

## LISTENING ROOM



# MOON 300D DAC

**A**re separates better than an integrated? At one time that question referred only to amplifiers: could an integrated amplifier be as good as a separate preamplifier and power amplifier? For many years the answer was no, but that was true only because manufacturers believed upscale integrations wouldn't sell. Not so true anymore.

But the question is also pertinent for digital players. The first players were complete one-box units. Then habits changed: those looking for the best would buy a separate transport and digital-to-analog converter, figuring they would sound better (and sometimes they did). Or else they added an outboard DAC in order to improve a one-box player.

Then the market changed again. There were serious advantages to putting the whole player into a single box, rather than pushing a potentially fragile digital signal through a long wire of uncertain quality. Wonderfully-designed single-box players pushed the separates into a corner of audio history.

And now, as Bob Dylan did *not* say, the times they are a-changin' back.

The reason is of course the computer as a music source. Even our hard-core audiophile readers are transferring their digital music to their hard drives. They

wish they could decode their computer files with the expensive DAC inside their players, but with most players that's impossible — there's no digital input. To add to the fun, a player whose transport fails may become a paperweight.

Hence the galloping return of the standalone DAC. This one is Simaudio's effort at making one that, potentially, can make you forget your one-box player. Since we had already experimented with the use of three DACs with computer music (*Hi-Res Music on DVD-R* in *UHF* No. 88), we had some experience in the matter. Though the 300D is not exactly what you would buy on impulse, it certainly doesn't set records for price.

On the next page you can see the 300D's rear panel, with its four digital inputs: TOSLINK optical, USB, and two S/PDIF coaxial inputs. The optical jack has a self-closing shutter, much preferable to those easy-to-lose dust plugs usually included. There is no balanced digital input, a surprising omission in a high end piece. You choose the input with a pushbutton on the right of the front panel. We would have liked a remote control for those inputs, but the 300D can be controlled only by adding an aftermarket infrared receiver to a jack at the rear (not shown in our photo).

The DAC chips in the 300D (Burr-Brown PCM-1793's) have fully modern

specs. The 300D uses a phase-locked loop and its own master clock in order to reduce jitter no matter the digital source. The 300D is capable of 24-bit depth with a sampling rate of as much as 192 kHz. For the moment you won't find much that will run at 192 kHz, but once you do the 300D will handle it.

Of course it does the intermediate sampling rates too: 176.4, 96, 88.2 and 48 kHz, as well as the 44.1 kHz of Red Book CD. The appropriate LED lights up on the front panel to confirm the resolution of the incoming signal. There's no indication of bit depth, but that's less crucial — if you've got more than a 48 kHz sample rate, pretty much any digital source will also push through 24 bits.

Note that those specs don't apply to the USB input, which is limited to 16 bits and a maximum sampling rate of 48 kHz (used in older pro gear). The Cambridge DACMagic, reviewed in *UHF* No. 88, had the same limitation, though that was pointed out to us by a reader only after we had gone to press. Indeed, Cambridge claims on its Web site that this is a limit of the USB standard, which is not true. In both cases the USB circuit seems to be an afterthought, included as a convenience rather than a preferred link.

There are other barriers to the performance of the 300D in a real-life system, not because of the 300D itself, but because of limitations in the source hardware and software. We expect those limitations to melt away.

Simaudio told us that the 300D would need a whopping 300 hours of run-in time before delivering its full performance! We plugged it in, along with the equally mint ELAC speakers, and sure enough they sounded unpleasantly edgy. Just six hours later they were producing real music, and over the next while they kept on getting better and better. By the time we were ready for serious listening, we had run the 300D for more than 320 hours.

This is a versatile product, which meant this would be not just one review session, but several.

### Adding it to a CD player

There are a lot more standalone DACs on the market than CD transports. For that reason, if you buy one, chances are your existing CD player will become your transport. Does that make any sense? How good an add-on is this, anyway?

To find out, we tried adding it to our Linn Unidisk 1.1 player, discontinued now but still one of the finest CD players ever built. We selected several CDs and played them on the Linn. We then connected the Linn's digital output to one of the Moon's coaxial inputs, using an Atlas Opus digital cable, and listened again.

We began with our all-time choral favorite, *Now the Green Blade Riseth* (Proprius PRCD9093), selecting the Red Book CD, not the SACD version. Even this version is awesome with the Linn, projecting a deep, natural sound that envelops the listener.

We knew no outboard DAC in existence could match that, and of course we were right, but the result was nonetheless very good. Gerard praised the timbres of both the solo flute and the choral voices, and noted the smoothness. He was also impressed by the fact that the sound didn't harden up on the crescendo, as too often happens.

All was not perfect, however. "Everything is there," said Albert, "but it's not as limpid and transparent, and there's more of an impression of compression and effort." Steve found the textures less "organic," and therefore less natural, but added that he enjoyed the piece nonetheless.

That recording is a challenging one, however — which is of course why we use it so often (and besides, we don't get tired of hearing it). So is the second one, but this time the 300D got uncannily close to the performance of the Linn alone.

The piece is Norman Dello Joio's dramatic wind band composition, *Fantasies on a Theme by Haydn* (Klavier K11138), which is noted for the overwhelming impact of the percussion, and for subtle and delightful interplay by woodwinds. It's a difficult recording to do justice to, but it gave the 300D little trouble.

Indeed, the wild bass drum introduction was pretty much identical,



with enormous impact, and effortless revelation of the deep acoustical space. The softer passages, those with the woodwinds in the starring role, were no less impressive, with an abundance of subtle detail, and timbres that were startlingly lifelike. The stereo image was exemplary, with each instrument placed where it should be, but still forming an organic whole. "There might be some compression of the higher notes," said Steve, "but it's minor even so."

The final recording was a challenge of a different sort: Margie Gibson singing *You Keep Coming Back Like a Song* from *Say It With Music* (Sheffield CD-36). Like the rest of the album, this song is an emotional experience. Indeed, Gerard commented that it was this very song which, some years back, had persuaded him that the Linn player was needed in our reference systems. Of course, the Linn rendered the song as flawlessly as ever. Doing a review session with music like this is no chore.

What was surprising was how close the 300D came to it.

From the very first notes by the piano, we could hear how really well the Sheffield recording had been done. Steve noted the smooth crystalline quality of the piano's higher notes. It was no less excellent when Margie came in. She had a superb presence, with details that highlighted the masterful way in which she uses her voice. After those initial notes, both Albert and Gerard stopped writing, the better to listen. "It may not really be quite the same," said Albert,

"but you forget to compare."

Need we add that, as they say on the Net, YMMV (your mileage may vary)? A lot can depend on your transport, and also on the quality of the cable linking your transport to the converter. Still, we remember the days when we would review standalone DACs, and we would struggle to determine whether there really was a difference when we added it to a (good for the time) CD player. Of course you wouldn't add it to a player like our Linn, but how many people own a player of that caliber?

A preliminary finding, then, was that adding this DAC to a reasonably-built player would yield much better results than upgrading to all but the very best super players. What's more, you then get a full range of digital inputs for your other sources.

Which is what we wanted to evaluate next.

### Cutting the wires

With that first comparison out of the way, we left the CD behind and moved to the contents of our main computer. The computer is not in the same room as the Omega reference system, and so we connected it to our system over the air.

The key to this legerdemain is Apple's increasingly popular Airport Express (\$100), a small but potent mini-router that can connect to the wireless Wi-Fi system you may already have.

We should add, however, that our own Wi-Fi system is built around another



Apple product, the Airport Extreme router. What it offers, which most routers do not, is the ability to broadcast *simultaneously* on both the conventional 2.4 GHz band and the much less crowded 5 GHz band. Thus, instead of competing with all the neighborhood routers for channels 6 or 11, our Airport Express moved to the vacant channel 149. That eliminated the occasional dropout we got with the older band, but — this was a surprise — we got far better sound at the other end. Other companies also make wireless routers capable of using both bands at the same time, including D-Link, Cisco and Netgear.

The same three recordings were on the hard drive of a Macintosh Pro computer, managed by iTunes software. The Airport Express was plugged in close to the Omega system, with an optical cable running to the TOSLINK input of the 300D. To avoid running to the distant computer to play the selections we wanted, we controlled the iTunes playback with the free *Remote* application on an iPod touch.

To our astonishment, what we heard was at least as good. No wait...might it actually be *better*? "It's hard to accept how fine it can sound transmitted without wires," said Steve.

The piece was of course *Now the Green Blade Riseth*. "It's a lot closer to the reference than it was connected to the Linn," said Albert. "There's a lot of body, but also a lot of transparency." Gerard thought male voices were more distant, which might be a good thing. Once Steve had gotten over his astonishment he commented that the piece didn't project the same 3D presence as with the Linn player, though he thought that could be a good thing too.

The *Fantasies* wind band piece was impressive too, with bass drum impact as good as we had heard from the original CD. The depth of image was also impressive, and the playful woodwind interplay was a delight. Albert pronounced it magnificent.

But of course we're here to criticize. Still impressed, Steve nonetheless complained about some lag in the rhythm. He also thought the brass seemed more distant, and that as a result some aspects of its timbre was missing.

But there were no complaints from any of us on Margie Gibson's song, only adjectives: amazing, magnificent (Albert), fantastic, amazing, incredible (Steve), marvelous, absolutely delicious (Gerard). And remember, we were making comparisons to some high-powered gear!

Beyond those adjectives it was difficult to know where to start. Margie's voice was gorgeously natural, but so too were the accompanying bass, cello and piano. Presence was as good as it gets. The balance was... but why go on? This is the performance level wireless audio from your computer can now reach. We've come a long way in a short time, and we have a feeling the surprises aren't over.

## SUMMING IT UP...

**Brand/model:** Simaudio Moon 300D  
**Price:** \$1600  
**Size (WDH):** 19 x 28 x 8.5 cm  
**Resolution:** 24 bits, 192 kHz  
**Most liked:** In the right setup, this is high end music from your computer  
**Least liked:** Mediocre USB input  
**Verdict:** One of those products you don't want to give back

## Connecting with USB

The Airport Express is particularly practical if your computer and your music system are not near each other, but what if they are? If your computer has a digital TOSLINK output, as most modern Macs and some Windows PCs do, you can connect an optical cable directly from the computer to the DAC. If it doesn't you can also connect to the 300D with the ubiquitous USB connection.

But would USB sound as good? To compare, we played Margie Gibson's song from a Macbook Pro laptop connected to the 300D via USB. For this comparison we used the premium USB cable from BIS Audio, rather than the inexpensive standard ones commonly packed with the gear.

Initially we thought it sounded much the same, but then certain differences became evident. Gerard thought Margie sounded more forward, and his disenchantment grew as the song went on. Albert initially found the two versions similar, but concluded that the wireless version left him feeling better. Steve began by actually preferring the USB version, though once Margie got into her deft vocal acrobatics he chose the wireless version as superior.

Conclusion: the USB connection may actually not be your best choice, at least on this DAC, but if it's all you have it can deliver what is, by any standard, a high level of performance.

## Beyond Red Book digital

For *UHF* No. 88 we had listened to some high-resolution music files, including some of the HRx files from Reference Recordings, using three different DACs with prices from \$5k down to just over \$500. We wanted to hear two of the selections again, comparing them to the Red Book CD versions.

Actually the CDs have HDCD encoding. Though our now ancient Counterpoint DA-10A has HDCD decoding, the 300D does not. However our Linn sounds better than the Counterpoint, and using the DA-10A would have given the HRx version too easy a ride.

To play the HRx file, we connected our optical cable from the TOSLINK

output of our Macbook Pro to the 300D. We used Apple's *Audio & MIDI Configuration Utility* to set the resolution to the best currently available, namely 24 bits and 96 kHz. Note that this resolution is not available with the Moon's USB connection. Nor can it be used with the present-day version of the Airport Express, which is limited to Red Book standard.

The first piece we heard was the *Non Allegro* from Rachmaninoff's gorgeous *Symphonic Dances* (RR-96CD). We agreed that both versions sounded superb, but after that we diverged sharply. Gerard liked the excellent depth and impact, but preferred the HRx version for its lyrical rendition of the soft passages. Albert disagreed, charmed by more of a sense of mystery in the soft passages with the CD, and better contrast among sections. "The story is told better," he said.

Steve was enthused by the HRx version, and the way it reproduced the orchestral instruments at their natural size. "There were harmonics there I had

never heard from classical saxophone," he added.

The final piece was *Some of These Days* by the Hot Club of San Francisco (from *Yerba Buena Bounce*, RR-109). When we listened to the CD, both Steve and Albert disliked it enough that they questioned whether we should be using such a recording for a review. And then...

And then they totally changed their minds on hearing the HRx version. "I was coming down hard on this music before," said Steve, "but it didn't deserve it. The CD was excessively punchy, but the HRx file is smoother and more refined." Albert was equally surprised, listing a number of improvements: better depth, a stable image, better balance, and a more realistic trombone and voice. "They did it!" he exclaimed. "On the HRx everyone seems to be playing better."

We were aware, of course, that we were not hearing HRx at its best. Its native resolution is 24-bit/176.4 kHz. The 300D can handle it, but our com-



puter can't, not yet. We're confident that will change.

### And we conclude...

We came out of the review pumped, frankly, and we had a question for Simaudio. Our Audiophile Store already offers the company's two phono pre-amps; could we add the 300D to the listings too? The answer was yes.

And we had our first customer... namely ourselves. Our old Counterpoint has served us well, but we reviewed it back in issue No. 44 (that was in 1995!), and it's ready for a pension.

The Moon 300D has joined our reference systems.



## CROSSTALK

This is it! There is nothing else to add if someone asked me what their next upgrade should be. Even that someone-who-has-everything does not really know how *good* everything is until he has tried introducing the 300D to his system.

And if you have nothing yet and are planning to join us on the road to Ultra High Fidelity, well...this is it for you too. Your first step should be a worthy one. Even if you build a modest system at first, let it be right at the source, and improve the rest later. Chances are it might be...*much* later.

The 300D is a versatile component too, in that it offers great sound for anyone, regardless of where their (digital) music originates from. Performers live and breathe around the speakers. They play music too, the timbres of their different instruments naturally recreated, and those who have a voice sing. *Really well*. Bet you had never known how *well* they could sing.

—Albert Simon

If radio waves can travel through the air and be translated into music, then sending

songs from your computer via airwaves to your stereo should be very possible, maybe even overdue.

There is another issue though, and that is the quality of the sound being sent. No radio ever produced the stuff coming out of this DAC.

*Amazing, fantastic, astounding* sound that comes close to the reference in every category. Was it the absence of wires that impressed me so much that I exaggerated the experience that day? Not at all, because hearing the same song through two different technologies made little change to the overall sound quality. This DAC is versatile and extremely capable. Wired or not, it produces high fidelity in spades and diamonds, and should win your heart.

—Steve Bourke

Is the Moon 300D a reference-quality converter? I'd be tempted to say it is, though the new wave of DACs is *very* new, and the recent ones we have heard (from Cyrus, Audiomat, Cambridge and now Simaudio) are clearly of a new generation, using much

upgraded technology. Is there more yet coming? Probably, and if this is a sample of what we can expect, I'm cheerfully optimistic.

I've been putting digital music on a hard drive for years now, partly to keep my iPod happy, though initially I had no illusions about what I would hear. For casual listening and for background music it was terrific, but I don't enjoy background music, and I seldom listen casually. What I have heard over those years seemed barely promising.

That has changed.

This new DAC from Simaudio is a key to using computer music not merely as a casual source but as a genuine high fidelity source, intended for serious listening. In the context of a properly set-up digital playback system, the 300D can outperform all but the very best (and least affordable) CD players. The weak spot now? Your computer, most likely, and watch for action on *that* front.

Products like these are game changers, and I've been waiting for this for a long time.

—Gerard Rejskind