

The Audio Beat

First Sounds: dCS Bartók 2.0

by Vance Hiner



It's no exaggeration to say we are enjoying a golden age of digital audio. The high level of sound quality the average music lover can access from budget DACs now is astounding when compared to what was available just a few years ago.

Some of that sonic progress is due to the cost-no-object research and development work conducted by cutting-edge companies like dCS. From creating the world's first 24-bit analog-to-digital converter in the late 1980s to its pioneering work with jitter-reducing digital clocking devices, dCS is among a handful of companies that have been continually raising the bar in digital audio reproduction.

The most recent example of dCS innovation is the unveiling of Bartók 2.0 (\$17,950 without headphone amp, \$19,950 with), a major overhaul of the company's entry-level DAC/streamer/headphone amplifier's firmware. Because this firmware upgrade was free to Bartók owners (like me) and can be downloaded in a matter of minutes, my sonic expectations were fairly low. I assumed I would hear subtle differences. However, the tectonic shift in sound quality was extraordinary. More on that later.

With Bartók 2.0, dCS is offering access to state-of-the-art technology developed for its much pricier Rossini DAC. New features enable listeners to further customize playback according to their unique set of psychoacoustic listening preferences. While that might sound like marketing mumbo-jumbo, months of listening sessions with a diverse group of family and friends demonstrated to me that Bartók 2.0 represents a major leap forward in digital playback at this price point.

My wife, an astute listener and discriminating music fan, was pleased enough with Bartók 1.0 to give me the green light last year to buy the review unit I was using. With the advent of the 2.0 firmware, we've both found ourselves using the word love when talking about the Bartók. We love how live and present our digital music now sounds. We love how easy it is to tailor the sound for streaming and playing compact discs.

Exactly what pushes a person from liking an electronic device to loving it is complicated. For us, a product becomes beloved when it meets and exceeds expectations. Bartók 2.0 does that. Unlike some gear we've auditioned, it functions without glitches while rendering all of the eclectic array of musical styles and platforms we enjoy with such realism and authenticity that we find ourselves focusing on the music rather than the technology. When friends gather, Bartók 2.0 inspires more requests and longer listening sessions than any digital playback device we've had in the system.

With Bartók 2.0, two additional boundary-pushing algorithms, called mappers, have been added to the device's computing arsenal. According to my ears and those of friends who have heard Bartók 2.0, the payoff for this upgrade is improved soundstaging, added weight to instruments and voices, a significant increase in low-frequency detail, and a lower noise floor.

Bartók 2.0's new and improved mappers (called Mapper 1 and Mapper 3) are optimized for the new architecture and allow for a lower noise floor to be achieved by running at twice the speed of the original mapper (now Mapper 2), while still preserving the linear sound that owners like me have come to associate with dCS's Ring DAC. In practice, these mappers push the noise created by the Ring DAC outside the audible band of frequencies so that it can be filtered out before it reaches the listener. Bartók 2.0 also includes some additional psychoacoustics-driven filter settings that offer varying trade-offs between Nyquist image rejection, pre-ringing, post-ringing and phase response, as well as the option to upsample all incoming data to DSD128.

Astute readers may have noticed that Bartók 2.0 now has exactly the same firmware used in dCS's \$28,000 Rossini 2.0 DAC. Prospective buyers will undoubtedly be curious about just how much of the Rossini's vaunted performance can be found in Bartók 2.0. During a recent interview with John Giolas of dCS, he paused when asked the question and then said, "Well, if pressed, I would say 85-87 percent." Not bad for a free firmware download. Rossini owners can leave Bartók owners in the rearview mirror

with the option of upgrading to dCS's newly unveiled Apex hardware. You'll read about this on The Audio Beat.

Even though the Bartók 2.0 firmware upgrade is free, the platform required for it to push performance boundaries does not come cheap. But the shock of the admission price lessens a bit when you examine what's packed inside the sleek casing. The Bartók resembles a ladder DAC, but there are key differences that make it unique. According to dCS's published materials, the Bartók's patented Ring DAC uses a "thermometer coded" DAC architecture, which involves manipulating 48 equal current sources within the Ring DAC. The Field Programmable Gate Array (FPGA) approach used by dCS engineers allows these current sources to be turned on and off in such a way that any component value errors are averaged out over time.

But what does all that technology mean for listeners? Officials with dCS contend that the Ring DAC "almost entirely removes the linear distortion from the signal." Those who study DAC design will tell you that linear distortion is one of the major reasons digital audio can sound artificial to many listeners. This may be one reason my wife and I perceive Bartók 2.0's rendering of musical performances as more authentic and why we are so taken with its sound.



While the computing power necessary for Bartók 2.0's level of current-source management is impressive, I was proverbially gobsmacked by what I learned during further conversations with dCS about the level of sophistication involved in their Ring DAC and the latest firmware. According to Giolas, the Bartók contains algorithms that adapt to compensate for the degradation of individual parts and

components within the unit. He added that these algorithms are even programmed to react in real time to temperature changes in order to make sure the highly sensitive quartz crystals within the Bartók's clocks are always operating at optimal frequencies for the very best sonic performance. If someone were selling you a car that compensated for tire wear, road conditions and environmental factors, you'd certainly expect to pay a bit more for it. In a nutshell, Bartók's adaptive algorithms represent a level of technological innovation you simply won't find in moderately priced DACs.

In order to test the new firmware's improved computing prowess and the psychoacoustic theories that have driven its design, I decided to put Bartók 2.0 through its paces with a panel of seven very different music lovers. Four were audiophiles and three were not. During listening sessions, I provided no explanations of what changes were being made. All listeners selected their own music, and then I would provide "version 1" and "version 2" playback. The difference between each version was the application of one or the other of Bartók 2.0's filters, upsampling modes and mapper algorithms.

Every listener was easily able to hear the differences between the mappers. After listening to several tracks, each had very distinct preferences. With respect to filters, six of the seven expressed varying degrees of preference, while one participant heard no differences between the filter settings. It's worth noting that these listening sessions did not entail endless a/b/a comparisons. Their preferences were formed fairly quickly and they did not require frequent re-comparisons.

Satisfied that at least some of the acoustic results my wife and I were hearing from Bartók 2.0 were not merely the result of our family echo chamber, I decided to dive deeply into our various digital streaming platforms and extensive CD collection. On electronic releases like the New Zealand-based band Men I Trust's *Untourable Album* (Tidal and Qobuz 16-bit/44.1kHz stream), the low-level information retrieval went beyond anything I've heard in my living/listening room. Bass tones were luxuriously textured and it was far easier to differentiate between those that were synthesizer generated and those that came from an electric bass. Timing was also considerably more in sync. After a recent upgrade to Shunyata's heavy-gauge, lightning-fast Sigma NRV2 and Omega power cords throughout my system, I thought I'd pushed the dynamic bass-response envelope in my room about as far as it could go with my Wilson Sasha 2 speakers. It turns out that the Sashes and my listening space were capable of a lot more definition and authority than I'd thought possible and that there was far more low-level information from a streaming file than I'd come to expect.

While Bartók 2.0 doesn't fix challenged recordings, it does an exceptional job of extracting the essence of the performance from them. For example, Amy Winehouse's *Back to Black* (Qobuz 24-bit/96kHz stream) has always sounded a bit bright and etched to my ears. With the Bartók 2.0 set for DSD upsampling, using Mapper 3, PCM Filter 3 and DSD Filter 5, Winehouse's voice was imbued with more weight and the soundstage was more expansive. The leading edges of drums and guitars sounded more natural without robbing them of their characteristic snap and attack. Somehow this new firmware enabled me to focus on how Winehouse's delivery can swerve from achingly vulnerable to wickedly sarcastic within a single number. By providing more breathing room for the sessions' utterly in-the-pocket backup band on cuts like "You Know I'm No Good," Bartók 2.0 reminded me why this is one of the great pop recordings of the early 21st century.

On Dave Alvin's King of California CD [Hightone Records HCD 8054], I could hear more of the deep-throated tonality and chesty reverberation in Alvin's rich baritone. The texture of the soaring Dobro lines throughout the album was clearer and much more present than in the countless previous sessions I've had with this disc. What surprised me most was that I never realized that the bass on my favorite track, "Fourth of July," comes from an electric bass. I could now clearly hear the amplifier tone setting. I also never noticed how the organ accompaniment was played to sound almost like a Mexican accordion.

Are any of these subtle details that important? They are for me because they provided a deeper insight into how those musicians were working in conjunction with the rest of the band to raise the roof on that song's chorus. Important details like that definitely give the composition more swing and they add an extra pinch of wistfulness to the proceedings. Bartók 2.0 has given me what feels like a virtual seat at Alvin's recording sessions.



Those who've followed my reviews for The Audio Beat know that I fall firmly in the "music first" camp of audiophiles, and I have to give my wife some of the credit for that. Computers annoy us, fiddling with knobs and buttons overwhelms us, and we have zero interest in hearing the squeak of a musician's chair in the far end of a recording studio. So it's a bit ironic that a DAC that houses a prodigious computer, offers dozens of acoustic settings and reveals mountains of recorded information could be so appealing to ordinary music lovers like us. To those of you who already have a comfortable relationship with your digital playback system, I'll offer some advice: approach this DAC with caution. After hearing what Bartók 2.0 can do, you may begin to feel less satisfied and find yourself falling for its seductive charms.

The Audio Beat

dCS • Bartók Digital-to-Analog Converter and Headphone Amplifier

by Mark Blackmore



Adding the dCS Bartók DAC/headphone amp to my system caused me to think about my personal journey in digital. I have owned a number of oversampling/upsampling CD players, beginning with a top-loading Sylvania player with its 14-bit, 4-times-oversampling DACs, and I had a continuing love affair with a Conrad-Johnson D/A-2b Bitstream DAC. A series of frustrating Apple OS issues with my 1-bit Korg DAC 100 pushed me out of the oversampling camp and led to the purchase of the simple, and simply great, BorderPatrol DAC SE-i, a 16-bit, non-oversampling ladder DAC with no output filtering. Additionally, the DAC SE-i doesn't even have an output stage, relying solely on the stream coming off the Philips TDA-1543 chip. It is as minimalist as one can get. So, the question is, can a new devotee of NOS (non-oversampling) DACs find renewed happiness in the dCS approach of using upsampling, via their Ring DAC with DXD or DSD output, and multiple filtering choices?

The Bartók is certainly shelf-filling at 17 1/2" wide, but extending 17" deep and 4 1/2" high. It is deceptively heavy and unwieldy at almost 40 pounds, resembling a moderately sized amplifier rather

than a digital-to-analog converter. The front panel is minimalist, with a display on the left side with six identically sized pushbuttons centrally located to control Power, Menu, Filter selection, Input, Output and Mute. The review sample was equipped with the headphone amp, so two jacks are provided: a 1/4" phono jack and a balanced connector. A volume knob is located on the right side of the front panel and can be used for headphone volume or line-level output.



The 3 3/4"-wide LCD has volume-setting numerals that are 3/4" tall. Set against the LCD's black background, the numbers were easily legible from my listening seat across my living room. Considering that most users will rely on a tablet or phone app to control volume, dCS has gone the extra steps to provide excellent readability.

On the rear of the case are sets of XLR and RCA outputs that can be used simultaneously. Digital inputs include two AES/EBU, two S/PDIF (one RCA, one BNC), TosLink, and two USB inputs, one for computer input and the other for external hard drive or memory stick. Also included are three BNC connectors for using an external clock, like dCS's Rossini Clock. Finally, there is an RS232 connector to allow renaming of the inputs or as a link from a dCS clock for simultaneous startup.

The Bartók has no WiFi provisions, needing a mandatory Ethernet connection in order to play music from streaming sources and allow music-playback apps to work. In my system, hard-wired Ethernet cabling from Blue Jeans Cable is ever-so-slightly smoother than using an AudioQuest Ethernet cable connected to a WiFi repeater, but your results may be different, so be sure to experiment. While the Bartók is capable of playing PCM files up to 24 bits/384kHz and DSD128, my listening sessions were 16 bits/44.1kHz over the BNC S/PDIF, Qobuz up to 24 bits/192kHz, plus Tidal for PCM and MQA tracks. My DSD listening was limited to DSD64 tracks that I have downloaded to a flash drive. It was nice to audition MQA fully unfolded, and DSD files sounded great, making me wish I had a bigger library of them. I used the Radio feature to tune in some local and international radio feeds to allow the Bartók some time to settle in before beginning the reviewing process.

Volume control is in 0.5dB steps from 0 to -50, then 1.0dB steps down to -80. dCS's unique implementation of volume control results in near 64-bit resolution, and there are actually three different volume controls: one for PCM, one for DSD and one for MQA. Through the Menu button (and dCS Mosaic, explained below), users can access balance as well as absolute-phase controls. dCS has also included tests for channel orientation, a phase check to see if the users' speakers are correctly wired,

and a burn-in tone for your system with the appropriate warnings about excessive volume. The front-panel display can be turned off, as can the illumination of the dCS logo. There are two basic modes of digital conversion: one involving upsampling PCM to DXD (24 bits/352.8kHz or 24 bits/384kHz PCM) or upsampling all PCM to DSD before conversion to the 5-bit/3MHz Ring DAC format.

dCS uses Field Programmable Gate Arrays in their digital processing platform. These allow the company to upgrade the products and add features, which I discuss below, but also keep owners up to date with any other improvements developed after purchase. With the Bartók connected via Ethernet, upgrading the firmware was a simple task that took a short amount of time. Certainly, dCS isn't the only manufacturer to include this easy path for upgrades, (PS Audio comes to mind), but I wish more companies would offer this feature to provide some degree of future-proofing their products.



It's my guess that many users of expensive digital-to-analog converters like the Bartók will use Roon to organize their music libraries and connect to their preferred streaming source. Instead, I downloaded dCS's Mosaic app to my iPhone and iPad and used it exclusively throughout the review period. Mosaic may have a minimalist look on the screen, but it is pretty thorough in its control features. And it proved to be almost bullet-proof and error-free, which is not always the case with proprietary apps. The only time it flinched was when I was trying to switch rapidly between Qobuz and Tidal, then to the S/PDIF input and back to Qobuz. The Bartók paused for a moment, as if to say, "Slow down and enjoy the music."

Mosaic allows scrolling through all of its music sources, including UPnP, USB, Deezer, Qobuz, Tidal, Radio, Podcast, and Spotify. Pulling down the Audio tab allows choosing between DXD and DSD output as well as multiple filters for PCM and DSD. MQA playback automatically engages the M1 filter, which in turn engages one of sixteen specific MQA filters. The Bartók can be set to have its analog output level at 0.2, 0.6, 2 or 6V. This is helpful in better matching the Bartok's volume with other sources in your system. Headphone output levels are 0, -10,-20 or -30dB to match volumes for 'phones of different sensitivities. As good practice, dCS advises users to first start with the -30dB setting until they've established a safe volume level for their ears and headphones.

The Bartók has six filters for PCM and four additional filters for native DSD or PCM upsampled to DSD. With so many choices, finding your preferred setting may seem a bit daunting, but the sonic differences are generally subtle and it's easy to switch filters in the Mosaic app. For PCM, I generally preferred filter

4 because it had a softer initial attack, and my horn-loaded, compression tweeters have quick response, so a bit of softening can be beneficial. I can see audiophiles with soft-dome tweeters preferring filter 1 or 2 because they add a bit of sparkle and snap to the sound. On the upsampled DSD side, I usually used filter 1 or 2 as they seemed more similar than not. Overall, I preferred the Bartók using the DSD setting over the DXD and did most of my listening in that configuration, except for MQA files, which are automatically switched to the dedicated M1 filter setting.

One important note about listening to the Bartók: it needs about one hour to reach its fullest sonic potential after being turned on, even from the Standby setting on the Mosaic app. John Quick of dCS confirmed this in an e-mail and recommended from one to four hours to get the best results. I don't have the luxury of waiting hours to get the best sound, so my solution to the problem was pretty simple: I left the Bartók on at all times and turned off the front panel display when I wasn't listening. The Bartók never got much warmer than room temperature and that way it was always performing at its best. I strongly urge keeping it powered up, and making sure a dealer does the same before any audition. You won't hear what this DAC is capable of without proper warm-up.

The latest changes to the Bartók include a firmware update and an updated Mosaic app to allow headphone users to select the new Expanse circuit, which adds two new settings to the Normal and Crossfeed choices. The differences between Crossfeed and either of the Expanse settings are not subtle and each has its place in headphone listening. The Crossfeed setting is based on Ben Bauer's work in the 1960s at CBS and is designed to lessen the feeling of sound coming from inside your head. dCS states that the new Expanse settings expand on the original concept, but improve the ambient cues lost in Crossfeed circuits. As a result, reverberation trails and hall acoustic signatures should be enhanced by the new Expanse settings. The dCS website has an extensive white paper discussing Crossfeed and Expanse, and I recommend reading it for further insight into this new development. It's interesting to learn how much added engineering went into developing the Expanse circuit. dCS's research centers on channel separation, frequency-response modifications specifically for headphone use, and time delay between channels in order to make Expanse an improvement over a traditional Crossfeed circuit.

I'm sure most audiophiles have a favorite album or a small group of reference tracks that they use to evaluate any new speakers, electronics or cabling. For me, the one CD that I use very early on into the review process is Rickie Lee Jones' *Pop, Pop* CD [Geffen GEFD-24426]. I feel pretty confident that I have discovered every bit of recording minutiae on this album, from the child's squeals and Jones's soft voice behind Joe Henderson's tenor sax on "Dat Dere," to the microphone-preamp hiss that ramps up right before her voice enters in "Coming Back to Me." I enjoy the selection of music, the quirky delivery of lyrics and the vocal presence of this well-known recording.

I wondered if the Bartók would reveal new, previously unheard details or emphasize some musical aspect I already knew well. The results were rather unexpected. I've been aware that Jones's vocals are less clear on certain songs, making her mumbling delivery even more distracting, or more charming, depending on your frame of reference. Looking at the liner notes to check some musicians' names I realized that there are three different engineers credited on the recording, and with the Bartók I heard

that each engineer delivers a different texture and purity to her voice. After all these years of listening, I had never realized this. The Bartók achieved this revelation not by hitting me over the head with *resolution, resolution, resolution*, as some DACs with aggressive treble might do. Instead, it simply delivered all the information on the recording, with a special nod to midrange clarity that was the key to my new appreciation of tunes I've listened to for years.

"I'll Be Seeing You," another track from the same album, begins with John Leftwich's bowed bass, but Bob Sheppard takes over the bass line with his clarinet underneath the vocals of the first verse. The Bartók made this swap easier to catch, and if the clarinet tone isn't quite as reedy as I've heard it, it was better delineated from the string bass sound preceding it. Again, the midrange clarity and resolution made this bit of music-arranging trickery easier to hear and appreciate.



I recently discovered Trio Chemirani's *Invite* [Qobuz, 16-bit/44.1kHz stream] while sampling Jeff Joseph's Graphene playlist. Playing the first cut, "Dar bâzé" with the Altec Valencia speakers pushed me back into my listening spot with superb transient speed and jump factor. I know that large horn speakers do those sorts of things well, but they were exceptional here. I was particularly impressed by the wall-to-wall soundstage, and I could point to images coming from way outside the speakers' edges. It was almost like having some surround-sound mode engaged, and this effect was unexpected coming from horn speakers, with their tightly controlled treble dispersion. Throughout my auditioning, the Bartók's soundstage width was most impressive, as was its precise image placement. Image depth initially seemed lessened because of the expansive soundstage width, but there was plenty of information lurking in the back corners of familiar recordings.

I discovered that in addition to a wide soundstage, definite strengths of the Bartók are transient attack and driving rhythmic energy, so I cued up *Winds of War and Peace* [Wilson Audio WCD-8823], with its (in)famous bass-drum explosions during "Liberty Fanfare." The monstrous bass drum at the 1:00 mark was ultra clean and powerful. With the Bartók, I was hearing better separation of mallet strike, the drum head and bass-drum body resonance than I'd heard before, maybe even better than in the rooms using Wilson speakers at AXPONA. My modest system will never match the big Wilson speakers' bass power, sheer volume or unflappable dynamics, but with the Bartók in the system, I was able to re-create a better impression of bass-drum tone. As an aside, I play trumpet in some local concert bands and I've performed "Liberty Fanfare" for several patriotic concerts. I'm always disappointed when our bass drum isn't as awe-inspiring as the crushing whacks Lowell Graham and the National Symphonic Winds produced on this great Wilson Audio recording.

Speaking of bass, the Bartók was not only powerful, but it also had excellent control throughout the lower frequencies. I was searching both Tidal and Qobuz, rekindling my appreciation of Bach's Passacaglia and Fugue in C Minor, BWV 582. During that listening session, I happened to be listening to my Magnepan LRS speakers, and the Bartók gave those bass-shy speakers just the right tone and texture to fool my ears into thinking the 32Hz pedal notes were real, not imagined. This pairing of LRS and Bartók nailed that tonal combination of "growl and purr" that big pipe organs generate, and the result left me smiling and forgetting that I was missing a lot of the bottom end from those small panel speakers.

Finally, I was listening to a newly released recording on Qobuz of Mahler's Symphony No.4 by the Bamberger Symphoniker, conducted by Jakob Hrusa with Anna Lucia Richter as soprano soloist [Qobuz, 24-bit/96kHz stream]. From an audiophile point of view, this is an excellent recording with wide dynamic range, good hall presence and fine orchestral timbre. It also possesses vastly superior string tone when compared with my favorite early digital release, Solti conducting the Chicago Symphony with Kiri Te Kanawa [London 410 188-2]. My complaint is that this new version misses the playfulness of the first movement and the "Child's View of Heaven" that Mahler intended for the last movement, something that Solti and Te Kanawa capture so well.

What does this have to do with the dCS DAC? Well, I mention this because I was frequently distracted from the reviewer's job of "sonic hide-and-peek," dissecting recordings for treble response, bass power, midrange liquidity, etc. The Bartók forced me to listen to music first, then consider sound, fulfilling dCS's motto, "Only the music."

Some reviewers have written about paring down their systems to using just an amp with a DAC like the Bartók as digital source and preamp. The sheer simplicity of this idea is enticing to me, and I think I could make it work with the right amp. I experimented with my Innersound ESL amp with balanced cabling from the Bartók and the sound was pretty good. The problem is this: the Innersound amp is about as neutral as can be, and paired with the similarly neutral Bartók, the sound was good but lacked the warmth I've grown accustomed to. I got used to this combination, but it may have been more of an admiration of the ease of use rather than love for the results. To be fair to the Bartók, inserting my

Yamamoto CA-04 preamp does bring some tube warmth in the upper mids, but it also fattens up the sound in the midbass and thickens the vocal range. While I may enjoy the Yamamoto sound a bit more when it is used between the Bartók and Innersound amp, the Bartók was certainly the more evenhanded of the two preamps. Also, the Yamamoto can be a bit polite, dynamically speaking, so the Bartók's fast transients and lively bass response were a good shot in the arm for the overall sound.

If the Bartók/Innersound combo was a bit too dry, my BAT VK-60 amp was a perfect companion, as the BAT amp consistently added just the right amount of warmth. Its big, glowing 6C33C output tubes not only warmed the listening room like a space heater during the winter, but they also worked some midrange magic, delivering many great listening sessions. Bartók owners thinking of going for a minimalist, digital-only approach should certainly investigate a good tube amp with appropriate loudspeakers. It turns out to be a winning partnership and one that I could easily choose to live with.

Finally, for the sake of completeness, I tested the Bartók's headphone output. I initially used my Sony MDR-F1 headphones, with their lower-than-normal 12-ohm impedance. Although dCS recommends using headphones with impedance above 30 ohms, the Bartók had no trouble driving the Sonys to sufficient volume levels with no sense of strain or distortion. Next, I tried my ancient pair of Koss 4AAs because of their fairly high 250-ohm impedance. Again, no trouble, and I'm positive this is the best those old cans have ever sounded. For serious listening, I settled on a pair of Audio-Technica ATH-W1000s for unbalanced and HiFiMAN HE560s for balanced playback. Because dCS has recently added the Expanse settings to the headphone menu, I spent most of my headphone listening toggling among Crossfeed, Expanse 1 and Expanse 2. To be honest, the straight feed from the headphones sounds too ordinary after enjoying the Crossfeed or Expanse settings, and I never wanted to return to an unenhanced headphone signal.

I particularly enjoyed Expanse 1 and 2 for synthetic, ambient music like Joseph Beg's *Long Term Memory* [Tidal, 16-bit/44.1kHz stream, from the dCS Expanse playlist] or Brian and Roger Eno's *Mixing Colours* [Qobuz, 24-bit/44.1kHz stream]. The sonic landscapes of these selections washed over me using the Expanse 1 setting with images floating across my inner soundstage. Your experience may be different, but with either the Crossfeed or Expanse settings, I didn't get the impression that the images moved in front of my face, as if listening to loudspeakers. Instead, images moved slightly upward and toward the center of my head. Returning to the normal headphone setting collapsed the soundstage and the experience was rather bland and uninteresting by comparison. Another interesting recording to hear with the Expanse settings was Jefferson Airplane's "White Rabbit" (from *Surrealistic Pillow* [Qobuz, 24-bit/44.1kHz stream]). With the Crossfeed setting, the bass and snare were pretty solidly rendered hard left and right, and the reverb slap in the right channel was more pronounced than with the normal headphone signal. Changing to Expanse 1 brought the snare more toward the center, with significantly improved definition and the snare gained body, as if it was now performed on a wooden-shelled drum as opposed to a metal-shelled snare.

I generally chose Crossfeed for orchestral and minimally mic'd recordings and Expanse 1 for studio recordings, particularly those that manipulated the soundstage. I did find one particularly enjoyable use

for Expanse 2 while doing a deep dive into remastered versions of the Grateful Dead's *Workingman's Dead*. With the first [Qobuz, 16-bit/44.1kHz stream], the original introduction to "Uncle John's Band" has a swirling reverb overlaying the guitar chords and bass guitar. With Expanse 2 engaged, this trippy, spacey effect sounded like it was played back by a Leslie speaker with its motor-driven horn engaged. Later remastering in 2013 [Warners/Rhino, 16-bit/44.1kHz download] removed the reverb for a cleaner opening, but I missed the psychedelic original, particularly as rendered by the Expanse 2 setting.

I wondered if a dedicated NOS (non-oversampling) audiophile could find enjoyment in an EOS (everything oversampling/upsampling) world. With the dCS Bartók, the answer is an emphatic yes. For two months, the Bartók worked flawlessly, delivering hours of superb listening. Its sleek, modernist design houses cutting-edge digital technology to produce an elegant, opulent sound. It was a pleasure to hear, and a pleasurable return to my oversampling/upsampling roots. ☺

Take two

My time with the dCS Bartók reminded me of what it's like when you get a surprise upgrade at a nice hotel. Life with the Bartók feels luxurious; the amenities are flawless -- from the instantaneous network handshake to the friendly Mosaic controller interface, MQA implementation and vast array of filter options, every function worked seamlessly (once I thoroughly read the detailed manual). With the Bartók in place, my shoulders relaxed and pretty soon I found myself musing about Phoebe Bridgers' clever lyrics while streaming *Stranger in the Alps* [Tidal, 16-bit/44.1kHz stream] and noticing how the Calefax Reed Quintet's members are strategically positioned around the stage as they perform Bach's *Goldberg Variations* [Econa 8717953057211]. This is a DAC made for lovers of texture and nuance who prefer that microdetails don't detract from the big picture.

Additionally, the Bartók's accurate rendering of instrumental timbres will impress those who take the time to listen deeply. On Paul Simon's *Surprise* CD [Warner Music 9362499822], a fascinating collaboration with Brian Eno, layers and layers of intricate digital and acoustic instrumentation are interwoven to form a complex sonic fabric. Even though I've used this album as a reference recording, it wasn't until I heard it through the Bartók's lens that I noticed just how captivating the soundscape is on the track "Outrageous." At 2:06, an electric guitar comes in from the left speaker as Eno's synthesized sequences swirl throughout the mix and another guitar riff appears just right of center. When listening to this passage through the Bartók, both lines emerged from the blackest of backgrounds in much the same way individual guitarists would step into their respective spotlights. The Bartók's performative presentation of the instrumental passages in the soundstage made the impact of these elements more dramatic and emotionally rewarding than I've heard from any other digital device.

A palpable sense of space between each instrument and a natural differentiation between vocalists in choruses is something I noticed repeatedly when auditioning the Bartók while using a Shunyata Research Omega/Sigma cable loom. I was surprised that this superior separation and ultra-quiet backdrop were consistent whether I was streaming via Ethernet or using my PS Audio PerfectWave transport. The Bartók turns Tidal and Qobuz data into the most authentic-sounding streaming I've yet

experienced, characterized by stress-free high frequencies and luxuriously textured bass notes. Some CDs still sounded superior to files, but several fully decoded MQA streaming titles beat the silver disc -- a first in my system.

In order to test the Bartók's prowess as a digital preamp, I bypassed my CAT SL1 Blackpath preamplifier and connected the unit directly up to the Conrad-Johnson Premiere 350 amp. While the Bartók's volume control was the most neutral and quiet I've heard from a DAC, I still missed the holography and lightning-quick dynamics the CAT's custom capacitors and NOS tubes bring to my system.

My current reference, the Audio Research DAC 9, also has its charms. The DAC 9 experience is more like a great neighborhood pub where the drinks may not be as smooth but there's always plenty of excitement. What it lacks in ultimate upper-register refinement, it makes up for with midrange energy and color. While the Bartók is more civilized, it's far from boring. The Bartók's presentation of low-frequency information, in particular, was stunning and utterly addictive. I never knew that Wilson Sasha 2s were capable of producing tight bass down to such subterranean depths. With the Bartók in charge, I experienced spooky 20Hz tones for the first time in my living room.

If you're looking for a DAC that delivers all the glories of vinyl, I must report that the Bartók is still a digital audio converter. As innovative as the folks at dCS's Cambridge headquarters certainly are, they haven't transformed this device into a virtual high-end phono cartridge. While I haven't heard über DACS like the Wadax Reference or dCS's own Vivaldi, every converter below that rarified air I have auditioned still leaves a digital imprint. Nonetheless, one element of the Bartók's approach to digital playback did remind me of vinyl: more of my CDs sounded "of a piece" and rhythmically in sync, qualities I've always ascribed to the best analog recordings. There's no doubt that the Bartók's ones and zeroes are the least robotic and most organic-sounding bits of data I've encountered in my living room.

For decades, those of us who listen to music from digital sources have been forced to choose between a romantic DAC that eschews accuracy in favor of musicality or a highly analytical unit that invariably causes listening fatigue. The dCS Bartók busts the digital paradox by delivering mountains of sonic detail as well as the musical and emotional subtext of a recorded performance. All of that alone is more than enough to warrant serious consideration, if you can convince your accountant to cooperate.

-Vance Hiner

Associated Equipment

Analog: J.A. Michell Gyrodec turntable with Orbe platter and bearing; Ortofon TA110 and Zeta tonearms; Sumiko Amethyst and Ortofon SPU CG 25 mono cartridges; Fosgate Signature phono stage.

Digital: BorderPatrol DAC SE-i digital-to-analog converter, Innuos ZENmini Mk 3 music server and LPSU power supply, Opera Consonance Droplet 5.0 CD player (used as a transport).

Preamp: Yamamoto Soundcraft CA-04.

Headphone amp: Yamamoto Soundcraft HA-02.

Amplifiers: BAT VK-60, InnerSound ESL, Pass Labs ACA, Yamamoto Soundcraft A-08 and A-09.

Speakers: Altec Lansing Valencia, Magnepan LRS, Opera Consonance M-12.

Headphones: Audio Technica ATH-W1000, HiFiMAN HE560, Koss 4AA, Sony MDR-F1.

Cables: BPT IC-SL and MIT Shotgun S1 interconnects; BPT SC-9L and InnerSound ESL speaker cables; BPT C-9 and L-9CST, Yamamoto Soundcraft (came with amps) and Shunyata Research Venom power cords; Shunyata Research Venom USB cable.

Power distribution: BPT 2.0 and CPT.

Room treatment: Zanden Audio AP-1 panels.