

## MOON by Simaudio Neo 380D DSD Review

*by The Computer Audiophile, Published on 08-26-2015*



The last couple audio events I attended I talked to consumers who were hesitant to purchase a new Digital to Analog Converter (DAC). The most common reason for this hesitation was that they weren't certain a DAC purchased today would satisfy their needs tomorrow, especially when they didn't even know their own needs today. What if I want to play this or play that or stream this or stream that? Those were common concerns at the events, but they have likely been on peoples' minds since high end digital audio began changing faster than is comfortable for most peoples' pocket books. I completely get it and I would likely be very frustrated if I were in the position of Joe Sixpack the average but dedicated audiophile.

Based in Boucherville, a suburb of Montreal, on the South shore of the Saint Lawrence River, Simaudio understands consumer desire for a product that won't be obsolete as soon as it's setup on one's home. Not only that but, the people at Simaudio are incredibly down to Earth and manufacturer products that they would want to spend their hard earned money on as well. This equates to products that have terrific flexibility, upgradeability, and great sound quality and products that the hesitant audiophile should definitely consider.

A great example of such a product is the DAC I've been listening through for a few months, the Moon Neo 380D DSD. This DAC has enough digital inputs to please even the most source-crazy audiophile, it supports DSD up through DSD256 and PCM up through 384 kHz, USB and Ethernet / WiFi, and features both fixed and variable (optional) analog outputs for users who use a preamp or drive amplifiers directly from a DAC. The Moon Neo 380D DSD is also upgradeable via firmware and replaceable hardware. While in-house I upgraded the firmware via the Internet and was sent an upgraded network board, with more features, installable by a local dealer.

Elvis certainly left the building decades ago, but a new king has entered the arena. The king of flexibility and sensibility. The Moon Neo 380D DSD has entered the high end digital audio arena with no intentions of leaving any time soon. Simaudio builds products to last and not be made obsolete quickly by a new model. In addition to the aforementioned hesitation-alleviating features, the Moon Neo 380D DSD offers great sonic performance. Products such as the 380D DSD should be prescribed for audiophiles suffering from analysis paralysis, hesitation anxiety, and neuroses due to worry about inferior sound quality. (Note: Listening sessions lasting longer than four hours are common. Listeners may need to seek approval from a significant other before beginning subsequent sessions.)



## Features

The Moon Neo 380D DSD is feature-heavy to say the least. Some of the many technical aspects of the 380D DSD according to Simaudio are an ESS Technology SABRE32 Ultra DAC / Digital Filter (ES9016) working in 32-bit Hyperstream, asynchronous DAC supporting DSD up through DSD256 (USB only) and PCM from 44.1kHz through 384kHz (32-bit on USB only), DSP with M-AJiC32 (MOON Asynchronous Jitter Control in 32-bit mode), Simaudio's Dual Jitter Control System, none digital inputs (AES/EBU x 2, S/PDIF x 3 (2 RCA / 1 BNC), TosLink x 2, USB x 1, Ethernet/WiFi), one digital output on S/PDIF (RCA), MiND (MOON intelligent Network Device) module for WiFi or Ethernet, variable analog outputs (balanced and single-ended) using M-eVOL volume circuit (based on a resistive array configuration), separate digital and analog power supplies using a toroidal transformers and 11 stages of voltage regulation, USB input with galvanic isolation which eliminates all ground current (i.e. no electrical connection) between the USB device (computer, music server, etc.) and the 380D DSD, analog stage with fully balanced differential circuit, advanced analog signal path using a DC servo circuit and proprietary 18dB/octave analog filter, 4-Layer printed circuit boards with pure copper tracings for a much shorter signal path, and much more. Simaudio designs seriously good stuff that not only checks off most feature boxes, but does so at a very high level.

Let's dig into a couple of these items. Both the MiND and variable volume control are optional and were included on the review unit per my request. (Shortly before publication I was informed that the MiND is now standard on all 380D DSD units). The M-eVOL volume circuit in the 380D DSD is identical to the volume circuit included in the top-of-the-line Moon Evolution Series. During this review I used the 380D DSD mostly driving my Pass Labs XA160.5 amplifiers directly (380D DSD variable volume) but I also tested the DAC running through the EMM Labs PRE2 preamplifier (380D DSD fixed volume). I was very pleased with what I heard in both configurations. At all volume levels when used in variable mode, the 380D DSD performed very well.

There are several ways to go about streaming music to a DAC over an IP network now days. Some manufactures purchase a canned solution from a third party and place these cards into their DACs, other manufactures build external boxes that simply convert a network stream into something like AES or USB for output to a DAC. Simaudio built its own network card that fits into its DACs/streamers throughout the Moon ranges of products and has recently developed its own software to run on iOS tablets (Android coming soon). Simaudio prefers to do things themselves and the high level of quality work they do really shows. This is evidenced by the new and improved iOS application. The previous iOS app used by Simaudio was built by a third party. To be honest, the app was terrible. The new app is very nice to use and doesn't overwhelm the user with feature overload. Taken as a whole (network card, streaming, software, etc...) Simaudio calls this concept the MOON intelligent Network Device (MiND). When added to a component such as the Moon Neo 380D DSD, the MiND turns the component into a UPnP/DLNA renderer. This makes the MiND enabled components from Simaudio capable of interoperability with a long list of UPnP/DLNA servers and control points. The simplest configuration is to use the 380D DSD as the renderer, the Simaudio MiND iOS app as the control

point, and something like Asset UPnP on a computer or Minimserver on a NAS as the UPnP/DLNA server. I used all kinds of configurations during the review including the setup just mentioned and other setups with JRiver Media Center as the server and JRemote as the control point. The JRiver/JRemote setup is much more powerful, but also adds a level of complexity.

The Simaudio MiND iOS app is really very nice and manageable for even the most novice of users. It's very simple to open the app and select one's MiND capable components because the app locates them on the network automatically. There is an information screen available for locating the IP address of the Simaudio component and the firmware version, though one will likely never need to know either. On this screen it's also simple to tap the Update Firmware button and let the MiND do the rest. One complaint here is there's no progress indicator when the firmware is actually updating. I noticed the 380D DSD itself switched into mute mode while updating, but this gave no percentage indicator as to when the update would be complete. Small detail that's certainly not a show stopper. On this settings screen is also where one enters the wireless network information for connecting to a WiFi network. Geeks will be interested to know the MiND can connect to 2.4 GHz 802.11n networks with a visible or hidden SSID. That's really it for settings. There's nothing to screw up for the ultra-novice user.



Moving into the browse and playback sections of the iOS app, one can locate a UPnP/DLNA server on the network by simply selecting it from a dropdown menu. There's no need to know any information about the server other than the ability to identify it by name when it appears in the list. Once on the browsing screen, Simaudio has intentionally made selection and playback of one's music very simple. The user has the ability to browse or search for content, play it now, queue it up at the top, bottom, or play it next. Once tracks are loaded into the queue the user can remove them individually, all at once, and rearrange them. There isn't much more to do when it comes to selection and playback. It's very simple. Two features that can't be overlooked, and are a huge bonus to using the Simaudio iOS app rather than a third party solution like JRiver/JRemote, are the ability for the user to control volume up/down and mute from directly within the iOS app and select the active digital input. The volume adjustment controls the level identically to the method used by the IR remote control, except it sends the signal over the IP based network. Overall I give the new iOS application very high marks for usability, simplicity, and simply getting out of the way to enable the user to listen to music without a PhD in software engineering.



As usual I always test network inputs for their ability to accept high resolution audio and play it back gapless. The MiND input on the 380D DSD was able to play up through 24/192 audio gapless via its wired Ethernet interface without any issues. The newest version of the MiND card also supports DSD playback at DSD64. This DSD capable MiND will ship to consumers later in 2015. When I switched to wireless playback via my 802.11n 2.4 GHz WPA2 network, I wasn't able to play 4x PCM content (176.4 / 192) without significant dropouts. I had success playing 24/96 material but not gapless. To get gapless playback I had to go down to 24/48 audio.

## Sonic Impressions

The Moon Neo 380D DSD's specification sheet checks almost all the boxes and the build quality is superb, but none of this means anything without matching sound quality. Let's dive into the music.

Laith Al-Saadi - Gone (24/192): The first thing I heard was a great sense of air around the hi-hat that virtually placed me in the room with the musicians. This sense of air or space really separates the men from the boys when it comes to music reproduction. DACs without the ability to convey this sense of space immediately cause me to lose interest in even my favorite music. The 380D DSD seems to have a tap that just flows with unlimited air. In addition to this, Laith's voice comes through incredibly rich through the 380D DSD. He sounds like the male equivalent of Natalie Merchant because of this richness. Underneath Laith's vocal throughout much of the track exists a very natural sounding group of baritone backing vocalists. The 380D DSD does a terrific job of separating Laith's vocal from this backing vocal. It's like the backing vocal just hangs in the air supporting Laith while he belts out the main lyrics. Taken together the sound is simply great.

Jack Johnson - Middle Man: Continuing on this sense of space theme, one can hear a nice amount of air around the drum in the opening sequence of this track. But, not every DAC can reproduce this space like the 380D DSD. The reason I know this is because I have other DACs here that just flatten this drum out and make it sound like the drum head is covered with a sheet. The 380D DSD really separates itself from the pack of lesser DACs when listening to tracks like Middle Man. I encourage readers to download the remastered version of the album and listen to this track. You should hear a nice sense of space around the drum after the opening bass lines.

Sara Bareilles - Goodbye Yellow Brick Road: I've talked about Sara's cover of this Elton John classic in previous product reviews. This track really has the ability to suck the listener into the live performance and make one think Sara is the original artist. Listening through the 380D DSD was nothing short of a fantastic audible illusion. Sara's smooth vocal sounded effortless. In fact the entire song sounded like it was being reproduced through the PA system of the Variety Playhouse in Atlanta, GA where it was recorded. PA systems certainly aren't the highest of HiFi, but they are live sound and the 380D DSD reproduced this exactly as I believe it would have sounded at the venue.

Leonard Cohen - Almost Like The Blues: There's no question Leonard has one of the most distinctive voices in music. Through the 380D DSD his rough baritone is juxtaposed terrifically with the female backing vocalists. There is this sense of naturalness yet a sense of gloss that can be heard in this backing vocal. In typical Leonard Cohen fashion, his vocal sounds as if he is swallowing the microphone and taking his last breath on this Earth and this can be heard very well through the 380D DSD. Even though his baritone is very rough sounding, like he just smoked the Marlboro factory before hitting the vocal booth, there are many tiny nuances that the 380D DSD reproduces with fine detail. There is a natural yet creepy feel to this track and the 380D DSD does a great job of delivering both to one's senses.

Suzanne Vega - Headshots: The 380D DSD has bass for miles and miles. Period. Listening to this track through the 380D DSD one gets a real sense for how powerful and how much control this DAC has in the lower frequencies. I hesitate to call it a bass monster because it's far from a booming Escalade sitting at a stoplight. Rather it's a bass control freak. This DAC puts forth an ultra vivid presence in the bottom end and pulls it back with one jerk of the bass chain. There's no boom or liquidity to this bass. It's tight and controlled yet full of texture and an ability to pound one's chest at high volumes. I don't know how many times I replayed this track just to hear the magnificent bass through the 380D DSD. Seriously fun and what this hobby is all about.

## Conclusion

The Moon Neo 380D DSD from Moon by Simaudio is one of the most underrated DACs I've had the pleasure of enjoying in my listening room. I say underrated simply because it doesn't get talked about much here on the Computer Audiophile forums. In reality this DAC and the other products from Simaudio are highly lauded in the press world wide, and for good reason. The 380D DSD is a DAC for both the audiophile who needs the latest and greatest and a DAC for the hesitant consumer unsure if he should make a move until everything shakes out. While no product is future-proof, the 380D DSD is

future resistant with its plethora of digital inputs and support of very high sample rates of DXD and DSD. It's also firmware and hardware upgradeable. In addition, the 380D DSD's ability to work with fixed volume output into a preamplifier and it's ability to drive amplifiers directly with the optional variable analog output is not only freeing for the end user it provides piece of mind that one's future system ambitions won't be hampered by technological limitations. The 380D DSD is not only the king of features, but it delivers sonically like only the best DACs can deliver. It reproduces a sense of space and air like the "big boys" while taking control of the deepest bass, punching the listener in the chest, and simultaneously tiptoeing through delicate details that many DACs simply can't reproduce at this level. The Moon Neo 380D DSD DSD may be just the DAC to get one's butt off the fence of hesitation and into the major leagues of high end digital audio with both flexibility and sound quality. Recommended unequivocally.