

REVIEW: Lehmann Audio's Linear USB

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Sampling rates (16/44.1, 24/96, 24/192), standard-res, high-res, DSD. If you're confused by all the numbers and formats, you're not alone. Lately, many audio manufacturers are touting their new DAC capabilities: processing nearly every sampling rate and format available. Mind you, these DACs range in price from \$99 to tens of thousands of dollars. We admit it: we find ourselves fetish-sizing over the numbers, but as experienced music addicts and audio enthusiasts we say it's the end result that matters most: the sound!



For those of you with large CD and CD-quality digital download collections who'd rather not re-purchase those records in high-resolution (nor have the time to learn a new software to play those files) the Lehmann Audio Linear USB sounds good with the music you already own.

Precision crafted in Germany with the highest quality audio components, the Lehmann Audio Linear USB is a simple to operate, compact, reference-grade headphone amplifier with an integrated Burr Brown DAC.

Set-up is easy. There are no drivers to install, whether you're using Mac or PC! Just plug in the included IEC power cord (or one of your own premium cable), connect the USB cable to a digital source, and you're done.

Your digital signal is transferred via sampling rates of either 16 bit/44.1kHz or 16 bit/48kHz. That's it.

Think you need higher resolution than that? Be prepared to re-think that by the time you're done reading this review.

In addition to its USB input, the Linear USB can handle an additional analog source, like a CD player or a turntable and phono stage. Switching between sources is easy because the Linear USB will detect a USB signal automatically.

Neighboring the input jacks are a pair of variable output RCAs which allow the Linear USB to be used as a line-stage for your powered desktop speakers or hi-fi system.



A pair of premium Neutrik headphone jacks on the front panel allow for simultaneous playback of two headphones.

In addition to letting two people listen in at the same time, this is also an invaluable asset for any headphone enthusiast who wants to conduct headphone comparisons. It's certainly a great help to reviewers auditioning multiple headphones.

Front and rear output levels are handled by a high-grade, 27mm ALPS potentiometer that was perfectly smooth and even in its control. And our interface to this ALPS pot was an oversized knob of milled aluminum.

Three faceplate finishes are available for the Linear (natural aluminum, black and chrome). Both of us opted for the natural aluminum faceplates.

Users can optimize the output level of the zero global feedback Class A output stage.

As soon as we got our music pumpin', we immediately reached for one of our top reference headphones: Sennheiser's HD 800.

Here's an interesting bit of trivia, Sennheiser chose the original Linear as their official amp when they launched the HD 800 at press events in 2008.



Unlike most headphone amplifiers on the market, the Linear USB features user-selectable gain via DIP switches on the bottom (0 dB, 10 dB, 20 dB).

AKG also used Lehmann Audio amps (the Linear Pro and the Studio Cube - both professional versions) when they recently launched their flagship K812 headphones!

We have the AKG K812 in review right now - keep hitting refresh!

Sound - *M. Liang is for Michael Liang, M. Mercer for Michael Mercer.*

M. Liang: While sitting in a dimly-lit listening room enjoying one of my favorite albums - Natalie Merchant's "Ophelia", I realized some HD800 owners have found this headphone a little bass shy and sometimes hot on the treble. I didn't find this was the case at all using the Linear USB as the DAC and power source.

Sub-sonic bass was presented with control, well defined, and lots of depth. Start/stop of each bass note was lightning fast, from a flash of bright light to pitch black darkness within milliseconds. Although the music files played were at 16 bit/44.1 kHz (CD quality), fidelity was never questioned.

The Linear USB is a smooth, musically engaging, balanced sounding component. Dare I say, it sounds analogue. I never felt disconnected from the music during the evaluation period. It brought back the memory of enjoying an entire LP while reading the liner notes, getting lost in the music.

With the Linear USB's gain set at 10db and the volume knob at 3 o'clock, sound pressure from the HD800 was nearing the experience of loudspeakers. Yes, this setting is very loud, but the music was magical, and the amp wants you to go further. The Linear USB is like the naturally aspirated six cylinder Porsche 911 GT3. Specs may not look so impressive on paper, but anyone who's driven one will tell you the 911 GT3 is every bit as high performance as its rival big V-12 engine supercars.

I have a few high-end headphone amps in my current collection, and have experienced many more. So far, Linear USB's authoritative power and control is unmatched. Throw any dynamic driver headphones at the Linear USB and you should get a glimpse of that headphone's maximum performance.

Okay, the Linear USB can't play high-res 24 bit/192kHz files, nor can it process DSD. We can OCD all day and night over sampling rates and marketing buzzwords, but do those things matter if the end result isn't musical? We won't know what the future holds. In the meantime, why not fall in love with your music collection all over again with the Linear USB?



M. Mercer: Listening to Four Tet's recent *Beautiful Rewind* LP on the Lehmann Linear with my Sennheiser HD800's (with Double Helix Compliment cables) reminded me of the most important thing, something that my partner Michael pointed out above: It's the music that matters. The album sounded crisp and detailed, dynamically engaging and wide-open, just the way Four Tet should sound. The transient attack and speed of the punchy basslines and airy synths was magnificently reproduced.

When I moved onto Boards of Canada's *Tomorrow's Harvest* album the sound was equally impressive. The low end slammed with authority, the midrange was clean and fluid: the highs, beautifully extended and decayed naturally. The Lehmann and HD800's are a grand sonic pairing. I can understand why Sennheiser chose to use Lehmann headphone amps when they initially introduced their flagship model (the HD800)! They compliment each other very well. I could listen to this combo all night with ease, and as a matter of fact I have.

Unfortunately, as the world of high performance personal audio explodes, users are seeking higher numbers in bit depth and sample-rate support when it comes to contemporary DACs. Plenty of manufacturers are also playing the numbers game, and some forget about the essentials when they do. After all, it doesn't matter how high your DAC goes in terms of these numbers, but how well it executes its job - how musical it is in relation to the headphone amp section. Now, I'm not saying that - at this price tag - it's unreasonable to expect more out of the DAC in terms of high rez file playback. That's just the nature of the beast today.

But for me, and many other music addicts like me (including Michael), most of our digital music collections are still recorded at 16-bit/44.1kHz! Sure, I have a good deal of high resolution files too, but the bulk of my digital music is recorded at Redbook CD-quality (16/44.1) - so the DAC in the Linear USB suited me just fine. If you need high rez support, you can just use the Lehmann Linear USB for what I believe is its greatest sonic attribute: the headphone amplifier. During my evaluation of the unit I utilized the on-board DAC for standard-res files, and my Mytek Digital Stereo-192 DSD DAC for higher-rez stuff. The component worked well as a DAC/amp combo, and shined when paired with the Mytek. I used my MacBook Pro/Amarra rig as the source as that's my current top reference for computer digital audio playback. Whether I was listening via the on-board or the Mytek DAC, the Lehmann sounded clean, with great separation and terrific detail retrieval.

I also enjoyed the selectable gain switches to accommodate different headphones. I tried the Lehmann with my Audeze LCD-X (open-back) and Audeze XC (closed-back) planar magnetics, my trusty Sennheiser HD 25-1 IIs (dynamic drivers) and the [Perfect Sound d901 Dido](#) (also dynamic drivers). The Lehmann seemed to show its best stuff when mated with dynamic driver cans. It sounded musical with the Audeze's, and the vibe of the music came through, but it translated the emotional impact of the music best when mated with my HD800's. System synergy is everything!



Then, at the recommendation of my partner here - Mr. Liang, I opted to try the Linear with my trusty Grado SR225i's. Hats off to Michael for that suggestion, as I often go to my Grados (been using em for years) to gauge the spatial qualities, and the emotive power of the music; how well its translated through the headphone amplifier I've partnered with the Grados. The Lehmann delivered in spades.

The strings on Mogwai's [Les Revenants](#) LP - the soundtrack to the ground-breaking French television series (now called *The Returned*, currently playing here in the States) were breathtaking in their spaciousness. The haunting, distant, xylophone-like pings, airy synths, and oddly placed spacey bleeps made me cringe - the obvious artistic

intent when scoring a cutting edge zombie series! The sound was quietly menacing, and I couldn't take the 225i's off until the entire record was finished. That's a huge thumbs up. What a splendid sonic voyage.

Overall, my experience with the Lehmann Linear was engaging and downright enjoyable. I could easily recommend this component as an amp/DAC combo to anybody looking to squeeze the most out of their standard-rez music. As for the Lehmann as a stand-alone headphone amp: I discovered its true potential there. The music was excitable and dynamic, while the subtle nuances were also finely articulated.

I think the Lehmann can hang with other amps that cost a helluva lot more, and if I needed another headphone amp (it's an addiction - things could be worse) I'd buy my review sample! That's probably one of the best recommendations I can give. Check it out if you have the opportunity, especially if you rock a pair of Sennheiser HD800's!

Editor's Note: For those in the U.S. interested in the Lehmann Audio Linear USB, it's available for \$1,399 from Ortofon (<https://www.lehmannaudio.com/service/dealers/united-states/ossining/ortofon.html>).