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dCS Varèse Music System

D/A PROCESSOR

It was during a visit to my music room by five members of the small Off-Islanders Audio Society that the magic of the dCS Varèse Music System (\$267,500 as reviewed; \$305,000 with CD/SACD transport) became clear.

One member had requested the 24/192 version of “Splendido Sundance” from *Saturday Night in San Francisco* (24/192 FLAC, Columbia-Legacy/Qobuz), performed by Al Di Meola, John McLaughlin, and Paco de Lucía and recorded live in the Warfield Theatre on December 6, 1980. I’d attended the unveiling¹ of the LP remastering of this recording, presented by the album’s co-executive producer, Abey Fon, in the Audio Reference room at High End Munich 2024. The system, which was first class, included a VPI Titan turntable, D’Agostino Relentless preamplifier and Relentless 800 mono amplifiers, a VTL TP-6.5 Series II Signature phono preamplifier, Wilson Audio XVX loudspeakers, Nordost cabling, a Stromtank power generator, and an unheard three-piece dCS Vivaldi APEX music system.² Because many of these components or their smaller relations populate my reference system—I use D’Agostino Momentum M400 MxV mono amplifiers and a Relentless preamplifier, a dCS Vivaldi APEX music system, Wilson Audio Alexia V loudspeakers with Lōke subwoofers, Nordost cabling, and a Stromtank S-4000 MK II XT—I found the system’s sonic signature quite familiar.

What was distinctly different about my home setup was that instead of the VPI Titan or the dCS Vivaldi APEX system, we used Qobuz to stream the 24/192 digital version of the album through the five essential boxes of the dCS Varèse Music System.³ Even more than at High End Munich, I heard three distinct guitars, each with its own uniquely identifiable color and timbre, spread across a wide soundstage. The sound may have been a bit brash—that’s the

nature of this singular live recording, though I may be shot dead for saying so—but every note was 100% clear and (that word again) distinct. When the three men pull out all stops in the second half of the seven-minute track, firing off more notes faster than anyone could possibly tabulate without AI assistance, every note remained clear. I heard no distortion—nothing to distract anyone from the artistry of three guitar virtuosos in their prime and the excitement they generated. It was tremendous—a revelation.

Even before he’d arrived to install the five-piece Varèse system, Emron Mangelson, director of dCS Americas, had asked if it would be possible for me to keep the Vivaldi APEX system on my double rack while he installed the Varèse system. In so many words, he told me that I might find it difficult to understand the differences between them unless I could perform direct comparisons.

Having now spent a lot of time with the Varèse, both in my music room and during an all-day factory tour at dCS headquarters in Cambridge, I must disagree with Mangelson. The more you listen to Varèse, the more obvious its distinct magic becomes.

The genesis of Varèse

When I reviewed the major Vivaldi APEX DAC upgrade in 2022—the APEX upgrade is also available for other dCS DACs—I learned that during the COVID lockdown in the UK, dCS’s two multidecade

¹ See [stereophile.com/content/abby-fon-nick-getz-wilson-xvx-d-agostino-relentless-vpi-titan-nordost-stromtank](https://www.stereophile.com/content/abby-fon-nick-getz-wilson-xvx-d-agostino-relentless-vpi-titan-nordost-stromtank).

² Vivaldi APEX remains in production and will receive a series of software upgrades this year.

³ In both cases, I’ve chosen to forgo a CD/SACD transport. I haven’t played a silver disc at home for at least two years. Instead, I have transferred most of my collection to file format and receive all music for review in file format.

SPECIFICATIONS

Description Five-box streaming digital music system—two Mono DACs, Varèse Master Clock, Core, User Interface/display—with remote control, proprietary ACTUS (Audio, Control & Timing Unified System) connectors, Mosaic ACTUS control app, optional CD/SACD transport, and I/O interface. Roon Ready. Enables PCM rates up to 24/384 and DSD up to DSD512. MQA coming.

Dimensions Core—9.7" (244mm) H × 17.5" (444mm) W × 17.3" (437mm) D. Weight: 73lb (33.1kg); User Interface—5.2" (131mm) H × 17.5" (444mm)

W × 17.8" (450mm) D. Weight: 32.2lb (14.6kg); each Mono DAC—5.2" (131mm) H × 17.5" (444mm) W × 17.3" (437mm) D. Weight: 41.3lb (18.7kg); Master Clock—5.2" (131mm) H × 17.5" (444mm) W × 17.3" (437mm) D. Weight: 34.7lb (15.7kg); CD/SACD Transport—5.2" (131mm) H × 17.5" (444mm) W × 17.3" (437mm) D. Weight: 44.3lb (20.1kg); Remote Control—2.2" (55mm) H × 4.5" (115mm) diameter. Weight: 1.1lb (0.5kg).

Finish Silver, black.

Serial number of units reviewed VNC9000019. Manufactured in the UK.

Price Varèse Music System as reviewed with optional Digital Input/Output Module and optional Master Clock but without CD/SACD transport: \$267,500. System component prices: Core System (Core with Ethernet network port and USB-A input, User Interface, Remote Control, one ACTUS Cable): \$111,000; DAC Pair (Left and Right Mono DACs and two ACTUS Cables): \$105,000; Master Clock (including one ACTUS Cable): \$38,000; I/O Module: \$13,500; CD/SACD Transport (not reviewed—with one ACTUS Cable): \$37,500. Approximate number of deal-

ers 15. Warranty: three years parts and labor for the original owner only.

Manufacturer

dCS (Data Conversion Systems), Ltd., Unit 1, Buckingham Business Park, Anderson Rd., Swavesey, Cambridge CB24 4AE, England, UK.

US distributor:

Data Conversion Systems Americas, LLC, PNC Bank Bldg., 300 Delaware Ave., Suite 210, Wilmington, DE 19801, USA. Tel: (302) 473-9050. Web: dcsaudio.com.



PHOTOS BY PAUL MILLER

technical mainstays, Director of Product Development Chris Hales and Technical Director Andy McHarg, started exploring ways to improve dCS's proprietary Ring DAC technology. Hales told me that he didn't have a specific project in mind, but when he thought he'd found something worth pursuing, he put it on a board so that everyone at dCS could listen. The fruit of the men's efforts, he explained, was that major APEX upgrade.

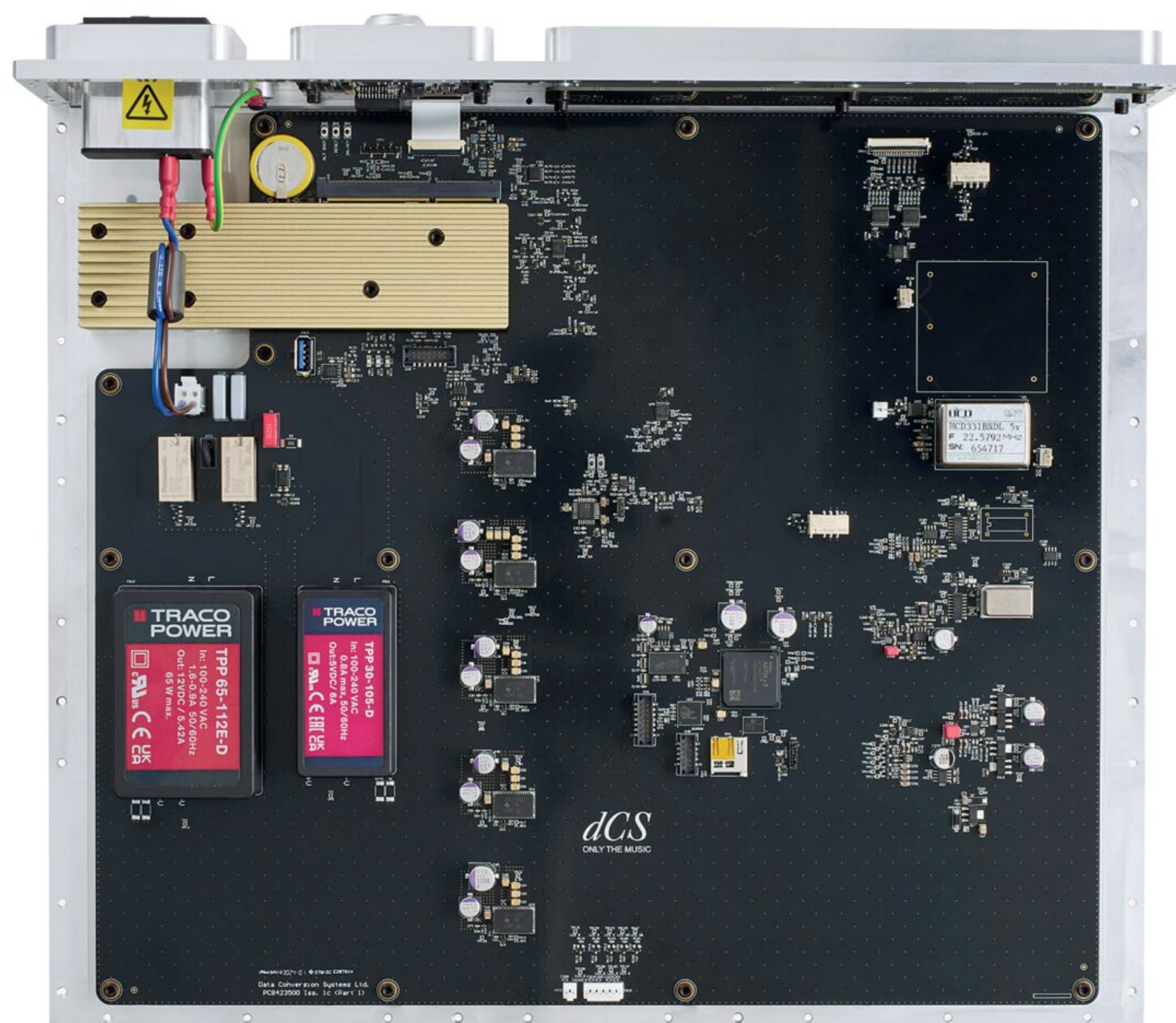
What Hales did not tell me then was top secret. During the pandemic, everyone was actually hard at work on the DAC technology that eventually led to the creation of the Mono DACs in the Varèse music system. But when they put their initial technological advances, which they dubbed APEX, on a board and discovered how well it measured, they decided to make APEX available to owners of dCS's current DAC lineup well before the release of Varèse.

As dCS Product Marketing Manager James Cook explains in a video⁴ posted on our YouTube channel, the APEX upgrade includes a completely new output stage, improvements in the transmission of clock and power supply signals, and more. Cook also explores why Mono DAC architecture eliminates crosstalk and provides other reasons why having separate Mono DACs, power supplies, and transformers for each channel results in better performance.

“All the analog output circuitry is essentially identical between an APEX version of Vivaldi and the Varèse Mono DACs,” Cook said. “But the Mono DACs take Varèse performance quite a bit higher by virtue of the many improvements in the power supply and the mechanical design. For example, each chassis better isolates it from any incoming vibrations, and the ACTUS (Audio, Control & Timing Unified System) interface enables us to offload processes to the Core.”

For more on the genesis of Varèse and its Mono DAC technology, see the David Steven sidebar on p.56.

Why add Varèse to a component lineup named for the far better-known composers Bartók, Rossini, and Vivaldi (with Elgar, Delius, Verdi, Scarlatti, Paganini, and Puccini before them)?⁵ Multiple con-



Left: The Varèse Master Clock system is based on two OCOs (Oven-Controlled Crystal Oscillators) centered on 88.2kHz and 96kHz (far right), a Xilinx Artix 7 DSP (center), and PSUs headed up by two Traco Power isolated AC/DC converters.

versations yielded multiple responses. To summarize: Edgard Varèse’s compositions, which integrated electronic and highly unusual instruments into a distinctly unusual modernist soundscape, propelled classical music into the future, inspiring future creators of classical, pop, rock, and electronic music. To dCS, naming their new flagship Varèse signified their effort to look into the digital future and examine how they could advance user experience,

industrial and mechanical design, and sound.

What Varèse is

Varèse consists of up to six component boxes. Each has a single, small, thankfully unobtrusive LED on its front that blinks as the unit progresses from standby to on; a small standby/on button

⁴ See youtu.be/jxK0pf3whLA.

⁵ Lina, the name for the product range (network DAC, headphone amplifier, master clock) introduced in 2022, is an outlier of sorts in the dCS pantheon.

MEASUREMENTS

With the separation of the Varèse’s core components—not least the evolution of the Ring DAC into two mono, differential arrays—we would expect to witness some uplift in technical performance. And indeed, comparisons with the Vivaldi APEX DAC show incremental gains in S/N ratio, distortion, and low-level linearity. Specifically, while the 5.88V maximum output (in the Varèse’s

top 6V mode) has not changed, and the sub-1 ohm balanced source impedance is retained, second-harmonic distortion through the bass and midrange has fallen from 0.00004% to 0.00003% over the top 10dB of the Varèse’s dynamic range (see fig.1). Such figures are of academic interest only of course. The 20kHz figure remains unchanged at 0.0001%, as this is a function of the final analog output buffer and not a digital nonlinearity. However, the Varèse

balanced Ring DAC has delivered a 1dB uplift in A-weighted S/N ratio from 117.1dB to 118.1dB, while low-level resolution is now good to ± 0.2 dB at -120 dBFS. This is all reflective of a state-of-the-art DAC.

The Vivaldi APEX’s elimination of random jitter/phase noise exposed an increase in correlated jitter of 120ps (24-bit/48kHz data), so it’s gratifying to report that the Varèse is having its cake and eating it, too: Phase noise remains almost entirely

absent, while the Vivaldi’s ± 5 Hz, ± 7 Hz, ± 9 Hz, etc, sidebands are now fully suppressed. A mere ~ 5 ps of jitter remains at ± 1.95 kHz and ± 120 Hz (a PSU rectifier component) over all sample rates (see fig.2). Clock accuracy and digital jitter are not necessarily linked, but in this case, the Varèse’s Master Clock system holds true to within ± 1 ppm. Incidentally, Class-1 accuracy is specified within ± 50 ppm!

Otherwise, the Varèse’s

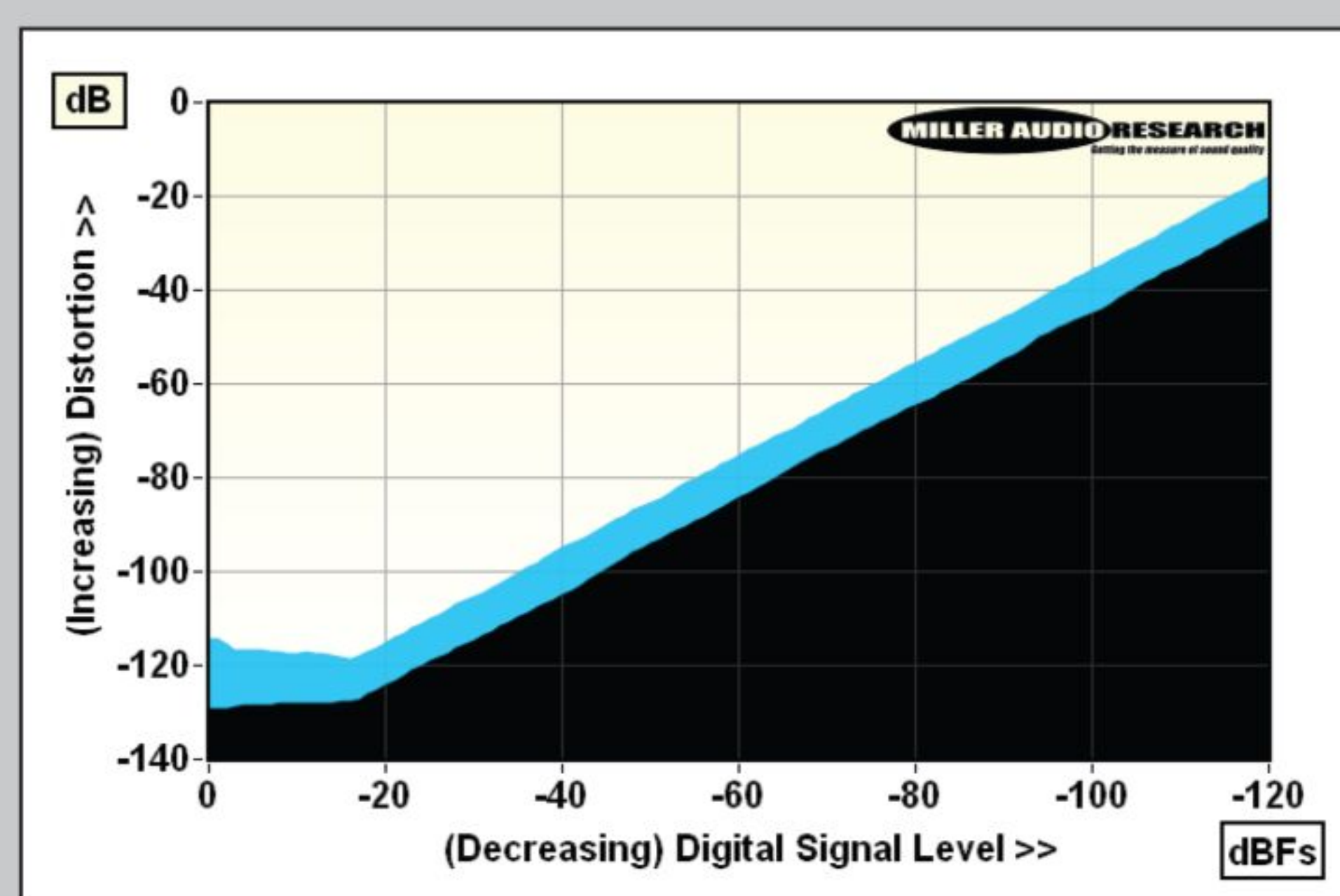


Fig.1 Distortion + noise versus 24-bit/48kHz digital signal level over a 120dB range (black, 1kHz; blue, 20kHz). Note 140dB Y axis.

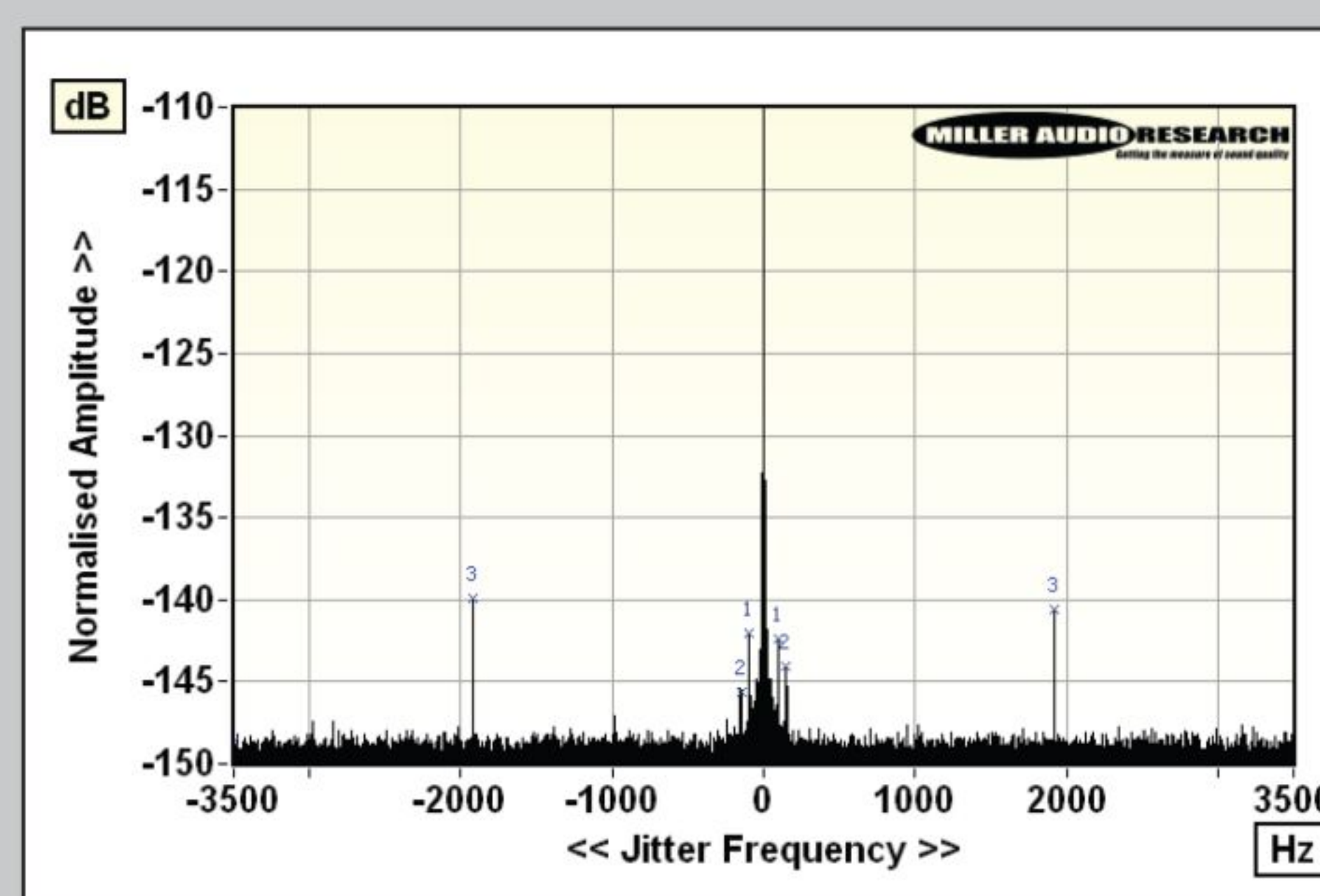


Fig.2 High-resolution jitter spectrum (24-bit/48kHz data). Very minor PSU-related sidebands and a pair at ± 1.95 kHz only.

secreted right beneath the center of the front panel; and a major power on/off toggle switch next to its 15A IEC connector on the rear.

The first two chassis hold the two Mono DACs, one for each channel, with new Differential Ring DAC⁶ technology; mains transformers, regulator topology, secondary circuits, and analog output stage. Each Mono DAC's power supply was designed to provide better common mode performance on its balanced output.

Each Mono DAC houses twin transformers that are specific to Varèse. Designed in collaboration with dCS's longtime transformer builders, whose factory is located three miles away from the dCS factory, one transformer is dedicated to analog; the other, which is different, powers the digital circuits.

The Mono DACs only perform D/A conversion; all other processes are handled in the Core, Clock, or User interface/display (see below). For more detail on the Mono DACs, please see the sidebar interview with David Steven, dCS managing director.

The third chassis is the Core, which dCS calls "the heart" of the Varèse music system. The largest component in the system, the Core handles several operations including audio input, conversion, oversampling, noise shaping, filtering, and streaming. Indeed, the Core handles most of the Varèse music system's processing and "heavy lifting," relieving the Mono DACs and their power supplies from multiple noise-inducing, power-draining processes. It includes an integrated network streamer that, together with the new dCS Mosaic ACTUS app, enables PCM rates up to 24/384 and DSD up to DSD512,⁷ and automatically oversamples PCM to either DXD (24/352.8 or 384), DSD, DSD128, DSD256, or DSD512.⁸

The Core contains two i.MX 8 modules. Cook, with whom I spent considerable time at dCS headquarters in Cambridge during an all-day tour, defined i.MX 8 as "a system on a module, or a whole computer on a chipset." One i.MX 8 module deals with internet streaming and UPnP; the other runs the ACTUS interface.

Streaming within the Core is handled by bespoke dCS code; this gives dCS extra flexibility in how it handles streaming. There is no Stream Unlimited streaming card inside the Core; only the User Interface (chassis #4, below) has one. Consequently, if a new streaming service comes along that dCS wants to integrate, it can do so very quickly.

The Core's rear panel includes eight unique ACTUS connectors that allow it to act as the hub of the Varèse system. Only a single ACTUS cable connects the Core to each of the other components. Only one of these connectors—the one on the bottom left labeled "Clock"—is reserved for a specific component.

"We have extra ACTUS ports available for components coming in the future, including the forthcoming Varèse CD/SACD transport," Cook said. "It's good to have extra built-in hardware headroom."

Designed to be future-proof, the Core has extra space for future add-on modules. If new technology or features arise, dCS can issue a new module that dealers can install by removing one of the back panels from the Core and inserting the new module into a slot. All necessary code will already be within it; no manual programming will be required. As you might expect, dCS will also update its software as necessary.

My review unit contained a brand-new, add-on I/O (Input/Output) module that allowed me to connect my Innuos Statement NG/PhoenixNet combo via USB. Early in the review period, dCS

6 For a short video explanation of Ring DAC technology, see youtu.be/UY5qkK5Moyk.

7 Only DSD64 and 128 were available at the time of this review; the higher rates may be enabled by the time you read this.

8 DSD is neither upsampled nor converted to PCM. Because DSD256 and DSD512 do not require any digital filtering on dCS's part, dCS users who currently prefer the sound of DXD upsampling—count me amongst them—will need to re-evaluate their preference once DSD256 and DSD512 are enabled.

measurements, continued

frequency response(s), stopband rejection, and time domain behavior all depend on your choice of dCS's six adaptive digital filters, F1 to F6, which are carried over from the latest version of the Vivaldi. The filter coefficients change with some sample rates, but as a rule, the linear phase F2 filter offers the flattest responses, out to $\pm 0.00\text{dB}/20\text{kHz}$, $-0.6\text{dB}/45\text{kHz}$ and $-7.0\text{dB}/90\text{kHz}$ with 48kHz, 96kHz and 192kHz media, respectively, this at the

expense of the poorest image rejection among the filters (just 3.7dB with 44.1kHz/48kHz sample rates).

For lower 44.1kHz–192kHz rates, F1–F4 are linear phase for all sample rates and offer responses of $-22\text{dB}/45\text{kHz}$ (but flat to 40kHz), $-0.6\text{dB}/45\text{kHz}$, $-12\text{dB}/34\text{kHz}$ and $-10.5\text{dB}/45\text{kHz}$, respectively, with 96kHz media, and $-13\text{dB}/90\text{kHz}$, $-7.0\text{dB}/90\text{kHz}$, $-14\text{dB}/68\text{kHz}$ and $-17.6\text{dB}/90\text{kHz}$ (fig.4, black, red, cyan and green traces),

respectively, with 192kHz files. F4 is a low-tap linear phase filter that trades reduced time-domain distortion for worse stopband rejection (red spectrum, fig.3). F5 is the outlier here, a fast minimum-phase filter (orange traces, fig.4) that rolls away early to $-1.5\text{dB}/20\text{kHz}$ and $-14\text{dB}/60\text{kHz}$ with 192kHz media while simultaneously offering superb stopband rejection of 125dB (black spectrum, fig.3).

F6 is a fast apodizing/linear phase type (purple traces, fig.4) with very extended ringing but full, $>125\text{dB}$ stopband rejection and responses that match F5 at $\pm 0.02\text{dB}/20\text{kHz}$, and $-3.9\text{dB}/45\text{kHz}$ (flat to 43kHz) with 48kHz and 96kHz files, respectively, and F3 at 192kHz, where they both roll away to $-14\text{dB}/60\text{kHz}$.

Importantly, all these filters passed the intersample clipping test, suggesting that dCS has built at least 3dB of digital headroom into the latest Ring DAC. —Paul Miller

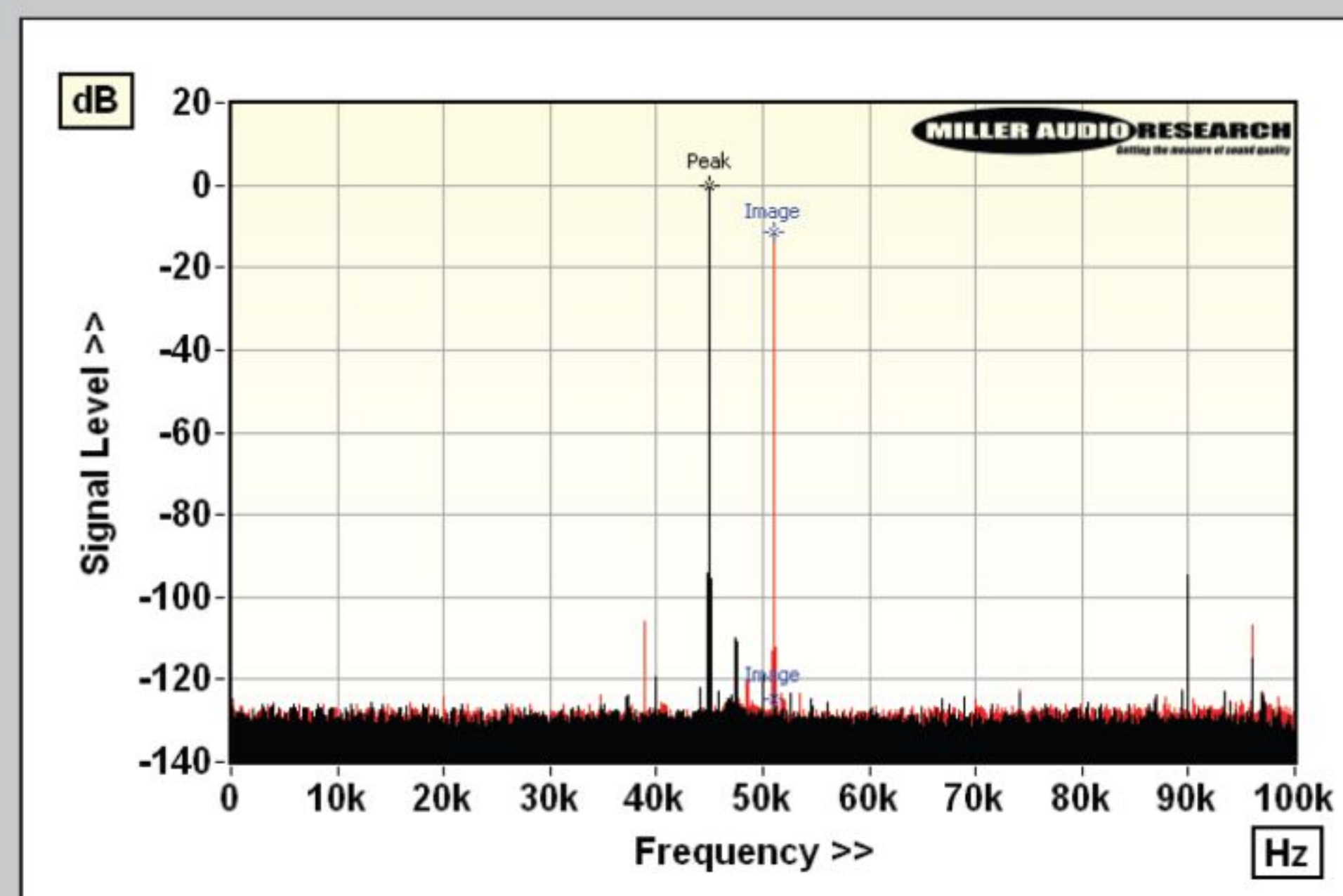


Fig.3 Stopband image at 51kHz in response to 45kHz/24-bit signal sampled at 96kHz. Rejection is 125dB (Filter F5, black) vs. 5.2dB (Filter F4, red). Note the second harmonic at 90kHz and the image at 96kHz.

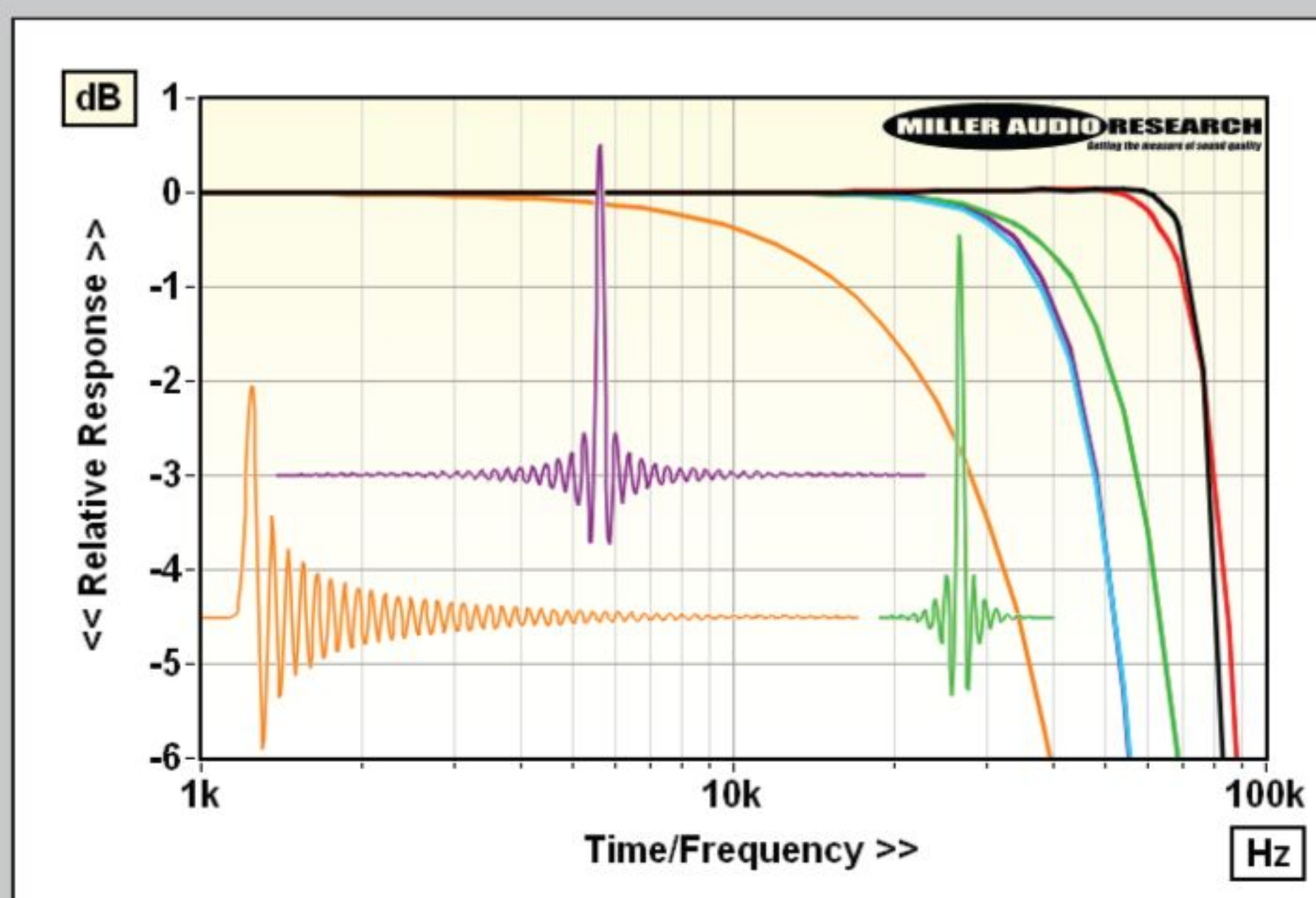


Fig.4 Time (impulse) and frequency responses with 192kHz data. Filters F1 (black); F2 (red); F3 (cyan); F4 (green); F5 (orange); and F6 (purple).

developed new software that enabled me (eventually) to compare streaming through the Statement using the Innuos Sense app and InnuOS to streaming through the Varèse using dCS's proprietary Mosaic ACTUS app and streaming software. More on that follows.

Chassis four is the User Interface. It includes a full-color touch screen to track data, album artwork, play queues, and other settings. Complete with a Bluetooth antenna, it works in tandem with the Varèse remote control and dCS Mosaic ACTUS app.

Chassis five contains the Master Clock, which utilizes new ACTUS and patented Tomix protocols to deliver dCS's best clocking performance.

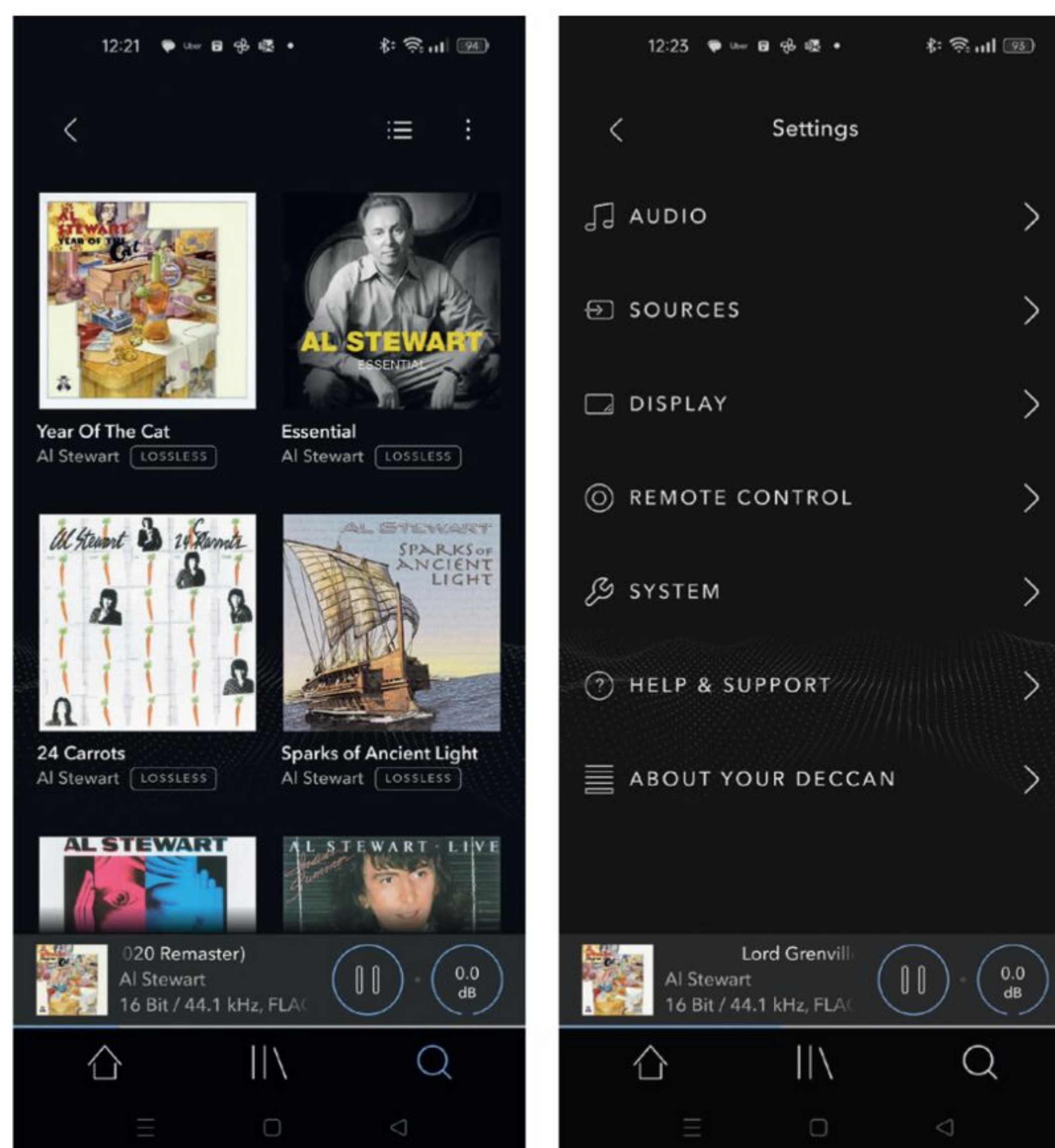
Tomix clock technology arose out of the need to ensure that the Mono DACs were perfectly synchronized so that left and right digital samples were converted at the exact same time, with no delay between channels. With all audio signals passing through and processed in the Core, the Core needed to place time stamps on each audio sample. dCS's solution—Tomix—embeds a time stamp into the clock signal.

"Tomix is quite a nifty way of precisely sending time signals and unscrambling them without negatively impacting timing," Cook explained. Transmitted via Varèse's proprietary ACTUS cabling, dCS claims it superior to the Differential Manchester encoding used in traditional AES3 and dCS-developed dual AES. In Differential Manchester encoding, zeros are assigned a longer pulse and ones are assigned a shorter pulse. The problem with this encoding scheme, according to Cook, is that cable capacitance can affect pulse length, thereby creating jitter. Tomix was designed to transcend such limitations.

The sixth chassis contains a CD/SACD transport that had not been released at press time and so was not reviewed. The tray mechanism is the same as in the Vivaldi transport, but everything else has been redesigned.

Beyond those basic major components, Varèse includes:

- ▶ The proprietary ACTUS cable system, said to greatly reduce clutter by combining audio, control, and timing (clock) signals in a single cable with its own connectors. Its six twisted pairs of copper cable—similar to an Ethernet cable—carry asynchronous and error-corrected audio signals, control signals, and a master clock signal via the patented dCS Tomix protocol.
- ▶ A new, downloadable Mosaic ACTUS app⁹ for iOS or Android, designed especially for Varèse, that enables playback from streaming services,



USB stick, or (with the I/O Module) external computers, streamers, and network-attached storage (NAS). Networked servers must be UPnP compatible. The app helps with setup, guiding you through initial system update and remote configuration. It also detects audio sources and controls volume. Google Cast enables streaming from phone, tablet, or computer; you can also use it for multiroom casting with Cast-compatible speakers. Apple AirPlay, Roon, and Tidal Connect are other options.

The Mosaic ACTUS app enables you to configure all system options, audio sources, streaming services, local network inputs, Digital I/O Module inputs, and signal path settings including filters, conversion modes, and mappers. dCS offers six PCM filter choices, four usable DSD filter choices, three

mapper choices, five conversion mode choices (DXD oversampling or DSD/DSD2/DSD4/DSD8 oversampling), absolute phase choice at the analog output, output voltage choice, and more. Thanks to Mosaic ACTUS, it's far easier to change these than in other dCS DACs and music systems. Everything is visible on the app—no more pushing buttons on the front panel—and filter settings have been blessedly simplified.

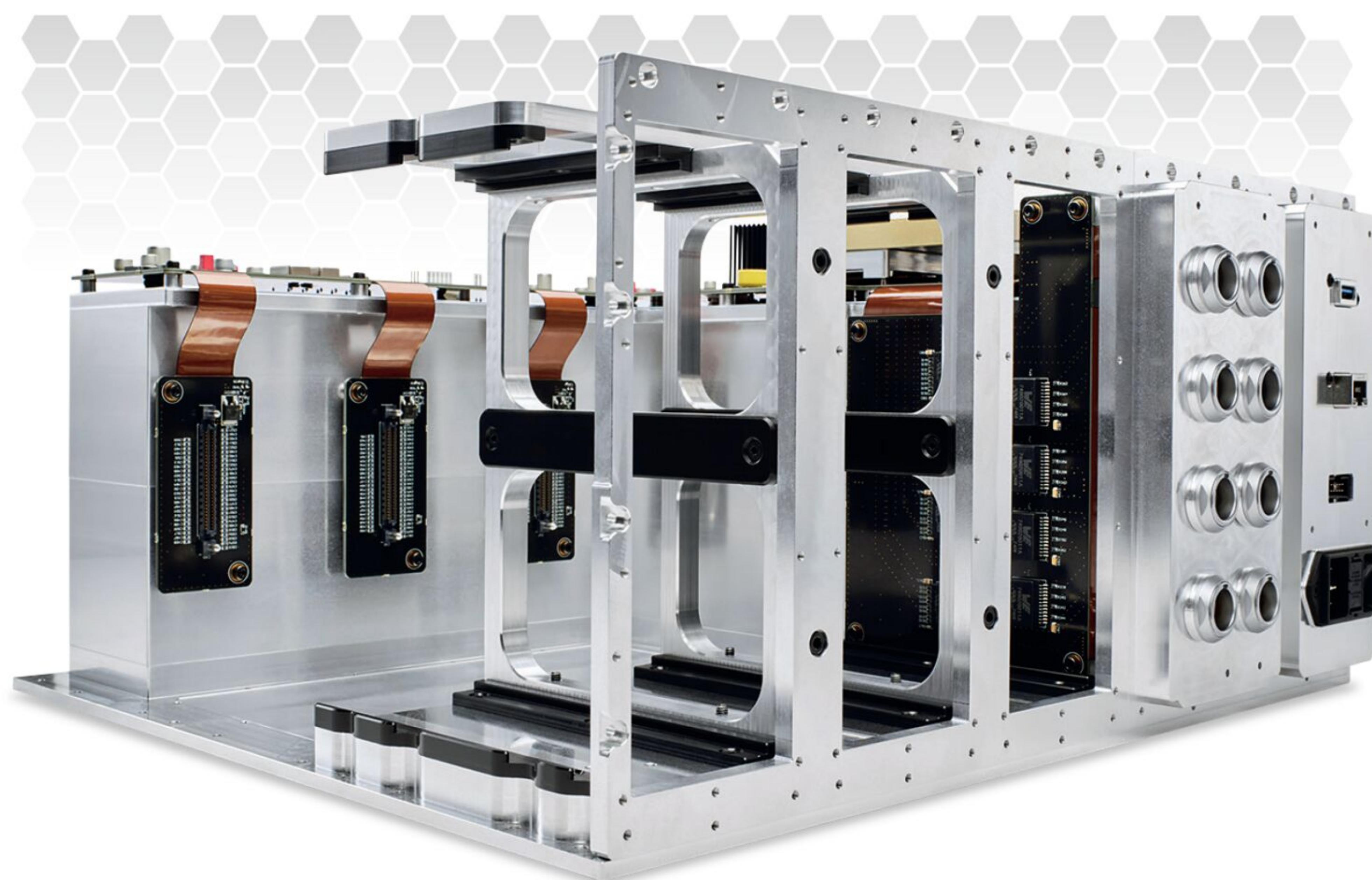
For the record, I stuck with my Vivaldi choices—6V output, Mapper 3, and DXD oversampling—and moved between PCM filters F3, F4, and F5.¹⁰

- ▶ A completely new remote control with "capacitive touch glass screen and illuminated icons," which charges via USB-C and connects to the system with Bluetooth. Along with an iPad or computer outfitted with the Mosaic ACTUS app, it can control volume, playback, source selection, signal path (including specialized filter choices), customizable favorite settings, and display options.

- ▶ An optional I/O Module, developed just in time for this review,

⁹ See dcsaudio.zendesk.com/hc/en-gb/article_attachments/17728273892380 for far more.

¹⁰ F5 automatically defaults to F3 at certain sample rates.



Right: Inside the machined alloy case of the Varèse Core showing the (screened) main PSU and USB-A/Ethernet digital inputs (far right) with ruggedised bays (near left) waiting for the optional digital I/O expansion modules to be fitted.

which can be ordered with the Core or dealer-installed. My I/O Module included three AES inputs for units with AES or Dual AES outputs (eg, Vivaldi or Rossini CD/SACD transports), WCLK Out, S/PDIF out, USB-B for connecting servers and computers, and RS-232 for corresponding ports on Rossini and Vivaldi transports.

The ACTUS cable

During my factory tour, I had the opportunity to chat for 51 minutes with one of dCS's younger engineers, Ben Ashcroft. In his almost 11 years with the company, he has risen from apprentice in the production department to managing the design of the dCS ACTUS cable. Originally drawn to dCS due to his interest in music—he loves electronic music—he was able to attend university part-time for seven years funded by dCS while building his technological knowledge base and skills. In 2022, he joined dCS's R&D team. Shortly thereafter, he was given free rein to expand upon and develop the single-cable-carries-all ACTUS system.

"I soon realized that there was nothing off-the-shelf that would act as a solution," Ashcroft told me. "For one, we needed six twisted, braided pairs of copper cabling: four to send and control the audio and the carefully isolated Tomix pair for our new clock technology. Each of these six twisted pairs has its own foil shield. Our testing is very strict on the amount of crosstalk between pairs, and the design passed with some margin. Performance is consistent at lengths up to 30 meters, and you can put 1m and 30m lengths on the same Varèse system with no timing errors, loss of sound quality, or added jitter. It is quite possible that ACTUS cables can achieve far more than they're currently required to do."

"We worked with the UK branch of our partner LEMO of Switzerland to carefully position the pins in a way that enabled us to reach the high speed specifications and levels of performance we wished for. Given that LEMO hadn't undertaken anything like this before, it was quite an accomplishment."

Inserting an ACTUS cable with LEMO's purpose-designed push/pull connector is simple; there's only one way it can go in. As for break-in, just leave the system on with no music playing, as clock data is constantly traveling through the cables.

Ashcroft and others repeatedly stressed that dCS is *not* a cable company. It is always possible that, while meeting or even

exceeding dCS's tight measurement specifications, dedicated cable companies can put their own sonic spin on dCS's achievement. With the understanding that all ACTUS cable must be certified by dCS, several well-known companies are already exploring what they can achieve and perhaps advance.

Conception and casework

During my visit to dCS UK, I also spent time with mechanical engineer Ross Bowman. Currently commercial director, who ensures that every aspect of Varèse manufacture remains in synch and on schedule, Bowman headed the design team for Varèse and the far-lower-priced Lina.

After working with others to conceive the number of boxes and what each might do, Bowman had to ensure that board and chassis fit and software and hardware would mesh. It took two years to develop dCS's rigid-flex foldable PCBs. The main board has nine foldable sections and 12 layers—some plastic, others copper or fiberglass—that enable it to isolate functions.

All boards are designed to fit within Varèse's single billet machined aluminum chassis that effectively manages heat via air movement within the casing. "The properties of our material effectively turn movement and vibration into heat," Bowman said. "That heat is then trapped between layers and successfully dissipated without harming the boards. It is a completely cohesive design, all the way around, that allows us to control heat, EMI, and RFI."

Simplification

According to Cook, "All the analog output circuitry is essentially identical between an APEX version of Vivaldi and the Varèse Mono DACs. But the Mono DACs take Varèse performance quite a bit higher by virtue of the many improvements in the power supply and the mechanical design. For example, each chassis better isolates sensitive components from vibrations, and the ACTUS interface enables us to offload processes to the Core." As David Steven noted during one of several exchanges, "The sum of our advances is so great that a Varèse system [without the] Varèse Master Clock is less susceptible to jitter than a Vivaldi Apex system with Master Clock."

"Everything about the system, including a huge amount of underlying technology, is designed to let us perform digital-to-analog conversion with the highest level of accuracy. Crucially, only a single ACTUS cable runs from a given component to the Core. The whole system is addressed as one; you don't have to worry about individual displays, menus, and settings on multiple components. So, in terms of setup and usage, despite being internally the most complex from a user perspective, I think it's



Right: So much tidier than the Vivaldi stack! The User Interface (top) connects via BT to the remote and via an ACTUS umbilical to the Master Clock (below). The Core (bottom) hosts USB-A and wired Ethernet inputs (there's no Wi-Fi), with ACTUS outputs to the two Mono DACs above. The Mono DACs each have two analog outputs, on XLRs and RCAs.

the easiest to operate multibox system that we've ever made."

Cook was but one of many dCS folks who stressed how much they've done to simplify setup and operation. Connection is a snap. The only ACTUS port on the Core that is assigned to and labeled for a specific component is the one on the bottom left, which goes to the Clock.

"Any of the other ports can go to any of the units, and they'll just sort themselves out as to what's connected to what," Cook said. "There's no need for RS-232 or any other kind of auxiliary cabling to synchronize units."

The standby/power procedure for Varèse is equally simple. Each unit has a main power toggle switch on the back of each unit and a small standby/on button on the bottom center. A short press puts the system in standby, and a long press fully shuts the system down. It's advisable to turn the Core on first and give it at least 15–20 seconds, or even a couple of minutes, to stabilize before turning on the other components. One person told me to turn on the User Interface/display last, but another didn't consider that essential. Before I knew any of this, I turned on units randomly, and everything worked fine. (I won't ignore the recommended turn-on sequence again, I promise!)

The current online user guide¹¹ occupies a mere 21 pages; even the large-print setup guide¹² is only 33 pages, far shorter than for the Vivaldi equivalent. I had only five ACTUS cables to separate from power cables. As intimidating as five boxes may seem, setup

and operation are simple. Operating a Blu-ray player, TV, and multi-channel music system is a far more complex affair.

Setup/review strategy

Despite the simplicity of Varèse setup, managing to fit a three-piece D'Agostino Relentless preamp, five separate Varèse boxes, three separate Vivaldi boxes, and the Innuos Statement NG music server/PhoenixNet switch on the nine shelves of my Grand Prix Monza dual rack was no simple task. Figuring out the power cable connection scheme presented challenges.

My gratitude to Emron Mangelson for his patience, long arms, and flexible knees, which allowed him to reach into the back pillars of my rack, remove and replace lots of screws and bolts, and change the distance between shelves. Ultimately, we kept the Relentless preamp on the top left shelf and placed the Varèse User Interface/Display atop the Core on the right top shelf. Miraculously, all other Varèse components fit onto the only shelves I could give them, with the Mono DACs situated on the bottom shelves. Vivaldi and Innuos components remained where they were. All components rested on Wilson Audio Pedestals. The Mighty Stromtank S-4000 MKII XT supplied all front-end power, and my wall power/grounding scheme, recently upgraded by Audio Ultra, handled the amps.

¹¹ See dcsaudio.zendesk.com/hc/en-gb/articles/17479741049500-User-Guide-Varèse.

¹² See dcsaudio.zendesk.com/hc/en-gb/article_attachments/17728278685212.

dCS MANAGING DIRECTOR DAVID STEVEN ON VARÈSE AND ITS MONO DACS

Varèse really started with us as a team saying, "If there were no constraints and we had infinite time and infinite budget, what could we do? Where could we go? How can we make a system that is simple to use, easy to set up, and super reliable? How can we support higher sample rates? How can we support streaming services? How can we make it easier to control functions over Bluetooth as opposed to IR?"

Looking at the user experience, reliability, and capability led us to the question: "How does it sound?" Ultimately, everything we do is about what happens between the speakers, acting in service to the music. How do we unravel ones and zeroes into music more accurately, more faithfully than anything we've ever done before?

We don't really look at what other people are doing. It's always about how we can better what we did previously.

There were lots of different projects going on over the last five or six years. We studied how people actually use our kit in the real world, what they want from interfaces and apps, how they search for music, how they want to control the system, how they unbox it and install it, and so on. While all that was going on, we had Chris Hales and his team looking at the Ring DAC and Andy McHarg and his team pondering software and system architecture. Their research led to APEX.

We continued on from there. If we have Mono DACs, how do we keep them in perfect sync? That was where the idea for the Tomix clocking system came from. Then we said, okay, if you've got these five boxes, how do they talk to each other by sending audio, command, and clock signals? We were aware of one common frustration with Vivaldi was all the AES, BNC, and other

cables—all the spaghetti. How do we simplify that?

So, we had different research projects asking how we could improve our technologies and exploring how someone might listen to music 10 years into the future. As we tried to keep all the different projects on track, we finally got to where Varèse was becoming a real thing.

If you think about it in computing terms, it was almost like we had designed a new chip, like Apple with its M chips, but we also needed to rewrite the operating system and come up with new computer interfaces. The team and I weren't sure if we could actually realize a new product, but we knew we could bring APEX to existing dCS products. Once we did that, we could try to focus on this crazy, long-term research project and try to get the most out of everything we were developing.

Inevitably, Varèse started with the DACs. We had APEX, which sounded great, and we realized that we could improve it further

if we went to dual differential DACs. Once that came together, everything else got layered on top of or built around it. Between Chris's team designing the hardware and Andy's team writing the software, we made the system work. That's been the last five or six years of intense development at dCS.

The Mono DACs were our biggest accomplishment. They have no crosstalk between them, and they have the lowest level of intrinsic jitter in any dCS front-end. There are separate power supplies in each DAC, each focusing on one channel of audio and optimized for digital and analog stages. That in and of itself had some profound effects on sound quality. Having the processing somewhere else, in the Core, is also handy, but the big thing is the Mono DACs. It's fair to say those DACs can, in theory, do more processing if they need to. If we come up with some stupid idea, we can do it in the future. But currently the DACs don't do any filtering or multiplying or anything like that. That's all in the Core.

One of our big challenges was synchronizing the two separate Mono DACs in a way that didn't compromise clocking. Introducing the Varèse Master Clock improved things further, but our way of synchronizing the DACs while simultaneously improving jitter performance and lowering the noise floor is quite unique.

We ended up creating a single folded

CONTINUED ON PAGE 59

By the second week of the review period, Mosaic ACTUS allowed me to view folders on my USB stick in alphabetical order. Folder and track titles were accessible but not album covers or booklets. I could also view and play files on my NAS, which only displayed in alphabetical order without album art or booklets. By the time you read this, Mosaic ACTUS's feature set will have likely expanded.

To use Innuos with its Sense App, it was necessary to manually connect the Nordost Valhalla 2 USB cable that extended from the Statement. When the Statement served as music and streaming source, I focused on the Sense App and ignored the Varèse display.

Previous experience with Rossini, Vivaldi, and their APEX upgrades has convinced me that as good as their volume controls are, a high-quality analog preamp can enhance the system's sound. Since dCS made no changes to Vivaldi APEX's analog output when it created Varèse, I eliminated the Varèse volume control from the chain by turning volume all the way up to unity gain and listened through the D'Agostino Relentless preamp I normally use. I wish I could have enlisted a few willing hands to help me switch between the Relentless and Soulution 727 preamplifiers, but everyone I felt comfortable asking was healing a sore back.

Because changing power cables was a major hassle, I relegated most comparison listening between Vivaldi and Varèse to the dCS listening room in Cambridge. There, others shifted cables for me while I could remain relaxed and in prime listening form.

Most of the recordings I auditioned in Port Townsend were hi-rez

PCM. Because MQA decoding was not yet available in Varèse, I avoided the MQA files I often play through the Vivaldi APEX music system. Nonetheless, when Peter McGrath requested that I play the MQA version of his recent, private live 24/192 recording of a piano recital by Stephen Hough through the Vivaldi APEX system and compare its sound to the non-MQA version played through the Varèse system, I found myself unable to resist what I feared would be an arduous process. It was. When all was said and done, what was done in was me. The stress of pulling, tugging, unraveling, and repositioning six thick power cables plus a set of XLR interconnects left me unable to draw any conclusion other than that I eagerly await the arrival of full MQA unfolding and rendering to Varèse.

One comparison I eagerly performed was between the sound of the Innuos Statement NG player/streamer¹³ using InnuOS/Sense to the Varèse player/streamer using Mosaic ACTUS. In many cases, I listened to the same resolution files on Qobuz, the Statement's internal SSD, and a USB 3 SSD inserted into the Varèse. At the time of the review, only the Statement enabled me to view album covers and booklets, regardless of source. That may have changed by the time you read this.

¹³ My Statement NG took advantage of Innuos's recently released upgrade umbilical cables, whose enhancement of resolution, detail, and air is notable.

DAVID STEVEN (CONTINUED FROM PAGE 56)

flex-rigid circuit board for the Core.¹ It has nine points of flex, which enables us to wrap it around our single-billet aluminum chassis. (That chassis also acts as a heatsink.) By fitting all the electronics on a single circuit board, we isolate sensitive components from the noisier components on the board. This improves signal integrity and reliability and reduces crosstalk.

The Varèse Mono DACs locate all their D/A circuitry on a single nonfoldable board. This, too, makes a big difference. Plus, we're now running differential Ring DACs inside each of the Varèse Mono DACs. That provides an inherent balance in how the Ring DAC draws from the power supply. It's not signal-dependent anymore, which means it's perfectly predictable. For a D/A converter, that is a very, very nice thing. Ultimately, all these elements together result in a system whose measured performance is at the highest level we've ever created.

Andy's first projects were A to Ds. We were there in the beginning of 24-bit and then hi-rez recording and playback. Andy and the team next worked on DSD and SACD as a format, developed DoP, and got everyone involved to make DoP an open format. We've been through FireWire and then dual AES as an interface. When Andy, Chris, and I were conceptualizing Vivaldi, even though it was really built around silver discs as the format, we were also thinking about computer audio and where it could go.

It feels like Varèse was 35-plus years in

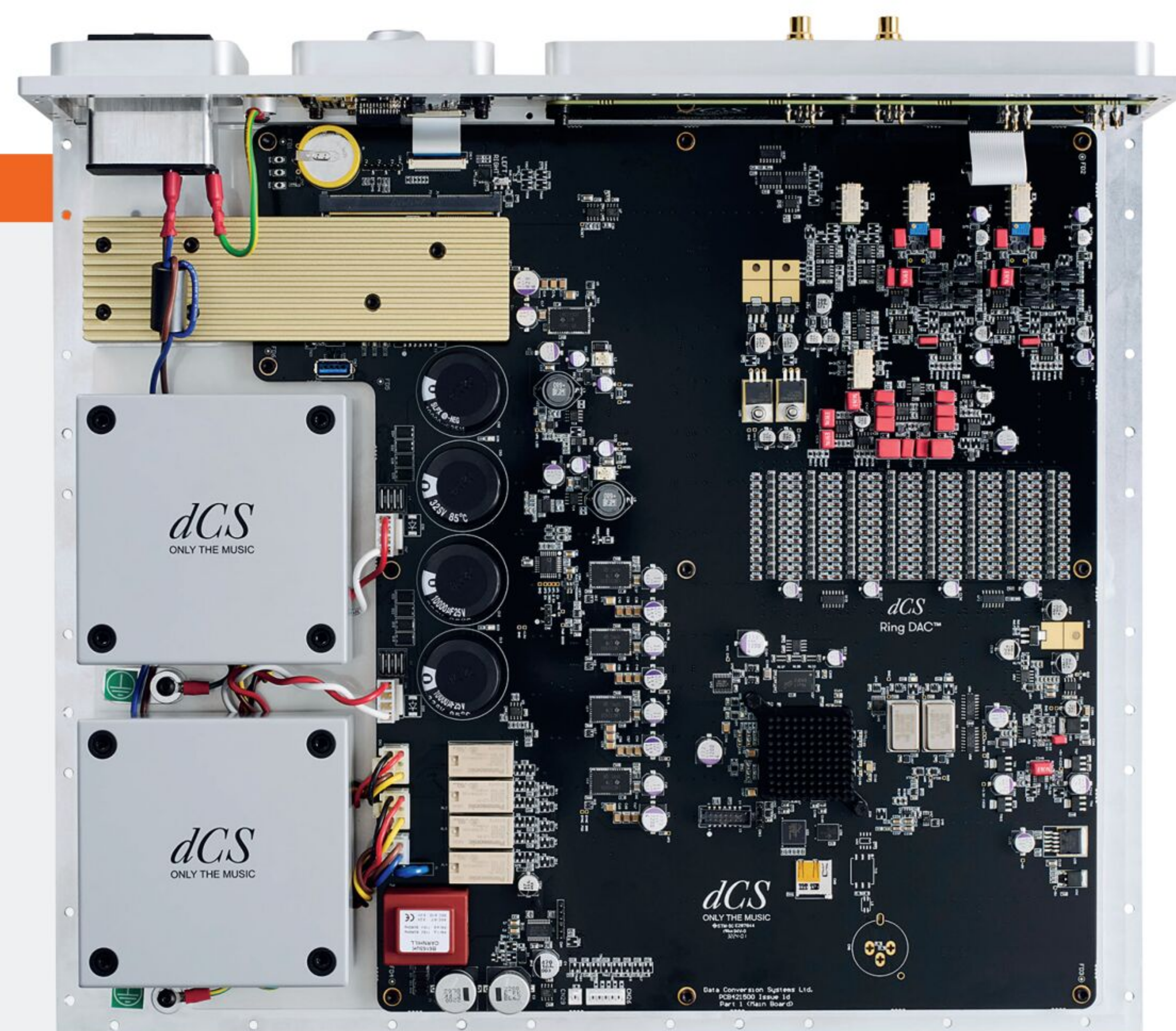
Right: Inside the Varèse Mono DAC: Dual power supplies (left), which power the Xilinx DSP (under the heatsink, top left); the Ring DAC's differential matrix of 2×48 resistor current sources (center right); and the mixed op-amp-based analog output stage (top right).

the making. Varèse is everything that we've ever learned and all the mistakes we've ever made overcome. Undoubtedly, some new challenges have been introduced. But we have been trying to make something that technically measures and performs better than anything we've ever done—something that is way, way simpler to use and more accessible to everyone, not just the audiophile. That's why I think Varèse was so many years in development and had so many different strands. Once we all got excited by what we were hearing from the prototype DACs, it was about building on top of that and trying to do the music and artistry justice. There was something special happening and we

had to keep pushing it, keep going.

Our goal was to take away all the visual noise—the lights and flashing things—and simplify the entire experience to make music and emotion more accessible. How do we connect to the music, and how do we enrich that experience for other people? Ultimately, Varèse is about the musical experience. It is about creating a system that is as transparent as a piece of glass and does no harm to the recording.—David Steven

¹ The folded PCB design, first released in the dCS Lina range of products, enables the company to fit a huge number of components into smaller caseworks. What dCS did not reveal at the time of Lina's release was that the folded PCB design was developed with the Varèse Core in mind and repurposed for Lina, which was released first.



Oh, the sound!

When the time finally came to write this section—the part of the review that, if you’re like me, you may have eagerly jumped to after the introduction—I looked at my notes and was a bit aghast. How was it possible that after weeks of listening in both the UK and at home, I only had two pages of notes?

Only once before had I experienced something like this. In 2024, shortly before the start of High End Munich, I sat in row 6 of Vienna’s acoustically fabled Musikverein as Riccardo Muti conducted the Vienna Philharmonic in the 200th anniversary performance of Beethoven’s Ninth Symphony. Even though I had been assigned a review, I was so mesmerized by the sound of Vienna’s violin section that I could not focus on Muti’s interpretation. Over and over, the only thought that circulated through my brain was, “I have never heard anything like this before, either live or on recording. The violins are silken smooth; there is absolutely no edge, no buzz, no sense of anyone sawing away. It’s the most beautiful sound of massed violins I’ve ever heard.”

My encounter with dCS Varèse was no less riveting. Perhaps I do my reputation no favors by confessing that as I listened with eyes wide open, I forgot about note taking as my critical faculties ceded to a sense of wonder. Weeks later, that same sense of wonder remains.

All the key elements of the audiophile experience—the “you are there” presence and aliveness, the absence of a veil between you and the music, the depth and weight of images, the drop-dead “Is it live or is it Memorex?” veracity, and the overarching sense of being swept up and transported by the music and its creators’ collective achievement—continue to overwhelm me. If asked for a one-word summary of what I feel, the word would be (and is) “Yes!”

Nonetheless, some facts are in order. During one listening session, I cued up the “Bass test” Qobuz playlist¹⁴ that *Stereophile* contributor Tom Fine posted as a New Year’s present to the community. I don’t know what possessed me, but I clicked on a track

¹⁴ See open.qobuz.com/playlist/21395182.

VARÈSE UNWRAPPED

The Varèse Core, pictured below, is the largest component in the system. All calls between boxes are integrated here, and the Core generates the system clock if the external Varèse Master Clock is not connected.

As the system hub, the Core is home to all the upsampling, the primary digital filtering, and a good deal of the modulation–truncation and the noise-shaping—but not the bit mapping, which happens on a dynamic basis within the Mono Ring DACs. More about this later.

All data, clock, and other signals are sent among the five Varèse boxes (six with the transport) via the proprietary ACTUS link. dCS’s Tomix clock system employs two crystal oscillators in the Master Clock, one of them (for 88.2kHz) oven controlled (OCXO), the other (slaved to the first for 96kHz) voltage-controlled (VXCO). The onboard FPGA calculates an absolute time stamp and embeds it in the inter-box data, ensuring exact time-alignment between the L and R channels without increasing data-related jitter.

Ring in the changes

The Mono DAC’s summing, gain, and output stages are based on those in the Vivaldi APEX. The summing and primary filtering stage is op-amp based, a cascade of Linear Technology and National ICs. It’s here that the 0.2V, 0.6V, 2V, and 6V gain options are set. Some final analog filtering acts above 150kHz to ensure that any residual stopband artefacts are gently polished off.

Before all this comes the Ring DAC itself, and although the resistor matrix and latches are unchanged in the Varèse, both are now arranged as 2×48 current source rings—a pair of Ring DACs within each Mono DAC running in differential mode with all the potential for reduced noise, even-order distortion, etc. that that implies. For the APEX update, dCS paid particular attention to the latches that address the matrix, tightening up the clocking and reduc-

ing the source impedance of the reference PSU, achieving a measurable reduction in low-level phase noise. However, the current drawn from the reference supply was still signal dependent—a possible source of

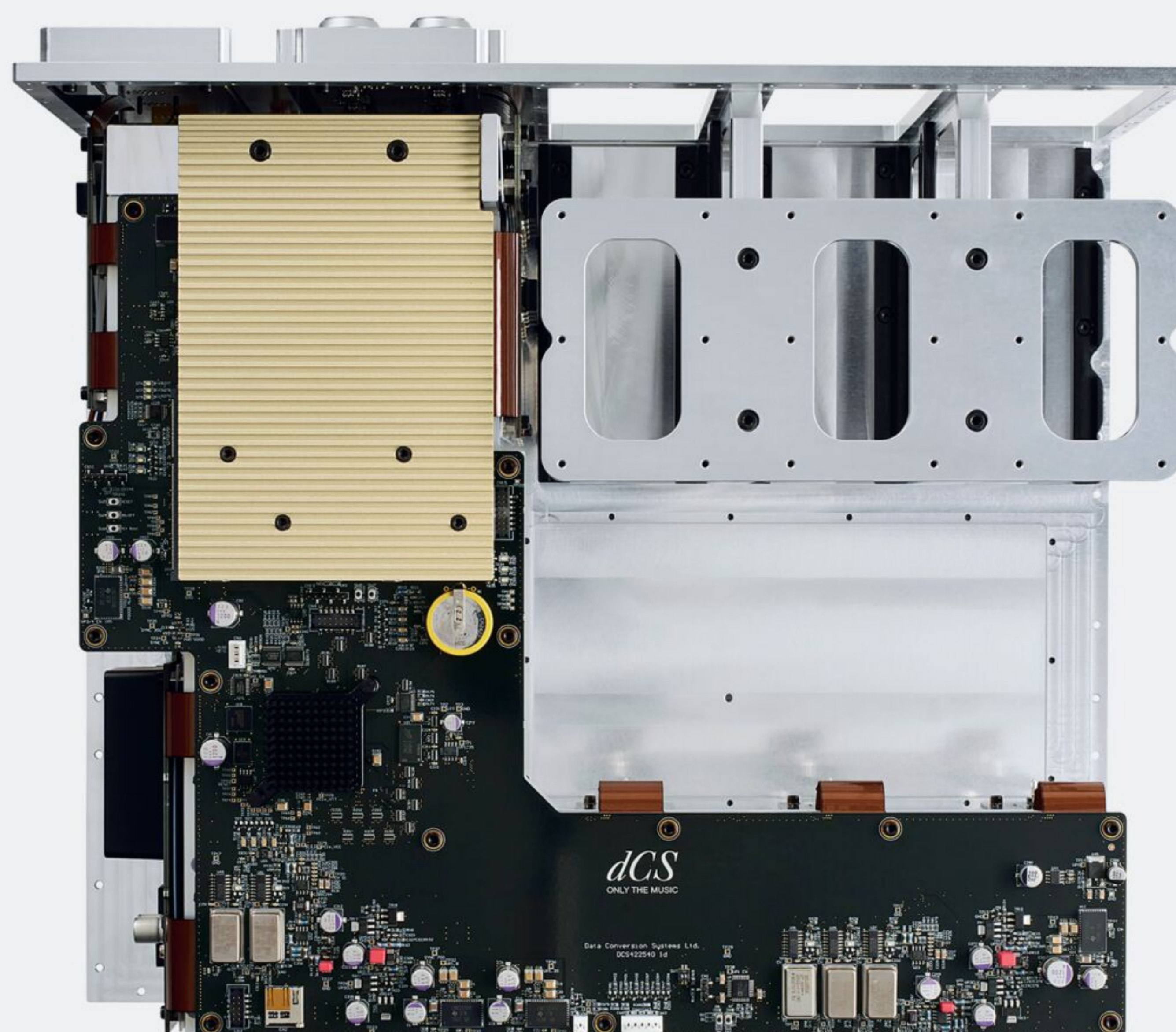
correlated ripple—which is avoided by the Varèse’s differential mode, ensuring that the current flow is now signal independent. More attention is also paid to the very high-frequency matrix switching noise; this is particularly important with the M1 and M3 mapping options, which run at twice the rate of the legacy M2 mapper.

Decoding the matrix

To understand why the mapping of data to the matrix is key to the Varèse’s sound, we need to remind ourselves how the Ring DAC works. The Varèse Core upsamples then decimates incoming LPCM data (and converts DSD) to an average word length of 4.6 bits. These 24 (24.6) possible values are then mapped across the 48 notionally identical current sources that comprise

the Ring DAC. This matrix of resistor elements is visible in the Mono DAC’s lid-off shot (opposite page) along with the fully balanced, APEX-derived analog output stages.

For the Ring DAC to be truly monotonic (like a pure 1-bit DSD DAC) these 48 current sources would need to be absolutely identical, which they are not. So dCS “randomizes” the mapping of bits to these elements. Fixed digital errors, which would be realized as harmonic distortion, are thus traded for an inaudible increase in noise. In practice, this sample-by-sample selection across the matrix is not truly random but is based on the historical and current data flow.—Paul Miller



that I'd come to detest after hearing it so many times in so many rooms at audio shows, Chris Jones's "No Sanctuary Here" (24/44.1 FLAC, Stockfisch Records/Qobuz). I think I've heard the deep "um-ah" mantra that begins this song in more than one post-show nightmare.

Nonetheless, I hit "play." Within seconds, I was floored. No, I didn't fall off my seat, but I found sanctuary in the track's fabulous bass, clarity, and tonal beauty. Not only did the song sound fresh; it sounded better than I've ever heard it on any system, anywhere.

I also returned to a recording on Tom's list that initially blew away some of the members of the Off-Islanders Audio Society during their visit, the "Long Version" of Aretha's "Bridge Over Troubled Water," remastered in 2021 (24/96 FLAC, Rhino Atlantic/Qobuz). Since there are multiple remasterings of this track, each of different lengths, levels, and degrees of success,¹⁵ look for the "Long Version" on the high-rez transfer of three-CD compilation *ARETHA*.

In Tom's private commentary to *Stereophile* staff, he wrote, "Listen to the bass played through a big-ass amp, likely an Ampeg, in the left channel." Listen I did. That bass is deep, strong, and fabulous. "Bridge Over Troubled Water" may not be a shake-your-booty song, but Aretha's multi-octave spiritual take, recorded in her glorious prime, remains *the* tried-and-true antidote to countless saccharine versions that have followed in Simon & Garfunkel's wake.

You've got to hear this song through the dCS Varèse. The multi-tracked recording may put a bit of edge on Aretha's God-given instrument, but it allows the unique colors of her voice, backup chorus, Hammond organ, and other instruments to come through in all their glory. I expect few will *not* bow before the altar of Aretha upon hearing this song through dCS's five-box flagship DAC.

Hours after the society's visit, Paul Rickert posted a Qobuz playlist¹⁶ of the tracks we auditioned, suitably titled "Visit to Jason Victor Serinus." Among them are two of the three movements of Debussy's Sonata for Flute, Viola, and Harp, beautifully played by Emmanuel Pahud, Gérard Caussé, and Marie-Pierre Langlamet on *Debussy: Sonatas & Trio* (24/96 FLAC, Erato/Qobuz). Recorded in the wonderfully resonant and deep Salle Colonne in Paris, these tracks excel in natural ambience. I've never heard either the venue's airy depth or the recording's colors and transparency depicted as superbly as on Varèse; it well exceeds the excellent presentation on Vivaldi APEX.

We also auditioned Jenna Mammina's "Hooked on a Feeling/Black Hole Sun" (16/44.1 FLAC, Water Street Music/Qobuz), from *Jenna Mammina & Rolf Sturm: Begin to Dance*. To quote society member Naveen MacArdell, "I loved it. It was immediate, huge, and impressive—a great presentation with right-on tonalities." When we switched to the poignant title track from Joni Mitchell's 2011 album *Both Sides Now* with the London Philharmonic (24/96 FLAC, Rhino-Warner Records/Qobuz), MacArdell said, "I'm not hearing a hi-fi quality at all. It sounds like music. The entire piece comes together and pulls you in."

Time and again, I've asked audio show exhibitors to play complex music that shows everything their gear can do, only to be served up a jazz trio playing a slow ballad. If I'm handed an iPad and given free rein to cue up whatever I wish, I often play the first movement of Rafael Payare's recording of Mahler Symphony No.5 (24/96 FLAC, Pentatone/Qobuz). After noting bass response, timbre, color contrasts, and dynamics, I hang on until, maybe four minutes in, every instrument and its distant relation sounds off at once.

I've often used this recording to see how much an amplifier or DAC can unravel. I thought I'd heard everything that Pentatone's mikes and engineers had captured until I enlisted dCS Varèse to send signal to the D'Agostino Momentum M400 MxV monoblocks/Relentless preamp combo. When I did, instrumental lines that had

ASSOCIATED EQUIPMENT

Digital sources dCS Vivaldi APEX DAC, Vivaldi Upsampler Plus, Vivaldi Master Clock; Innuos Statement Next-Gen Music Server and PhoenixNET network switch; Small Green Computer Sonore opticalModule Deluxe (2); Broadcom/Avago AFBR-5718PZ 1GB SX-SFP, Gen 5 Fiber Optic modules; Nordost QSource linear power supply (2); Sonore Audiophile Linear Power Supply; Synology 5-bay 1019+ NAS with Ferrum Hypsos linear/switching hybrid power supply; Linksys MR9000 mesh router and Arris modem; Apple 2023 iPad Pro and 2017 MacBook Pro laptop with 2.8GHz Intel i7, SSD, 16GB RAM.

Preamplifier Dan D'Agostino Relentless, Soulution 727.

Power amplifiers Dan D'Agostino Momentum M400 MxV monoblocks.

Loudspeakers Wilson Audio Specialties Alexia V, two Lōke subwoofers.

Cables Digital: Nordost Odin 1, Odin 2, and Valhalla 2 (USB and Ethernet), Frey 2 (USB adapter); AudioQuest WEL Signature; Wireworld Platinum Starlight Cat8 (Ethernet), OM1 62.5/125 multimode duplex (fiber optic). Interconnect (XLR): Nordost Odin 2 and Blue Heaven (subwoofer), AudioQuest Dragon. Speaker: Nordost Odin 2, AudioQuest Dragon. AC: Nordost Odin 2, Valhalla 2, Valhalla 1; AudioQuest Dragon and Firebird; Kimber PK10 Palladian. Umbilical cords: Ghent Audio Canare on NAS; QSource Premium DC cables with LEMO terminations for QSources; Innuos upgrade umbilical cables for Statement Next-Gen.

Accessories Grand Prix Monza eight-shelf double rack and amp stands, 1.5" Formula platform; Symposium Ultra Platform; Nordost 20A QB8 Mark III, QKore 1 and 6; Titanium and Bronze Sort Kones, Sort Lifts; Stromtank S-4000 MK II XT power generator, SEQ-5 Audio Distribution Bar; AudioQuest Niagara 7000 and 5000 power conditioners, NRG Edison outlets; Environmental Potentials EP2050EE surge protector/filter; Wilson Audio Pedestals; A/V RoomService Polyflex Diffusers; Resolution Acoustics room treatment; Stillpoints Clouds (8); HRS DPX-14545 Damping Plates; Marigo Aida CD mat.

Room 20' L × 16'4" W × flattens at 9'4" H.—Jason Victor Serinus

previously been subsumed in the fray declared their independence and created as glorious a cacaphony as Mahler intended.

Apples and oranges

As noted earlier, I compared the sound of the Innuos PhoenixNet/Statement NG streaming music with the Innuos Sense 3.2.0 to the Varèse system streaming music with dCS Mosaic ACTUS. After going back and forth numerous times, I concluded that the Innuos combo and its software seemed to bring an even wider and more enveloping soundstage to the Varèse experience. However, because I have only so many aftermarket power cables, I was unable to eliminate the sonic effects of different cabling on my assessment. In other words, your results may vary.

When I streamed directly to the Varèse Core and switched between Mosaic ACTUS and Roon software, the former yielded marginally more transparent and color-saturated sound. Roon's superior feature set cannot be denied, but Mosaic ACTUS and Innuos Sense brought me a bit closer to the music and artistry that

¹⁵ My guess is that multiple engineers tackled it, each adding their own sensibilities to their remastering. This one, at 4:24, is artistically tighter than longer versions whose "filler" dissipates musical tension.

¹⁶ See open.qobuz.com/playlist/28885587. Ignore the "LP Version" of the Aretha track.

are the Varèse's *raison d'être*.

We performed all Vivaldi APEX/Varèse comparisons at dCS headquarters in Cambridge without an external preamp. Had I not known, from prior experience with Vivaldi, that a high-quality preamp can further improve sound, I would have been convinced that I'd heard all the Varèse music system can deliver.

Nonpareil

Whenever I want to see how far a component can take me emotionally, I cue up the second movement of Franz Schubert's Piano Trio No. 2 in E flat major, D. 929 (Op.100), marvelously felt by violinist Christian Tetzlaff, cellist Tanja Tetzlaff, and pianist Lars Vogt on their 2-CD recording, *Schubert Chamber Works* (24/96 WAV download, Ondine). Schubert's mixture of sadness and joy in music written one year before his early death, from syphilis, at age 31, seems as honest and potent today as it was at the time of its conception 198 years ago.

During the recording session, Vogt was in terrible pain from the cancer that would soon take his life. As a result, Schubert's pain became the musicians' own as they played with consummate poignancy and grace. Through Varèse, Christian Tetzlaff's violin emitted the most delicate sliver of sound I've ever heard through my system. Even when everyone rapidly transitioned to full volume, the individual timbres of their instruments remained intact, and acoustic space and distance between musicians remained uncannily real. No matter how emphatically everyone played, nothing sounded congested or distorted. I am fully convinced that everything Schubert, Tetzlaff, Tetzlaff, Vogt, and producer/engineer Christoph Franke put into this music was there to savor in all its open-hearted glory.

I ended my listening with music of maximal contrast. Using

Mosaic ACTUS software, I journeyed from the Los Angeles Philharmonic and the Los Angeles Percussion Ensemble's classic performance of Varèse's short and wild *Ionisation*, conducted by Zubin Mehta (16/44.1 FLAC, Decca/Qobuz)—its *triple forte* percussive assault superbly captured by Decca's engineering masters—to soprano Arleen Auger's 1978 live Salzburg performance of Schubert's lovely little song "Heidenröslein," accompanied by Erik Werba on Hammerklavier (16/44.1 FLAC, Orfeo/Qobuz). A component that can journey with consummate grace from the maximal impact of an all-out percussive assault to the subtle artistry of German art song is quite the component in my book.

While listening to Auger, I was certain that my husband, David, had quietly entered the music room and was doing his best to wait unobtrusively in the hallway, out of sight. Three times I called out his name, and three times he failed to respond. Only then did I realize that the Varèse music system had so perfectly conveyed the sound of an audience member, seated far to Auger's right, quietly clearing his throat, that I thought it was David. If ever I needed confirmation that Varèse can take the listening experience to a far higher level than we ever expected from digital, that was it.

From the time the Varèse entered my system, my sole frustration was that I was unable to listen all the time, every day. I have never experienced so much pleasure and satisfaction, reveling in all kinds of music, in my music room. Even the somewhat modest dimensions of my 20' × 16'4" × 9'4" space could not lessen the unbounded joy I experienced through Varèse.

Here's hoping that you, too, will have the opportunity to hear this remarkable technological and sonic achievement in a setup conducive to its gifts. It really is something special. We may need to create a new A++ rating in Recommended Components to adequately convey how special the Varèse music system is. Or A+++. ■