB cable.

Specification:

LS-4004 speaker cables: \$6,000/3m
Reference USB: \$340/.75m
Reference Digital coaxial: \$1,000/m

U.S. Distributor:

[Worldwide Wholesales](#)

Latest Reviews & Audio News



Ortofon MC Anna Diamond moving coil cartridge Review
(February 23, 2021)

New Album Releases Project 2021-2-22
(February 22, 2021)

New Album Releases Project 2021-2-15
(February 16, 2021)



Commentary Sony TC-200 Reel-to-Reel tape deck and My 50-Year Audio Journey in Southern California
(February 12, 2021)

New Album Releases Project 2021-2-9
(February 9, 2021)



SW1X Audio Design DAC III Review
(February 23, 2021)

New Album Releases Project 2021-2-2
(February 2, 2021)

Cables in general

Since this review covers three different types of cables, it's useful to describe my philosophy on cables. I've had a wide variety of power, interconnect, speaker and digital cables in my systems, including my main system and two secondary systems. The suggested retail pricing for the cables I've actually tried ranges from \$50 to \$22,000. In all cases, the more expensive cables sounded "better" in some ways, but sometimes the improvement was so slight that it took extensive listening to identify it.

I have had cables in my systems that were intentionally used as "tone controls" to adjust for a perceived shortcoming in the system's sound. This approach is roundly criticized by many audiophiles as a band aid solution for a problem in the underlying equipment combination. I agree with this criticism, but of course it fails to take into account the fact that people don't generally have infinite resources to replace expensive equipment and applying cables as tone controls may actually result in a perceived improvement at a much lower cost. Financial reality matters! To be clear: the Inakustik cables are definitely *not* tone controls. In fact, they are probably the most neutral cables I've heard. More on this below.

Over time, as my main components improved, it became increasingly important to use cables that are fundamentally neutral. This is very difficult to assess in listening tests. First, you need to select a reference for "accurate" reproduction of the music. This alone is actually impossible to do if you weren't present at the recording venue when the recording was made. The closest you can come is to regularly attend live performances in good venues and then attempt by memory to recall the live sound when you are back in your own listening room. I live in the Chicago area, and my principal references are Symphony Hall, the Green Mill, City Winery, the United Center and Lincoln Hall. These venues are all vastly different and present a wide variety of music genres, which allows distinctions between a small acoustic jazz trio, a full symphony and a loud rock concert.

Once you've identified your reference performance venue and genre, you then must repeatedly change out cables and listen for any differences. This is extremely tedious, and I've periodically rejected doing cable reviews because I was just not in the right frame of mind for such an exhausting task. Furthermore, as you continuously make improvements to your system with better cables, the differences between cables tend to become more and more minute.

Initial evaluation

My typical approach to evaluating cables is to start by inserting them into one of my secondary systems. At this point I had no idea where these particular Inakustik cables fit into the Inakustik hierarchy, nor did I have any idea of their prices. I replaced a Creative Cable Concepts Black Knight digital coax (\$99) with the Inakustik Reference 2404 Air digital coax and an AudioQuest Type 5 speaker cable with the Inakustik LS 4004 Air speaker cable. Substituting high end cables in a midfi system is very dicey. The vast majority of the time the midfi equipment is not resolving enough to highlight differences between cables. It's not until you put the cables into a high-end system that differences become apparent. That was not the case here. Despite the modest system and poor room, everything about the music was just a bit *more*: more extension, more resolution, more sense of space. Time to move on to the real evaluations in the big rig.

Where do these cables fit in the Inakustik hierarchy?

My initial experience with just these two cables prompted me to check out the Inakustik website. I discovered that the cables were the second from the top of Inakustik's range of offerings. As I subsequently discovered from an interview with Holger Wachsmann and

New Album Releases Project 2021-1-26
(January 26, 2021)

New Album Releases Project 2021-1-18
(January 18, 2021)



Denafrips Avatar CD Transport – First Look
(February 23, 2021)

New Album Releases Project 2021-1-11
(January 13, 2021)

offerings. As I subsequently discovered from an interview with Holger Wachsmann and Sven Schulz of Inakustik, (the interview was set up by their Canadian importer, Robert Neil of Worldwide Wholesales), the top range was of similar design but uses pure silver conductors, which of course makes them much more expensive because of the cost of silver.

As you will see as you continue reading, if I didn't know that the pure silver versions existed, I would have concluded that what I had must be Inakustik's top of the line, but at price points well below the top of the line of most big name high-end cable players.

With this background, let's get to the cables under review, starting with the USB.

[*Note to reader:* To avoid confusion, let's make sure we're applying the same terminology. Reviewers repeatedly use certain terms to provide clarity and consistency in reviews. I will use audiophile terms the same way, so if you are not clear what a term means I suggest that you Google it to get clarity.]

My USB cable journey

Up until three or so years ago my server-to-DAC connection was a digital S/PDIF. After fairly extensive evaluations of top digital cables, my preferred digital S/PDIF became the Stealth Audio Varidig Sextet. I used this cable until I transitioned to the Legacy Audio Wavelet as my all-in-one digital preamp/DAC/crossover/room correction unit. The best sounding connection to the Wavelet was USB, so my USB cable search began.

For perspective, here are the USB aftermarket cables I've actually auditioned in my system: Audience AU24 SE; AudioQuest Cinnamon, Coffee and Diamond; Belkin Gold; Cardas Clear; and Wireworld Starlight 7. All of these beat stock USB cables handily, but I ended up with the Stealth Audio USB-T Select. One thing that attracted me to the Stealth, besides its tonality and ability to resolve minute musical cues, was the ability to adjust the cable to each particular component it's connected to. I previously had other Stealth cables with this feature and found that, though the adjustment process is painstaking, it enabled me to dial in the exact sound that I believed replicated the recording. Unfortunately, I had to swallow hard on the price (\$2,000). However, this gave me a superior USB that allowed me to adjust when swapping out the components connected to it.

Enter the Inakustik Reference High Speed USB



The Reference High Speed USB retails for \$430, which is less than the majority of the USB cables I auditioned, so my expectations were still modest when I first inserted it into the system between my Laufer Teknik Memory Player and the Legacy Wavelet. Boy, was I in for a surprise. In fact, I actually went to check that I had changed out the Stealth and not just imagined that I had.

On first listen the music that came out of the system was so close to what I heard when using the fine-tuned Stealth that I felt compelled to double-check my senses, so I pulled out the AudioQuest Coffee I still had lying around and substituted it for the Inakustik. Sure enough, the musical presentation immediately degraded. The soundstage shrunk, became less lifelike and the cues that convey the performance venue all but disappeared. I then inserted my Stealth and everything was restored.

I spent the next four days at two to three hours a day playing a variety of music in head-to-head comparisons between the Stealth and the Inakustik. Each session involved extensive listening as opposed to quick swap-outs. Gradually, I was able to identify the differences between the two USB cables. At first, I thought the difference was perspective.

The Stealth USB was slightly laid back, while the Inakustik High Speed USB was ever so slightly forward. Generally, I prefer slightly laid back, in part because of my room setup, which is set up “width-wise,” so the listening width is greater than the listening depth. Nonetheless, despite the slightly more forward presentation, I found myself more drawn into the music with the Inakustik. However, I had a hard time identifying exactly why. When I listened for specific qualities, such as tonality, soundstage, detail, dynamic range, etc., I was not able to readily discern any major difference in any of those particular aspects of the presentation. Gradually, I realized that I had just a bit “more” in *every* aspect of the Inakustik, and that the cumulative combined difference was a more realistic and engaging “live” presentation. This was especially true of good live recordings, where the combination of performer placement and excellent detail resulted in a phenomenal ability to focus either on individual performances, on the performance as a whole, or a combination of your own choosing. All of this for about 25% of the cost of an excellent USB cable that I had selected after extensive comparison testing. Very impressive.

What’s in the Air (cables)?

I normally avoid dwelling on information that the reader can readily obtain by reading the manufacturer’s website, and I strongly recommend that you read it thoroughly to better understand the rigorous technology implemented in the “Air” cables. However, some high level background will be helpful for this portion of the review.

The “Air” designation refers to the fact that the wires that actually carry the transmission are suspended in air. I’m familiar with this idea from a Tara Labs interconnect I reviewed and bought several years ago. Tara touted the fact that its wire was suspended in a vacuum, which implied that the signal transmission is not affected by a dielectric such as cotton, plastic, or anything else. As you may well imagine, creating a cable enclosure that preserves a vacuum means that you need a housing that is extremely durable – even stiff. Of course, this results in a cable that is not flexible, and the Tara incorporated extensive engineering designed to permit some bends in the interconnect. However, the Tara’s bendability was extremely limited, and required me to purchase a much longer (and more expensive) cable in order to allow connection to components at both ends. In the end it was just too difficult to work with the Tara and I sold it.

This experience led me to expect that the Inakustik LS 4004 Air and the Digital 2404 Air would both be very stiff. In reality, the opposite is true: these are very flexible cables. How did Inakustik accomplish this? Individual strands of copper wire (24 strands in each of 16 braids) are braided around a core and that the braided wires are then held in place by a series of separators (my made-up word) that keep the braids separated from each other. The “separators” in turn are linked to each other in a way that permits bending.

Various materials are used to enclose the braided wires and separators and to minimize vibrations. The wires are pressure-crimped to the connector, which I've always regarded as a much better way to secure the wires to their connectors than soldering. The connectors themselves are rhodium-plated tellurium copper, which ensures excellent conductivity. The connectors used in the speaker cables incorporate a hinged moving spade that can be adjusted to an angle that best facilitates connection to the amp and speakers.

The Reference Digital 2404 Air Digital Cable



As I mentioned above, the 2404 Air digital cable was actually the first Inakustik cable I tried in one of my secondary systems. The result was more extension, more resolution, more sense of space, but the evaluation was limited by the room and the midfi components in that system.

In my main rig I normally output the digital stream from my Laufer Teknik Memory Player to the Legacy Audio Wavelet via USB, so I had to insert another source into the mix. That source was initially an Oppo Blu-ray player. This changed the equipment chain and complicated the comparison process. Consequently, to make sure that my evaluation was not unduly skewed by the different source, I borrowed a Marantz ND 8006 network player. I used both sources via their digital outputs for my evaluation of the Digital 2404 Air. The comparison digital cable was SotM dCBL-COX that I was able to borrow. I no longer have my previous reference Stealth Varidig since I went to a USB connection.

As with the USB, I had the immediate general impression of liking the sound of the system with the Inakustik Digital 2404 Air in play. This is significant, in that experienced listeners are of the opinion that the SotM is one of the best digital cables around. Also, as was the case with the USB, individual "audiophile" qualities came across as "only" just a bit better, but the overall effect was significant and immediately noticeable. Again, just to be clear, I very much enjoyed the SotM, and did not expect to be able to easily distinguish a difference before I substituted the Inakustik for the SotM. But with the Inakustik Digital 2404 in play the music became more vivid, with a very "live" presentation. The more nuanced the performance, the more pronounced this vividness became.

Now the Reference LS 4004 Air Speaker Cables



My experience with the Inakustik High Speed USB and the Digital 2404 Air raised my expectations for the Reference LS 4004 Air Speaker Cables. I was not disappointed.

The comparison speaker cables I used as a reference are my own Stealth Dream v.14-T. For those of you unfamiliar with Stealth's designations, the "v.14" stands for the 2014 version of this cable, as Stealth is continuously tweaking and improving its cables, one of the reasons I have great respect for Stealth products. As with the USB cable described above, the "T" designation means that this cable is tunable to precisely match your speaker/amplifier combo. Again, as mentioned above, this is an arduous — even tedious — process, but the results are truly excellent if you take the time.

I started with the Stealth playing symphonic music, which I find is very good for evaluating the breadth and depth of the soundstage, precise placement of instruments, accurate instrument tonality, dynamic range, and pace, rhythm and timing (PRAT).

I should note that one of the few features of my Vivid G1 Giya speakers that I do *not* like is the recessed connectors that are located under the back end of the speakers. This makes it impossible to connect speaker cables without the help of another person. This means that there was typically a substantial lag between listening with the Stealth Dream in place and listening with the Inakustik LS 4004 Air inserted. The Inakustik adjustable hinged spades described above were definitely easier to work with than the fixed spades on my Stealth Dream. I took several steps to help deal with this delay. First, I diagrammed the apparent width, depth and instrument placement to refer to when I switched to the Inakustik. I also noted the exact volume levels I used and made subjective notes about the dynamic range, from the quietest to the loudest passages, with particular reference to the apparent detail conveyed during the quietest passages and the slam I felt during the loudest passages. Finally, I made notes focusing on the interplay of instruments "talking" to one another.

I have to say that everything sounded absolutely great through the Stealth Dream. When I settled in to listen with the Inakustik LS 4004 Air in place I was of the attitude that I'll need to listen very carefully to numerous particular aspects of the music presentation to identify differences. In retrospect, I'm not sure why I thought that, especially given my experience with the Inakustik USB and the Digital 2404 Air. As was the case with those other two cables, I immediately "felt" I liked the music better, but when I focused on

specific characteristics, the differences seemed negligible. Again, I had to really think about why I liked it better with the Inakustik LS 4004 Air. Consulting the notes I took with the Stealth in place, the stage width appeared to be just a tad wider, the front of the stage was slightly closer with the same backstage depth, and instrument placement was just a bit clearer. The clearer placement seemed to make instrument repartee more realistic, with each instrument that was “talking” to another instrument seem illuminated for the moments it was talking. The orchestra seating arrangements seemed to be more clearly assigned to the spaces customarily occupied by the corresponding instrument in the orchestra circle. Everything sounded just a bit more substantial, with pinpoint imaging and at the same time having a very holistic presentation. “Palpable” is a good description.

I proceeded to play with the different volume levels I employed with the Stealth in place. The Inakustik LS 4004 Air created the impression of being a little louder, but this was hard to distinguish from the fact that the Inakustik’s perspective made the front of the stage appear closer. Increasing and decreasing the volume did not affect the differences I heard – both speaker cables retained the same rock-solid presentation regardless of volume manipulation. However, I did get the impression that the Inakustik’s slam was a little more pronounced at all volumes, thus adding a bit of extra excitement to explosive passages even when played at lower volumes.

Listening to live recordings, both cables did a wonderful job in revealing the boundaries and reflections of the performance venue. This is highly subjective, so I’m hesitant to state it, but I felt that the Inakustik exhibited an openness and realism in the way the music permeated the venue and decayed the way I hear it at a live performance. I might go so far as to say that, in general, decays of notes seemed more realistic with the Inakustik in play. This despite the fact that I think the Stealth is quite good at that.

I’ve been trying to avoid this word, because I’ve always had difficulty understanding how one can really know it applies: *neutrality*. Use of this word in the context of speaker cables necessarily implies that your source, preamplification and amplification, and your speakers correctly and accurately reproduce the recording, and it’s the cabling that’s off. Not sure how you can know this for certain. However, the end product – the music itself – sure seems to be coming out absolutely “neutrally.” Of course, I thought this about my Stealth Dream, but now I think it “more” about the Inakustik LS 4004 Air. It was completely effortless to envision soloists, orchestral instruments, pianists and vocals occurring on a stage in front of you. Again, palpable and realistic.

Summing up my impressions of Inakustik Reference Cables

As I review my notes from my listening sessions, three words keep popping up: vivid, palpable and realistic. Note that I am wayyy past the basic “extended”, “detailed”, “dynamic”, “wide soundstage”, “deep soundstage”, “excellent tonality” and similar descriptions that, in my mind, should be a given for any cable that aspires to be top shelf. Vivid, palpable and realistic are terms that convey the ability of a system/component to take you beyond mere enjoyment. It’s a system/component that makes it effortless to pretend that you have been transported to the actual performance in the recording venue. It’s not just great imaging, it’s actual violins/guitars/pianos etc. playing in your listening room.

I’ve experienced this occasionally with excellent recordings, but never consistently. With the Inakustik cables in play I had this experience the vast majority of the time.

How to separate the performance of the cables from the performance of the main components? I don’t see how that’s possible. Though there are hundreds of good components I’ve never listened to critically, by now I have enough experience to know that my Gryphon Antilleon, Legacy Wavelet, Laufer Teknik Memory Player and Vivid G1 Giya are top shelf, even though there may be other worthy or better components. Moreover, I know that the synergy between these components is excellent, and they reside in a room that has top-shelf power and above average acoustics. Just because the

Inakustik cables sound absolutely sublime in my system doesn't guarantee they will perform to the same level in a completely different system. However, I can unequivocally state that they will perform better than many of the upper echelon cables praised by reviewers.

So, I refer you back to the opening paragraph of this review. The Inakustik Reference LS 4004 Air, Reference Digital 2404 Air, and Reference High Speed Digital USB are now included in my list of No Brainer cables, partly because of their price, but mostly because they are among the finest cables around and have been greatly enhancing my listening pleasure.

Copy editor: Dan Rubin