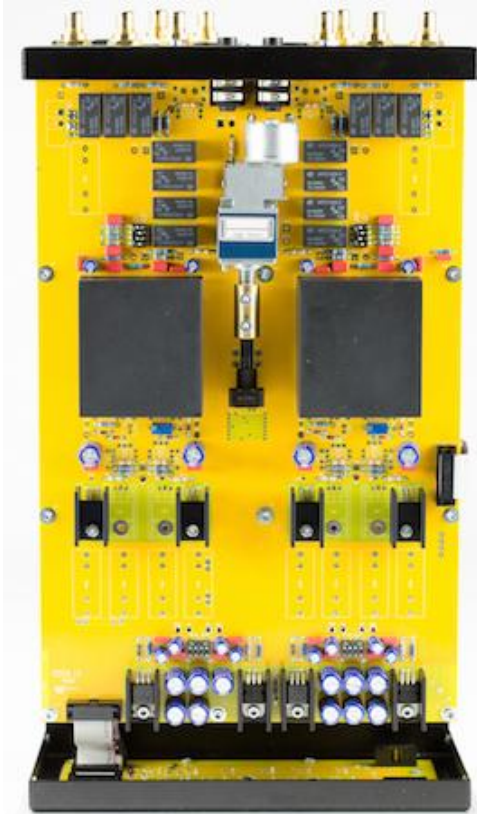

Norma Audio HS-DA1 DAC Review

by

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My job as an audio journalist requires that I attend trade shows and report back to the Computer Audiophile readers what I've seen and heard. Despite the luxury of listening to the best audio systems and making friends all over the world, audio trade shows can be grueling. Thus, on the last day of every show I have a free / fun day where I stroll the halls without any appointments or meetings. On my fun days I look for diamonds in the rough, new products that need and deserve attention, and products that are unique and new to me or the CReaders. This year at the Munich High End show I was strolling one of the main areas on my fun day and the Norma Audio booth caught my eye. I'd never seen nor heard of the brand even though it wasn't a new company. The main reason the booth caught my eye is the impeccable internal product design. The board layout and look reminded me one of my favorite brands, Spectral Audio. The two reasons I spent five minutes talking to the Norma Audio team are its high speed, wide bandwidth designs (2 MHz range), and the company offers a very versatile Digital to Analog Converter (DAC). The similarities to Spectral with clean design and wide bandwidth impressed me without hearing a note. Fortunately Norma Audio offers a standalone DAC, unlike Spectral, and there was no way I would leave Germany without making plans to review such a product. I set in motion a review of the Norma Audio HS-DA1 (Pre), a DAC with built-in preamplifier and headphone amplifier. At the time I wasn't sure if I had found a diamond or cubic zirconia. Without the ability to listen to the product at the show, I'd have to wait until I returned home to Minneapolis.

Upon my return home I phoned a couple industry friends to mention this "new" brand named Norma Audio. Of course they had heard of Norma and had researched the brand long before I blindly stumbled into the company's booth in Munich, as Norma Audio has been around for over twenty years. Reading the first two paragraphs from the

About Us section of the Norma website provides a look into the company and its rich place in music history.

*"The NORMA brand is property of OPAL ELECTRONICS, a company that designs, engineers, and builds Electronic Devices in the measuring instruments field. From the union of the technical know-how acquired in time and the passion for Quality Listening, NORMA*products were born, a synthesis between Technology and Love for Music. Norma is based in Cremona, a place where music has always played an important role. Cremona is the home of Monteverdi, Ponchielli, Stradivari, Amati and many other artists. For more than 20 years Norma has been involved in the study and implementation of sophisticated audio amplifiers. Technical skill and musical sensitivity must be merged together, in the same way in which the best musical instruments are made."*

A few months after returning from the Munich show, a Norma Audio HS-DA1 (Pre) arrived at my front door. The time had come to put a Norma product under the sonic microscope. The DAC was well broken-in as it had been in use by someone in the industry for a while before shipping to my place. I jumped right into my favorite music, some new music, and some excellent high resolution albums from Reference Recordings.

Jimi Hendrix Valleys of Neptune title track and opening track Stone Free sounded great. The drums had a fullness and solidity, reinforced by an appropriately thick bass, that I haven't heard from many DACs in recent memory. Both the drums and Jimi's famous guitar had a realness to their sounds that kept me listening longer and more repetitively than usual. Through the HS-DA1 this entire album was a pleasure that I treated myself to over and over again.

"You have all the time you need sir, and not a second extra." So goes the Intro track on A Little Touch of Schmilsson In The Night from Harry Nilsson. The first real song, Lazy Moon, is a favorite of mine because of both Harry's vocal and the backing orchestra. The Norma Audio HS-DA1 didn't sonically disappoint reproducing this track. The delineation between the strings, wind instruments, and Harry's voice is delightful.

The first track on Gary Karr's [Plays Double Bass](#) album had a great you-are-there sound through the Norma DAC. The sound as Gary slowly drags his bow across the bass strings has elegant emotion that is really brought out through great HiFi components such as the Norma HS-DA1. In addition to emotional, this track is tonally terrific.

Listening to Xiomara Laugart's [La Llave at 24 bit / 96 kHz](#) revealed my only sonic criticism of this DAC. The deep bass at the beginning of this track sounded more rounded off at the edges than I am used to hearing. A bit too bulbous. Nonetheless this bass definitely sounded lush, warm, and almost tube-like.

A new track I've added to my review rotation is named Gone from Laith Al-Saadi's [Real](#) album. The album was recorded live to two-track with some very fine musicians. The track Gone has a wonderfully organic sound through the Norma DAC. Laith's voice has such an in-the-room sound through this DAC that I just couldn't stop listening without a real deadline to meet. After listening to this track through this DAC several times I asked a friend to evaluate it for me on his system. The friend was impressed by the sound of the track but wasn't as enthusiastic as I was during my listening sessions with the HS-DA1. Maybe the Norma DAC was really bringing out something in this recording that the friend wasn't hearing on his Norma-less system. It's also plausible the Norma DAC was adding something to the sound, but if that's the case and it caused me to listen over and over to the same track, I can't really complain.

What can I say about Keith Johnson's engineering work for Reference Recordings that hasn't already been said? Probably nothing. However, I can describe what I heard through the Norma HS-DA1 when listening to the [HRx 24 bit / 176.4 version of Exotic Dances From The Opera](#). The opening track, Dance of the Tumblers From the Snow Maiden has stellar delicacy and smooth horns breaking up that delicacy in a wonderful way. The leading edge of transients was also stellar, but could suffer a bit from the rounded bass when certain lower frequencies were present. Overall the tone of the horns, tingle of the bells, and sound of the strings were all great through the Norma DAC.

Due to this DAC's design it doesn't support DSD playback without first converting DSD files to PCM. According to Norma designer Enrico Rossi the BB1704 chip, used in all Norma digital products, is so superior to other chips that this superiority far outweighs its inability to process DSD. Enrico's opinion is certainly one of many differing opinions on this topic. That said, I used one of my favorite sounding DSD tracks converted to PCM at 24 bit / 176.4 kHz to listen for myself. Before this review I created 24.176.4 versions of all my DSD files using JRiver Media Center. I own John Hiatt's [Bring the Family](#) album in 24/96 PCM, DSD64, and now 24/176.4 PCM derived from DSD. In the past I've said the DSD version sounds best to me in my system. Playing the 24/176.4 version, created from the aforementioned DSD version, through the Norma HS-DA1 sounded every bit as good as the original DSD. Granted I couldn't compare the DSD version to the PCM version head to head on this DAC, but I could listen to the 24/176.4 PCM version for the same sonic traits that I like in the DSD version that are absent in the 24/96 PCM version. Wow that's a mouthful. Listening to the 24.176.4 version of Learning How To Love You, I heard the same clarity and tone to the opening guitar as I previously heard in the DSD version through the EMM Labs DAC2X. Missing in both the DSD and 24/176.4 versions was a plastic sound to the guitar strings that is present in the 24/96 version sourced from DVD-Audio disc. Based on this and other listening of PCM music sourced from DSD files, I don't think anyone should write off the Norma HS-DA1 simply because it doesn't support DSD without conversion to PCM prior to playback.

The Norma Audio HS-DA1 (Pre) isn't a run-of-the-mill DAC based on the most popular DAC chip of the day. Designer Enrico Rossi based the HS-DA1 on the Burr-Brown 1704 and implemented these multi-bit chips in a true dual mono design. Like all great designs the DAC features dual oscillators, one each for multiples of 44.1 kHz and 48 kHz sample rates. During the review I used both AES/EBU and asynchronous USB input, based on the XLINX chipset, with great results. Both inputs support sample rates up through 24 bit / 192 kHz. The output stage of Norma products, including the Half Size DA1, is all discrete. The HS-DA1 (Pre) features a very nice analog volume control that enabled me to drive a pair of Pass Labs, class A, XA160.5 mono blocks directly. The output stage in the Norma DAC was so good I didn't even attempt routing the signal through the Pass Labs preamp I have on hand.

Norma Audio currently offers three different versions of the DA1 DAC. The HS-DA1 (\$3,400) is a DAC only version with fixed analog output. The HS-DA1 (Var) (\$4,000) features variable output, and the HS-DA1 (Pre) (\$5,400) features variable output with a preamp, analog inputs, and headphone amplifier.

Conclusion



Any questions whether the Norma Audio HS-DA1 was a real diamond or a cubic zirconia Spectral look alike were put to rest after countless hours of listening through the DAC in my system. The impeccable internal design coupled with ultra wide bandwidth are attention grabbing aspects of Norma products. However, the rubber meets the road when it comes to sound quality. The HS-DA1 delivers time and again by drawing the listener in with its lush and rich tonal textures. This DAC is a must-audition for even the most diehard DSDaficionados. From Hendrix to Hiatt the listening sessions simply stretched on and

on with the HS-DA1 in my system. I couldn't get enough of the Norma sound. Without a doubt the Norma Audio HS-DA1 is a [CASH List](#) certified digital to analog converter.

Manufacturer's Comments

tmh audio reply:

Hi Chris,

On behalf of Norma and tmh, we would like to thank you for taking time to review the new HS-DA1 DAC/Preamp.

We are truly honored you have awarded the HS-DA1 your coveted "CASH" recognition.

A few technical comments...

The "Pre" version includes 2 Class-A headphone outputs in addition to the Preamp output.

We, as do many others, believe the BB1704, a true Multi-Bit design, is the finest chip ever created.

The design includes user selectable filter to offer better system matching and user taste.

A more robust version of the Dual-Mono BB1704 DAC that offers even higher performance is found in the:

DS-1

DAC-1

SC-2 linestage (DAC option)

The integrated IPA-140 offers a DAC option that implements a 32-bit chip (not the BB1704) that is compatible with DSD

All Norma digital designs are compatible with "Integer Mode".

Also, all Norma digital products including the HS-DA1 embrace their 2Mhz analog output. This ultra-wide bandwidth helps to "prevent any high-frequency cut-offs working their way down into the audio band, but requires solid engineering to prevent the DS-1 making those 'papada, papada' noises when mobile phones periodically poll their nearest cell." (h/t Alan Sircom/HiFi+). This helps to insure a neutral & revealing output but still retain ultimate tonal accuracy of the source.

Chris, we appreciate your efforts to demonstrate the HS-DA1 playing DSD files converted to PCM can match DSD when played thru a reference \$15k DSD DAC. That the Norma also includes an internal preamp for direct connection to the amplifier further increases the value of the HS-DA1.

Chris, thanks again for reviewing the Norma HS-DA1.

Ciao!

Jim Ricketts

tmh audio/US Distributor

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Norma Audio reply:

There are two key phrases in this review, in my opinion, amongst others: "realness" and "you-are-there sound". When we develop our products, here at Norma, we always fine-tune them with the aim of obtaining a sound as close as possible to the one of the real instrument. Therefore, the sound is very neutral, very transparent, but also, and most of all, NATURAL.

This kind of ability, in an audio electronic, allows us to enjoy the best recordings in their full potential, while less well-done recordings benefit from its way of playing back without artificial harshness or emphasis.

The test made by listening the DSD files converted to PCM is very important for Norma, as it shows that using a very high quality conversion kit, even though it doesn't play DSD files, is not a bad move after all. This shows that today, with very good software conversion from DSD to PCM, you might even get better results than actual DSD hardware conversion.

To further emphasize Norma's neutral sound quality, the listening impressions from the track "gone" from Laith Al-Saadi, Chris mentions the possibility that the Norma introduced some modifications to the sound, as opposed to the possibility that the neutrality of the Norma revealed the true beauty of a track other systems could not reveal. If we do look at the comments he made about the other tracks' listening impressions, though, it would seem more likely that the Norma is very neutral and revealing.

In our experience, we have always heard in modern converters the bass response is almost always very "artificial". A "real" bass is supposed to be carrying quite a lot of physical energy as well, putting the body of the listener in vibration. Most modern converter chips may seem more controlled, but they actually tend to lack this energy content.

We (Enrico and all at Norma) think this review is truly wonderful, as is being part of the CASH list, and we thank Chris from the bottom of our hearts.

Norma Audio/Enrico Rossi[Norma Audio](#)