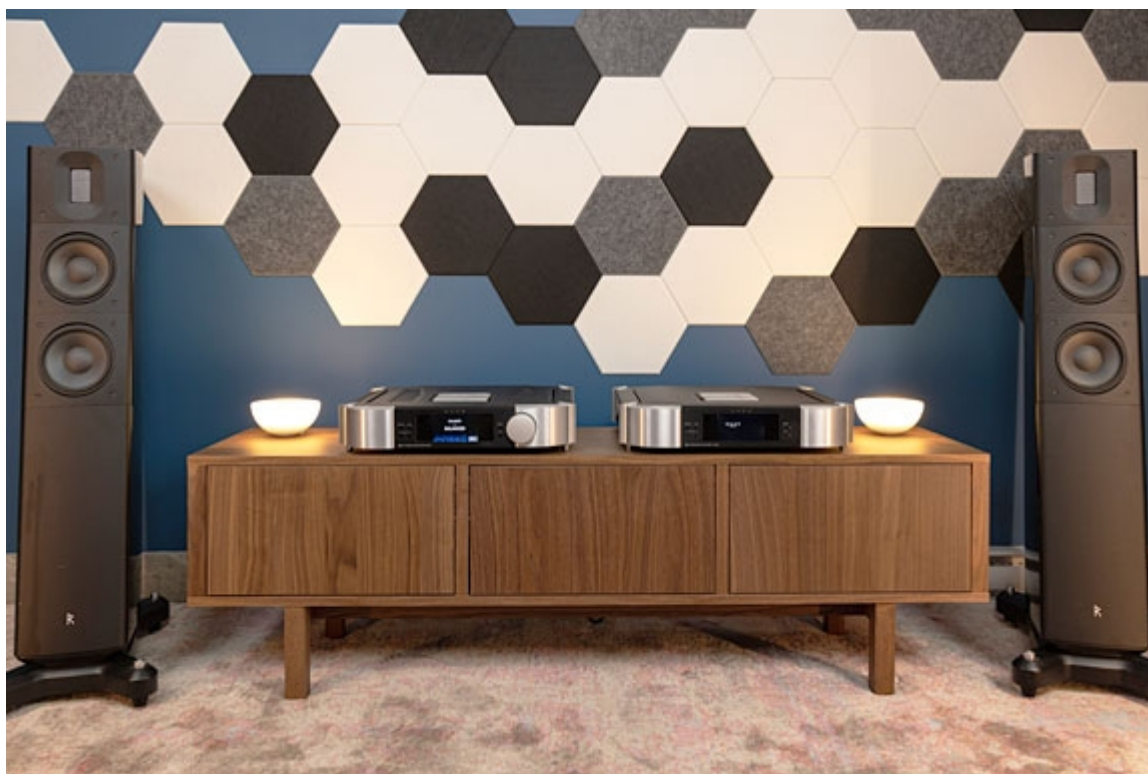


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## Simaudio MOON 641 Integrated Amplifier & 681 Network Player / DAC Review

Review By Tom Lyle



Last year, I had the pleasure of reviewing MOON's 250i V2 integrated amplifier. Even though its output is "only" 50 Watts per channel, I praised it, concluding, "I felt a connection to the music that passed through this integrated amplifier, as it belied its price." The Simaudio MOON 250i V2 is priced five times less than the integrated amp reviewed here but with a third less output power.

The MOON 641 integrated amplifier and the 681 network player/DAC are both part of MOON's NORTH Collection. From reading about them on the MOON website, I've learned that they are not simply new audio components but "a testament to MOON's commitment to pushing the envelope of audio technology. They are designed to deliver an unmatched listening experience in clarity and depth."

### MOON 641 Integrated Amplifier

Simaudio's MOON 641 integrated amplifier features their Distortion-Cancelling Amplifier (MDCA) technology. It is used exclusively in North Collection components of MOON. This feature has an independent circuit to perform signal correction to lower noise and distortion. The MOON 641's dual-mono configuration "fills the room with rich, immersive sound."

The 641 integrated amplifier's output is 125 Watts per channel in an 8 Ohm load and 250 Wpc in two 4 Ohms. Every model in Simaudio's NORTH Collection is similarly styled, with curved aluminum corners, a black chassis, and a large LED display.

Simaudio's BRM-1 remote can control the 641 integrated amplifier and the 681 network player/DAC. Although MOON touts the component's M-VOL3 as having a very smooth-running front panel attenuator on their website, I felt as if they referred to the remote in the same way that the first remote controls introduced for televisions way back when, in other words, "enabling one to be comfortably seated as one adjusts the volume control."

But the BRM-1 is quite a modern device, although it also has a smooth-running volume control; its central knob controls much more than just the 641's volume. The BRM-1 can also select the component's input, control play & pause, balance, mute, and put the unit into standby mode. The remote can adjust the screen's brightness and even monitor the remote's battery level.

The MOON 641 integrated amp's rear panel has four unbalanced RCA inputs and one balanced XLR input. Its beefy speaker posts accommodate banana pins, spades, and bare wire connections. One can also edit the names of the inputs using its volume control to scroll through its options.



The 641 can also be used as a preamplifier. This integrated amplifier can also be connected to one's home network. It allows it to be connected to MOONLink technology when connected to other compatible MOON products. When using MOONLink technology, one can trigger certain functions and operate multiple devices simultaneously via one's home network. It can toggle standby and adjust display brightness for all devices in the group while enabling volume control and automatic input selection of specific devices that are linked together. I appreciate that MOONLink can do this, but I'm more of a hands-on audiophile. I get a nerdy thrill out of powering up multiple devices and making changes by hand.

Although some might think this strange, I consider it a positive. There are at least a few other audiophiles who will agree with me, as I'm sure that there will be many who will disagree with me and

enjoy the convenience of using the MOONLink technology. I could write a separate review about the ergonomically shaped BRM-1 remote when used with the MOON 641 integrated amp and 681 network player/DAC. It can control multiple devices, and various BRM-1 remotes can control a single MOON component. Of course, the remote can be used in conjunction with MOONLink; it can also perform every function on the front panel 641, which are too numerous to list here. The technology contained in this remote is one of the most complex I've ever encountered. Even so, I used the remote only to adjust the volume and, once in a while, change the 641 and 681 inputs.

## MOON 681 Network Music Player / DAC

According to Simaudio, MOON's parent company, "The feature-rich "MOON 681 draws upon stunning MOON design and advanced digital audio technologies to deliver a seamless experience with the 641 and to serve as a complete digital front end to any analog amplifier."

Sure, the above is a subjective description of this DAC and network player, but looking at this component reminded me that high-end audio manufacturers aren't producing any second-rate products these days. Yes, advertising hyperbole still exists, but enough time has passed for designers to know what they are doing, and high-end audio customers can discover just about anything they want, with the only limiting factor often being their budget. Despite that, which functions the users are looking for and system matching are hardly the only factors that limit one's choices.



The MOON 681 is a "comprehensive digital front-end" with a MIND2 network player, an MDE1 digital engine, and MHV volume control for "accuracy and versatility." Its relatively large display makes it a beautiful digital component. In addition to its excellent-sounding DAC, the 681 easily connects to Roon, Airplay, Spotify Connect, and TIDAL Connect. It also connects to Qobuz, Deezer, and TIDAL. The MOON 681 has six digital inputs, an HDMI input with ARC, a MIND 2 module, and an MHV MOON Hybrid Volume Control. It has a fully balanced configuration, a 4.3" color display, and a BRM-1 "intelligent remote.

## Two Systems

This section describes the equipment I used for this review, which is a bit longer than usual because I used two different systems during the audition period for these two MOON components. My main system is the larger of the two, but unfortunately, its rather large electrostatic speakers require more power than the MOON 641 integrated amp delivers. Luckily, my secondary system, located in a common area of our home, namely the living room/dining room area, uses smaller dynamic speakers that are much more suitable for the 150 Watts per channel that the MOON 641 provides. I usually use several different speakers in my second system. I found that the best match for the Simaudio MOON 641 was the \$20,000 / pair Vermouth Studio Monitors, which I first heard during my review in December 2022; I used them most of the time when auditioning the MOON 641. I tried the other speakers I had on hand, the two-way floor-standing EgglestonWorks Isabel Signature speakers I used before the Vermouth speakers arrived. I often used an older pair of Magnepan MG-2b planar speakers. With all of the speakers other than the Vermouth Audio, I used a small SVS SB-2000 subwoofer. Despite its small size and low price, this subwoofer has a decent frequency response, reaching as low as 19 Hz. The system's analog front-end in this system was the Pro-Ject 2X turntable with an Ortofon MC WinfeldTi phono cartridge mounted on its integral tonearm, which was connected to a Pass Laboratories HP-17 phono preamplifier. The digital front-end was centered around the Italian-made, overachieving Audio Analogue aaDAC converter. Its aptX Bluetooth receiver is one of the best wireless connections I've ever heard. Using either TIDAL or Qobuz streaming services resulted in a sound that was practically indistinguishable from a wired connection, such as when I connected a Cambridge network player to one of its digital inputs. However, its sound was in a different sonic league than when I used the MOON 641 Network / DAC that I brought down from the main system. Still, I'll get to that a bit later.



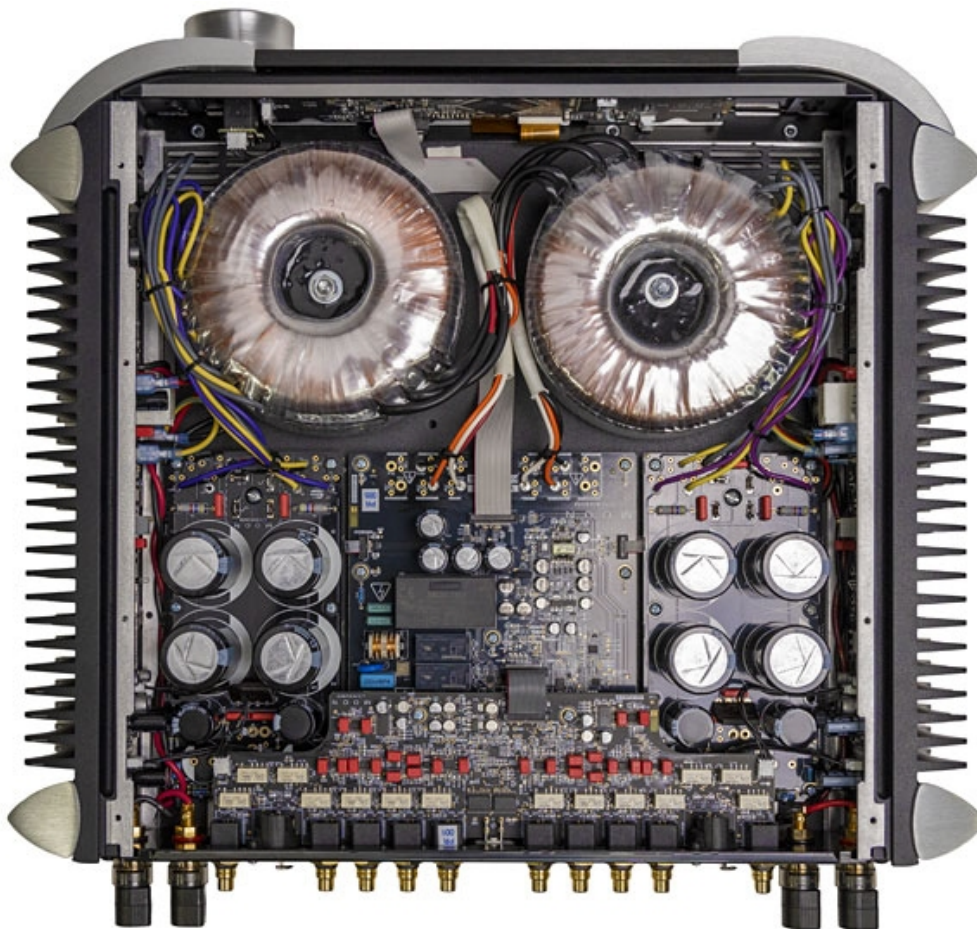
My primary system is in a dedicated listening room with two AC outlets running directly to our basement's circuit box. The room is acoustically treated on all its walls and the ceiling and lined with filled LP shelves. The room is painted with black paint. The analog front end for this review consisted of a Basis Model V turntable and a Top Wing Suzaku "Red Sparrow" phono cartridge mounted on a Tri-Planar 6 tonearm. The tonearm's integral cable was connected to a Pass Laboratories two-chassis XP-27 phono preamplifier coupled to a Nagra Classic Preamp. Still, later in

the review, it was attached to a TAD P1100 line stage, which was here for review. The Simaudio MOON 681 received a digital signal from a few sources. I often listened to my computer-based music server; its USB output was connected to the USB input 681. An Ethernet cable from home's mode connected to its LAN input, only eight feet from my Arcici equipment rack. The occasional 5" silver disc was spun on a discontinued but fine-sounding OPPO BDP-203 Blu-ray / universal disc player. Its digital output was

connected to the S/PDIF input of the MOON 681; its analog outputs were connected directly to the linestage de jour using Kimber Kable's Cabon 8 interconnects, and this model of interconnects was also used throughout the system. The power amplifier was my reference Pass Labs X250.8, but later in the review, another TAD component for review, the M1000 power amplifier, replaced it. Both amps' output was 250 Watts per channel – the USB cable was a 6' run of Wireworld's Platinum Starlight 8. The Kimber Kable Carbon 18XL speaker cables fed power to the Sound Lab electrostatic speakers, augmented by a pair of SVS PB16 Ultra subwoofers.

## Seriously

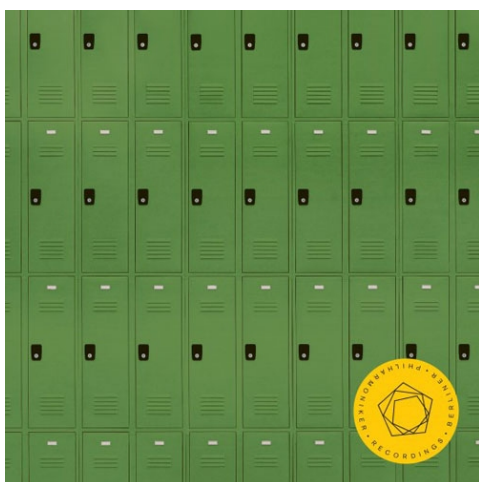
I began seriously listening to both the Simaudio MOON 641 integrated amplifier and the 681 streamer / DAC simultaneously, as I listened to both systems in our home regularly. I moved the MOON 681 down to the second system to pair it with the 641 integrated amplifier quite a few times. My first impressions were very positive. They shared a family resemblance, which included a pitch-black background and a very transparent sound. The MOON 641's inky black background subjectively enhanced the dynamics of all the music I listened to. This amp's micro- and macro-dynamics were impressive, as was its unequivocal transparency, which enabled me to hear way into a recording's mix. The 641 integrated amplifier was a pleasure to use. Even though I've admittedly become jaded regarding the luxurious, smooth-running, and solid feel of the majority of high-end component attenuators and other controls, it was difficult for me to ignore the very smooth-running attenuator and all the controls on the MOON 641's faceplate (innards shown below).



More critical was this amp's sound quality. I was highly impressed with the solid and transparent-sounding MOON 641 when connected to just about every speaker I tried with it. The best was when it was connected to the Vermont speakers, which made it more possible to display the top-notch sound quality of this integrated amplifier and the sound quality of the recordings I played through it.

The space in which this system was located is not acoustically treated and has a more "live" sound than the dedicated listening room. But that hardly mattered as the sound quality of the 641 was patently apparent.

While using the Simaudio MOON 681 network player/DAC in the second system, I streamed using Qobuz, the Berlin Philharmonic's 24-bit/96kHz version of Shostakovich's Eighth Symphony, conducted by Kirill Petrenko. This is one of Shostakovich's more dark and tragic works, and it is also one of my favorite symphonies. Most music critics agree that it is one of Shostakovich's best.



His Eighth Symphony opens with the right side of the orchestra most present, mainly the double basses, celli, and low-pitched horns. This was similar to Shostakovich's Fifth Symphony but lingered longer using these lower-pitched tones. It allowed me to revel in the MOON 641 integrated amplifier's ability to not only transparently reproduce these instruments but also enjoy the Vermont speaker's ability to reach down into these frequency's nether regions without any bloat, which was very easy to hear despite the Vermont speaker's very slight mid-bass hump.

The Vermont speakers reach 33 Hz, which is not bad for a speaker with 6.5" midrange / woofers. No subwoofers were needed when using these speakers in this system, which meant that all the bass coming into the room was due to the amp, the recording, and these small-ish speakers. However, these speakers are relatively large for those calling themselves "studio monitors."

Besides the tight bass I heard coming through the somber first section of this symphony, it was also surprising how tight the transients of these low frequencies were, its impressive lower-midrange "snap," and the incredibly resolving sound overall. The MOON 641's midrange was also highly transparent, which made the lush string section make me melt into my listening seat.

It was at least somewhat due to the Simaudio MOON 641's dual-mono design that this amp had a vast, drawn-to-scale soundstage along with pinpoint imaging. These traits, combined with its other positive qualities, made this recording of this symphony one that I was forced to listen to throughout the afternoon. I could listen to this symphony on repeat through the MOON 641; its resolution is incredible, and hearing the details embedded into Shostakovich's ingenious orchestration was thrilling. Coming back to the beginning of this symphony, this dark first movement has been interpreted as either a battle or "the crushing on the individual by the Soviet system." But this is different from what impressed me; it was being able to hear specific details, such as the reedy solo Basson, that introduced the movement's first theme. But there was so much more to hear and enthusing comment about, the details of which

could quickly fill up the rest of this review! I found the Simaudio MOON 641 to be ultra-transparent. However, depending on the source, some might find the 641 slightly euphonic or smooth sounding. System matching may be more critical for those types of listeners. The Vermouth Studio Monitors were a perfect match for this integrated amplifier, as they could take advantage of what I thought was a very transparent amplifier. But I like it when the Magnepan speakers are paired with a more aggressively detailed amplifier than the MOON 641, so these speakers sat out for the remainder of this review.

## Impressed

I was even more impressed with the MOON 681 Streamer / DAC when it was used in my primary system. I connected its Ethernet input directly to our home's modem, and its USB port was connected to the music server in the same room.

I want to spend only a little time on the subject, but I've wondered how much difference I would hear when listening to the MOON 681's various inputs on my system. Does the sound of a DSD file via the music server sound any better or worse than a DSD file streaming through the MOON 681 via its Ethernet connection? Do these sources sound better than any other method, such as playing a CD through my transport connected to the 681's coax input sound better than a CD-quality file via USB?



Thankfully, the Simaudio MOON 681 makes any differences between these sounds coming out of its analog outputs microscopically different, at least through my earholes. In almost every case, the variances were due to the source, not the 681, such as the slightly better-sounding CD above ripped to the server and sent through the USB input versus when I played the same CD through a transport connected to the coax input. During the review period, I mostly listened to the 681 using my music server via its USB output into the 681's USB input. Your choice of input will be a personal one. But again, one should rest assured that each of these inputs results in the same outstanding sound quality that the MOON 681 provides. The MOON 681's rear panel includes inputs for two-channel PCM devices: an AES/EBU balanced (XLR) connection, a S/PDIF coaxial (RCA) connection, and an optical input. The USB input (type-B) connection can also be used for PCM sources and accommodate those seconded with proprietary lossy MQA and lossless DSD. It also has an HDMI input called an HDMI ARC, which can accommodate PCM audio from an ARC-enabled TV's audio output (in case you're wondering, no, I didn't use the Simaudio MOON 681 for television viewing). The MOON 681 also has a MIND 2 input. The MIND 2 is a half-rack-sized component made by Simaudio MOON, the MOON Intelligent Network Device that can run on most Android and iOS devices. It can play music from one's computer, NAS, mobile devices, and various internet-based music services. It can also control a complete MOON system, multi-room synchronized playback, and stream audio files. But I digress. Most of the music I played through the MOON 681 came from my computer-based music server. I played back music using FOOBAR 2000 and JRiver software sourced from hard-wired hard drives connected to the computer. I also streamed lots of music from our home's Ethernet connection and the Qobuz and TIDAL software on the computer. I'm not a huge fan of Elton John, but if every album were as good sounding as the DSD file of his album Goodbye Yellow Brick Road, I would play his music much more often. This album was a perfect way of demonstrating the Simaudio MOON 681's rock-solid sound. When I previously heard songs from this album, I assumed it was only an average recording. But I repeated specific selections when playing this album through the MOON 681! I could listen to every instrument, voice, and overdub in the relatively complex soundstage of the "Bennie And The Jets" track as if it were isolated. I could enjoy all the instruments and sounds, many of which I had never realized were present, such as the periodic appearance of the acoustic guitar panned to the left speaker. I sat back in my listening seat, basking in the solid sound of this DAC.



Again, regardless of its source, the Simaudio MOON 681's sound quality was beautiful. However, in many ways, it mimicked the sound of the MOON 641 integrated amplifier, especially when I had them both connected in my second system. But what a beautifully synergistic pair they made! It was as if they brought out the best in both of them when used as a set. But when I brought the MOON 681 network player / DAC into my central system in the acoustically treated, dedicated listening room, I could hear what this component was sonically made of.



The MOON 681 mimicked all the traits I discussed when auditioning the 641 integrated amplifiers in the second system. However, the 681's sonic characteristics were much easier to detect because I used it almost exclusively in the more revealing central system.

The 681 had an apparent high level of transparency, as there wasn't a selection I listened to during the review period that didn't make me think that I was hearing exactly what the musicians, engineers, and producers intended me to hear. The MOON 641 integrated amplifier and 681 streamer / DAC shared the trait of having a large, drawn-to-scale soundstage. Also, their frequency extremes seemed infinite, but these ultra-upper and lower extremes traits were as musical as they all get out, and this was again easier to detect when hearing its signal played through the monolithic Sound Lab speakers.

I often need help to describe the minutiae of a streamer's sound quality. My experience with many streamers during the last few decades has shown me that a streamer's sound quality depends mainly on which DAC it is connected to. In the MOON 681 case, it's evident that this DAC is very high-quality, so the streamer sounded exceptional.



The MOON 681 might be outside the category of upper-echelon converters that cost as much as an upper-middle-class home. But this hardly matters. My system is excellent but not state-of-the-art, so I doubt I could appreciate the sound of a DAC made of gold. Or not. So, I must wait to hear one of those

mega-expensive DACs in my system. Regardless, the Simaudio MOON 681 is a mighty fine DAC equal to some of the best DACs I've heard.

If I were looking for a new DAC at this price range, I would likely have many other DACs to choose from. If considering the MOON 681, the bonus is that this DAC is also a streamer. All in all, this DAC, along with the MOON 641 integrated amplifier, like the MOON 250 v2 that I reviewed last summer, belies their prices.

What makes the Simaudio MOON 681 network player / DAC even better is that it includes a network streamer, which puts it ahead of other DACs within its price range. I consider this a deal maker (the opposite of a "deal breaker"); it is as if the purchaser of this DAC is getting the streamer at no cost!

## Recommend

There are many reasons why I will recommend both the Simaudio MOON 641 integrated amplifier and the MOON 681 Streamer / DAC to any audiophiles searching for components anywhere near their prices. The 641 has enough power to drive most speakers on the market, and its combination of a pitch-black background, ultra-transparent, dynamic sound, colossal soundstage, pinpoint imaging, rock-solid sound, and a background that can be none more black. The Simaudio MOON 681 network player / DAC shares the same sonic qualities as the MOON 641 integrated amplifier. Its combination of streamer and DAC should be considered a relative bargain, as it can be compared to similarly priced DACs. But, this component also includes an Ethernet input, allowing it to stream from one's home network and connect to a host of streaming apps and Roon. I'm only touching upon a few of its many features, adding to its appeal. Adding to these two components' excellent sound quality and features is an incomparable fit-and-finish and a shapely black and chrome chassis. Both of these components allow for a win-win-win situation for all audiophiles searching for components anywhere near their prices.



Tonality	
Sub-bass (10Hz - 60Hz)	
Mid-bass (80Hz - 200Hz)	
Midrange (200Hz - 3,000Hz)	
High Frequencies (3,000Hz On Up)	
Attack	
Decay	
Inner Resolution	
Soundscape Width Front	
Soundscape Width Rear	
Soundscape Depth	
Soundscape Extension Into Room	
Imaging	
Fit And Finish	
Self Noise	
Value For The Money	