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AS WE SEE IT

BY JIM AUSTIN

THIS ISSUE: How tariffs—and vinyl records—are impacting the music/hi-fi economy.

The commercial impact of tariffs (and of vinyl)

As I write this, the current US president recently put into effect large import tariffs on almost every country except (oddly) Russia and North Korea, then paused for most countries (including EU countries) for 90 days (except for 10%, and then another 10%). The 145% tariff on Chinese exports wasn't paused (except for computers and smartphones).

Tariffs are the dominant force in our industry right now, due partly to the added cost but also to the uncertainty they create. New products, especially those made in China, have been delayed because prices can't be set. Companies in Europe and elsewhere are waiting and seeing; some have implemented or are contemplating price increases; others have decided (for now) to keep prices the same. Many component parts come from China, so American supply chains are disrupted—and as we learned from the COVID pandemic, supply-chain disruptions can lead to inflation. Tariffs have caused the value of the dollar to decline, making foreign products more expensive for Americans (and American importer/distributors).

Lenbrook (NAD, PSB, Bluesound) raised prices 15% in early March and another 10% in April. Steinway-Lyngdorf, makers of the Lyngdorf MXA-8400 eight-channel amplifier reviewed last month by Kalman Rubinson, announced a tiered price-increase schedule, with increases ranging from 5% to 53%—of retail, not wholesale, prices. AudioQuest says it will add a "temporary" 5% increase (of wholesale) prices on PowerQuest, Niagara, DragonFly, and JitterBug products and 10% on all others.[1]

Tariffs should have a major beneficiary: US manufacturers, due to the fact that foreign products are now less competitively priced. But if you think US manufacturers are happy with the protection from overseas products that import tariffs offer, think again. US companies may benefit from tariffs with domestic sales, but many (perhaps most) US hi-fi companies sell half or more of their product overseas—and that will be interrupted by "reciprocal" tariffs against the US, which are practically guaranteed. Representatives of US companies I spoke to were pissed. Tariffs are harming those they're intended to help.

And consumers? We're stuck with less choice and in many cases higher prices.

The worst problem, though, is none of this. Rather, it's the wealth—the spending power—that tariffs have destroyed. As of late April, the S&P 500 was down about 11% from its recent peak on February 19. Tariffs (or the tariff threat) are expected to substantially reduce economic growth, in the US and overseas, which means less money to spend on hi-fi. The IMF expects US economic growth to slow from last year's 2.8% to 1.8%—a reduction in potential new wealth of about $300 billion, fully attributable to tariffs. Germany, home of Accustic Arts, Audio Physik, Burmester, Canton, Elac, MBL, and T+A, among other hi-fi companies, was expecting a small amount of growth—perhaps 0.3%—to its stagnant economy; post-tariff, those growth predictions have been zeroed out.

There are indications that the US hi-fi industry is reining itself in, and the clear, obvious reason is tariffs.

Ever heard of Ethel Cain? I hadn't, though she is reasonably well-known. She's a singer-songwriter from Perry, Florida, a town I remember from my childhood as the approximate midpoint in my family's frequent trips to my grandparents' places in Alabama before the interstate was finished. I recall sleepily rolling into town and seeing lights from a handful of restaurants in the part of town we drove through. In contrast to the rest of Florida, Perry—population 6898, according to the 2020 census—doesn't seem to have grown much in the last 40 years or so.

Ethel Cain, aka Hayden Silas Anhedönia, grew up singing in the church choir. She left the church at age 16. Judging by her lyrics, the parting was not amicable.

Anhedönia is Cain's legal name, though it isn't her birth name. Anhedonia is also a psychological syndrome characterized by the inability to experience pleasure or joy. It's a common consequence of schizophrenia and severe depression.

In early 2022, Cain released her first full-length album, *Preacher's Daughter*. The album's protagonist is the daughter of the town preacher, who had died years before.

Cain's music is hard to describe. Ambient slowcore darkwave Americana noise with gospel and metal influences? I hear Cat Power in some of her well-reverbed vocals. The lyrics are consistently dark—"When my mother sees me on the side/Of a milk carton in Winn-Dixie's dairy aisle/She'll cry and wait up for me," she sings on "Strangers"—and often Not Safe For Work. Sonically, I prefer more grit and less atmosphere, but some of the later tracks sound okay.

When it was released in 2022, for streaming and download—no physical media, which these days is common enough—*Preacher's Daughter* received critical acclaim but failed to make a mark commercially. Then suddenly, in the April 10 issue of *Billboard*—three years after the album's release—*Preacher's Daughter* appeared at #1 on the Album Sales chart and #3 on the Artist 100 chart. Most significant was its appearance, at #10, on the *Billboard* 200 chart. The *Billboard* 200 is a modern chart, based on metrics relevant to our current age: traditional album sales (physical and digital) plus track-equivalent albums plus streaming-equivalent albums. So that's an actual, 2025-type #10 ranking, not some relic like rock physical album sales.

Why did this 2022 album become popular all of a sudden? Because on April 4, 2025—a week before the cover date on that *Billboard* issue—it was released on vinyl. Vinyl sales alone launched it to #10 on the *Billboard* 200. That's the power of vinyl circa 2025.

Not convinced? How 'bout this? The album *Tracy Chapman* debuted on the *Billboard* 200 on April 30, 1988. It hit #1 on that chart in the August 27 *Billboard*. *Tracy Chapman*'s run on the *Billboard* 200 ended more than a year later, in the week of July 4, 1989.

Almost 36 years later, on the chart for the week of April 19, 2025, *Tracy Chapman* found its way back to the charts, at #51 on the *Billboard* 200.

Why? On April 4, Rhino and Elektra reissued *Tracy Chapman* on vinyl. ■

1 Some of this information comes courtesy of Strata-Gee.com.

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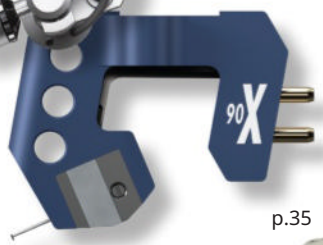

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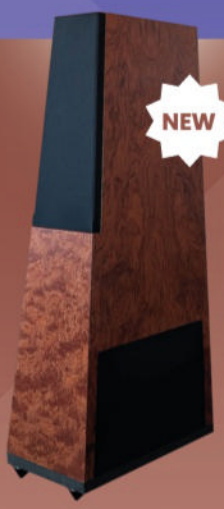
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LETTERS FEEDBACK TO THE EDITOR

TAKE HEED! Unless marked otherwise, all letters to the magazine and its writers are assumed to be for possible publication. Please include your name and physical address. We reserve the right to edit for length and content.

Brilliant Future

I want to thank Alex Halberstadt for his brilliant and, above all, *hopeful* Brilliant Corners column about the future of our beloved hobby.[1] At 66, I'm part of the Boomer generation that helped build this hobby. I still remember cycling down as a 12-year-old to Pacific Stereo on Geary Boulevard in San Francisco, and with one boxed component at a time, cycling home. That was the kind of passion this hobby inspired.

Alex's piece captures today's reality: Younger generations—Millennials, Gen Z, and beyond—may not own homes or dedicate living rooms to listening, but they *are* hungry for high-fidelity sound. They're finding it in galleries, bars, and public spaces. It's not solitary anymore—it's communal. And that shift is powerful. It brings us closer to music's roots: connection and shared experience.

It brings us closer to music's roots: connection and shared experience.

Some in the industry may lament the decline of expensive home systems, but the real focus should be on access to music and the emotion it delivers. That's why Devon Turnbull of Ojas is such a vital figure: He's made hi-fi meaningful again, not as a status symbol but as a way to bring people together and experience the *essence* of music.

And how musically poetic that we've come full circle—back to horns, tubes, vinyl, and point-to-point wiring. Or, as my SET, zero feedback, 10 ohm, 96dB Boomer ears would say: Let everyone *experience* the music the way they want to!

Thank you, Alex, for reminding us that hi-fi isn't dying—it's just being reimagined. There's real hope (and passion) in that.

Mark Burhenne
St. Helena, California

Truth telling

I'm writing to express my appreciation for Kalman Rubinson. In his January 2025 review of the Buckeye PURIFI EIGENTAKT 1ET9040BAI (catchy name you've got there, Buckeye), he wrote, "I was able to compare the Buckeye with both my Benchmark AHB2 amps and a NAD M23, and it was extremely difficult to hear and, thus, to describe any differences."

He didn't hear a difference ... and said so.

This is of a piece with John Atkinson's As We See It thoughts in the same issue, where he questioned the value of expensive components when "the percentage improvement compared with affordable equivalents is relatively small for that hefty difference in price; ... at what point does the law of diminishing returns set in?"

How do you know when someone is telling the truth? When it doesn't necessarily align with their personal or financial interests. These comments have given me renewed faith that you're not merely cheering the emperor's new and very expensive clothes but pursuing good sound and good music, regardless of their source or (surprisingly low) cost. Thank you.

Russell Reich
Millburn, New Jersey

B-sides

Regarding Tom Fine's My Back Pages piece, "Perfect Album Sides":[2] Some friends were coming to my house to listen to music. I decided on "folk singers" as my theme and constructed a much too long candidates list of every folk artist I ever enjoyed. I decided to focus on familiarity for my friends and created a Tidal playlist consisting of Bob Dylan, Judy Collins, Leonard Cohen, et al. When I was done, there were 21 unused artists. I later made a second playlist featuring those artists. Examples are Odetta, Dave Van Ronk, and Ramblin' Jack Elliott. Effectively, this was the B-side to my first playlist. It turns out I like the B-side a lot better and play it much more frequently!

Jeff Weiner
Scottsdale, Arizona

Jeff Weiner wrote "Alive at the Café Au Go-Go," which we published in My Back Pages in the July 2021 Stereophile*; see stereophile.com/content/alive-cafe-au-go-go. His playlists are available (to Tidal subscribers) at tinyurl.com/WeinerlistA and tinyurl.com/WeinerlistB.*

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Envelop Me

As always, I enjoyed the March As We See It column, "Envelop Me."[3]

So, empirical data tells us playback of some low frequencies using two speakers in stereo instead of a single monaural one adds to our musical joy. And lossy files, or too much corrective digital manipulation, subtracts from it. Did we really need science to confirm this?

Anyway, it's nice to know that the technophiles preaching single (or multiple) subwoofer placement anywhere in the room for all these years were (partially) wrong!

Thank you for all your continued hard work.

John Jordan
Trenton, New Jersey

I loved the "Envelop Me" article. I am having to read it three times to fully understand. I hope you give a little talk on this with PowerPoint, or invite Thomas Lund. It seems to me that this is important stuff!

Timothy Corcoran
Flynn, Maryland

Jim Austin's piece about the effect of low frequencies on "pleasure beyond the music itself" may have missed a key factor, which is also being missed by the majority of loudspeaker manufacturers. The website of Linkwitz Labs has extensive material on the importance of the reverberant field and its influence on our perception of the "magic" in music reproduction. In essence, Linkwitz claims that any difference between direct sound and reflected sound is a form of distortion that makes the room visible to our ears and destroys the magic. Said another way, a loudspeaker that has the same response in all directions will sound clearer rather than muddying the sound. Accurate reflected sound is what our brains need to conclude that the sound is genuine (not reproduced). Box speakers with perfect on-axis response but imperfect off-axis response cannot fool our brain the way we audiophiles crave. Maybe speaker manufacturers should think about redirecting resources away from marginal improvements in on-axis response and start focusing on the actual thing that matters, on- and off-axis response.

John Chivington

1 See stereophile.com/content/brilliant-corners-25-devon-turnbull-and-klipsch-ojas-ko-r1-loudspeaker.

2 See stereophile.com/content/perfect-album-sides.

3 See stereophile.com/content/envelop-me.

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AUDIO NEWS & VIEWS

SUBMISSIONS: Those promoting audio-related seminars, shows, and meetings should email the when, where, and who to stletters@stereophile.com at least eight weeks before the month of the event. The deadline for the October 2025 issue is July 20, 2025.

SOUND UNITED FINDS A NEW HOME WITH HARMAN

Mark Henninger

Masimo Corporation has entered into a definitive agreement to sell its Masimo Consumer Audio division, which is made up of the former Sound United hi-fi brands, to Harman International, a subsidiary of Samsung Electronics, for $350 million in cash. Pending regulatory approvals, the transaction is expected to close by the end of 2025.

The sale transfers an extensive portfolio—including Bowers & Wilkins, Denon, Marantz, Polk Audio, Definitive Technology, Classé, and Boston Acoustics (although that brand is just a name at this point)—to a buyer with business firmly rooted in audio.

The deal includes the HEOS multiroom streaming platform, which Sound United has developed into a robust, hi-rez–capable system that competes with Sonos. Harman mentioned HEOS in its press release; Masimo did not, but its inclusion in the deal is confirmed. HEOS is integral to the wireless functionality of many products in the Sound United ecosystem.

HEOS was rumored to be a strong motivation for Masimo's acquisition of Sound United, since it would give Masimo a solid wireless foundation for its consumer products. That never came to fruition.

Harman already owns JBL, Harman Kardon, AKG, Mark Levinson, Revel, Arcam, and Roon. That's a lot of brands under one umbrella. This acquisition turns Harman into an audio superpower.

The mismatch between a medical-products company and several prominent hi-fi brands became a rallying point for activist fund Politan Capital, which secured board

CALENDAR OF INDUSTRY EVENTS

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United States

CALIFORNIA

- Friday, June 6, 12pm–Sunday, June 8, 4pm: T.H.E. Show SoCal 2025 will take place at the Hilton Orange County Costa Mesa (3050 Bristol St., Costa Mesa, CA). The longest-running audio show in the country offers attendees the opportunity to audition a wide range of audio gear. Audio media and accessories will be available for purchase. For more information and tickets, visit theshownow.com.
- Sunday, July 20, 2–5pm: The Los Angeles & Orange County Audio Society holds its Second Society LP Event at AudiophileUSA (10572 Calle Lee #126, Los Alamitos, CA). Host Mark Hoover will discuss the vinyl industry and record store culture. Special LAOCAS record discounts available. For more information, visit laocas.com or call 1-657-298-3003.

COLORADO

- Thursday, September 4–Saturday, September 6: CEDIA Expo 2025 takes place at the Colorado Convention Center (700 14th St., Denver, CO). The event focuses on residential and commercial A/V integration and smart home technology. For more information, visit cediaexpo.com.

NORTH CAROLINA

- Friday, August 1–Sunday August 3: Audio Advice Live 2025 will take place at the Embassy Suites by Hilton Raleigh (201 Harrison Oaks Blvd., Cary, NC). The three-day event offers live demos of high-performance audio and home theater systems, plus seminars and panel discussions led by industry experts. For more information, visit audioadvicelive.com.

Overseas

AUSTRALIA

- Friday, August 29–Sunday, August 31: StereoNET Hi-Fi & AV Expo Melbourne 2025 will be held at the Pullman Convention Centre Albert Park, Melbourne. Australasia's largest hi-fi & A/V expo. Visit stereonet.com/show/au for details.

CHINA

- Saturday, June 14–Sunday, June 15: CanJam Shanghai 2025 takes place at the Shanghai Marriott Hotel City Centre. Headphone and personal audio show featuring over 100 leading brands. Visit canjamglobal.com/shows/shanghai2025 for details.
- Friday, July 11–Sunday, July 13: The 32nd Shanghai International Top Audio-Visual Show (TAS) 2025 will be held at the Shanghai International Convention Center. Visit siav.com.cn for details.

JAPAN

- Saturday, June 21–Sunday, June 22: OTOTEN Audio & Home Theater Festival Tokyo 2025 will be held at the Tokyo International Forum. Japan's largest audio and home theater event. Visit jas-audio.or.jp/audiofair for details.

TAIWAN

- Thursday, August 7–Sunday, August 10: The 35th Taiwan International TAA Hi-End Audio Show 2025 is scheduled at the Grand Hyatt Taipei, Taipei City. Features hi-end/hi-fi audio hardware and software accessories. Visit taiwanaudio.org.tw for details.

UNITED ARAB EMIRATES

- Friday, September 26–Saturday, September 27: The High End & Smart Home Show Dubai 2025 takes place at the Radisson Red Hotel Dubai Silicon Oasis. Second edition of the B2B and B2C platform for hi-fi and smart home technology in Dubai. Visit highendshow.ae for details.

UNITED KINGDOM

- Saturday, September 27–Sunday, September 28: The UK Hi-Fi Show Live 2025 takes place at the Ascot Racecourse (High St., Ascot, UK). The UK's longest-running premier high-end audio show. Visit hifishowlive.com for details.

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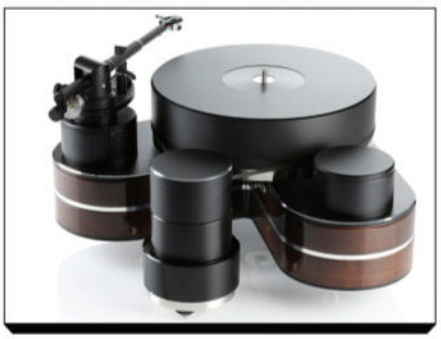

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seats and urged Masimo to divest. In late 2024, the audio business was carved out as a standalone unit, and Masimo sought buyers. Rumors of much higher offers circulated, but months passed without a deal until Harman stepped in.

For Harman, the acquisition bolsters an already impressive home-audio lineup. Denon and Marantz provide scale in A/V receivers, Polk Audio and Definitive Technology strengthen the mass-market speaker segment, and HEOS brings a mature, whole-home streaming platform that can integrate with Samsung televisions and connected appliances (and perhaps dovetail with Roon). The move also aligns Bowers & Wilkins's high-performance loudspeakers with a company steeped in audio heritage and backed by Samsung resources.

The combined roster presents challenges as well as opportunities. Harman must manage overlap among four AVR lines—Denon, Marantz, JBL, and Arcam—while preserving Bowers & Wilkins's audiophile cachet and positioning Polk and Definitive Technology to compete in the crowded loudspeaker, soundbar, and smart-speaker arenas. And then there is the burgeoning car-audio segment. Yet the strategic logic is far clearer than Masimo's ill-fated experiment: Every brand involved now answers to a parent singularly focused on audio innovation and consumer electronics.

If regulators approve the transaction, it will close a turbulent three-year chapter that saw Sound United's valuation tumble from more than $1 billion to (in this transaction) a third of that figure. Masimo exits with a costly but decisive return to its healthcare roots, while Harman and Samsung gain a powerful array of brands poised to strengthen their position in living-room entertainment, from big-screen TVs to whole-home audio.

GRYPHON OPENS FIRST MONO-BRAND SHOWROOM IN WEST HOLLYWOOD

Mark Henninger

Gryphon Audio Designs, the Danish maker of ultra-luxe audio equipment, will open its first monobrand US showroom in late May. Located in more than 2700ft^2 inside West Hollywood's Pacific Design Center, the appointment-only space features three purpose-built demonstration rooms, each showcasing Gryphon's "total system" approach. This West Hollywood opening reflects a broader strategy for Gryphon to establish brand-exclusive storefronts in key luxury markets.

Founded in 1985 by Flemming E. Rasmussen, Gryphon has been majority owned since 2002 by Thomas Willum Børsting. Beyond these principal stakeholders, the company is enjoying a recent investment by Goer Dynamics, a European subsidiary of the Chinese company that owns Dynaudio. For more details, see Re-Tales on p.109.

"BARGAIN" BLING FROM DAN D'AGOSTINO

Jason Victor Serinus

First unveiled in passive display at High End Munich 2024, the D'Agostino Pendulum integrated amplifier made its US debut at AXPONA 2025, in two places: a hallway setup, where listening was possible only at close range, and in a room sponsored by Innuos. The *Stereophile* team caught up with Dan D'Agostino during his brief visit to Chicago, in an effort to get the lowdown on the newest and lowest-priced integrated amplifier in his line.

The all-balanced Pendulum Integrated has one single-ended input, three balanced inputs, a home-theater pass-through, and two balanced outputs that allow subwoofer integration. Connections include optical, RJ45, Wi-Fi, and HDMI eARC. Thanks to a custom toroidal transformer rated at 750VA and a 25,000µF capacitor bank, it can deliver 120W into 8 ohms and 240W into 4 ohms.

The Pendulum's optional Digital Streaming Module (DSM) can decode signals up to 32-bit/192kHz and DSD256. It currently supports Tidal, Qobuz, MQA, Qobuz Connect, Tidal Connect, and Spotify; it is also Roon Ready.

The optional MC phono stage features discrete circuitry, 75dB (!) gain, and user-selectable load settings of 50, 100, 200, 400, 1000, and 47,000 ohms.

The integrated amplifier is priced at $16,000. The DSM is an extra $2500; the phono module adds $1000 to the price.

MAJOR BUZZ SURROUNDS PEARL ACOUSTICS—EVEN IN AXPONA'S ELEVATORS

Jason Victor Serinus

"Do you know where the room with Pearl Acoustics Sibelius loudspeakers is?" That question greeted Jim Austin and me as we navigated the stairs. It grew increasingly common as AXPONA unfolded.

Jim and I weren't much help. Pearl Acoustics wasn't in the show guide. Even so, the buzz around the English company was substantial. Perhaps the relative isolation—their room was at the end of the fourth floor, far from the AXPONA hotel's gimpy elevators—added to the cachet.

Jim and I had no answer—that was the first time we'd heard the scuttlebutt—but I soon learned that the Pearl mystique extends well beyond AXPONA. As we were setting up for our video shoot, a happy Pearl owner stuck his head into the room for a brief hello. He was an oboist for the world-renowned Metropolitan Opera Orchestra.

Pearl Acoustics is one of many hi-fi companies attempting to run the four-minute mile with clichéd descriptors—"bespoke" in this case. Yet it has created something interesting: a loudspeaker with a single 4" driver that it treats as a "microphone in reverse."

It was after show hours when we dropped by. I only had time for a brief listen before the camera began to roll. On a track by the inescapable Diana Krall, colors and imagery were superb. These narrow speakers captured every aspect of Krall's inimitable voice and much-more-imitable piano. This system rendered both with a warm, irresistible, pearl-like finish. I left the room eager to hear Pearl Acoustics speakers and electronics again.

dCS INTRODUCES LINA DAC X NETWORK MUSIC PLAYER

Mark Henninger

During the buildup to High End Munich, British digital-audio specialist dCS announced its latest product, the Lina DAC X, a full-featured network music player said to blend high-resolution streaming with a deeply immersive listening experience. The new DAC X carries over key functionality from the acclaimed Lina Network DAC, adding a physical volume control, IR remote, and direct connectivity to CD/SACD transports.

Built around dCS's proprietary Ring DAC and Digital Processing Platform, the DAC X promises exceptional clarity and detailed sound. It supports popular streaming services including Tidal, Qobuz, and Spotify (and in China, QQ Music) alongside software including Roon, Audirvana, and JPLAY. The Lina DAC X accepts data via

Ethernet, USB, S/PDIF over RCA and BNC, AES3, and TosLink; on the output side, the DAC X can connect directly to power amplifiers or active speakers, enabling a versatile range of system configurations.

Housed in a chassis milled from solid billet aluminum, the DAC X benefits from flex-rigid circuitry aimed at maximizing reliability and audio performance. Like other dCS products, the Lina DAC X is hand-assembled and tested at the company's Cambridgeshire facility, with shipping set to commence worldwide in June 2025.

SILENTPOWER DEBUTS OMNI LAN NETWORK SWITCH

Mark Henninger

SilentPower, the sister brand of iFi, has unveiled the OMNI LAN, a 13-port, optically isolated network switch aimed at audio and home-cinema purists. Announced April 15, 2025, the 1U-sized component employs triple-stage isolation and a femto-precision clock to curb noise, jitter, and timing errors that can creep in when standard IT-grade switches feed high-end A/V systems.

At the heart of the OMNI LAN is an internal optical-fiber stage that converts incoming Ethernet to light and back again, creating complete electrical separation between its nine "Standard" ports and four "Ultra-Pure" ports. The latter add two extra

isolation stages for mission-critical links to streamers, DACs, and A/V receivers. A 10MHz clock-sync interface lets users run the switch as system master or slave it to an external reference, while SilentPower's GMT jitter-reduction circuit keeps data delivery on a tight leash.

A full-color TFT display and the iFi Nexis smartphone app provide real-time bandwidth meters, grounding-mode selection (DC-RF, RF, ISO), and over-the-air firmware updates. For pro installs, an optional cold-rolled-steel rack kit accommodates single or dual units, creating a 24-port switch when doubled up.

The OMNI LAN is available now for $799. You'll find more information at silentpower.tech.

STARKE SOUND UNVEILS HALO SERIES SPEAKERS, SUBS, AND AMPS

Mark Henninger

Starke Sound has announced the availability of its new HALO home audio lineup. The HALO family comprises three two-way loudspeaker models—the M1 bookshelf ($4200/pair), C2 center ($3150), and W1 on-wall ($1950/pair)—each featuring Starke's "Rogrid" aluminum frame and reinforced cabinet. The company is also introducing two new high-powered subwoofers: the SUB1 ($2499/each), a 12.5" with 1kW of power, and the SUB5 ($4999/each), with a 17" driver, 3kW of power, and 120mm excursion.

According to Starke, the M1 bookshelf speaker employs a Diamaze28 beryllium tweeter and a MaxCarbon65 woofer integrated via a premium first-order crossover to achieve low distortion and precise phase coherence. For surround duties or height/side channels, the W1 on-wall model aims to combine elegant design with superior acoustics. The C2 center channel speaker uses dual mid/bass drivers for enhanced dialog. All three are finished in the company's TrueChrome lacquer, a 14-layer paint process.

Starke Sound also unwrapped two new solid state amplifiers: the A3 three-channel ($6900) and A2 two-channel ($6000), each rated at 620Wpc into 4 ohms. Both employ the company's third-generation class-A+AB design, which Starke says runs in pure class-A for typical music signals, seamlessly switching to class-A/B for peaks.

Completing the product family is the Stand 3S, an aluminum speaker stand engineered to lock the M1 monitor in place for optimal performance.

CASTLE LOUDSPEAKERS BRINGS BRITISH CRAFTSMANSHIP TO THE US VIA MOFI DISTRIBUTION

Mark Henninger

Castle Loudspeakers has returned to its British roots with the launch of the Windsor Series, now available in the US through MoFi Distribution. The series features two standmount models—the Earl and the Duke—both handcrafted in Huntingdon, England, and supplied with bespoke matching stands.

The Windsor Series combines traditional British aesthetics with modern acoustic engineering. Each speaker is finished with real-wood veneer in walnut or mahogany and utilizes woven polypropylene mid/

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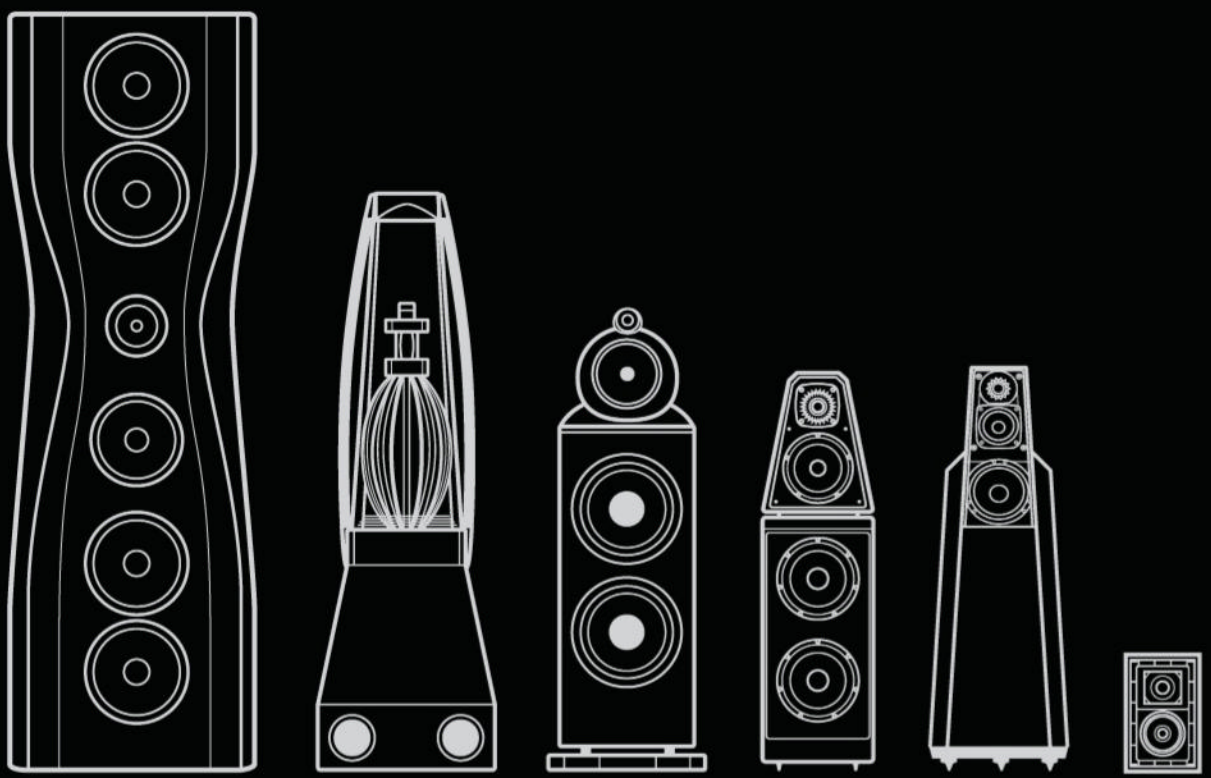

Behind every great speaker... there's AudioQuest.

audioquest

bass cones, glass-fiber voice coils, and a fourth-order Linkwitz-Riley crossover network with air-core inductors. The Earl employs a 165mm mid/bass driver and a 28mm textile dome tweeter and offers a frequency response of 58Hz–22kHz and a sensitivity of 89dB (specific units not specified). The larger Duke features a 200mm mid/bass driver, extending the low-end response and increasing sensitivity to 90dB.

In the US, the Windsor Earl is priced at $5250/pair, the Windsor Duke at $6250/pair, stands included. The Windsor Series is available through MoFi Distribution's network of dealers.

AEQUO AUDIO ANNOUNCES ADAMANTIS AND ENSIUM LOUDSPEAKERS

Mark Henninger

Dutch loudspeaker manufacturer Aequo Audio has introduced two new models—Adamantis and Ensium—featuring a proprietary nanotech enclosure designed to minimize cabinet resonances from 1Hz to 100,000Hz.

The Adamantis is a passive three-way. The Ensium adds 500W of powered bass assist incorporating Aequo's ARPEC analog room and placement-correction system. Both speakers utilize complex, acoustically optimized 3D shapes made possible by the castability of the nanomaterial, meant to minimize baffle diffraction and improve acoustic phase linearity.

Weighing more than 220lb each, the speakers offer a large internal volume relative to their footprint. Ivo Sparidaens, Aequo Audio's founder and chief technologist, states that the design philosophy begins with a perfect, time-aligned acoustic shape. The result is a speaker designed to deliver ultralow distortion and powerful dynamics.

SEISMION PARTNERS WITH MIBS DISTRO

Mark Henninger

Seismion has chosen MIBS Distribution to manage distribution, marketing, and brand management in North America. Partnering with Jonathan Badov of Sonic Artistry, MIBS will expand existing efforts to introduce Seismion's advanced active isolation products to audiophiles. Debuting at AXPONA 2025 in the VAC/Acora room with SAT's XD1 turntable, the new Reactio 2 Series provides enhancements over the original models, including automatic leveling, higher passive damping, a locking top plate, and a 50% reduction in noise.

Active isolation technology harnesses sensitive piezoelectric sensors and motors to achieve up to seven times more effective vibration control than conventional air springs in the critical 1–10Hz range. Seismion founder and mechanical engineer Dr. Marcus Neubauer brings years of research in vibration damping to ensure leading-edge performance.

The Reactio 2 Series is available now, with pricing yet to be announced. Contact MIBS for more information, as well as dealer demonstration and review opportunities.

AUDIOVECTOR UNVEILS FLAGSHIP R 10 ARRETÉ

Mark Henninger

Danish loudspeaker specialist Audiovector has pulled the wraps off its new flagship model, the R 10 Arreté, introduced at High End Munich. Hand built in Copenhagen, the floorstander is billed as a clean-sheet design that celebrates the company's 45-year heritage while showcasing its latest driver and cabinet technologies.

A key talking point is the Dual AMT tweeter assembly, which combines a primary Air Motion Transformer covering 3kHz–53kHz with a "hypertweeter" that extends response to 53kHz. Working in concert with the firm's Soundstage Enhancement Concept waveguide, the array is said to deliver an unusually open and precisely placed treble image.

Below, eight rear-mounted long-throw woofers—collectively offering the cone area of a single 15" driver—form a line-source bass system intended to flood the room evenly with low-frequency energy while avoiding the compression artifacts common to conventional boxes. Two additional front-firing mid/bass units handle the crucial 200Hz–2kHz region.

The drivers sit in an Accelerated Force Concept (AFC) framework that, according to Audiovector, accelerates and decelerates cones with exceptional control, yielding lightning-fast transients and vanishingly low distortion. Cabinet damping can be tuned internally to align enclosure resonance with musical energy, which lends the speaker its "calm yet physical" delivery, the company says.

Each R 10 Arreté is constructed from high-density engineered wood and finished in a choice of African Mahogany Crotch, Canadian Birdseye Maple, or Italian Walnut Burl, all in piano gloss. Audiovector hasn't published an MSRP, but production is limited and distribution will run through the brand's top-tier retailers worldwide.

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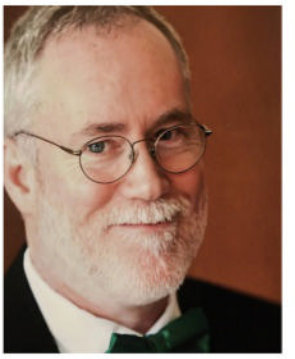
RIP KEITH DOWD, STEREO MAN

Dave Nauber, chief executive officer T+A North America

They say the hi-fi business is one that you never really leave. It gets in your blood. There are countless examples of lifers who wake up every morning and go into the world to evaluate, explain, demonstrate, and—yes—sell stereos. None are household names. Most are not well-known designers or entrepreneurs. No brands are named for them. But their passion and enthusiasm are infectious and motivating, and they have had influence longer than there have been influencers.

On March 15, an original influencer and self-described "stereo man" succumbed to brain cancer. Keith Dowd, 65, began his career at David Beatty Stereo in Kansas City. There, he sold some of the most storied names in audio: Klipsch, McIntosh, Magnepan, Mark Levinson. Beatty's influenced the trajectory of Keith's life in much the same way that Keith influenced so many others. In 1989, he founded Audioport Ltd. in Overland Park, Kansas. He showed a knack not only for selling fine audio products but also for attracting and teaching talented staff who themselves have become lifers.



In 1999, Keith sold Audioport and moved to Connecticut, where he managed sales for Mark Levinson and eventually the entire Madrigal Audio Labs portfolio. When Harman closed Madrigal in 2003, choosing a different approach for those brands, Keith moved on to AudioQuest and, later, Tributaries and Paradigm/Anthem. Most recently, he worked with Vivid Audio of South Africa to establish distribution in the US.

Along the way, Keith worked with, taught, and motivated countless industry professionals including me. As a friend, husband, and father, I know of none better. When I first met him at Beatty's in 1986, I thought he was a bit of an asshole. But soon I found his directness and honesty to be two of his most endearing qualities. His sense of humor and love of music and Guinness drew us even closer. Keith's influence on the audio business is lasting. For that reason, this stereo man is a lifer who is with us still.

Keith donated his body to Vanderbilt University, where he had been treated, so that they might learn more about his cancer and so improve the outcome for others. Always teaching. RIP, my friend.

ISOACOUSTICS UPDATES ITS GAIA PRODUCTS TO "NEO" STATUS

Jim Austin

Ever since Robert Deutsch wrote about the IsoAcoustics Gaia vibration-isolation footers in *Stereophile*'s October 2017 issue, our reviewers—including this author—have been consistently impressed by the efficacy of the products, from the smaller Gaia IIIs to the big Gaia Titans, which I investigated supporting the Revel Ultima Salon2 loudspeakers. Just before High End Munich, IsoAcoustics announced the first updates to these products with the introduction of the Gaia Neo and Gaia Titan Neo lines.

What's new? The most obvious improvement is that the new footers are height-adjustable: By rotating a ring at the Gaias' base, the user can raise or lower that corner of the product sitting on it. The new footers are also easier to install: "The top of the isolator housing sits flush against the bottom of the speaker," the product announcement said, "with an integrated O-ring that compresses for a secure fit." IsoAcoustics also says the footers offer improved isolation, improving sonic clarity.

Gaia Neo footers are available to support a wide range of equipment, from the smallest devices up to speaker weights "of up to an impressive 620 lbs." The footers come in dark chrome and black finishes.

The Gaia Neo series debuted at High End Munich and will be available to customers during the third quarter of this year. Prices have not yet been announced.

MAUREEN JENSON, CUSTOM-INTEGRATION CHAMPION AND INDUSTRY STORYTELLER, REMEMBERED

Stereophile Staff

Maureen Jenson—editor, advocate, and tireless voice for home A/V tech—died March 26 in Hermosa Beach, California. She was 73.

As editor-in-chief of *Audio Video Interiors* in the early 1990s, Maureen helped an emerging profession establish its public face, giving the fledgling CEDIA association vocabulary and visibility; CEDIA honored *AVI* with its Lifetime Achievement Award in 1993. Jenson went on to guide *Home Theater Magazine*, *Stereophile Guide to Home Theater* (Editor-at-Large in 1998, Editor by 1999), *CustomRetailer*, *Technology Integrator*, *Electronic Lifestyles*, and, most recently, *HTSA Insight*.

Wherever her name appeared on the masthead, Maureen paired technical rigor with a reporter's instinct for human drama, always spotlighting the integrators behind the gear. Peers took note,

recognizing her achievements with industry awards: CEDIA Fellow (2011), IPRO Lifetime Achievement (2011), and a Women in Consumer Technology Legacy Award (2012). Friends remember red-eye hops to the UK and Greek isle vacations but also the deadline edits done from show floors.

Away from magazines, she rode horses, supported local animal shelters, and mentored writers and dealers. She is survived by her sister, Carol Gould, and Carol's partner, Nicholas Hynes. A private celebration of life is planned. Donations may be made to the American Cancer Society.

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GRAMOPHONE DREAMS

BY HERB REICHERT

THIS ISSUE: Herb listens to the Woo Audio 20th Anniversary WA24 headphone amplifier.

The iron-and-tube ethos

Woo Audio's 20th Anniversary WA24 headphone amplifier comes in a distinctive, low-slung chassis that welcomes the eye with gentle angular volumes and bright, frosty-surfaced, copper-toned controls.

In the always-crowded Woo–JPS Labs–Stax room at CanJam 2025,[1] Woo's new $12,999 flagship caught everybody's eye, sitting on a table next to its similar-looking stablemate, the $8999 WA23 LUNA, a tube-rectified single-ended amplifier that, unlike the new WA24, uses 2A3 tubes.

I asked Woo Audio founder Jack Wu how he came up with this design. He told me, "My brother, Zhidong Wu, designed it. He did all the original drawings. But after that, we worked together, slowly revising and refining those drawings. We started out with a 3D-printed model, then we had numerous revisions leading up to a metal sampling. It was a long process, during which I worked very closely with him. We are both pleased with the results."

What struck me most about the WA24's chassis was that no matter how fabulous it looked with the lights on—no matter how bright and golden that Woo Audio 20th Anniversary badge looked—I thought the amplifier looked more appealing in the dark, where all you see is the halo of orange light surrounding the volume knob, matching perfectly the hue of fire from the 3A/109E tubes' filament cathodes. That's a nice touch, and the kind of intangible that gives its keeper pleasure every day.

With the lights on, I could see that the WA24's four slender tubes were of a type I'd never seen before. A closer look revealed their Stradi brand logos (screened in Western Electric yellow) on Bakelite bases. Under the Stradi logo, the tube identified itself as 3A/109E, a type I'd never heard of. Under that, it said "Made for Woo Audio."

Above the base, I saw a sturdy-looking vacuum tube with sparkling, unusually thick glass surrounding an unusually stout rod-support arbor. Above that were triple micas stabilizing the laddered-grid frame and gleaming pure-nickel anodes. Those nickel plates and the laddered-grid frame (and the spooky purity of the sound) reminded me of the 71A amps I built in the late 1980s. The 71A was one of the clearest-sounding and alluring-looking of all the directly heated triode tubes I experimented with. The WA24 uses two 3A/109Es per channel, operated in parallel, single ended.

My RCA tube manual indicates that the 3A/109E[2] is built to a common ST16 profile attached to an uncommon B4 base I associate with European PX4 and PX25 tubes. According to Jack Wu, the "E" in 109E indicates it is a "higher gain" version of the 3A/109B, which features a ceramic base. The 3A/109E tubes used in the WA24 Anniversary are premium, new-issue tubes made in Korea by a company called Stradi.

Behind the WA24's copper-toned volume knob lies an Alps RK50 volume control. Flanking it are two smaller, copper-toned knobs. The one on the left offers a choice of higher or lower output impedance. The one on the right is a three-position input selector (two RCA, one XLR).

Flanking those small, copper-toned knobs are a complete set of output sockets: Balanced on the left (4-pin XLR and 4.4mm Pentaconn); single-ended 6.3mm and 3.5mm on the right.

Listening with Meze Elite

I decided to begin my listening with Meze Elite headphones[3] connected to the Woo Audio WA24, sourced by the dCS Lina DAC and Master Clock[4] streaming Andris Nelsons conducting the Boston Symphony Orchestra performing *Shostakovich: Symphonies Nos. 2, 3, 12 & 13* (24/96 FLAC, DG/Qobuz). I play this Shostakovich album often, for the sound of its sound. This is a demonstration-quality recording that pushes every audiophile button: big, tight bass; deep, wide spaces; sharp images; crisp highs; startling transients; copious detail.

Then there's the Dmitri factor. Shostakovich's compositional ambitions are well

1 See my coverage in Gramophone Dreams in the June issue.

2 The 3A/109B is a power/output tube designed for use in telephone repeaters. It is an early tube, apparently introduced around 1925. It had vanished from the RCA guide by 1975.—**Jim Austin**

3 See stereophile.com/content/gramophone-dreams-64-meze-audio-elite-headphones-headamp-gs-x-mini-balanced-headphone.

4 See stereophile.com/content/gramophone-dreams-84-dcs-lina-da-processor-and-lina-master-clock.

displayed in these symphonies. Watching their thoughtfully engineered matrices unfold is the fun part of this recording. Shostakovich's episodic forms feel modernist avant-garde-ish, but they are melded throughout with bits of fanfare and socio-political seriousness, which the composer felt he must include to satisfy the Soviet demand for populist, nonelitist content. The symphonies included on this DG recording are especially good at pushing and pulling these conflicting imperatives.

With the Lina DAC and Master Clock supplying music to the WA24 amp, the easy-to-drive Meze Elite (32 ohms, 101dB/1mW at 1kHz) presented this recording as though someone created it to be an orchestral showpiece and audiophile demo record: impactful, super-3D, nano-detailed. That is also how it sounded through Voxativ's Hagen2 loudspeakers.[5] Through the Meze Elite and WA24, it sounded fantastic and haute bourgeois.

Listening with HiFiMan's HE-R10P

Who wrote the book of the seven seals?

After the Meze, I decided to change my listening game entirely, choosing a different type of headphone and switching to music with a different world view: Dr. Ethel Caffie-Austin singing "John the Revelator" on *The Harry Smith Connection: A Live Tribute to the Anthology of American Folk Music* (16/44.1 FLAC, Smithsonian Folkways/Qobuz). This anthology is a star-packed tribute to one of the most respected and influential artists of the postwar era in America: Harry Everette Smith (1923–1991). My first encounter with Smith's art was seeing his trippy, hand-painted 35mm films in art school. Since that day, I've been slowly discovering the originality and importance of Harry Smith's creative and philosophical achievements.

In the music world, Smith's fame and influence as a visual artist are upstaged by the longstanding global reverence for his 1952 *Anthology of American Folk Music*, a box set of LPs he created from his own collection of 78s for Smithsonian Folkways Records. This collection of 84 old-timey Appalachian, fiddle music, gospel, jug band, blues, and Cajun tunes impacted the music ethos of the 1950s and '60s.

This tribute recording was made in 1997, live at The Barns of Wolf Trap in Vienna, Virginia. I enjoy it because the sound quality is very good, and the performers, including The Fugs, Roger McGuinn, Jeff Tweedy, Dave Van Ronk, John Sebastian, and the above-mentioned Ethel Caffie-Austin, go all-out to show their appreciation for Smith's Anthology.

As I listened...

I was hoping the HiFiMan HE-R10P planar magnetic closed-back[6] would show me how much clarity the Woo WA24's paralleled 3A/109E tubes could manufacture—and these slender triodes seemed right comfortable driving the R10P's 30 ohm impedance. This record, amp, and headphone combo let me roll enjoyably through all 19 tribute tracks with zero thoughts about sound quality. For that achievement, I gave the Woo a perfect score.

In the key of metaphysical distress, the Fugs performing "Nothing"—where they sing about "Quaalude dada" and other surreal-existential absurdities—was a high point of my Woo-review experience. Other than those cool-cat Fug voices, the best part was the ease with which the WA24 + R10P closed-back bypassed hi-fi-ness and foregrounded the Fugs' ironic poetry. That's more evidence that this amp and headphone can disappear. For that, I gave both products a gold star.

I had no other 3A/109E tubes to compare the Stradis to, but in the Woo WA24 these tubes were as thick-glass/high-vacuum clear as any NOS 45 or 2A3 tubes I've

used—but the 109E's characteristic sound had a sweeter essence than either of those. The 109Es present sounds in what I perceive as "the tone" of nickel. Creatively, I call this appealing virtue *nickeltone*, and I also hear it in alnico magnets in cartridges and speakers. I would describe it as a slight haloing that makes vocal and instrumental textures seem polished and gleaming. This could just as easily be the result of the nickel in the output transformers or the nanocrystalline cores of the input transformers, but whatever the cause, this Woo amp sounded the opposite of mechanical. It let each singer's flesh and psyche pass through. While using the WA24, I repeatedly paused and thought, *Yep, that's what that record is supposed to sound like.*

HiFiMan's HE-R10P was so right-on with the Woo that I decided to see if Ethel Caffie-Austin and the Fugs would fare differently through Linear Tube Audio's Z10e headphone amplifier.

Playing "John the Revelator" with the LTA Z10e powering the R10Ps, I was immediately struck by its rich flavor and relaxed demeanor. The Z10e made the WA24 sound lean. The WA24, though, was dramatically better defined, more refined, and transparent.

When I played *The Harry Smith Connection* through the dCS Lina headphone amp, I immediately heard the effect of the Lina's lower output impedance, higher torque, and greater raw horsepower. The full black Lina Stack (with Master Clock and the dCS Mosaic app) powering HiFiMan's R10P is as high-rez as I can go in my studio. This source-amp-headphone combo pulled everything out of every track and presented it in a manner that felt wide awake and engaging.

During this three-amp comparison, the R10P closed-back sounded most fit and athletic powered by the Lina amp. With LTA's Z10e amplifier, the R10P sounded rich, vibey, and psychedelic but maybe a touch fuzzy on the edges. Powered by Woo Audio's WA24, the R10P produced its best-ever transparency, disappearing *almost* completely.

With the ZMF Vérité

The next headphone I tried was ZMF Audio's 300 ohm Vérité closed-back.[7] The recording I selected was *Dis, quand reviendras-tu?* by Ukrainian-born French chanteuse Monique Andrée Serf (aka Barbara) (16/44.1 FLAC, BMG/Qobuz). With the Lina-powered ZMF, Barbara's vocals sounded direct and soulful, with plenty of

5 See stereophile.com/content/gramophone-dreams-95-voxativ-hagen2-monitor-loudspeaker.

6 See stereophile.com/content/gramophone-dreams-75-dcs-bartók-apex-hifiman-audivina-he-r10p-he1000-v2-headphones-page-2.

7 See stereophile.com/content/gramophone-dreams-35-zmf-hagerman-headphones-headphone-amplifiers.

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expressive nuance. The Vérité headphones and Lina amp allowed the varied character of Barbara's different microphones to show through, spotlighting the album's physical production, wherein the singer's voice emerges as the chief element in a framework of separately recorded instrumental elements.

The careful crafting of Barbara's suave elocution dominated my attention, presenting well the shifting textures and moody vicissitudes of the artist's delivery. Sound quality felt irreproachable.

Next, I tried Barbara with the closed-back ZMF through the Woo WA24. I was greeted by a sweet liquidity of tone that felt so luxurious that Barbara was no longer an element in a studio recording. Now, she was a woman, with a face and body and an accessible persona. Except for a sense of awe, my critical mind was silenced by the allure of Barbara singing the album's title song: "*Dis, quand reviendras-tu*?"

This was the moment when all the WA24's tube magic came out. I felt like I was hearing this record like no one had ever heard it before. The form and quality of tube beauty that dominated the WA24-Vérité presentation exceeded any tube beauties I'd previously experienced.

While driving the Vérité with the Woo amp, I became bored of streaming and got revved to play an exotic LP with the Lyra Delos on the Dr. Feickert Blackbird: American violinist Michael Rabin playing Ravel's *Tzigane* with Sir Adrian Boult conducting the Philharmonia Orchestra on a pressed-in-England Columbia violet-label LP (33CX 1597). Whenever I switch from streaming to black discs, I instantly notice how much more bite analog transients have and how much more raw drive and intensity LPs pump out.

This was an important spin-my-head moment. With this high-purity analog source—the Lyra Delos mounted in a DS Audio headshell, the Sorane SA-1.2 tonearm, the AudioQuest Yosemite cable, the MoFi MasterPhono[8] loaded at 100 ohms—the Woo WA24 produced vividness and transparency of a sort few people have experienced. I'm sure of it. It was goosebumps out of the gate.

Ravel's *Tzigane* is a super-intricate showpiece, packed with power and inner detail. And when its complexity comes out precisely focused and neatly sorted, as it did with the Vérité, it's thrilling. Best I could tell, the Delos found everything on the record, and the WA24 + Vérité kept all of it. Detail felt like splendor. Rabin felt divinely inspired.

I don't subscribe to the concept of diminishing returns, but the above-mentioned equipment, none of which is free, rendered this 1958 violin recording with an austere beauty rarely attained in any sound system at any price. The joy of low-power triodes like the 3A/109E is always to bathe in the essence of their purity. The ZMF Vérité made that easy.

But could it drive the Abyss?

These days, some hard-to-drive premium headphones are being upgraded to something fancier-looking and easier to drive. For example, HiFiMan's Susvara was upgraded to a snazzier looking "Susvara Unveiled," and the JPS Labs Abyss Diana TC, which was last year's *Stereophile* Headphone of the Year, has been deleted and replaced by the Diana DZ. Designwise, it looks a little more MoMA store. The specifications suggest that it is *easier* to drive, but it is still not *easy* to drive.

I keep using the JPS Labs Diana TC[9] because at their best, the sound I get from them driven by dCS's Lina headphone amp is what my blind Russian neighbor calls "choregraphed hallucination" and what I call "sound pictures." To light up and dance, the Diana TC needs more torque and horsepower than most headphone amps are designed to provide. Unusually, the dCS Lina's amplifier was engineered with the even-harder-to-drive JPS Abyss AB1266 Phi TC (50 ohms, 88db at 1mW) in mind, so the Lina smiles knowingly and powers the Diana with ease and elan. I doubted the Woo could match that.

Powering my Diana, the Woo played Beethoven's *Sämtliche Klaviertrios* with Pinchas Zukerman (violin), Jacqueline du Pré (violoncello), Daniel Barenboim (piano), and Gervase de Peyer (clarinet) (LP, EMI C 163-02046/50) smoothly and charmingly, with infinite detail and a deep, dark transparency but no varoom or fireworks.

The Woo Audio 20th Anniversary WA24 must be viewed as a highly refined, purist-level tube amplifier designed for evolved headphone aficionados. In my opinion, this transformer-coupled triode amplifier, with no feedback, no resistors, and no capacitors, represents a pinnacle of commercial tube-amp design, one that should be experienced by all audiophiles.

More cartridge stories

I did not come of age in high school. Or college. I came of age in my 20s living in SoHo (the one in New York, not London) between 1975 and 1980. American troops had pulled out of Saigon, and the edgiest music was playing every night in the East Village. My brain was on fire, and my life was revved to redline following the Ramones, the Contortions, and the whole No Wave film and music scene swirling around the Pyramid Club and CBGB.

I remember the day that energy began to fade, just before Christmas in 1979. After dropping out of the music scene for a decade, Marianne Faithfull released her most humanity-stretching album: *Broken English* (LP, Island ILPS 9570). For me and my mates, this record marked a shift in New York's creative ethos. It signposted the end of one cultural era and the beginning of another.

Before I streamed this chilling masterpiece for my Fezz DAC review,[10] I played both sides of my first US pressing twice with Lyra's Delos moving coil.[11] I am fascinated by Lyra's lowest-priced ($2195) cartridge because every day it communicates more *music* to the right side of my brain than I ever thought it would or could. With the Lyra and the Voxativ Hagen2s, every little crackle and shiver of Faithfull's voice was a tear-pulling moment. Every time Marianne sang "The Ballad of Lucy Jordan," I sobbed and shivered all the way through.

Everyone knows the Delos scratches out an extraordinary amount of low-level data, then uses those tiny voltages to construct unusually dimensional sound pictures, with bones, matrices, scaffolding, and puffy clouds of reverb ricocheting against stone walls and over audiences' heads. But no one told me it did goosebumps, tears, and sadness like it's been doing in my system. Say amen brother.

Hana SL MK II Mono

If you're one of those who think that digital recording is technically superior to analog,

I dare you to play *Sibelius: Symphony No.1 in E Minor (Opus 39)* with Anthony Collins conducting the London Symphony Orchestra (Decca LXT 2694), a 180gm orange-label Decca recording from 1956.

Played through the Mobile Fidelity Electronics MasterPhono, the Lyra Delos played this pre-RIAA recording a touch bright and hard. But based on previous listenings, with a variety of cartridges, I figured that's probably how this old Decca sounds. That slight brightness was easy to overlook because the Lyra delivered incredibly deep spaces with glittering transparency, light-speed transients, and unfettered dynamics.

Then, out of curiosity, I played this explosive orange-label Decca with the Hana SL Mono moving coil, which features a nude Shibata stylus and an alnico magnet. Mounted on a standard Technics headshell and loaded at 500 ohms, the SL Mono played this Decca disc smoother, softer, suppler, and considerably richer in tone and texture than the Delos. There was no hardness or brightness. The SL Mono's cast was darker than that of the Delos. And—who would have imagined—the SL Mono added significant extra depth to the soundspace. With the Hana SL Mono MK II, *Sibelius: Symphony No.1* sounded a lot like I imagine it sounded to 1950s audiophiles.

These old recordings were made in studios where wire-wrapped, nickel-rich iron was passing signal everywhere in the recording and playback chains, so I figured the more nickel I add to the signal path during playback, the more the record might sound like it did to its makers.

My door buzzer sounded as I listened to Rabin playing Mendelssohn's Violin Concerto, and guess what? It was FedEx with a little box containing the new, $850 Hana SL MK II Mono.

Thirty minutes later, through the MK II, Rabin's violin was sounding tight and bright—brighter than with the Lyra. Holy mountains of joy, I could now feel Rabin's expressive bowing scraping on the surface of my skin as much as in my mind. The sound was brightly lit, with substantial presence. I played this for my friend Beau, and we were both wowed by the bite, resolution, and *air* coming out of this old mono. We both heard the room the orchestra was playing in. Notes felt tight and right.

After four stiffish unbroken-in sides, the SL Mono MK II sounded like a dead ringer for the *stereo* SL MK II I described last fall in GD90. This is not surprising because the MK II Mono is the same cartridge as the stereo MK II, but with its coils rotated 45° so that electrically it favors horizontal groove modulations. It retains its vertical compliance, so no damage is done playing stereo records.

Most days, I play my mono recordings using whatever stereo cartridges are on my tonearms, and I am never dissatisfied.

With a stereo cartridge, the mono images appearing between my speakers read taller and wider but not as dense or intense as they do with a true mono cartridge. Vintage mono cartridges, like the Fairchild 225-A Alex Halberstadt described in Brilliant Corners #19,[12] take "dense and intense" mono to a level unimaginable by folks raised on CDs and streaming.

To me, mono feels rooted, like an old tree, while stereo specializes in phantoms wearing bellbottoms. Speaking of:

Stop, children what's that sound
Everybody look, what's going down

While playing a 7" 45 of one of my generation's best anthems, "For What It's Worth" by Stephen Stills and Buffalo Springfield (Atlantic OS-13073), I realized that after all these years, literally every guitar note, reverb molecule, and vocal nuance of that 1967 recording is inside my head, etched perfectly into my memory. Like a monster AI, my mind assembles all my memories and shows me exactly what that big-hole disc is supposed to sound like. This made it easy to compare what I heard now with Hana's MK II SL Mono to the sum of my jukebox, radio, and disc-playing experiences.

I wish I could say the Hana played "For What It's Worth" better than my collected memories, but that's not possible. With the MK II Mono, the song sounded properly rendered and was musically satisfying, but compared to my memory of the sonics of many jukebox and radio experiences, reverb felt truncated and Shabata-ized. (My conical-tipped Denon DL-103 plays it closer to perfect.) I remember how, in '67, that song's prominent reverb felt like the shared vibe of people's uneasiness. It was a major component in Atlantic Records' house sound. I don't know what type of reverb was used on "For What It's Worth"—it may have been a mixture of types—but I'm pretty sure Atlantic was still using its famous reverb chamber. No matter how it was made, it's unforgettable.

Unlike buying remastered reissues, collecting vintage mono discs is always an adventure. Old monos come in three sizes—7", 10", and 12"—and play at three speeds: 78, 45, and 33rpm. Their rag paper sleeves feel like linen sheets, and their labels are frameable images with plenty of gold and silver ink. Throw in a spirited mono cartridge, like Hana's new SL Mono MK II, and you'll be living like Frank Sinatra. Highly recommended. ■

8. See stereophile.com/content/gramophone-dreams-80-mobile-fidelity-electronics-masterphono.

9 See stereophile.com/content/gramophone-dreams-72-abyss-diana-focal-utopia-headphones-eleven-audio-broadway-naim-uniti.

10 See my review in the June issue of *Stereophile*.

11 See Gramophone Dreams in the May 2025 *Stereophile*.

12 See stereophile.com/content/brilliant-corners-19-music-among-fairchildren.

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BRILLIANT CORNERS

BY ALEX HALBERSTADT

THIS ISSUE: A classic Mac amplifier and a new record on the audiophile Analog Tone Factory label.

Two things that don't suck

There are things that make me feel so unpleasantly lightheaded that some days I worry my cranium might float away like a helium balloon. Like baby animals generated by AI that I can no longer distinguish from real ones. Skin care for tweens. Headlines about American politics that read like headlines about Turkmenistan. The music of Charli XCX.

And being middle aged. Even the term is a con. At 54, I'm not in the middle of anything, and given the way my back feels in the mornings, the thought of living to 108 fills me with terror. There are things about this stage of life that arrive imperceptibly, and not just the physical frailties. Chief among them is the way one's time on earth begins to feel unsettling and sometimes poignant in its suddenly tangible brevity. Now, when I speak to people in their early 20s, I find myself amazed by their belief that life is brimming with endless possibility and lasts nearly forever. I suppose I might envy them, but I remember being their age and wouldn't relish being that person again.

Fortunately, there's more to middle age than bewilderment at cottagecore and one's worsening nocturia. Personal highlights include being less appalled by my many shortcomings, knowing how to dress better, and giving way fewer f*cks about people's opinions. Also: Needing less sleep. Finding it easier to laugh at myself. And having more access to patience and, on occasion, kindness. Perhaps some readers can relate.

Like me, McIntosh amplifiers from the classic tube era occupy the category of old things that may still have something to offer. A few decades ago, I tagged along with a friend on a long drive upstate; he was going to pick up a restored McIntosh MC240. After we reached the audio shop, which had a whole slew of old Macs for sale, I bought an MC275 pretty much on a whim. I was beguiled by its chrome-and-black panache—it looked like Roy Orbison had turned into an amplifier—and reputation as a mafia-level luxury product of its time. If I'm being completely honest, a part of me enjoyed upstaging my friend by buying a bigger and more expensive amplifier. It wasn't my proudest moment.

Karma is real, and I ended up selling that MC275 a month later. Compared to my favorite amps, it sounded bassy, slowish, and opaque. In retrospect, I was probably pairing it with the wrong speakers, but the experience dampened my interest in vintage Macs.

For a while, anyway. Thing is, I'd never heard an MC225. Manufactured from 1961–1967, the smallest and lowest-powered of the stereo amplifiers has a reputation as the lineup's overachiever. In their treatise on vintage gear Audiomart's Walt Bender and Lennice Werth describe the MC225 as having "the nicest sound in a Mac stereo amp, ... light, airy, and the just-right balance of Mac richness." Ampsandsound's Justin Weber, who bases some of his tube amplifiers on classic mid–20th century circuits, also told me that the littlest stereo Mac was a favorite.

So when my friend Adam Wexler, a hi-fi retailer and vintage gear dealer who maintains a showroom here in Red Hook, mentioned that he had an MC225 in stock, I asked whether he could stand to be parted from it for a few months. For my purposes, the unit that Wexler lent me was perfect—restored with a light touch, with no more parts replacements than absolutely necessary and era-appropriate substitutions. Even the tubes appeared to be NOS originals: the 12AX7 and 12AU7s were smooth-plate Telefunkens, while the 12BH7s and 7591As were screen-printed with "McIntosh by RCA." In other words, the amp looked to be as close to stock as possible.

Let's take a look around the spiffy chassis. Though it lacks the dictator-limo gravitas of the MC275, it's still a handsome, reassuring thing and no larger or heavier than it needs to be. There's a stereo-mono switch, which toggles operation between 25W in stereo and 50W in mono, and a gain pot for each channel, a feature I think should be installed on all power amps. This one came with the original screw terminals, though Wexler provided adapters that work with the bananas and spades on my double run of AudioQuest Thunderbird speaker cables. The pythonlike cables messed up the Mac's lovely wabi-sabi vibe, but nonetheless they sounded pretty terrific together. Oh, and there's no power switch: To turn on the MC225, you simply stick the tiny, ungrounded plug, the kind you might find on a bedside lamp, into an AC outlet. What more do you need?

I connected the Mac to the Manley Steelhead, which I used as a preamp both to decode LPs and to control volume, and sat down for a listen. I began with the rousing "Days in My Arms," from a Qobuz stream of *Leave Another Day*, last year's occultish dreampop opus by Milan W. On this album, Belgian musician and songwriter

Milan Warmoeskerken sounds like Harry Potter—if after graduating from Hogwarts he got a job at an East London record store, discovered MDMA, and got heavy into My Bloody Valentine and Mazzy Star.

Through the Mac, the track sounded underwhelming. Unlike most modern amps, the MC225 didn't create a black silence behind the music, even with a digital source. In fact, the music's backdrop sounded decidedly more beige than black. Worse yet, this self-noise had an audible *texture*, putting a crimp in the Mac's sonic contrasts and transparency.

Compared to many of today's designs, vintage gear often excels at bringing out the tone colors of a recording. But on the Milan W. track, I had to admit that the Mac didn't sound as prismatically colorful as the single-ended–pentode Ampsand-sound Mogwai SE I'd been listening to; it also came across as less saturated than the push-pull Manley Mahis. The MC225 wasn't grayish or bleached, but no one would confuse it with a musical rainbow generator like the Mogwai. And the amp's portrayal of pace and rhythm was no better than adequate.

Our acquaintance was off to an unpromising start, but I was determined to keep listening. After a while, I had to admit that the Mac's tonal balance was pretty well judged: It sounded just right, without any obvious emphases or omissions. The amplifier also extracted a respectable amount of detail, and it staged every bit as well as the other amps I had on hand, creating a soundfield that was wide, tall, and, when called for, deep. There was also that sense of richness Bender and Werth mentioned—not an upper-bass emphasis but a harmonic density and punchiness that made everything sound more real. Which brings me to the one sonic category in which the vintage Mac turned in a state-of-the-art performance: Musicians sounded so embodied and uncannily present in my room that on some tracks it felt downright spooky.

Last month, while digging through a box of 10" records at a local record emporium, I discovered a treasure: an original copy of *Chet Baker Sings* (Pacific Jazz PJLP-11) with its 1954 price tag still stuck to the cover. On my favorite version of "My Funny Valentine," the Mac made Baker's voice sound heart-stoppingly lifelike, and the amp's robust scale and dynamics rendered it larger than life both in terms of size and drama.

The listening session disproved certain jazz fans' conviction that Baker was little more than a pretty boy with a weak, inexpressive voice. By making his breath and rhythmic choices so palpable, the MC225 made it clear that Baker knew exactly what Larry Hart's lyric is about and had thought deeply about what he was singing. It also revealed that his voice possessed both range and volume but that he used it tastefully, with lyricism, restraint, and real subtlety.

In the coming days, as I listened to other records, I had to admit that I was experiencing something that was largely unrelated to the Mac's *sound*. Yes, the sound continued to be a decidedly mixed bag, and in certain respects unimpressive, but there I was, pulling out record after record. I hadn't heard some of them in years, a sure sign that something good was happening with the hi-fi.

After a while, I realized that while I remained aware of the Mac's sound, the 60-year-old amp kept me listening by continually shifting my attention to the music. I first noticed this while playing a mid-1970s Japanese copy of *Blowin' the Blues Away* (Blue Note GXK8036) by the classic lineup of the Horace Silver Quintet, with Junior Cook on tenor and Blue Mitchell on trumpet. I now own every title by this ensemble on vinyl, most in mono, and I continue to marvel at the inventiveness of Silver's compositions, the peerless interplay of

the band, and the sheer listenability of the records, which I never tire of.

While taking in Blue Mitchell's solo on the album's title track, I was struck by the fire and freshness of his playing. Critics rarely included him in the top echelon of jazz trumpeters alongside Miles Davis, Freddy Hubbard, and Lee Morgan, but working in Silver's band brought out his originality and fine taste, and the solos he lays down on these classic sides are unfailingly delightful and always appropriate to the musical setting. This is possibly even truer of his bandmate Junior Cook. As I listened, the Mac allowed me to simply enjoy Mitchell's playing with all my pleasure centers engaged and to let go of the hypervigilant part of the mind that's always analyzing the sound.

This may sound like a small thing that I'm inflating into a larger one, or even a case of audio-reviewer sophistry, but I'm beginning to think this may be the most important thing there is to discuss about a hi-fi component. Many of us equate peak listening experiences with peak sound. This suggests that nothing short of a mind-blowing hi-fi can reliably hold our attention, which if you think about it for even a moment is a pretty miserable predicament. So anything that allows a reprieve from the endless tweaking, optimizing, fussing, and comparing—activities that sometimes occupy more of our listening sessions than enjoying our music—must be considered a small miracle. Imagine sitting down in front of your hi-fi and actually having fun.

This is what the little Mac allowed me to do more often than any other amplifier in recent memory. When I replaced it with the aforementioned amps from Ampsandsound and Manley, I was rewarded with appreciably better sound, but I felt less engaged, less able to give myself over to the music. My analytical mind—what Buddhists sometimes call the monkey mind—kept intruding, prattling on about soundstage width or transient response like an annoying roommate. Meditation teacher Pema Chödrön says that when a thought arises in our minds, we should touch it with our awareness as gently as we might touch a soap bubble with a feather. It's a beautiful teaching, yet after some listening sessions I still feel like coming after my incessant thoughts with a dull hatchet.

Analysis and enjoyment don't always play well together.

Before I put a fork in the subject of the MC225 and enjoyment, I have to talk about Jimi Hendrix. The little Mac made me reach for *Electric Ladyland*, one of the most fun records I can think of. But when I put it on, I remembered just how bad my first US pressing sounds—murky, with too much bass and piss-poor clarity, resolution, and scale.

After a little research, I bought the 2010 vinyl reissue (Experience Hendrix–88697 62398), mastered by the album's original engineer Eddie Kramer and George Marino at Sterling Sound. Though I can be a bit of a Karen about vinyl reissues, this *Electric Ladyland* strikes me as essentially perfect. The two LPs are clean and flat, come in archival sleeves, are widely available, cost less than $30, and sound fantastic. If you need a copy of this monster of a record, you'd be hard pressed to do better.

With the reissue in hand, I dropped the needle on "1983... (A Merman I Should Turn to Be)," Hendrix's epic about fleeing the

war-torn world of men for the primordial oceanic ooze from whence all living things emerged. I wish I could convey to you how much fun it was to hear Hendrix's guitar and bass, Mitch Mitchell's drums, seagull squawks, and the chiming bell sounds of the flexatone floating around me, sometimes sounding like they were directly behind my seat. I felt the kind of excitement I used to feel at 13, lying on my elbows on the rug in front of our Fisher department-store hi-fi, and I got a little wistful about never having been much of a drug taker.

My time with the MC225 made me think about why we continue to listen to certain components long after they were introduced, despite the alleged advancements in musical reproduction. Like records and books, the vast majority of hi-fi products are soon forgotten—just take a look at an audio magazine from 1961, the year the MC225 was introduced. While people continue to seek out the little stereo Mac, few are still grooving to the Bogen-Presto RP-40 Home Music Center or the Coral Tetraxial Speaker from the unfortunately named Fukuyo Sound company of Tokyo, Japan. So what is it that makes an audio component outlast the ravages of novelty and time? It may have a bit to do with its looks and something to do with its sound, but I can't help believing it has even more to do with the ability to make listening compelling in a variety of systems and rooms. If that's the truest measure of longevity, the MC225 deserves to be called a classic.

Chris Cheek's *Keepers of the Eastern Door*

Audiophile record labels have always been a fundamentally lousy idea. Making a good record is difficult enough. And when the label's reason for existence is making "demonstration-quality" audio, it's too easy to end up with pristinely recorded disks of crushingly banal music. Without naming the guilty, does anyone really need to hear another Broadway singer work out her jazzy side into a $15,000 microphone?

There have been happy exceptions. For me, foremost among them are the stunning recordings of Indian masters like Ali Akbar Khan and Vishwa Mohan Bhatt that Kavi Alexander made for his Water Lily Acoustics label. Another exception is jazz saxophonist Jerome Sabbagh's recordings of his own music, which have been covered in some depth in this magazine. With the advent of Analog Tone Factory, a label he runs with jazz pianist and recording engineer Pete Rende, Sabbagh has begun to release music by other artists. I've been listening to the first of these titles—*Keepers of the Eastern Door*, a jazz recording by a group led by saxophonist Chris Cheek and featuring guitarist Bill Frisell—in three different analog formats, and I'm here to report that I've enjoyed myself.

Happily, the main reason is the music. Though he doesn't have the name recognition of Branford Marsalis or Joshua Redman, Cheek is a first-rate improviser and composer with a distinctive sound; while he mostly plays tenor, he's also one of the greatest living performers on the soprano sax. Since 1997, he has appeared on nearly 30 records with everyone from Lee Konitz to Brad Mehldau, but for me, *Keepers of the Eastern Door* is the most enjoyable record of his career.

One reason is Frisell. He's recorded everything from bluegrass to orchestral classical music with total conviction, and he brings that curiosity and broad intelligence to this album. Here, he comps and solos with customary tastiness and sensitivity and wrings uncommon warmth from his instrument. The other reason is the mood: Everyone sounds like they're having a blast in the studio. Perhaps it's because the bassist and drummer on the session—Tony Scherr and Rudy Royston—are Frisell's longtime collaborators. Or maybe because of Sabbagh's insistence on having everyone play together, with no overdubs. Or possibly it's the wild range of the material, which includes a version of Henry Purcell's 17th century art song "Lost Is My Quiet" leading into the Beatles' "From Me to You," which Cheek plays like a funk band sax player at a neighborhood barbecue. It's one of those records where you can hear the good time being had, and everything just flows.

The sound is every bit as pellucid and powerful as on Sabbagh's most recent release, *Heart*—not surprising given that

Clockwise from left: *Keepers of the Eastern Door*; Cheek during the recording sessions; Bill Frisell. **Below left:** the Analog Audio Design TP-1000

PHOTOS ©ADRIEN H. TILLMANN

Engineer James Farber's view from the soundboard while recording *Keepers of the Eastern Door* at New York's Power Station.

it was recorded at the same studio with the same gear and engineered by the same guy, the masterly James Farber. What's different is that it is being released both as a conventional LP and also as a one-step disc, which dispenses with several mechanical steps used in the normal pressing process. Making it requires more lacquers to produce the same number of albums but essentially converts the lacquer into a stamper.

A few weeks ago, Sabbagh lent me a test pressing of each. The way the regular LP captures the bell-like tone of Frisell's amplified guitar, panned hard into the left channel, is goosebump-inducing, and every instrument sounds weighty, saturated, and crystal clear. But to my ears, the one-step is even better. There's more definition and presence, but to my surprise the largest difference is that following the music becomes easier. The performance is more emotional and makes more sense.

The day before I sat down to write this, I also heard *Keepers of the Eastern Door* on $^1/_4$" tape at Ana Mighty Sound, a hi-fi dealer in Paris. Playing on an Analog Audio Design TP-1000, the tape sounded magical, with an effortlessness and rock-solid stability that made both vinyl versions sound a bit fussy. All three formats should be available by the time you read this.

Sabbagh is a friend, but I would love this record even if it were produced by Mel Gibson. He (Sabbagh) told me that upcoming releases will include a set by jazz saxophonist Mark Turner, one of his generation's leading lights, and will be engineered using one of two vintage Altec tube consoles, including a stereo version of the 230B, used by Rudy Van Gelder during his 1950s heyday.

I wish Sabbagh luck wrangling that rarest of unicorns—an audiophile record label that doesn't suck. ■

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SPIN DOCTOR

BY MICHAEL TREI

THIS ISSUE: The Spin Doctor ponders changes in the tonearm market, checks out the Sorane TA-1, and explores Ortofon's latest moving coil cartridge, the MC 90X.

A Sorane TA-1 tonearm, the evolving tonearm marketplace, and the Ortofon MC 90X

A friend who sells high-end audio gear once pointed out that people who shop for separate tonearms are very different from those interested in phono cartridges or turntables in general. If you think about it, this makes sense. Almost everyone buying a new turntable needs a cartridge to go with it, and most turntables come equipped with a tonearm. Tonearm shoppers are more avid enthusiasts than general consumers.

It wasn't always that way. In earlier days of high fidelity, 60 or more years ago, people putting together a cutting-edge phono playback system would typically buy what was known as a motor unit: a Thorens TD 124, Garrard 301, or a few years later the Garrard 401 or Technics SP-10. They would match it up with a tonearm from a company like SME or Ortofon. Then they would buy or build a wooden plinth to mount the motor unit and arm on.[1] Decades later, many of these vintage motor units have gained near cultlike status, and their new owners are still shopping for arms and plinths to use with them. A good chunk of my recent turntable setup work involves helping these new owners assemble a motor unit, plinth, and tonearm that meets their needs, expectations, and budget.

Up until six years ago, selecting a new tonearm wasn't too complicated. If you wanted superb bang for your buck, Jelco, from Japan, offered an extensive range of affordable options in various lengths, finishes, and performance levels. They sounded great, rarely gave trouble, and were easy to use, all of which made them an obvious, frequent recommendation. Many turntable manufacturers also went to Jelco to have custom arms built and branded just for them. In the early 1990s, when I worked for British turntable manufacturer Roksan, we sold thousands of the Jelco-built Tabriz.

If you wanted something a bit more ambitious than a bread-and-butter Jelco, the obvious choice remained SME, whose slogan since the 1950s had been "the best pick-up arm in the world." This was no casual boast. Ever since I was 11 and saw an SME 3009 on Gregg's dad's Thorens TD 125, I knew I wanted one. That itch was scratched in 1986, when I purchased one of the recently launched Series V arms to use with my Roksan Xerxes turntable. When I combined it with a van den Hul MC-1b cartridge (a modified EMT), the combination was glorious, slowly weaning me off my Linn-centric mindset.

While there were always plenty of other options, the complementary SME and Jelco ranges remained an easy recommendation until late 2019, when SME announced it would no longer sell its arms without a turntable attached. Five months later, Jelco sent out a press release saying that they would be closing their doors for good with immediate effect. This double blow left me scrambling for alternatives, but nothing fit neatly. Plenty of turntable manufacturers will sell an arm separately—I'm thinking of Pro-Ject, Rega, VPI, Clearaudio, and Acoustic Signature—but like the new SME, most of them seemed more focused on selling complete turntables, with little effort to promote sales of separate arms. Kuzma and Origin Live count as exceptions, but I rarely see them out in the field without one of their own turntables.[2]

It was SME's decision that I found most baffling. Why would the company that for 60 years had touted itself as making *the best pick-up arm in the world* suddenly tell you that you could only get one if it came bolted to a turntable? That would be like Michelin saying that you could only get a set of tires if you bought a Michelin car. Thankfully, in 2023, SME partially reversed this decision by making their lower cost M2-series 'arms available again for separate purchase—but with large price increases that made them far less competitive.

One popular arm I've seen getting some love from the DIY vintage turntable crowd is the Sorane TA-1. Sorane traded under the name Abis until 2017, and I believe this name change has made the arms somewhat less recognizable than they probably should be. Sorane makes just three basic models, the TA-1, the SA-1.2, and the ZA-12, but you can make that four if you include the longer 12" TA-1L. The three are quite different in concept. The unusual-look-

1 The TD 124 has an onboard armboard. Still, it needs a separate plinth.

2 Although Origin Live provides OEM tonearms to some manufacturers, as Jelco once did.

ing SA-1.2 sports a sliding armtube weight that allows you to adjust its effective mass; see Herb Reichert's review in Gramophone Dreams #73.[3] The heavyweight, I-beam–looking ZA-12 was reviewed by Art Dudley in Listening #194.[4] Art also reviewed the longer TA-1L, in Listening #145,[5] but this is the first time *Stereophile* has looked at the standard 9" TA-1.

Of the three Sorane arm designs, the TA-1 is the most conventional. It's a basic, static-balanced gimbal-bearing arm with an S-shaped armtube and an SME-style H-4 bayonet mount with an azimuth-adjustable removable headshell. The mounting distance is 216mm, and at 518gm total mass, it should work fine on bouncy suspended turntables like the Linn LP12. No effective mass is specified, but I estimate it in the medium to medium-high range.

I received the TA-1 to use with the TT Hub turntable;[6] after that review, Mike Fajen from Sierra Sound (who is not Sorane's distributor) was kind enough to allow me to hold on to the arm for a while for further evaluation. I mounted it on my Brinkmann LaGrange and installed my Lyra Delos cartridge so that I could listen to it in a familiar context.

It's nice to have a tonearm like the TA-1 where all the adjustments are clear and intuitive and everything moves smoothly and precisely. Tracking force is adjusted using a static-balance counterweight and dial, and the VTA/SRA adjustment uses a basic sliding arm pillar with a locking screw in the arm collar—no fancy on-the-fly VTA adjustment tower here. The antiskate bias is controlled with a calibrated screw-in knob on the side of the bearing housing, so there's no fiddling with weights dangling on fishing line. The supplied tonearm cable plugs into a 5-pin DIN plug at the base of the arm pillar. The arm's gimbal bearings rotate freely with no discernible friction and zero free play or rattle. The fit and finish is superb, and everything works as intended, making cartridge setup a snap.

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I stopped in Amsterdam and found a copy of Leonard Cohen's final album, *You Want It Darker* (Colombia 88985365071), in a small, canal-side record shop. This aptly titled album was released days before Cohen died, and here, his deep, brooding *sprechgesang* technique is in full force. With the Sorane TA-1 in place of my normal Brinkmann 10.5, this music was dynamic and powerful, separating the male choral backing voices from the minimalist instrumental accompaniment. The Brinkmann arm is three times as expensive, but the Sorane keeps it close, with speed and detail that would better any of the old Jelco 'arms.

Going back to an old favorite, *Segments*, by the jazz trio of Geri Allen, Charlie Haden, and Paul Motian (DIW-8034), Allen's piano sounded glorious on "I'm All Smiles," her chords and phrasing majestic. On this recording, Haden's bass is a bit introverted; it takes the control and resolution of a great playback system to sort it out. The Lyra Delos/Sorane TA-1 combination kept Haden's bass from sounding too woofy, rendering his basslines clear. Motian's angular drumming is always a treat, and through this setup, the timing and tone of his drums and cymbals were perfect.

The Sorane TA-1 is easy to recommend: a great-sounding arm at a very fair price that works as it should, without complication. Its removable headshell and easy adjustment make it a fine choice for someone who likes to swap out cartridges—but even if you just want to set and forget, it outpaces any Jelco I remember for similar money.

The Ortofon MC 90X

When I was a semibroke college freshman, I got my first new turntable, a Dual CS 506. At first, I equipped it with the most affordable cartridge with any sort of audiophile street cred, the ubiquitous $18 Grado FCE+1. For the money it was hard to beat. But just a few months later—after I had collected a bit more scratch—I went back to my roots, influenced by the British hi-fi press, and bought an Ortofon VMS 20E, the budget choice for many UK audiophiles at the time. That move came at a time when I was rapidly building my record collection, and the hours of pleasure the VMS 20E gave me cultivated a lifelong respect for Danish cartridge manufacturer Ortofon.

Ortofon makes what is easily the most diverse range of cartridges of any manufacturer, covering the entry level with their OM and 2M moving magnet series, the pro-deejay market with their ubiquitous Concorde series, the vintage market with their SPU models, and the audiophile market with their Quintet, Cadenza, and Exclusive series. That last range—Exclusive—is where Ortofon's cutting-edge development takes place, resulting in a disparate array of models that lack the color-coded hierarchy of the 2M, Quintet, and Cadenza ranges.

In 2008, Ortofon celebrated its 90th anniversary by launching the MC A90, which introduced several technological breakthroughs, including a unique body shape that looks kind of like a lowercase letter N, created using selective laser melting (SLM), a technology that is similar to 3D printing but uses metals like steel and titanium, rather than the various thermoplastics used in the more familiar FDM (fused deposition modeling) 3D printing. SLM allowed Ortofon to build a metal body that was immensely rigid, but with intricate voids in the structure to damp vibration and control mass.

The A90 was a limited edition, and it quickly sold out, but five years later a

3 See stereophile.com/content/gramophone-dreams-73-ptp-audio-solid9-turntable-sorane-sa-12-tonearm-page-2.

4 See stereophile.com/content/listening-194-sorane-za-12-tonearm.

5 See stereophile.com/content/listening-145.

6 See stereophile.com/content/spin-doctor-24-connected-fidelity-tt-hub-turntable-and-afi-flatduo-record-flattener-and.

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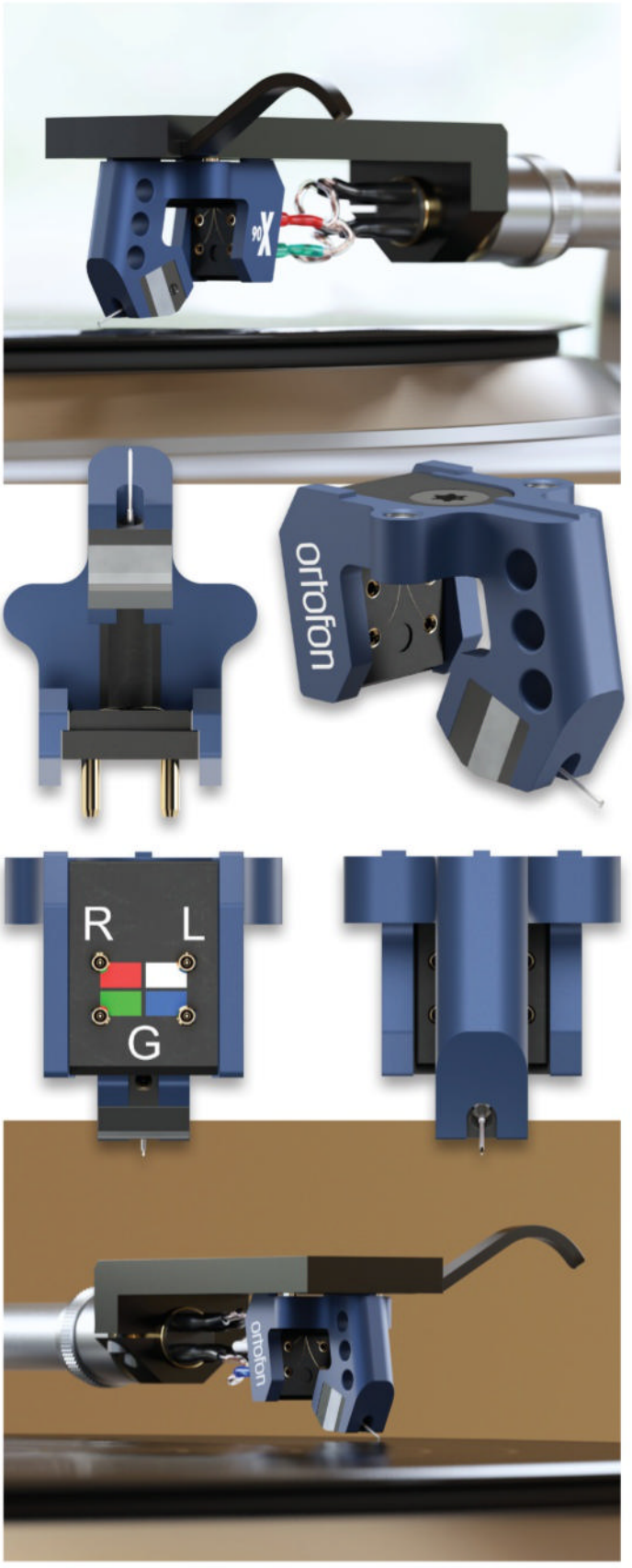
follow-up was launched, the—you guessed it—A95, which added to the A9* formula a body made of titanium, a lighter material that allowed them to eliminate three holes along the body's front facet. On the A90, these holes were used to attach the most dangerous stylus protector I've ever seen, threatening to slice off your cantilever every time you put the cover on. In the new cartridge, the extra space was used to add damping material.

Another N-shaped Ortofon was launched in 2012, but MC A104 didn't have quite the required ring to it, so they called it the MC Verismo. Changes included a wider version of the N body for added stiffness and a diamond cantilever, trickled down from the flagship Century and Anna D (since renamed MC Diamond) from the boron cantilever used for the A90 and A95.

The latest in this series tosses in the towel on the anniversary naming convention. The MC 90X was introduced in Ortofon's 107th year, for anyone keeping score. The 90X is kind of a throwback to the original MC A90, returning to that model's steel SLM body with its distinctive three holes, but without the dangerous stylus guard. Instead, we get the much safer guard design first seen on the A95, with full-coverage protection. Visually, the 90X is nearly identical to the A90, except for its natty new blue color. The bigger change—much bigger—is with the sound.

The A90 was as uncompromising a cartridge as existed 17 years ago, presenting the music with spectacular detail and retrieving gobs of information, but there were no soft edges to cushion less-than-stellar recordings.

For many years, turntable manufacturer Continuum hired me to set up its Obsidian turntable in their demonstration systems at high-end audio shows including High End Munich and AXPONA. The A90 required careful balancing to behave synergistically with the rest of the system. It gave you everything on the record, even stuff you didn't want to hear. Having lived in Denmark as a child and worked for a Danish boss for several years, I like to think I have a tiny insight into the Danish way of thinking, and I expect it pained Leif Johannsen, Ortofon's chief cartridge designer, to realize that not everyone wanted the absolute, pure, unvarnished truth from their records. He used that realization to dial a more burnished glow in the 90X.



One uncompromising element that remains from the prior N-shaped cartridges is the take-no-prisoners Replicant 100 stylus. This tip has contact area with the groove wall that's 100µm along the vertical diagonal but just 5µm along the rotation direction, making it very sensitive to alignment errors. Typical of Ortofon, the 90X has a steep VTA specification: 23°. I got the best results with the arm a little low in the back. J.R. Boisclair, from analog setup specialist WAM Engineering/WallyTools, recently told me that he considers VTA—the angle between a line drawn from the stylus contact point to the cantilever's fulcrum and the record surface—more critical than the SRA (stylus rake angle). I've had similar thoughts for years but kept my opinions to myself for fear of being castigated by the SRA-*uber-alles* crowd. I feel somewhat vindicated.

Ortofon recommends a tracking force of precisely 2.3gm, with no ± range. The gold-plated copper "Aucurum" coils have an internal impedance of 4 ohms, making the 90X suitable for current-mode phono preamps. I experimented with both the current and voltage inputs of the CH Precision P1 phono preamp and had a subtle but clear preference for the current input, which delivered a slightly quieter noisefloor and enhanced

dynamic performance. The 90X's output voltage is 0.25mV, so it needs plenty of low-noise gain. With the voltage input, I settled on a load of 105 ohms for the best mix of dynamics, bass tightness, and top-end response. Most of my listening was with the 90X mounted on a Kuzma Safir 9 tonearm with my Brinkmann LaGrange, but I also used Brinkmann's own 10.5 tonearm. With the 90X's low, 11µm/mN dynamic compliance, the super-heavyweight Safir 9 played nice, with no obvious matching issues.

Despite Johannsen's work to dial back detail on the 90X compared to its predecessors, this cartridge still sucks an astonishing amount of information from the record grooves. Violinist Gidon Kremer founded the annual Lockenhaus chamber music festival in Austria in 1981. During the second event, some of the proceedings were recorded and released as *Gidon Kremer Lockenhaus 1982 Live* (Philips 411 062-1). Recorded in what sounds like a huge church, this chamber recording is an amazing blend of closely miked instruments and a massive acoustic space. On the opening track, Haydn's String Quartet No.1 in B-flat major (Op.1, No.1), you can hear every detail of the players fingering and bowing their instruments but also every scrape, cough, and throat-clearing from the audience, set in a massive bubble around the players. At one point, a huge door at the back of the church closes and the weight of the sound echoes around the room for seconds. Often with lesser cartridges—and with previous N-bodied Ortofons—when the quartet played fast and loud, the strings became thin and brittle. This effect is absent with the 90X, which adds more flesh on the sonic bones and more realism.

Elvis Costello's single *I Want You* (Imp Records IMP 008T) is a harrowing plea from a spurned and obsessed man to his romantic interest; the desperation in Costello's voice is tangible. The 12", 45rpm single brings astonishing dynamics to the mix, as Costello's sense of desperation rises then falls again in resignation. The backing from The Attractions is slow and brooding, but the clarity of Steve Nieve's organ is exceptional. One challenging aspect of this recording is Costello's sibilants, which can sound smeared and fuzzy. With the 90X there's none of this; the sound is clear and full bodied yet razor sharp.

It has been interesting to watch Ortofon's top cartridges develop over the years. Each new model offers a new balance of strengths, often borrowing from what came before, yet the trend is always in the right direction, toward better. While I'd probably get chased down with pitchforks if I called this $5499 needle good value for money, the 90X offers more than its predecessor for less. No one can deny that it's a step in the right direction. ■

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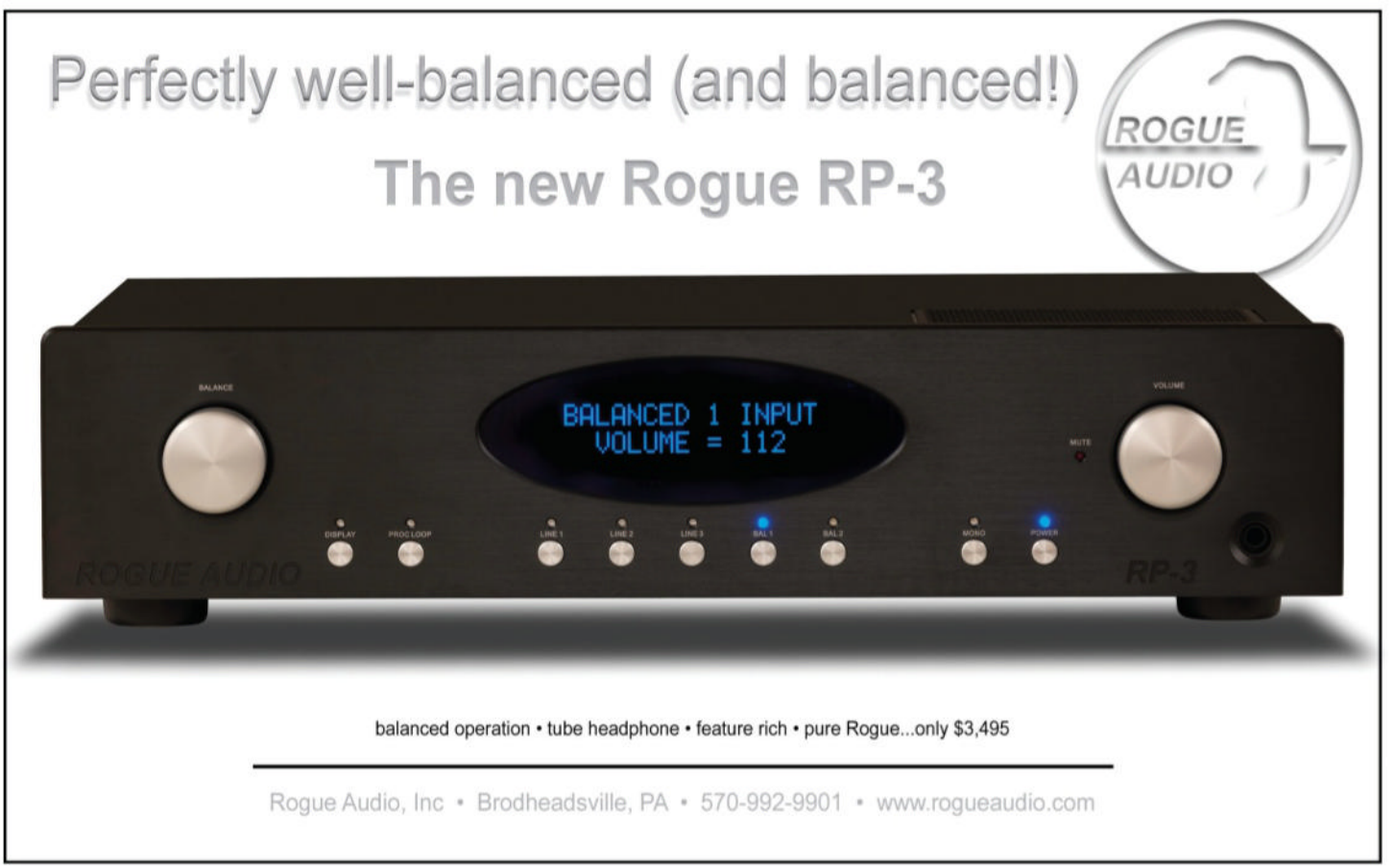

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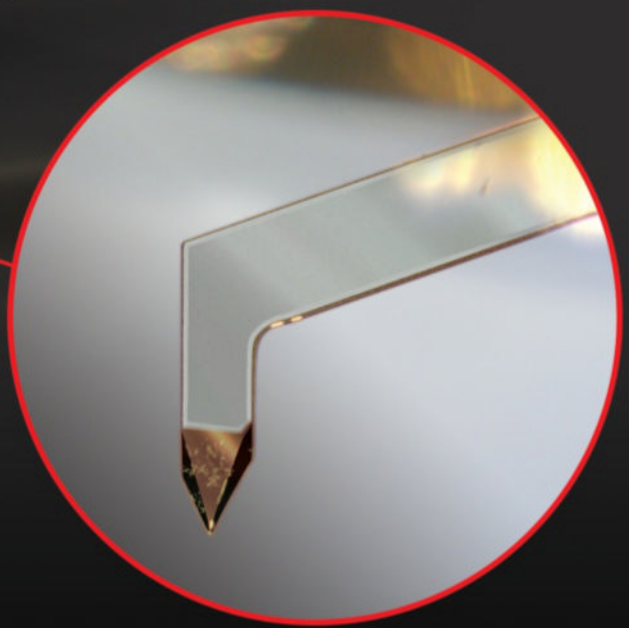

FLAGSHIP OPTICAL PHONO CARTRIDGE WITH ONE PIECE DIAMOND CANTILEVER/STYLUS

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Pathos InPoL Legacy

INTEGRATED AMPLIFIER

Back when gasoline had lead in it and amplifiers came with circuit diagrams in the back of the manual, there was an unspoken understanding that power meant weight. A professional camera was a Graflex Speed Graphic or a Hasselblad 1000F, built like a small battleship and nearly as heavy. Powerful car engines were cast-iron V8s with cylinders you could stick a fist in. And of course, serious amps had transformers that could double as boat anchors.

These days, amplifier design often emphasizes efficiency. Class-D amps in particular have come a long way. Many are terrific, and they're undeniably practical. But there's still something uniquely satisfying about a design that prioritizes timeless expression over economy of electricity or space.

What you can expect from this no-holds-barred amp is vitality. Spirit. *Brio*.

The Pathos InPoL Legacy, a class-A design, is unapologetically massive and so gloriously overbuilt that moving it requires a tactical plan and a chiropractor. It is the most ambitious product that Pathos has ever built—a $55,000 set-no-limits behemoth that's as much a monument to excess as an argument against half-measures. It communicates in warm, golden tones that there's still magic in thermionic emission, even (or especially) when it arrives in a 309lb (!) package.

Ciao, bella

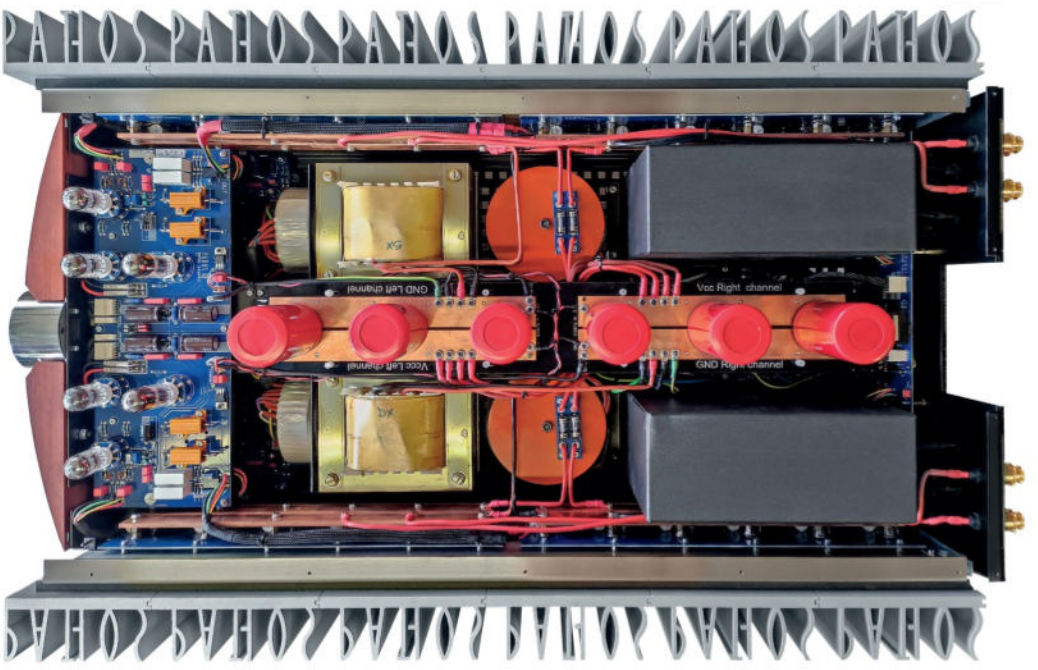
In my review of the solid state Audia Flight FLS10 (see the February 2025 *Stereophile*), I nattered that an integrated amplifier "helps declutter a room, appealing to minimalists." Ha. There's nothing minimalist about the integrated Pathos InPoL Legacy. It weighs as much as an offensive lineman.[1] It's 34" deep—almost three vinyl albums laid end to end. My equipment console would tolerate neither its heft nor its depth, so I relied instead on a superbly built 3'-deep, 22"-wide Pagode amp platform from German company Finite Elemente.

When the movers carried the Legacy into my listening room, lowered it on the amp stand, and gently removed the red cloth cover, they and I stood there for a couple of seconds, taking in the design. Then, almost simultaneously, the four of us sighed, "Wow."

The Pathos InPoL Legacy looks like something dreamt up by an Italian design house after one too many espressos from a La Marzocco KB90.[2] Both machines combine high-end industrial engineering with fearless visual swagger. The Pathos website alleges, "Through the years, the idea 'the uglier they look, the better they sound' has been common in the audio business." If that's a real trope, the Legacy torpedoes it. Its aesthetic clearly isn't an afterthought.

The movers left; my work began. Starting at the back, I locked onto the Legacy like a raccoon eyeing a picnic cooler. Dual gold-plated speaker terminals sit alongside three RCA inputs and three balanced XLR connections. The Legacy has no digital inputs nor a bay for an add-on digital board *à la* the FLS10. Four penny-sized, slotted covers hide the user-replaceable fuses. Finally, there's a master AC switch.

In typical Pathos fashion,[3] the heatsinks on the sides of the amplifier are in the shape of the company logo. On the Legacy, the logo pattern is repeated six times on each flank. The joins between these 12 modules are clearly visible—slightly more so than the 18 flush-mounted screws that secure the two-part metal cover. This may bother sticklers who want a seamless, monolithic appearance and delight aficionados of an unabashedly industrial look.



With the Pathos, words like *goddam* and *Jesus* would sometimes escape my heathen lips. Once or twice, I produced an involuntary "Oh!," exclaimed in pleasure and disbelief.

On the front of the amplifier is a 16" × 5" convex panel made of padouk, a lovely reddish-brown tropical hardwood. Protruding horizontally from the top of this piece and rising a few millimeters above it is a silver cylinder. About 3" in diameter and 2" deep, it looks like either a circular display or an oversized volume knob. To

1 Look, ma, my first-ever American-football simile! This Dutch native may become a Real American® yet.

2 See shorturl.at/HfQma.

3 The only Pathos amps without those eye-catching fins are the T.T. (introduced in 1994), the ClassicOne (1999), the Pathos Aurium headphone amp (ca 2013), and the more recent AmpliD—Pathos's first class-D amp, which of course runs cool and doesn't need such dissipation.

SPECIFICATIONS

Description Fully balanced hybrid, class-A integrated tube amplifier with double InPoL technology, capacitors by Itelcond and ICEL, resistors by Vishay. Tube complement: Two Tung-Sol ECC803s, one Sovtek 6H30 per channel. Inputs: 3 RCA, 3 XLR, input connectors by Neutrik. Outputs: 1 pair loudspeaker binding posts by DBT. Maximum output power: 100Wpc into 8 ohms (20dBW), 170Wpc into 4 ohms (19.3dBW). Frequency response 2Hz–100kHz, ±0.5dB. Input sensitivity 700mV RMS at full output power. THD: 0.02% at 1W, 1kHz; 0.5% at 100W, 1kHz. S/N ratio: >97dB. Gain: 31dB unbalanced, 25dB balanced. **Dimensions** 21.3" (540mm) W × 33.7" (840mm) D × 11.8" (300mm) H. Weight 309lb (140kg). **Finish** Padouk wood and Matte Metallic Black. **Serial number of unit reviewed** 222005. Manufactured in Italy. **Price** $55,000. Approximate number of US dealers: 10. Warranty 3 years. **Manufacturer** Pathos Acoustics, Via Palù, 52, Grumolo delle Abbadesse, Vicenza, Italy. Tel: +39 0444 264732. Web: pathosacoustics.it/en/home-english. US distributor Harmonia Distribution, 1712 Corrigan Ct., La Verne, CA 91750. Tel: (909) 931-0219. Email: info@harmoniadistribution.com. Web: harmoniadistribution.com.

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my delight, it's both. I'll return to this.

On each side of this knob are three tubes: two Tung-Sol ECC803s—a premium, low-noise version of the more familiar 12AX7—plus one Sovtek 6H30, sometimes marketed with the "SuperTube" epithet[4] because of its excellent specifications. Pathos claims there is no need for biasing and that the tubes can last upwards of 10,000 hours.

I assumed that the 18 metal tube guards—each shaped like the blade of a small pocket knife—were positioned around the valves to reflect their glow. Same with the 8.5" × 4" mirror-polished metal panels placed next to the tubes at 45°: They seem designed to bounce and magnify, like angled mirrors in a candlelit room.

But I couldn't test this. I couldn't turn on the Legacy *at all*. The Legacy has an IEC mains socket, but it's of the C20 variety made for 20A loads, the kind with horizontal pins. The wheeled birch-wood crate the amp arrived in contained no companion cable, with the C19 plug on one end, and I had none on hand. Also MIA was the amp's remote control.

The empathetic folks at Harmonia—the California-based Pathos distributor affiliated with Upscale Audio—pronounced these oversights "vexing and irksome" in a text to me (they're a literary bunch!). A-looking they went. Within a day, the missing items had surfaced; they'd been misplaced after an audio show where the Legacy had made an appearance.

Three days and one FedEx shipment later, music was finally in the cards. Sticking to my usual routine, I used the newly arrived cable to plug the amplifier straight into the wall, bypassing the AudioQuest PowerQuest PQ-707 conditioner that ably juices and protects the other electronics. Using AudioQuest Thunderbird cables, I connected the wonderful Estelon X Diamond Mk II speakers, which had temporarily stuck around in my gear closet after I'd rave-reviewed them for the January 2025 issue. For my digital source, I used an Aurender A20 streamer-DAC connected to the Pathos amplifier via Red River balanced interconnects. Later, I auditioned the Legacy with my reference speakers, a pair of Focal Scala Utopia Evos, and with the excellent Eversolo DMP-A10 streamer.

To get things going, it is necessary to move the power switch on the back panel to the up position. Actually turning the amp on, however, requires pressing an almost comically teensy button on the bottom left of the fascia; it's roughly the diameter of a medium-sized nailhead. You'll probably do this by feel a lot because that shallow control is more or less obscured by the padouk panel. An identical-looking button on the right lets you cycle through the six inputs, identified on the dual-character display as A1 through B3.

Primo piatto

The Legacy will be ready to play music about 30 seconds after power-up. Until then, a red, dotted P appears on the circular display. Does it stand for "Patience"? "Preparing"? "Please wait"? Or could it be "Pathos," "Protection," or "Purgatory"? The latter would be funny, a limbo where your music waits to be allowed into the world. Pathos says that "superior sonic performance" can be expected after 20 minutes. I found that to be true, although the sound continues to improve for at least another half-hour.

When the display is done P-ing (forgive me), it defaults to showing the two-character volume level, up to 99. You can't turn it off or dim it. In my mostly darkened room, I found this distracting, so I used LightDims, which are made of a mildly adhesive, half-transparent foil, like the material used to tint car windows. The rough circle I cut out with scissors tamed the Pathos's bright display

4 So named, apparently, by Balanced Audio Technology's amplifier designer Viktor Khomenko; see shorturl.at/e3M6v.

MEASUREMENTS

Despite the InPoL Legacy operating partly if not wholly in class-A—which means that increasing the current leaving those 4mm speaker outputs causes the amplifier to cool down rather than heat up—I preconditioned the unit by running it at 10% of the rated 100W/8 ohm output for one hour. Over that period, distortion (fig.1) increased slightly, from ~0.047% to a steady 0.06%; this uplift with temperature is a feature of most low-feedback designs. The distortion is second- and third-order in roughly equal measure.

The maximum spot temperature registered across the heatsinks was 59.9°C at a room temperature of 20°C, so this expanse of ornate metalwork requires careful siting and plenty of airflow. It draws 855W from the wall at idle.

Such is the physical scale of this amplifier that it's easy to forget it's an integrated rather than a power amp; its 31dB of overall gain is closer to typical for the latter than the former. The 630mV input required to raise the output to the rated 100Wpc at 8 ohms is well within the compass of all modern (digital) line-level sources. The stepwise attenuator, meanwhile, covers just 1dB over the top six steps and 3dB over the top 10 steps (99 to 89). The top 20 steps cover 7.8dB, the top 30 steps 12.5dB; 40 steps, 18.9dB; 50 steps, 23.9dB; 60 steps (99 down to 39), 28.9dB; 70 steps, 34.8dB; 80 steps, 40.3dB; 90 steps (99 to 9), 51.4dB; with the last nine steps operating over 2–4dB each. The maximum useable volume range is 70dB.

In practice, the InPoL Legacy achieves higher power than its rated 100W into 8 ohms, offering 2×160W with that load before falling back to 2×105W at 4 ohms (ref. 1kHz at <1%THD). Increasing the THD limit to 2% realizes a substantially higher 2×220W at 4 ohms, and under dynamic conditions, to 182W and 225W into 8 and 4 ohms, respectively (fig.2). Current output is limited to just 7.5A; although this current is sufficient to maintain the rated class-A condition into 8 ohms (where draw from the wall increases slightly to 900W), this

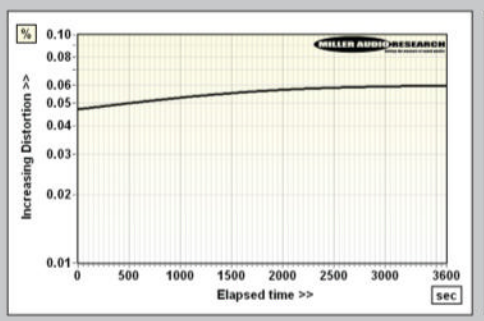

Fig.1 Pathos InpoL Legacy, distortion ref. 1kHz/10W/8 ohm output over one hour (3600 seconds) from cold to 59°C heatsink temperature.

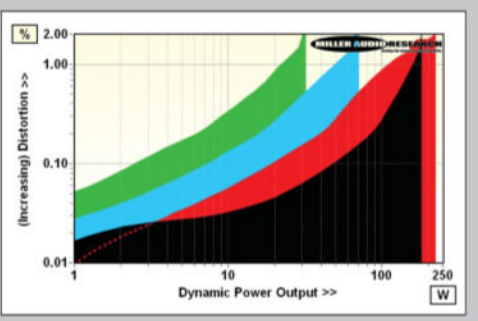

Fig.2 Pathos InPoL Legacy, dynamic power output (ref. 1kHz/10msec) versus distortion into 8 ohms (black), 4 ohms (red), 2 ohms (blue), and 1 ohm (green) loads.

Not another pretty face.

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perfectly. A six-sheet LightDims variety pack costs just $20 and will likely last you a lifetime.[5]

About that volume knob: You have to use a little elbow grease—wrist grease I suppose—to turn it. Operating it with one or two fingers doesn't work, at least not easily: There's too much resistance. Increasing the volume from, say, 40 to 65 takes four 120°, full-handed turns, during which relays click rhythmically.

This minor workout may be for the best. The class-A Legacy is rated at 100Wpc into 8 ohms and 170 into 4 ohms, reflecting the Legacy's MOSFET output devices. With the Estelons in the system, at the listening position, I measured 100dB peaks at 67 (two-thirds max volume); the Estelons have a sensitivity of 88dB/2.83V/1m. The Focals (92dB/2.83V/1m) responded even more vigorously: Things easily got loud enough for my most intense headbanging moments. I shudder to think of the clamor if you were to nonchalantly go past 75 on the dial.

I found it hard to ignore the partial dropouts—split-second reductions in gain—that accompanied every 0.5dB-step adjustment, as if the amp were stuttering. At the same time, a faint, percussive thwup emerges from the speakers with every stepped change. Harmonia's Jesse Luna relayed my experience to Pathos HQ in Italy and got the following response: "The volume control is a laddered resistor network that uses premium Vishay Dale metal-film resistors and individual relays, so the signal goes through one

5 See lightdims.com/store.htm.

measurements, continued

limitation is at least partially responsible for the collapse to just 70W and 33W into 2 and 1 ohm loads, respectively.

Distortion increases gently with level over the first 10W, from 0.016% at 1W to 0.032% at 10W, then increases more steeply to 0.046% at 20W, 0.12% at 50W, and 0.3% at the rated 100W (all ref. 1kHz into 8 ohms)—all consistent with Pathos's published specifications. As a function of frequency, distortion increases at higher frequencies—another feature of the reduced compensation—and also at lower frequencies, especially at the lower power levels (fig.3). At 1W into 8 ohms, the range is 0.009–0.05%; at 10W, the range increases to 0.018–0.45%, and at 100W, to 0.20–3.4% (all ref. 20Hz–20kHz).

Noise is low, and the A-weighted S/N ratio is above average at 88.9dB (ref. 0dBW), while the amplifier's output impedance (dotted trace, fig.4) is a usefully flat 0.218–0.25 ohms from 20Hz–20kHz, rising thereafter to 0.74 ohms at 100kHz. This is still sufficient to modify the InPoL Legacy/speaker system's frequency response due to swings in loudspeaker impedance, but the amplifier's "native" response is largely, and uncommonly, unaffected by changes in nonreactive test loads between 8 and 1 ohms. The response reaches from 1Hz to 30kHz into 8 ohms (–0.5dB), and is –4.9dB at 100kHz. Into 1 ohm, the rolloff is only slightly higher: –0.5dB at 20kHz and –6.6dB at 100kHz (fig.4, black and green traces, respectively).

In short, this amplifier is powerful enough for medium sensitivity loudspeakers of, preferably, 6 ohm nominal impedance and above. The unity-gain solid state output is (probably) a single-ended, class-A MOSFET stage in a fairly typical common source configuration but with an inductor rather than series resistor between the FET source and ground. This would increase the efficiency of the class-A circuit as claimed but also limit the current available into lower impedances, as seen here.—**Paul Miller**

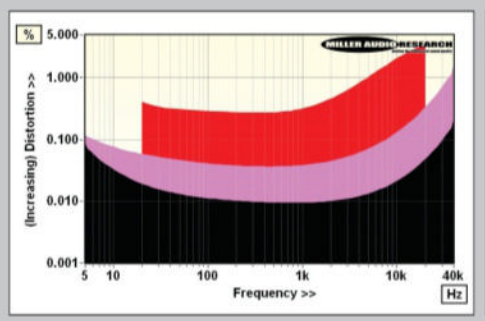

Fig.3 Pathos InPoL Legacy, distortion versus frequency 5Hz–40kHz at 1W into 8 ohms (black), 10W into 8 ohms (pink), and 20Hz–20kHz at 100W into 8 ohms (red).

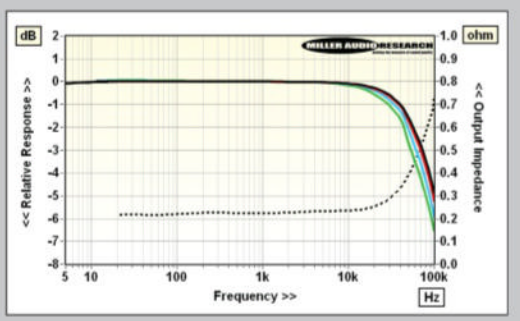

Fig.4 InPoL Legacy, frequency response 5Hz–100kHz into 8 ohms (black), 4 ohms (red), 2 ohms (blue), and 1 ohm (green), all as a function of output impedance (dashed trace, right-hand Y axis).

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resistor per channel and comes out 100% pure. Because they're a mechanical device with a switching speed, there can be a very short delay between the devices responding." For maximum sonic purity, Pathos's engineers rejected the idea of inserting a mute circuit, transistors, or ICs into the signal path, at the expense of the tiny serial dropouts I mentioned. "These kinds of solutions would most definitely impact the overall sound quality in a negative way," team Pathos asserted. I can easily live with that decision.

What I *couldn't* brook was the Legacy's remote control. Even with a fresh battery, turning off the amplifier often required as many as a dozen power-button pushes. Curiously, that same button performed better—but still not reliably—when powering the Legacy *on*. The remote has gray icons printed on a mottled silver finish. Until you become familiar with the buttons and can operate them by feel, prepare to do a lot of squinting, if you are of a certain age. I eventually just kept the master volume at 60 and adjusted from there within the Roon app running on my MacBook Air.

Oh, and those tubes, surrounded by reflective metal surfaces I'd figured would help create a bit of mood lighting? Even in the dark, they emit only the faintest hints of light: pinpricks of orange, more ember than flame. It's subtle, not showy.

Secondo piatto

Most audio components' capacitors are soldered out of sight, neatly concealed inside the casework. Not the Legacy. Mounted in the silver center bay that runs lengthwise across the top of the amp are six custom capacitors—"pretty maids all in a row,"[6] my brain quipped. Each is Ferrari-red and looks like a D-cell that's been hitting the gym. These caps are made in Italy by Itelcond. Along with those logo-shaped heat fins, they've become part of the Pathos look. The company sources smaller, interior capacitors from Italy's ICEL. The input and speaker connectors are supplied by Neutrik and WBT, respectively. The power supply, which is borrowed from the Pathos Adrenalin and InPower monoblocks, is made in-house.

Damiano Zanini, Pathos's director of research and development, walked me through some of the amplifier's other internal highlights. "We use thick copper bars inside the amplifier to handle the high currents involved, ensuring robust and efficient power delivery," he emailed. "The input selector is designed with a special feature that not only selects the signal but also the source ground. This helps avoid ground loop issues."

Speaking of ground loops, the Legacy is probably the quietest tubed amp I've had in my system. No noise of any kind emanated from the speakers, even with the volume turned way up. I did hear a (transformer?) hum from the amplifier itself, but only late at night if I listened intently from inches away. When I moved back a foot, all seemed dead silent. At its lowest, the noisefloor in my listening room is around 32dB. Placing the sound pressure meter on top of the Legacy's vented chassis gave me a reading of 38dB. I think that's louder than a gnat breaking wind, but not by much.

The amp's tubes, I learned, are used in a totem-pole configuration—a classic design that, topographically speaking, stacks single-ended stages to maximize gain and control. Pathos outfitted the Legacy with patented InPoL technology. The term is a portmanteau of *Inseguitore Pompa Lineare*, or "Linear Pump Follower"—a nod to how the solid state output stage "follows" the tube stage's voltage, while acting as a high-current "pump." The tubes provide all the voltage gain and shape the sound; the solid state circuit delivers current, adding nothing but muscle. There's no global negative feedback, and the signal remains in phase throughout. The idea is to preserve the harmonic and tonal integrity of the tubes while providing the current necessary to drive difficult loads. With the Legacy, Pathos literally doubles down via "*doppio* InPoL" technology, which essentially uses two InPoL circuits in a bridged configuration. This cranks up current delivery and allows for higher-power output.

The tubes themselves don't get especially hot, but the amp's overall thermal behavior is notable. According to my infrared thermometer, after 20 minutes of idling, the Legacy's temperatures were 95°F on the metal plate between the tubes, 93° on the black top, and 109° in the recesses between the heat fins. After six hours of playing moderately loud music (80–85dB at the listening position), the numbers were 101°, 114°, and 125° respectively. The amplifier had arrived in mid-October, just as nighttime temperatures in my part of New England started dipping into the low 30s, so I can't say I minded the toastiness. In the middle of the summer, I might feel more conflicted.

Dolce

It typically takes me weeks to get a handle on an amplifier's character. It was different with the Pathos. By day two, I understood what the amp is about. The word I kept coming back to was *generosity*. The immodestly named *Mingus Mingus Mingus Mingus Mingus* (24/96 FLAC, Verve/Qobuz), a career-high album by—well, you know—sounded big and lavish. It was a very different presentation from the one served up by the impressive solid state Audia Flight amplifier that preceded the Pathos in my system. In a direct duel between the two Italians, the tube amp brought more brashness, more *appassionata*. The Audia Flight was a bit starker and punchier.

Forty minutes later, I was practically startled out of my chair when Pepper Adams started blowing his baritone sax on the album

6 If you're wondering whether that's a reference to the nursery rhyme, the Eagles track, or the Rufus Thomas Jr. song "Walking the Dog," the answer is yes.

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Mingus and his band had recorded some five years before: *Blues & Roots* (24/192 FLAC, Rhino Atlantic/Qobuz). Adams's opening notes on "Moanin'," cocksure and gritty, are placed mostly in the right channel but audibly reflect off the studio wall on his right (that's our left), gaining a bit of extra bite on their journey. You know how some exceptional musical moments get you grinning? This went beyond that. I literally laughed out loud with the pleasure of it, the brassiness, the nerviness. I thrilled to the cheek of Mingus's wailing nonet, its members alternately challenging their band leader and falling in line behind him.

By the two-minute mark, my torso was tingling, and 10 seconds later, I was overcome. That's no hyperbole: The sheer power of the performance, funneled through the Pathos, hit me in the gut. It was also the *message* that moved me. The track proclaims the indomitable desire for freedom, for release. That feeling permeates the whole recording. In a pinch, I'd still pick *The Black Saint and the Sinner Lady* as the shiniest of Mingus's pearls. Regardless, *Blues & Roots* must be one of the most visceral jazz events—I use that word advisedly—ever committed to tape. And holy hell did the Pathos amp bring it, with a bounteous presentation that expanded the soundstage in all directions, a picture of musical generosity. There's that word again.

Before I get carried away, I should point out that on Michael Hedges's *Oracle* (16/44.1 FLAC, Windham Hill/Qobuz) and a range of other recordings, the Pathos was ample in the lower midbass, making the acoustic guitar sound two to three times larger than life. I heard the same thing on Paul McCartney's "Jenny Wren," off *Chaos and Creation in the Backyard* (16/44.1 FLAC, Capitol/Qobuz). Big acoustic guitar. Big clarinet. The sonic warmth of the Italian heavyweight surpasses that of the Margules U-280SC 30th anniversary monoblocks in my kit. That's not a bad thing, just as a rich chocolate torte isn't a sin. There's indulgence and lavishness in that dessert, and so it is with the amplifier. Seductive yet composed, the Pathos Legacy isn't scrupulously uncolored, which is also to say that it's not analytical in the slightest.

"Apartments" by Sybarite5, from *Collective Wisdom* (24/96 FLAC, Bright Shiny Things/Qobuz), came next. In my FLS10 review, I wrote that on this somber mood piece, we can hear the difference between drops of different sizes. Some hit grass or plants while others splash loudly off a table, a window sill, a rock. "On less-resolving systems," I opined, "the downpour sounds like the crinkling of foil or bubble wrap, like a *wash*. ... The resolution is such that the drops are separate, distinguishable events." It wasn't like that with the Legacy. It gave a bit less definition to the drops but displayed a more "whole" quality, subsuming each individual splash into the sound of *rainwater* rather than *drops*. I'd give the nod to the Audia Flight's handling of this effect, but I found it easy to succumb to the Pathos amp's impressionistic lyricism.

I'm not implying that the Legacy amplifier doesn't do musical accuracy. "Spirits in the Material World," an instrumental version of the Police song from bass ace Michael Manring's *Drastic Measures* (16/44.1 FLAC, Windham Hill/Qobuz), stood out via the Pathos. The uncannily convincing electric bass sung with that exciting metallic growl of a real amplified bass guitar. Roon Radio had served up this previously-unknown-to-me album, probably because Manring frequently collaborated with Michael Hedges. As jazz goes, *Drastic Measures* is on the light side. A superior album is Manring's *The Book of Flame* (16/44.1 FLAC, Alchemy/Qobuz). Listen to his composition "Your Ad Here," an audiophile-grade, Stanley Clarke–inspired funkfest whose wicked groove also calls to mind Tony Levin at his most deliriously creative.

The Pathos excelled at lateral soundstaging. One of the percussion parts on Israeli oud player Yinon Muallem's "Six Senses," off *The Way It Goes* (16/44.1 FLAC, Magda/Qobuz), seemed to come from a good 3' outside the right speaker. It pushed deep into the room.

I had to put the amplifier away for a couple of months when other reviewing duties took precedence. (Don't take "put away" literally—there's no way I could've moved the Pathos without help from a couple of weightlifter types.) When I welcomed the amp back into service, it wasted no time reasserting its hold on me. Just to make sure I'd hooked everything up correctly, I randomly played *Nightfall* (24/96 FLAC, RCA-Sony/Qobuz) by Till Brönner (trumpet and flugelhorn) and Dieter Ilg (bass) and was pulled into the music almost immediately. Their version of Ornette Coleman's "The Fifth of Beethoven" arrived in the room with drama and flair. Both instruments shone with a purity of tone that felt disarmingly genuine. Engineer Arne Schumann's mix places them fairly close together—I would have preferred more spread—but it's not like the Pathos exaggerated the effect.

The title track, composed by Ilg and Brönner, has a more expansive mix, with the bonus that Brönner's part appears more than once—to the left of the original and a few feet further back (all accomplished through a digital plate echo, and a reverb effect by the sound of it). The horn notes sometimes overlap in breathtaking ways. There's also an identical but much quieter third part, slowly fading into blackness. It all sounded phenomenal.

With the Pathos, words like *goddam* and *Jesus* would sometimes escape my heathen lips. Once or twice, I produced an involuntary "Oh!," exclaimed in pleasure and disbelief.

Addio, amore

With most recordings, Pathos's Italian thoroughbred mirrored its immodest physical dimensions with an immense soundstage. I don't recall hearing another amplifier in my system that delivered width, depth, height, and life quite like this bodacious beauty. A combination of presence and exceptional drive makes it a musical instrument in its own right.

Yes, it's a bit colored (most amps with a tube stage are), but it's also smooth, authoritative, and completely fatigue-free.

The Pathos Legacy has a moderately fleshy midbass signature that won't remind you of clinical lab gear. Presumably, it wasn't intended to be as neutral as the beige walls in a rental apartment. What you can expect from this no-holds-barred amp is vitality. Spirit. Brio. Pair it with speakers and electronics that are slightly on the lean side of neutral, and I can't imagine you'll ever run out of music that, animated by the Legacy, hits you right in the feels. ■

ASSOCIATED EQUIPMENT

Digital sources Aurender A20. Grimm Audio MU1. 15" MacBook Air running Roon 2.0. Eversolo DMP-A10 streamer.
Preamplifier Benchmark HPA4 line stage.
Power amplifiers Krell FPB 200c (recapped). Audia Flight FLS10.
Loudspeakers Focal Utopia Scala Evo. Estelon X Diamond Mk II.
Speaker cables AudioQuest Thunderbird Zero.
Power cables and interconnects RSX and Clarus Crimson power cables. AudioQuest Red River balanced interconnects.
Accessories Townshend Seismic Podiums. Finite Elemente Pagode amplifier platform. AudioQuest PowerQuest PQ-707 power conditioner. Puron plug-in AC enhancers.
Listening room Custom-built 21' × 15' space with 10'-tall walls and a 16' cathedral ceiling. Hardwood floor over gravel and concrete. Rubber subflooring. 12' × 16' wool rug on a felt pad. Four bass traps, two skyline diffusers, and a dozen absorption panels including four clouds.—**Rogier van Bakel**

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—Keith Jarrett

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KEN MICALLEF

Audio Note UK AN-E/SPx Field Coil

LOUDSPEAKER

Stemming from the foundation of Kondo Audio Note of Japan, Peter Qvortrup's Audio Note UK is, for many, a custodian of the definitive audio heritage. The debut of each Audio Note piece sparks obsession among adherents—ardor that outstrips mere fandom.

My first high-end purchase, in the mid-1990s, was from none other than Spin Doctor Michael Trei, who at the time was a dealer for Audio Note UK. (His partner in that venture was another *Stereophile* columnist, Herb Reichert.) The component was the Audio Note M2 Preamplifier. That exceptional piece was so dynamic and revealing that rolling its single 6SN7 tube provided a deep lesson in tonal color. The M2 showed how a great new old stock tube can impact everything from soundstage dimensions and music delivery speed to tonal transparency.

In 2022, I reviewed the Audio Note Meishu 300B Tonmeister Phono integrated amplifier. I was gobsmacked, buzzed, then sad because I was too poor to buy it. "The Tonmeister," I wrote, "together with the Audio Note SUT I auditioned it with, took what I hear from my vinyl collection and made it better, portraying each performance as a singular, unique event occurring at a particular time and place, its secrets revealed."

SPECIFICATIONS

Description Two-way, reflex-loaded loudspeaker with field-coil electromagnets and external power supply. Drivers: 1" silk dome tweeter, 8" hemp-pulp mid/woofer. Sensitivity: 97dB/W/1m, specified at 6 ohms. Frequency response: 18Hz–23kHz, ±6dB, in-room. Minimum amplifier power: 8Wpc RMS. Cabinet construction: Birch ply with real wood veneer.
Dimensions 31" (790mm) H × 14" (360mm) W × 10" (270mm) D. Weight 64lb (29kg).
Finishes Real wood veneer in high-gloss finish. Olive, Palisander, Apple, Walnut, Makassa-Ebony, Black. High-gloss finish standard.
Serial numbers of units reviewed 42994, '95. Drivers and power supply units manufactured in-house in the UK. Cabinet construction, driver matching, and assembly in Austria.
Price $65,000/pair including PSUs. Metal stands: $2500/pair. Approximate number of Audio Note dealers in the US: 22. Warranty: 2 years.
Manufacturer Audio Note (UK) Ltd., Viscount House, Star Road, Star Trading Estate, Partridge Green, West Sussex, RH13 8RA United Kingdom.
Tel: +44 (0) 1273 830800. Email: info@audionote.co.uk.
Web: audionote.co.uk.

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Then last year I reviewed the Audio Note TT-One Deluxe Turntable for *Analog Planet*, writing, "for those of you who crave the raw, unadulterated humanity of music and for whom perfectly relayed vinyl playback is a language understood more in the heart than the head, the Audio Note TT-One Deluxe is sweet surrender—a revelation."

Now I come, bank account relatively secure, senses alert, emotions reined in—well, mostly reined in—ready to audition the Audio Note UK AN-E/SPx Ltd. Field Coil loudspeaker ($65,000/pair).

But before we get to that, a question. Specifically, I sent Andy Grove, Audio Note's head of R&D, an email asking, Why does Audio Note UK make not one, not two, but *18 versions* of its classic speaker, the AN-E? And that's *just* the AN-E. Audio Note also offers the AN-J, AN-K, AX-One, AX-Two, and AZ-Two Deluxe lines, each with its own variations. Why so many?

"It's to allow a high degree of granularity in refinement of materials such as cables, etc.," he wrote back.

Grove and Audio Note consultant Andy Whittle were the principal designers of the AN-E/SPx Ltd.

Before getting to all those variations, what makes an Audio Note speaker an AN-E? They share a 1" tweeter and an 8" mid/woofer. They all have an enclosure that's roughly[1] 31" high, 14" wide, and 11" deep, with a rear port. Enclosures are made from veneered Baltic Birch, except for the least expensive models, which use MDF.

Now, what about the variations? Voice coils can have copper or silver wire, and crossovers can have any of several capacitor types. Magnetic materials can vary. For example, the Level 1 AN-E/D has standard paper cones, standard ferrite magnets, and copper voice coils. The D is the only AN-E that uses an MDF/chipboard cabinet. Its sensitivity is 94dB, and it costs $6034/pair. The Level 3 AN-E/SPe HE Signature has silver voice coils and AN-SPe cabling, achieves 97.5dB sensitivity, and costs $24,136/pair. The Level 2 AN-E Lexus Signature, which had an external crossover, cost $12,000/pair when Art Dudley reviewed it in 2008; today's equivalent speaker is the AN-E/LX HE Signature. It has silver voice coils, "high-efficiency" hemp drivers, copper-foil capacitors made in-house, and AN-Lexus LX cabling. It costs $22,251.03/pair. Yes, the three cents are real.

The most expensive AN-E is another field-coil speaker, the AN-E-SOOTTO Ltd., at $395,000/pair. It is the only Level 6 Audio

1 "Roughly," because the dimensions are specified in millimeters: 790mm × 360mm × 270mm.

MEASUREMENTS

I used DRA Labs' MLSSA system and a calibrated DPA 4006 microphone with an Earthworks microphone preamplifier to measure the Audio Note AN-E/SPx Ltd Field Coil's farfield frequency behavior and dispersion. I couldn't raise the loudspeaker as far off the ground as usual for the quasi-anechoic measurements, which meant that the first reflection from the floor occurred relatively early. I therefore placed the microphone at 1m rather than my usual 50". I used an Earthworks QTC-40 mike for the nearfield and corner-positioned responses. As instructed in the manual, I made sure that the speaker's serial number, 42994, matched that of the field-coil power supply.

Audio Note specifies the AN-E/SPx Field Coil's sensitivity as a very high 97dB/W/1m. While my B-weighted estimate was lower, at 91dB(B)/2.83V/1m, this is still usefully high. Audio Note recommends that this speaker be placed in a room's corner, where the reflections from the closely spaced boundaries will increase the level, particularly in the bass (see later). I suspect that Audio Note's sensitivity was taken in this condition. By contrast, my measurement was taken with the loudspeaker well away from room boundaries, my long-term practice. In addition, the B-weighting I use reduces the effect on the estimated figure of the speaker's high- and low-frequency extension. (A series of blind listening tests I performed in the 1990s indicated that the B-weighted sensitivity correlated well with a loudspeaker's perceived loudness.)

The AN-E/SPx Field Coil's impedance is specified as 6 ohms. Measured with Dayton Audio's DATS v2 system, the impedance magnitude lies above 6 ohms for most of the audioband (fig.1, solid trace), with a minimum value of 3.96 ohms at 230Hz. As the electrical phase angle (dashed trace) is occasionally high, the effective resistance or EPDR[1] drops below 4 ohms for several regions between 28Hz and 724Hz and between 2.8kHz and 6.1kHz. The minimum EPDR values are 3 ohms at 40Hz, 2.2 ohms at 362Hz, and 3 ohms between 3.8kHz and 4.7kHz. Although the AN-E/SPx Ltd Field Coil is a moderately demanding amplifier load, this will be ameliorated by the speaker's high sensitivity. Audio Note notes that this speaker works best with tube amplifiers; I recommend using such an amplifier's 4 ohm output transformer tap.

There is a slight discontinuity just below 200Hz in the traces in fig.1. When I investigated the enclosure's vibrational behavior with a plastic-tape accelerometer, I found a

1 EPDR is the resistive load that gives rise to the same peak dissipation in an amplifier's output devices as the loudspeaker. See "Audio Power Amplifiers for Loudspeaker Loads," *JAES*, Vol.42 No.9, September 1994, and stereophile.com/reference/707heavy/index.html.

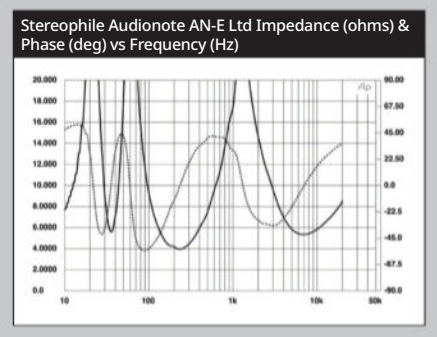

Fig.1 Audio Note AN-E/SPx Ltd Field Coil, electrical impedance (solid) and phase (dashed) (2 ohms/vertical div.).

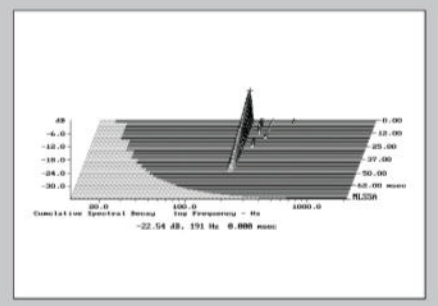

Fig.2 Audio Note AN-E/SPx Ltd Field Coil, cumulative spectral-decay plot calculated from output of accelerometer fastened to center of sidewall (MLS driving voltage to speaker, 7.55V; measurement bandwidth, 2kHz).

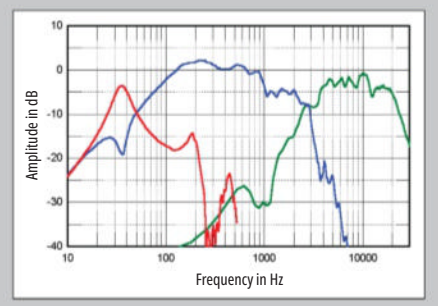

Fig.3 Audio Note AN-E/SPx Ltd Field Coil, acoustic crossover on the tweeter axis at 1m, corrected for microphone response, with the nearfield responses of the woofer (blue) and port (red), respectively plotted below 355Hz and 510Hz.

Note speaker. It has Audio Note's top pure-silver Litz cable, with 168 strands.

Every variation, the designers say, affects the sound.

The AN-E/SPx Ltd.

What makes it very different from the other AN-E speakers is the use of field-coil drivers. The SPx Ltd. combines a 1" silk dome field-coil tweeter and an 8" hemp-pulp field-coil mid/bass driver, both with silver voice coils. The woofer basket is manufactured from cast Zamak, with a reinforcement ring of 6082 aluminum alloy. Cabinet construction is from Baltic birch plywood. Six veneer options are available, and the cabinets can be custom painted in RAL colors. That rear-firing port is 2 1/4" wide and extends nearly 11" into the cabinet. It's stationed near the bottom of the cabinet, below a pair of handsome Audio Note posts at the cabinet's lower boundary. Internal cabling is 99.99% pure silver Litz. The umbilical cable from PSU to the speaker is AN-Lexus copper Litz. Sensitivity is rated at 97dB with a nominal impedance of 6 ohms. Damping, internal bracing, and crossover information is proprietary.

The drivers' silver voice coils are mated with Audio Note electromagnets that utilize a soft iron called Telar 57. "The poles are Telar 57 in this model," Grove wrote. "The top plate is Armco pure iron, and the casting is fully ferritized SG iron, made at a foundry in Britain's Black Country, which has a long history of metalworking."

All magnets, drivers, transformers, crossover resistors, copper chokes, and PSUs are made in Audio Note's UK factory and shipped to Austria for final assembly. "These components are extremely tightly matched, by our Austrian speaker-building team, to the other elements in the crossover, which in turn is matched to its partnering crossover in the other speaker in the stereo pair," Audio Note representative Martin Grennall told me in an email. "These are then matched to the drive units. This matching process, which all our K, J, and E models go through regardless of the Level, is crucial."

A field-coil speaker needs an external power supply; the ones provided with the AN-E/SPx Ltd. are modest, standing 11 1/2" wide, 10 1/2" deep, and 4" high. They're not heavy. There are two supplies in each box, one for each driver, powered from individual windings on a common transformer.

The AN-E/SPx Ltd. may be Level 5, but it's still, in a sense, entry-level, with room to grow. "We decided to make the entry-level AN-E/SPx Ltd. as unobtrusive as possible," explained Grove, "hence the internal crossover and small PSU. I am working on larger upgrade PSUs now, and they will follow when time allows.

measurements, continued

resonant mode at 191Hz on the back panel and sidewalls (fig.2). However, this mode is both very low in level and has a high Q (Quality Factor), which will work against it having audible consequences.

The saddle centered at 36Hz in the magnitude trace in fig.1 indicates that this is the tuning frequency of the port at the base of the loudspeaker's rear panel. The red trace in fig.3 shows the nearfield response of the port. It reaches its maximum level at the tuning frequency and the upper-frequency rollout is clean, other than a resonant peak at the frequency of the cabinet vibrational mode and another peak lower in level between 400Hz and 500Hz. The blue trace below 350Hz in fig.3 shows the nearfield response of the woofer; it has the expected minimum-motion notch at the port tuning frequency, which is when the back pressure from the port resonance holds the cone stationary.

The blue trace above 350Hz in fig.3 shows the woofer's quasi-anechoic farfield response, the green trace shows that of the tweeter. Audio Note recommends in the speaker's manual that the tweeter be positioned at roughly ear height. Both the responses in fig.3 were taken on the tweeter axis, which, with the speaker sitting on its 10"-high stand, is 38.5" from the floor; this is close to what a survey performed by Thomas J. Norton for *Stereophile* found is a typical listener's ear height. The crossover between the two drive units appears to be set at 2.7kHz, though the tweeter's average level is 2–3dB lower than that of the woofer.

The usual rise in the midbass of the complex sum of the woofer and port responses (black trace below 310Hz in fig.4), which will be due to the nearfield measurement technique, is absent. As with the Audio Note AN-E Lexus Signature loudspeaker that Art Dudley reviewed in June 2006,[2] the AN-E/SPx Ltd Field Coil's woofer alignment is overdamped in order that the speaker doesn't boom when it is placed in the corner of the room. (The manual states that the AN-E/SPx's ported enclosure has been designed to be placed close to room boundaries, where the bass performance is augmented significantly by the additional reinforcement from the nearby walls.)

The AN-E/SPx Ltd Field Coil's quasi-anechoic response at 1m, averaged across a 30° horizontal window centered on the tweeter axis, is shown as the black trace above 310Hz in fig.4. The response is very similar to that of the Lexus Signature, with the high frequencies balanced a little too low in level compared with the midrange. There is also a small suckout between 3kHz

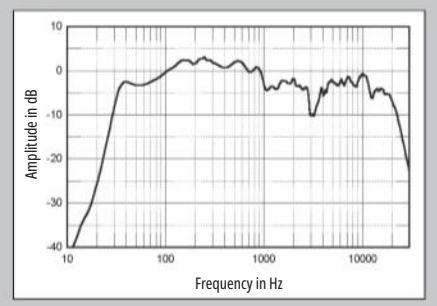

Fig.4 Audio Note AN-E/SPx Ltd Field Coil, anechoic response on tweeter axis at 1m, averaged across 30° horizontal window and corrected for microphone response, with the complex sum of the nearfield responses plotted below 310Hz.

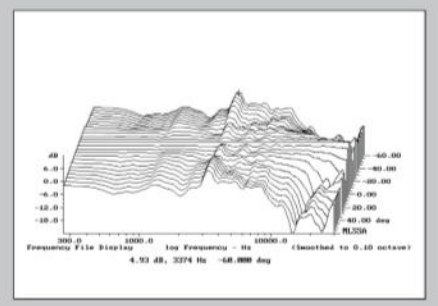

Fig.5 Audio Note AN-E/SPx Ltd Field Coil, lateral response family at 1m, normalized to response on tweeter axis, from back to front: differences in response 60–5° off axis, reference response, differences in response 5–60° off axis.

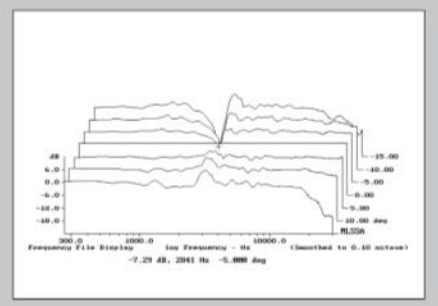

Fig.6 Audio Note AN-E/SPx Ltd Field Coil, vertical response family at 1m, normalized to response on tweeter axis, from back to front: differences in response 15–5° above axis, reference response, differences in response 5–15° below axis.

"In order to make something stable and convenient, we decided to develop an active power supply," Grove wrote in a white paper. "It's based on an in-house mains transformer and stabilizer circuitry developed from the filament supplies used in the M3 to M10 preamps. The DC operating point is locked down tightly, yet, when transitioning into the audio band, the output impedance rises slightly, to avoid an unnatural grip. In a practical sense, they are quiet, compact, and cool running as well."

The AN-E/SPx Ltd.'s internal crossover network is largely consistent with that of prior designs, I was told, though it uses a hand-wound resistor, crafted on a phenolic former to mitigate resonances that sensitive field-coil drivers could expose. Copper inductors and custom-made polyester capacitors are used.

"The drivers are substantially bigger and heavier than even the alnico versions, and this required modifications to the cabinet, the tweeter faceplate, and the woofer basket." This, too, is from the white paper. "With regard to sound quality, the tweeter faceplate is the most interesting and was very time consuming to get right. We entirely redesigned the faceplate mounting surface so [that] it is much more firmly coupled to the magnet-body metalwork and uses a cork gasket to aid with damping. Additionally, after numerous trials with aluminum and various plastic materials, we arrived at a nonmagnetic steel alloy over which a powder coat is applied."

Finished in Palisander, which is also called Brazilian rosewood, my review pair of AN-E/SPx Ltd. speakers are the most gorgeously veneered speakers to ever grace my Greenwich Village crib. There's gloss, and then there's *GLOSS*. The speakers shine like mirrors, reflecting the contents of my lis-

and 4kHz.

The plot of the AN-E/SPx Ltd Field Coil's horizontal dispersion, normalized to the response on the tweeter axis, which thus appears as a straight line (fig.5), shows that this suckout fills in more than 10° to the speaker's sides. In an email, Audio Note's Adrian Ford-Crush noted that as a general rule of thumb, the AN-E/SPx Ltds should be toed-in approximately 45° to point at the listening position; experimenting with toe-in will optimize the speaker's balance. However, the dispersion narrows considerably above 10kHz, which will lead to a lack of "air" if the speakers are not toed-in to the listening position.

The Audio Note speaker's radiation pattern in the vertical plane, again normalized to the response on the tweeter axis, is shown in fig.6. A suckout in the crossover region develops above the tweeter axis, so, for optimal results, don't listen to this speaker while standing.

In addition to my usual quasi-anechoic, free-field measurements, I examined how the speaker's response was affected by the recommended corner placement. Fig.7 shows the AN-E/SPx Ltd Field Coil's $^1/_3$ octave-smoothed response on the tweeter axis at 2m, taken in my listening room with the Fuzzmeasure app. There was only corner in my listening room that I could use to make this measurement, and I wasn't able to take a meaningful measurement at a greater distance due to interference from the room's furnishings. (In contrast to my quasi-anechoic measurements with MLSSA, this measurement isn't windowed to eliminate reflections.) This graph shows that the Audio Note's low frequencies are indeed boosted by the corner placement, and the treble now smoothly slopes down in textbook fashion. The response in the midrange is uneven.

In the time domain, the AN-E/SPx Ltd Field Coil's step response (fig.8) indicates that the tweeter and woofer are both connected in positive polarity. The tweeter's output arrives first at the microphone, followed around 0.4ms later by that of the woofer. The AN-E/SPx Ltd Field Coil's cumulative spectral-decay plot (fig.9) is generally clean, though some low-level delayed energy is present at the top of the woofer's passband. (As always with my waterfall plots, ignore the ridge of delayed energy close to 16kHz, which is due to interference from the MLSSA host PC's video circuitry.)

The Audio Note AN-E/SPx Ltd Field Coil's measured performance is somewhat idiosyncratic. It confirms that the speakers need to be placed in the room's corners, with the appropriate care taken in setup.

—John Atkinson

2 See fig.4 at stereophile.com/content/audio-note-e-lexus-signature-loudspeaker-measurements.

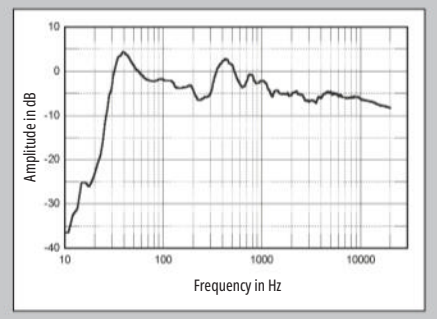

Fig.7 Audio Note AN-E/SPx Ltd Field Coil, $^1/_3$ octave-smoothed response on the tweeter axis at 2m with the speaker placed in a room corner.

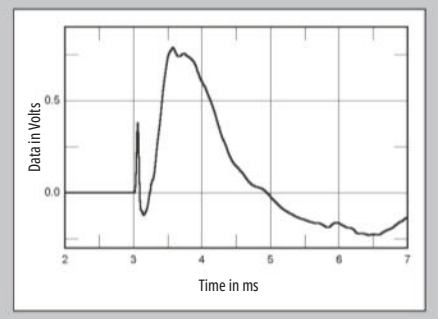

Fig.8 Audio Note AN-E/SPx Ltd Field Coil, step response on tweeter axis at 1m (5ms time window, 30kHz bandwidth).

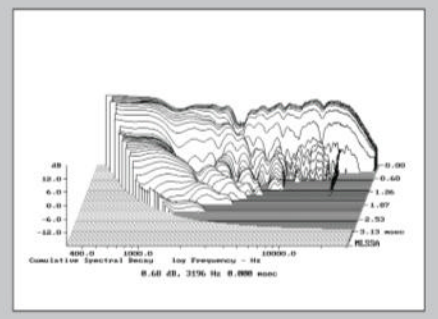

Fig.9 Audio Note AN-E/SPx Ltd Field Coil, cumulative spectral-decay plot on tweeter axis at 1m (0.15ms risetime).

tening room so as to almost disappear—visually. Sonic stealth may be discussed later.

At Audio Note UK's Austrian factory, eight layers of polyurethane lacquer are applied with intermediate sandings then presanded four times before getting a high-gloss polish, followed by a quality check. Finishing time from the start of production until completion is two months or longer per speaker, depending on the veneer used.

Understanding field coils

"Field-coil drive units—in laymen's terms, powered drive units, which use an electromagnet to generate the magnetic field with which the voice coil interacts (by Lorentz Force)—date from the earliest days of electrical music reproduction." That is from the Audio Note website. "Not long after the turn of the 20th century, permanent-magnet technology was not sufficiently advanced to make a conveniently sized, and priced, speaker drive unit."

Field coils reportedly offer a calmer, more relaxed and graceful sound, delivering more information and improved tonality. Some would say they are faster and more linear than speakers that use conventional magnets. Field-coil speakers are still relatively rare, but their numbers are increasing.

"Faster, in the hi-fi case, is usually a subjective term, and a vague one at that," Grove told me. "Actual acceleration of the driver is related to the gap flux and cone weight, etc. To all intents and purposes, these would be the same regardless of magnet type if those parameters were held equal. However, the AN-E/SPx Ltd. *does* have a higher gap flux than either the ceramic or alnico versions. This was tuned by ear to optimize bass quality with our amps.

"A way to think of it is that permanent magnets are like a stretched elastic band, with the speaker voice coil trying to move against it," he wrote. "No matter how much energy is stored in that elastic band—and there is a limit to how much; otherwise, the physics of bass tunings won't work anymore—it will move in response. The field coil doesn't have that limitation. Energy can be applied to compensate, and it works by simple transformer action. The permanent-magnet system is a closed system; the field coil is not."

Setup

Audio Note UK provided a pair of 10" high, black powder-coated steel speaker stands. I began my audition using a pair of Anthony Abbate/Box Furniture stands, which are made of wood. The metal stands, though heavy and unwieldy to set up, proved essential in getting the best sound.

Initially running a single pair of AudioQuest William Tell Zero speaker cables to the AN-E/SPx Ltd. with its dual sets of binding posts joined via a jumper, I experimented with biwiring the speakers, which, like the metal stands, also proved essential. The difference was not subtle. Using the AudioQuest cables on the tweeters and ArgentPur 12 or Danacable Sapphire Reference Mk.2 cables to the woofers, the sound sprung to life, with excellent separation, soundstaging, coherency, and focus. The ArgentPur cables provided more sweetness and air, the Danacable Sapphire more presence and girth. I don't know if this is true with all Audio Note speakers, but I didn't really hear their exceptional abilities until biwiring was employed.

"The ported enclosure of the AN-E/SPx Ltd. has been designed to be placed close to room boundaries, where the bass performance is augmented significantly by the additional reinforcement from the nearby walls," noted the manual. I obeyed. The speakers ended up 10" from my back wall, 73" apart from the tweeter domes, and 108" from my listening seat.

Listening

I wanted to evaluate the speaker with a wide array of music, so I pulled out CDs and vinyl by Pat Metheny, Steely Dan, The Beatles, Kraftwerk, The Doobie Brothers, Dave Holland, Miles Davis, Air, the Great Jazz Trio, various classical discs, and Aphex Twin.

The AN-E/SPx Ltd.'s impact on digital listening with CDs was immediately and profoundly evident in its bass reproduction. The speaker's ability to render bass weight was nothing short of spectacular, transforming mere listening into a visceral immersion. Specifically, with Pat Metheny Group's *Speaking of Now* (Warner Bros. Records 9 48025-2), the speaker's bass performance was so intense it bordered on overwhelming. It evoked the sensation of being plunged into the ocean's deepest depths, space filled by voluminous and profound bass. While this CD showcases an exceptional, almost anomalous bass presence, the AN-E/SPx Ltd. consistently demonstrated its ability to deliver deep, well-defined, extended bass with solid tonal accuracy, faithfully reproducing the information contained within the recording. The AN-E/SPx Ltd. proved capable of delivering bass impact of all shades.

Despite the inherent subjectivity of "speed," the AN-E/SPx Ltd. delivered a consistent sense of swiftness, clarity, and transient articulation—among the best I've heard. Music unfolded with remarkable energy and lucidity. Familiar recordings were revitalized, eliciting visceral excitement and emotional resonance.

Perhaps because of the field coil's ability to minimize noise, I heard extraordinary resolution—superb clarity—but also richness, detail, all within a sonic whole. One evening, upon taking center seat and imbibing a good Beaujolais, Alex Halberstadt, who was visiting, remarked, "This is the richest, most refined version of your system I've ever heard."

Record after record, music played with incisive coherency and refined presence. I found the presentation impossible to fault. Somehow, the speakers clearly revealed the sound of upstream components and cables—that's the resolution I suppose—while retaining a consistent sense of refined musicality. Transparent but with their own character. They played ZZ Top's "Waitin' for the Bus"/"Jesus Just Left Chicago," from *Tres Hombres* (London Records XPS 631), with all the power, gravity, connection, and brisk winter-morning clarity I could desire.

Regarding sonic stealth: The AN-E/SPx Ltd. disappeared sonically as completely as any speaker I've reviewed. The Leslie-affected, chocolate-toned Rhodes piano signature of The Doobie Brothers' "Minute by Minute," from the album of the same name (Warner Bros. Records BSK 3193), was balanced by the musty, sinewy, whisky-flavored voice of Michael McDonald. I'd not listened to this record, with beautifully aromatic production by Ted Templeman and engineer Donn Landee, in years. The Audio Notes also exposed the song's string-synth overlays, which I'd never noticed before.

These AN-Es got to the meat of The Beatles' "I Saw Her Standing There" from *Please Please Me* (Parlophone PMC 1202). The driving riot of sound jumped, quaked, and startled in the clear, large acoustic of Abbey Road Studio Two, with particular focus on the resonant, raw tone of Paul McCartney's Hofner bass. If you want excitement, the AN-E/SPx Ltd. provides it.

The experience offered by the AN-E/SPx Ltd. was consistently intimate, resonant, and personal, as though the speaker was revealing the core of the recording. It unearthed music's emotional depth, revealing layers of meaning previously obscured. Each recording was revitalized, with the speakers amplifying the beauty of well-produced tracks while maintaining the integrity of less polished ones.

Even recordings marred by technical limitations were granted a renewed focus. Consider The Allman Brothers Band's 1969 debut (ATCO Records SD 33-308), captured at the famously noisy Atlantic Studios in New York City. This recording is notoriously murky and raw, yet the performance is special. Through the AN-E/SPx Ltd., the band's haunting power and southern gothic artistry were vividly conveyed. The recording's imperfections were not glossed over but, rather, presented as part of its character. The speaker acted as a conduit, faithfully transmitting essence, both brilliance and flaws, with unwavering, colorful honesty.

At times I felt at one with the musicians in the recording studio. Dave Holland's *Triplicate* (ECM Records ECM 1373), with its crazily panned stereo drums and gargantuan upright bass, never sounded so flat yet so rich and somehow orderly. The ominous rising tide of musicians at the beginning of Stravinsky's *The Firebird*, performed by the London Symphony Orchestra conducted by Antal Dorati (Mercury Living Presence SR90226), seemed malevolent, dynamic, and spookily intimate. The speaker's low noisefloor, created, I presume, by its field coil's swiftness, unmasked every corner of the recording in surprising ways.

The Miles Davis Quintet's *Workin' with the Miles Davis Quintet*, played from my original pressing (Prestige PRLP 7166), produced more revelations. While competent speakers render the recording's mood and dynamics, very refined systems capture the fine variations in "Philly" Joe Jones's cymbal work. The Audio Notes, with their resolution and wholeness, revealed the full spectrum of resonance and the percussive clarity of his sticks, exposing nuanced tonal distinctions among his cymbals as he transitioned through the solos of Davis and Coltrane.

Conclusion

The AN-E/SPx Ltd. transcends technical analysis, offering a "meat and blood" immediacy that captured the very essence of every record I wanted to hear. Its integration of deep bass, clean midrange, and silken treble created a unified, emotionally resonant whole. This is music playback of extraordinary beauty, a near-supernatural experience that left me dumbstruck and humbled. ■

ASSOCIATED EQUIPMENT

Analog sources Thorens TD 124 with Korf TA-SF9R tonearm/HS-A02 Ceramic Headshell/Kuzma CAR-30 MC cartridge. J.Sikora Standard Max Supreme Turntable with KV Max 9" tonearm, Aidas Gold Web PL MC cartridge.
Digital source Tascam CD-200 iL CD player, HoloAudio May DAC.
Preamplifiers Tavish Audio Design Adagio, Allnic DT-5000 phono.
Power amplifier Rogue Audio Stereo 100.
Integrated amplifiers Union Research S7. Riviera Labs Levante.
Cables Interconnects: AudioQuest Pegasus and Firebird, Triode Wire Labs Spirit II (RCA). Speaker: AudioQuest William Tell Zero (10'), ArgentPur 12, Danacable Sapphire Reference Mk.2. AC: AudioQuest NRG Z.
Accessories Pro-Ject VC-S2 ALU, HumminGuru record cleaning machines; AOCISKA soft bristle brush; AudioQuest PQ-707 and IsoTek EVO3 Aquarius power conditioners; Salamander five-tier Archetype rack (2); Pangea audio rack; A/V RoomService Ltd. Equipment Vibration Protectors (EVPs); IKEA Aptitlig bamboo chopping boards (under turntable, preamp, power, and integrated amps); mahogany blocks (three to a stack), under IKEA boards.—**Ken Micallef**

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Quad 33/303

PREAMPLIFIER/POWER AMPLIFIER COMBO

Launched in 1967, Quad's highly original, elegantly styled 33 preamplifier and 303 power amplifier were Quad's first all–solid state designs and among the first solid state separates. The 303 may have been one of the first "vertical" amplifiers. Together with the 405 stereo amplifier, which came out in 1975, and the FM2 and FM3 tuners, these products proved to be enduring, widely feted successes from their launch until they were discontinued, the 33 in 1982, the 303 in 1985. Meanwhile, they enjoyed massive production runs, were marketed worldwide, and were much admired for their modern industrial design. It's said that Quad sold 120,000 33 preamps and 100,000 303 amplifiers. Across two versions, the 405 sold even more.

Quad introduced new versions of the 33 and 303 (each component $1599) in 2024, apparently moved to do so by the continuing hot market for originals. The 2024 components are not identical to them, but at least conceptually, they share much with the originals. In appearance, the new 33 control unit has distinct echoes of the original, which in its time won many design awards—as did the 303. The 33 retains the compact, chunky, weighty form. It is finished in a muted, low-key orange/tan, not so different from the original. It has streamlined, low-profile controls and now a matching LCD display, backlit in orange, with user-variable brightness. That LCD panel is small and not high contrast, so it's

SPECIFICATIONS

QUAD 33

Description Solid state, stereo preamplifier with built-in phono stage and headphone amplification. Inputs: three pairs single-ended (RCA), one balanced (XLR), one pair MM/MC phono, switchable (RCA). Outputs: one balanced line-level (XLR), one single-ended line-level (RCA), one Pre-Out (RCA), one 1/4" headphone, two 12V trigger. Input sensitivity (Vout = 695mV): 695mV (line/XLR), 3.2mV (MM phono), 460µV (MC phono). Input impedance: 10k ohm (XLR), 45k ohm, 100pF (MM phono), 100 ohms, 1.7nF (MC phono). Output impedance: 120 ohms (line), 2.35 ohms (headphone). Frequency response: 20Hz–20kHz, ±0.2dB. THD: <0.0005% (1kHz, XLR), <0.002% (1kHz MM and MC phono), <0.01% (headphone, 1kHz, 50mW). S/N ratio (A-weighted): >108dB (XLR), >82dB (MM phono), >74dB (MC phono).
Dimensions 10.15" (258mm) W × 3.7" (94mm) H × 6.5" (165mm) D. Weight: 8.8lb (4kg).
Finish "Classic Quad Gray."
Serial number of unit reviewed QH20071CIE0021 (auditioned); QH020071C-CF0864 (measured). Manufactured in China.
Price $1599. Approx. number US dealers: 70. Warranty: three years parts and labor with registration, nontransferable.

QUAD 303

Description Bridgeable class-AB stereo power amplifier with "Triples" output stage, "custom" 200VA toroidal transformer. Inputs: One pair balanced (XLR), one pair single-ended (RCA). Outputs: one stereo pair loudspeaker outputs. Gain: 29dB. Power output, stereo: 50Wpc into 8 ohms (17dBW), 70W into 4 ohms (15.4dBW); bridged: 140W into 8 ohms (21.5dBW), 170W into 4 ohms (19.3dBW), all THD <1%. Frequency response: 20Hz–20kHz, ±0.3dB. THD: <0.002%, 1kHz. Input impedance: 15k ohms single-ended, 22k ohms balanced. Sensitivity at full rated output: 700mV single-ended, 1.5V balanced. S/N ratio (A-weighted): >108dB. Max output current: 10A.
Dimensions 4.7" (120mm) W × 7" (176mm) H × 12.8" (325mm) D. Weight: 18.5lb (8.4kg).
Finish "Classic Quad Gray."
Serial numbers of units reviewed QH020171CIE0021, 24 (auditioned); QH20171CAF0842 (measured). Manufactured in China.
Price $1599. Approx. number US dealers: 70. Warranty: three years parts and labor with registration, nontransferable.

Manufacturer (33 and 303)
QUAD Electronics International, IAG, 13/14 Glebe Rd., Huntingdon, Cambridgeshire PE29 7DL, UK
Tel: +44 (0) 1480 452561
Email: service@quad-hifi.co.uk
Web: quad-hifi.co.uk
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not easy to read at a distance, especially the smaller, secondary legends.

Conveniently, the tone controls can be bypassed with the remote control, which is important for assessing the value of more subtle adjustments. Considering the generous feature list, the 33 is quite compact, allowing the slender 303 power amp to sit beside it if you so wish. Build quality is excellent for both products, with precision machined metal-alloy panels and camera-quality fixings. The components themselves are let down a little by a remote control handset in molded polymer. The remote requires a little practice to operate, but familiarity comes with use.

The electronics found inside the new pre/power units result from the creative input of Quad group engineers, headed by the highly experienced Peter Comeau, the head of engineering for parent company IAG. Peter has enjoyed a run of wins with his creative updates of legacy products including the Mission 770, which I reviewed in *HIFICRITIC* and John Atkinson reviewed for *Stereophile*.[1]

One key feature of the new 303 that the original version lacked is bridge mode. If you need extra power, each 303 can be bridged to serve a single channel. (They can also be used for biamping.) I think it makes sense to think of the Quad proposition as two separate offerings, a pre-power stereo set with 50Wpc at $3200 and a pre-power set with a pair of 140W monoblocks at $4800. That extra $1600 expenditure seems quite reasonable for nearly three times the power and, who knows, maybe better sound. You could of course buy one 303 now and another later. Incidentally, the old 405 was rated at 100W; it is easily supplanted by the new 303 in bridge mode.

Those original Quad preamplifiers are famous for a distinctive feature that allows control of timbre and, to some degree, stereo image perspective, achieved by controlling the tilt or slope of the frequency response. The usual 0dB flat response may be gently tilted up or down about a perceptually chosen middle frequency, here 700Hz. In place of conventional tone controls, with all their limitations, the seamless tilt adjustment can bring the performance closer if it sounds too distant. Conversely, if a recording

1 See *HiFi Critic* Vol.16 No.4 (2022) and stereophile.com/content/mission-770-loudspeaker.

MEASUREMENTS (QUAD 33)

I performed a complete set of tests on the Quad 33 preamplifier with my Audio Precision SYS2722 system.[1] Looking first at the 33's performance as a line preamplifier, all the inputs and outputs preserved absolute polarity, ie, were noninverting. The balanced input impedance was close to 20k ohms from 20Hz to 20kHz; the single-ended input impedance was 8.7k ohms at 20Hz and 1kHz, 8.2k ohms at 20kHz. The preamplifier's balanced output impedance was a low 111 ohms from 20Hz to 20kHz; the unbalanced impedance was 119 ohms from 20Hz to 20kHz; the headphone output impedance was a very low 3 ohms across the audioband.

The Quad's maximum gain was 0dB (unity gain) for the balanced input to the balanced and unbalanced outputs and the unbalanced inputs to the unbalanced output. For the unbalanced inputs to the balanced output, the gain was 6dB. The maximum gain at the headphone output was 3.1dB for the balanced input, 9.04dB for the single-ended inputs.

Fig.1 shows the 33's balanced frequency response into 100k ohms (blue and red traces) and 600 ohms (green and gray traces) with the tone controls bypassed and the volume control set to the maximum. The response is flat up to the 200kHz limit of this graph and was identical from the unbalanced and headphone outputs. At lower settings of the volume control, the level of the left channel was 0.3dB higher than that of the right channel. With the tone controls activated, the output was down by 3dB at 100kHz. The Bass control gave a boost or cut up to 3.5dB below 50Hz (not shown), while Quad's classic Tilt control tilted the response up or down by up to 3dB (fig.2).

Channel separation was very good, at >90dB below 1kHz in both directions and still 82dB at 20kHz. With the volume control set to the maximum, the wideband, unweighted S/N ratio (ref. 2V output) was 70.9dB in both channels, which increased to 87.5dB when the measurement bandwidth was restricted to the audioband, and to 90.2dB when A-weighted. Spectral analysis of the Quad's low-frequency noisefloor with the preamplifier outputting a 1kHz tone at 2V with the volume control set to the maximum is shown in fig.3 (blue and red

1 See stereophile.com/content/measurements-maps-precision.

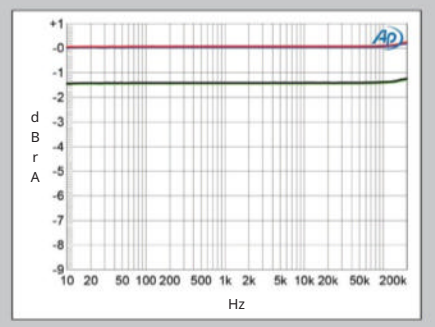

Fig.1 Quad 33, balanced frequency response with volume control set to the maximum at 1V, into: 100k ohms (left channel blue, right red), 600 ohms (left green, right gray) (1dB/vertical div.).

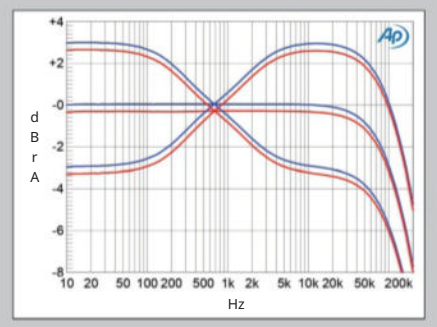

Fig.2 Quad 33, balanced response with volume control set to –6dB and Tilt control set to 0dB and ±3dB (2dB/vertical div.).

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is rather bright and too closely miked, a counterclockwise rotation imparts depth, weight, and perspective. The effect is subtle and worthwhile. With the new 33, you can control this feature from your listening seat, which after all is where this perceptual action happens. Many vintage recordings will benefit from a gentle blowing away of their dusty acoustic cobwebs with a gentle uptilt. Conversely, a downward tilt may happily tame some modern rock, in which an overloud steely or brittle sound dominates. A touch of down-tilt adds perspective and allows greater power to be exercised, for example on *The White Room* by The KLF, specifically the tracks "Last Train to Transcentral" and "Justified and Ancient."

The legendary Cello Palette boasted an advanced multifrequency control that could be configured for similar duty, though it was certainly more awkward to program. I bought one some years ago for its effective timbre optimization and lovely sound but eventually lost patience with that before-listening, time-consuming precalibration. Conversely, Quad's own convenient broad-brush "timbre-tilt" facility on the 33 may be a primary reason to commit to purchase. "Tone" settings may be quickly compared via that vital "bypass."

On the back panel, you will find one of the most densely packed sets of facilities that I have yet experienced yet beautifully laid out and eminently usable. The LP input

The 303's back panel: many facilities, informative labeling.

Quad 33 measurements, continued

traces). Repeating this analysis with the volume control set to –12dB and the level of the input signal increased so that the output was the same 2V (green and gray traces) dropped the level of the noisefloor by 12dB.

Fig.4 plots the THD+noise percentage in the Quad preamp's balanced output against voltage into 100k ohms with the volume control set to the maximum. Actual distortion lies below the noisefloor up to 4V output. With clipping defined as when the THD+N reaches 1%, the 33's balanced outputs clipped at a high 9.5V into this load. The balanced clipping voltage into 600 ohms was 5.8V, while the unbalanced outputs clipped at 4.65V into 100k ohms and 3.6V into 600 ohms. The headphone output clipped at 4.9V into 100k ohms. Unusually, when I repeated these tests at lower settings of the volume control, the maximum voltage was reduced in proportion to the setting. For example, with the volume control set to –6dB, the balanced clipping voltage into 100k ohms was 4.75V, ie, 6dB lower than it had been at the maximum setting. With the control set to –12dB, the clipping voltage dropped by another 6dB. This behavior, which was consistent with both balanced and unbalanced input signals, suggests that the clipping voltage that I measured was actually due to the input stage being overdriven rather than the output stage. Given the preamplifier's low maximum gain, I don't believe this behavior will be an issue in use. However, it is unusual.

The balanced outputs' THD+N percentage at 5V into 100k ohms was very low across the audioband (fig.5, blue and red traces). While it rose at this voltage into 600 ohms (green and gray traces), it was still low in absolute terms. While the distortion harmonics lay below the random noisefloor at 4V into 100k ohms (not shown), the second harmonic lay at a very low –99dB at the same voltage into 600 ohms (0.001%, fig.6). Intermodulation distortion with an equal mix of 19 and 20kHz tones was similarly very low, even into 600 ohms (fig.7).

Turning to the Quad 33's phono input,

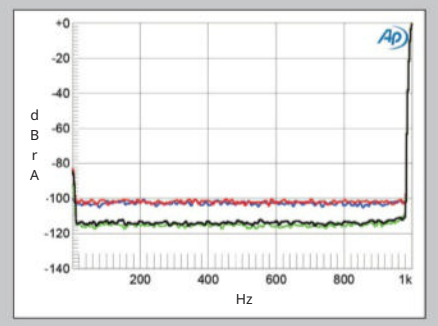

Fig.3 Quad 33, balanced spectrum of 1kHz sinewave, DC–1kHz, at 2V into 100k ohms with volume control set to the maximum (left channel blue, right red) and to –12dB (left green, right gray; linear frequency scale).

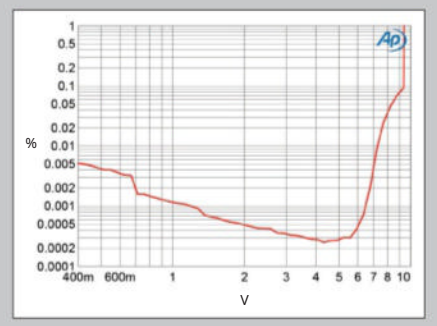

Fig.4 Quad 33, balanced THD+N (%) vs 1kHz output voltage into 100k ohms with volume control set to the maximum.

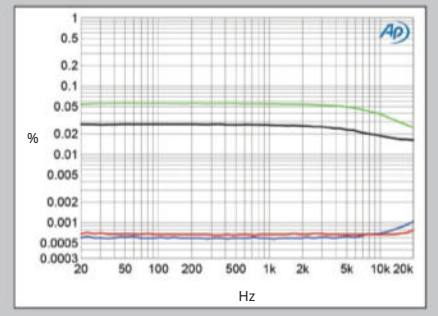

Fig.5 Quad 33, balanced THD+N (%) vs frequency at 5V into: 100k ohms (left channel blue, right red), 600 ohms (left green, right gray).

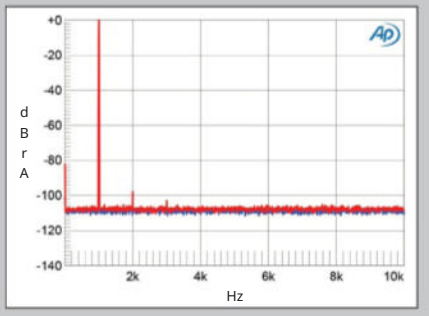

Fig.6 Quad 33, balanced spectrum of 1kHz sinewave, DC–10kHz, at 4V into 600 ohms (left channel blue, right red; linear frequency scale).

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phono sockets have a local ground/earth terminal. Gain and loading may be conveniently set remotely at the listening seat, either for MC or MM cartridges. There is a silent internal toroidal power transformer feeding five low-noise regulated supplies, and there is not a scrap of audible hum anywhere, electrical or mechanical. This whole 33/303 affair is impressively thought out and well executed.

On the densely packed rear panel of the 33, from the left we find the rocker switch for power and the IEC 3-pin socket with adjacent 0.5A fuse (1A USA): Access to the voltage selector is via a cover plate, while the adjacent USB socket is for software updates, as in this design system control is by a microprocessor. Two 12V trigger outputs are for synchronizing power-up for one or two power amplifiers, as needed (cables not included). Preamp outputs are in both RCA, balanced XLR, plus a fixed-gain "aux" output. There are four aux/line inputs, three in RCA format, one in XLR balanced. The final pair of phono sockets are for LP disc with a ground terminal, here gain switchable between MM (47k ohm) and MC (100 ohm) via the versatile remote control or the front-panel buttons. There is a $^1/_4$" headphone jack socket powered by a dedicated, wideband current feedback amplifier, and it sounded just fine.

The brand-new phono stage is both moving magnet and moving coil compatible with the facility to switch between the two options on the fly; no mods or board upgrades necessary. With a gain of 46dB for the MM and 63.5dB for the MC input, the input stage uses very quiet, low-distortion audio-dedicated op-amps. For RIAA processing, the circuit has a separate wide bandwidth dual bipolar/JFET op-amp with a generous dynamic range.

A low-noise toroidal power transformer feeds oversized reservoir capacitors connected to five regulators. The motorized ALPS volume control is a high-resolution analog type, here a selected version with position-sensed data driving the numeric volume readout.

The Quad 303 stereo/mono power amplifier has a tidy, minimalist front panel featuring elegant vertical fins in cast alloy; these are quite shallow and this efficient and versatile design runs cool. However, the rear panel is as busy with sockets and switches as that jam-packed 33 control unit. For the 303, the upper section carries four generous shrouded 4mm binders/sockets for left and right speaker connection, while the two locking XLR input sockets for left and right channels are complemented by an array of phono sockets in gold plate. Pushbutton switches select between the XLR or RCA inputs and also set the alternative single-channel, higher

Quad 33 measurements, continued

I examined its measured performance in both MM and MC modes. To minimize noise, I connected a wire from one of the Audio Precision's ground terminals to the grounding post on the preamp's rear panel. The MM input impedance was 45k ohms at 20Hz and 1kHz, 40k ohms at 20kHz. The MC mode's input impedance was 101 ohms from 20Hz to 20kHz. Both input modes preserved absolute polarity at the balanced, unbalanced, and headphone outputs.

The phono input's RIAA correction (fig.8) was well matched between the channels and extremely accurate in the audioband, though the low-frequency response was down by 2dB at 10Hz. The MM mode's wideband, unweighted S/N ratio, ref. 1kHz at 5mV, assessed at the balanced output with the inputs shorted to ground and the volume control set to the maximum, was a good 66dB in both channels. Restricting the measurement bandwidth to 22Hz–22kHz increased the ratio to 86.4dB, left channel, and 84.9dB, right, while inserting an A-weighting filter resulted in a ratio of 90dB in both channels. In MC mode, ref. 1kHz at 500µV, the ratios were respectively 60dB, 68dB, and 74dB.

To be sure I wasn't prematurely clipping the preamplifier's output, I examined the phono input's overload margins with the volume control set to –12dB. Both the MM input's and MC mode's margins were impressively high. The MM mode's margins ref. 1kHz at 5mV were 26dB at 20Hz and 1kHz, 19dB at 20kHz. In MC mode, the margins ref. 1kHz at 500µV were 29.5dB at 20Hz and 1kHz, 23dB at 20kHz. Even with an input 6dB below the 1kHz overload level, the only distortion harmonics present were the second and third at an inconsequential –100dB (0.001%, fig.9). The levels of the intermodulation products with an equal mix of 19 and 20kHz tones were similarly negligible (fig.10).

While I was puzzled by the relationship between the maximum output voltage and the volume control setting, the Quad 33's measured performance as a line preamplifier, phono preamplifier, and headphone amplifier was otherwise excellent.

—John Atkinson

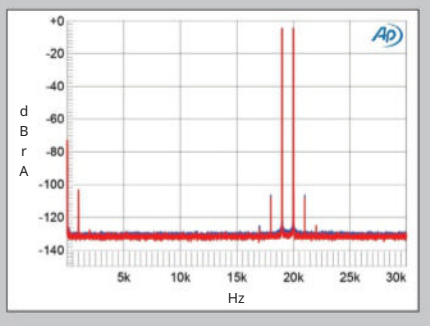

Fig.7 Quad 33, balanced HF intermodulation spectrum, DC–30kHz, 19+20kHz at 2V into 600 ohms (left channel blue, right red; linear frequency scale).

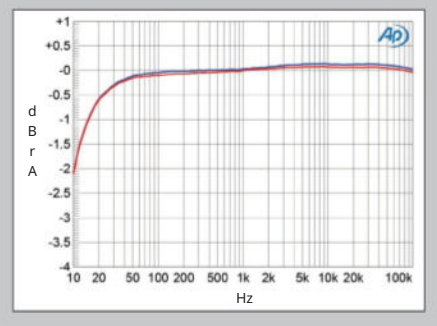

Fig.8 Quad 33, phono input, balanced output, response with RIAA correction (left channel blue, right red) (0.5dB/vertical div.).

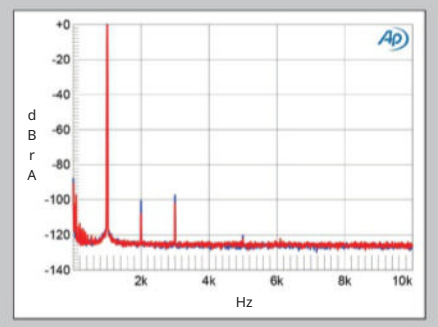

Fig.9 Quad 33, MM phono input, balanced output, spectrum of 1kHz sinewave, DC–10kHz, at 50mV input (left channel blue, right red; linear frequency scale).

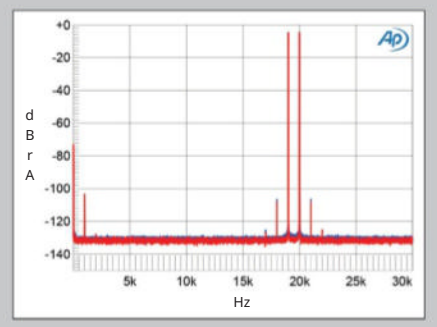

Fig.10 Quad 33, MM phono input, balanced output, HF intermodulation spectrum, DC–30kHz, 19+20kHz for 200mV input (left channel blue, right red; linear frequency scale).

power "bridge mode." Mini-jack sockets facilitate cabled synchronization of the power amplifiers with preamp power-up, including that second channel when operating in bridge mode. The required leads were not provided but are easy to procure. Power input is via an IEC 3-pin facility with the power switch adjacent. After a period of inactivity, the 303 powers down automatically, as per EU-legislated grounds of economy. Thankfully, warmup is quite rapid, usually unnoticed after a few minutes of music play.

303 power amplifier: tech story

The transformer in the new 303's power supply is a low-noise, low-impedance toroidal, updated from its E/I laminated precursor. The rated power output from the new transformer is a modest 200VA. The new design builds on the original concept, though the new 303 has significant advantages. The new design can easily be configured for either stereo or monoblock use. This modern, cool-running, class-AB solid state amplifier provides a baseline 50Wpc into an 8 ohm–rated load in stereo, rising (not doubling) to 70Wpc into 4 ohms. In stereo at least, the 303 is not intended for very demanding loudspeaker loads.

Via masterful sleight of hand, the new 303 replaces not just the early 303 but also, with the addition of bridge-mode connectivity, the early 405 "current dumping" amplifier. Working in mono, the 8 ohm output power now increases to a useful but safely limited 140W, rising to 170W into 4 ohms. The modest 4 ohm value reflects the output current limit of 10A. While it depends on how loudly you play and how large your listening room is, even in bridge mode, relatively sensitive speakers of higher impedance will make the best match.

The original Quad 303 utilized the very smart and cleverly named "Quad Triple" transistor array in the output stage. The Quad Triple was a clever way of offsetting the fact that in the 1960s, no PNP output transistors were available that could result in sufficiently low crossover distortion in a complementary arrangement with an NPN transistor. So the 303 was configured in an equivalent array using only NPN transistors. (TR9 and TR10 are both NPN.) Today, well-matched NPN and PNP power transistors are readily available, so the new 303's output stage is fully complementary.

Another fundamental change: The original quasi-complementary output stage was coupled via a large electrolytic capacitor. The new 303 operates from a modern dual-rail power supply instead of the single 67V rail of old, allowing for direct coupling to the loudspeaker for better damping at low frequencies.

During my testing, I found all the power transformers in these three units—the 33 preamplifier and a pair of 303 amplifiers—to be silent mechanically. During lab testing, I misconnected an amplifier and powered it up. I expected a blown fuse at least, but the protection circuits proved effective.

The sound: The 33 preamplifier and the 303 amplifier

The sound quality of this new pairing inspires confidence, with an impressive neutrality—no fireworks but rather an easy refinement, everything in balance, almost (but not quite) self-effacing. After a week or so of conditioning, I substituted the Quad 33 (with its included phono stage) for my Naim Superline phono equalizer and Townshend Allegri Reference autoformer line control. The

MEASUREMENTS (QUAD 303)

I used my Audio Precision SYS2722 system[1] to measure the Quad 303. I performed a complete set of tests in two-channel mode, then repeated some of the tests in bridged-mono mode. I preconditioned the amplifier at $^1/_8$ the maximum power into 8 ohms for 30 minutes before starting the testing. At the end of that time, the heatsinks were hot, at 111.1°F/43.9°C. The top panel's temperature was 85.3°F/29.6°C.

The Quad 303 preserved absolute polarity with both the balanced and single-ended inputs in both two-channel and bridged-mono modes. The balanced input is wired with pin 2 hot, the AES standard. The balanced input's voltage gain at 1kHz into 8 ohms was 22.6dB; unusually, the single-ended input's gain was higher, at 29.2dB. The gains in bridged-mono mode were respectively 29.6dB and 34dB. The balanced input impedance was 18k ohms from 20Hz to 20kHz; the unbalanced input impedance was 5.8k ohms at 20Hz and 1kHz, 5.65k ohms at 20kHz.

The output impedance was low, at 0.05 ohms at 20Hz and 1kHz, rising slightly to 0.12 ohms at 20kHz. As a result, the variation in the amplifier's frequency response with our standard simulated loudspeaker[2] (fig.1, gray trace) was negligible. The response into resistive loads was flat up to 40kHz, rolling off by 3dB at 200kHz into 8 ohms (blue, red traces), at 125kHz into 4 ohms (cyan, magenta traces), and at 61kHz into 2 ohms (green trace). The unbalanced input's frequency response was identical to that shown in fig.1; the response in bridged-mono mode into 8 ohms was down by 3dB at 150kHz. Even though there are now two output stages in series, the output impedance in bridged-mono mode was still low, at 0.065 ohms in the bass and midrange, rising to 0.165 ohms at the top of the audioband. The Quad 303's reproduction of a 10kHz squarewave into 8 ohms in two-channel mode (fig.2) featured short risetimes without any overshoot or ringing.

The Quad 303's channel separation was very good, at >80dB in both directions below 3kHz and still 80dB, L–R, and 69dB, R–L, at 20kHz. The unweighted, wideband signal/noise ratio taken with the single-ended inputs shorted to ground was a very good 79dB ref. 1W into 8 ohms (average of both channels). This ratio improved to 93.65dB when the measurement bandwidth was restricted to the audioband, and to 96.5dB when A-weighted. Spectral analysis of the low-frequency noisefloor while the Quad 303 drove a 1kHz tone at 1Wpc into 8 ohms

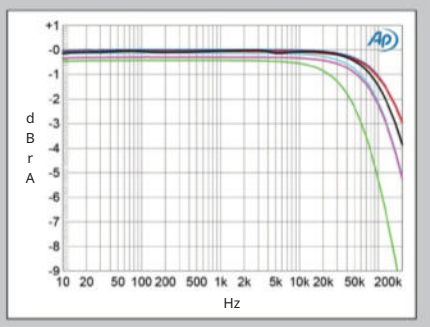

Fig.1 Quad 303, frequency response at 2.83V into: simulated loudspeaker load (gray), 8 ohms (left channel blue, right red), 4 ohms (left cyan, right magenta), and 2 ohms (green) (1dB/vertical div.).

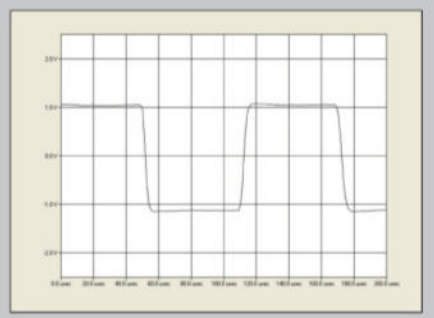

Fig.2 Quad 303, small-signal 10kHz squarewave into 8 ohms.

reference power amplifier remained in place: my Naim NAP 250 (2024). Initially, right after the substitution, the sound seemed a little reticent—softer, pleasant, with good resolution but not particularly involving. That impression soon passed. The more we—my listening panel and I—used the control unit (beyond 50 hours), the better it got, until the 33 no longer seemed in the way. Rather, it was now providing free-flowing, musically rewarding replay when fed by my reference-level ND 555 dual-supply streamer. The 33 did not perform like a reference-level design, but then it is not intended to be. It does classic, full-function preamplifier tasks without fuss and with substantial musical neutrality. Transparency rates Good+—very good at the price.

With the Quad 33 well run-in, we experimented with the facilities; eg, tone controls, on and off. We found "bypass"—no tone controls in the circuit—a little sweeter, more transparent and dynamic. There is some mild midrange bloom and loss of transparency with "tone" invoked. We also noted slightly better stereo image clarity when the display was muted. (We ran software version 1.7; updates are available online.) The line level via CD was clearly better in definition and soundstage clarity, though LP via the built-in phono preamplifier was certainly pleasant. With my Lyra Delos cartridge, I achieved a fortuitous gain match. Both MM and MC input options worked well, if perhaps not quite to maximum volume via MM.

I put on Vivaldi's *The Four Seasons*, with Sir Neville Marriner and the Academy of St. Martin-in-the-Fields (LP, Argo ZRG 654). The MC input was respectably quiet with no supply hum, just a little more, unobtrusive background *ssh* than with the MM setting. The timbre was well balanced: a little bland, reasonably spacious, with the solo violin honey toned, perhaps more decorative than involving.

Conveniently, MC/MM switching may be done remotely, allowing easy comparison of the low- and high-gain inputs after adjusting for the volume changes. A tough call, but I fancy that the MM input was a tad clearer, more open and more dynamic than MC, so a higher-output moving coil might be favored. It is worth trying the MC input nonetheless. The quality was well up to the standard revealed that the random noisefloor was very low in level, at –120dB (fig.3). While some power supply–related spuriae were higher in level than the random noisefloor, given the very small size of the 303's chassis, the low levels of these spuriae suggest exemplary circuit board layout.

Quad specifies the 303's maximum power with both channels driven as 50Wpc into 8 ohms (17dBW) and 70Wpc into 4 ohms (15.44dBW). With clipping defined as when the THD+noise reaches 1%, the Quad amplifier slightly exceeded the specified powers with a 1kHz signal, clipping at 52W into 8 ohms (17.16dBW, fig.4) and 77W into 4 ohms (15.85dBW, fig.5). The FTC's updated "Amplifier Rule" states that maximum power should also be assessed at frequencies other than 1kHz.[3] I therefore repeated the clipping test with a 20kHz signal. At this frequency, the Quad 303 clipped at the specified power of 50Wpc into 8 ohms. (The amplifier went into protection mode just above this power, putting it into standby. Turning it on again

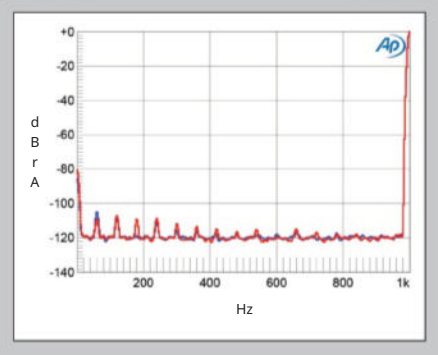

Fig.3 Quad 303, spectrum of 1kHz sinewave, DC–1kHz, at 1Wpc into 8 ohms (left channel blue, right red; linear frequency scale).

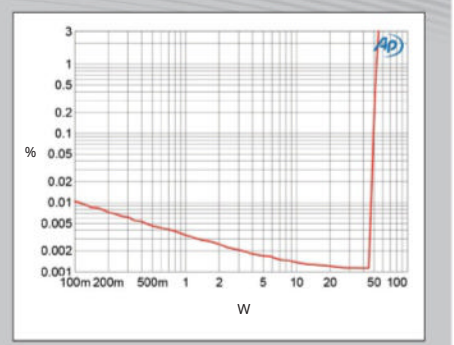

Fig.4 Quad 303, distortion (%) vs 1kHz continuous output power into 8 ohms.

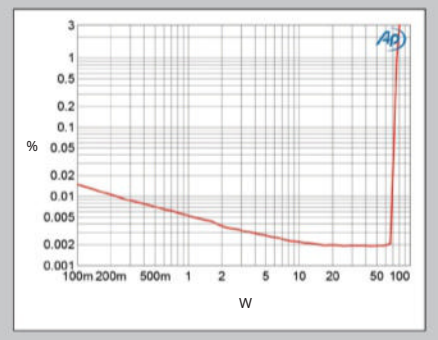

Fig.5 Quad 303, distortion (%) vs 1kHz continuous output power into 4 ohms.

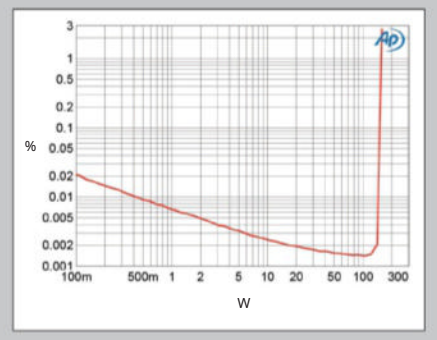

Fig.6 Quad 303, bridged-mono mode, distortion (%) vs 1kHz continuous output power into 8 ohms.

1 See stereophile.com/content/measurements-maps-precision.

2 See stereophile.com/content/real-life-measurements-page-2.

3 See stereophile.com/content/ftc-updates-amplifier-rule.

required for a component at the price. I compared Bruce Springsteen's *Born in the U.S.A.*, LP vs CD. The latter was better in definition, focus, and attack, but the LP (via the MM input) was easier on the ear and proved more rewarding.

The MC input was well matched for the Lyra Delos, with very low noise and no audible hum. The Quad 33 pre will easily drive the Naim NAP 250 power amp, but unsurprisingly the latter reveals some limitation of image depth and dynamic expression. Nevertheless, this combination remained musical and entertaining, a win in this context. There was some loss of immediacy with tone invoked. However, the tone controls worked as advertised and could with practice be used to correct more difficult recordings. Out-of-kilter timbre can be leveled up, while for high-quality, well-balanced material the tone control section was best left on bypass.

In its class, it is neutral, almost nostalgic, with good clarity, a wide soundstage but moderate image depth despite a natural perspective, ie, not too much presence. The phono input is very pleasant, with natural tonality and a relaxed quality.

While the MC phono input was well balanced over frequency and respectably quiet, the sound in MM mode was superior, with enough gain for my Lyra Delos medium-output moving coil. A higher output cartridge, like the Hana EH, would likely be a good choice for use with the MM input—and a more appropriate price match than the Lyra Delos. The 33 via the moving coil input is quiet, and via the line input, it is silent. The line stage is neutral and detailed and drove other amps well, including the NAP 250, despite the price differential.

303 bridged

In time, it became apparent that the 303 power amplifier had superior potential. More listening, with higher-definition sources, proved rewarding in terms of transparency, dynamics, and image precision. Wishing to stretch this further, two 303s were bridged as monoblocks, one channel per amplifier.

The 303 comes to life in bridged configuration. The bridged-mono set had a firmer grip on my 8 ohm Fink Team KIM loudspeakers: tighter, more tuneful bass with better rhythmic patterning. The dynamic headroom was obviously superior—indeed, I heard improvement in dynamics, musical expression, transparency, and focus. The sound overall was more upbeat and bolder, as evinced by my *The Best of the Art of Noise* (CD, China Records WOLCD 1010), which displayed crisp, neutral, well-defined sound with good timing, satisfying clarity, and bold image focus. This last quality was particularly evident when I substituted the Townshend Reference control preamplifier for the Quad 33 preamplifier. Images gained additional focus, fatigue remained low, the soundstage had more depth, resolution and dynamic range increased, and pace and rhythm noticeably improved. Timbres remained natural. This system was now seriously entertaining.

Randomly, I substituted a Kimber Carbon power cable for the

Quad 303 measurements, continued

via the front-panel button restored normal operation.) In bridged-mono mode, the Quad 303's specified powers are 140W into 8 ohms (21.46dBW) and 170W into 4 ohms (19.3dBW). I measured clipping powers of 152W into 8 ohms (21.8dBW, fig.6) and 180W into 4 ohms (19.54dBW). I didn't test the maximum powers in either mode into 2 ohms, as these aren't specified.

The downward slope of the traces in figs.4–6 suggests that the actual distortion lies beneath the noisefloor at powers below 20W. I therefore examined how the Quad 303's THD+N percentage varied with frequency at 12.67V, equivalent to 20W into 8 ohms and 40W into 4 ohms (fig.7). The THD+N was very low in the bass and midrange into both impedances, and while it rose at higher frequencies, the level was still low in absolute terms.

The distortion waveform with a 1kHz tone at 20W into 8 ohms was primarily the second harmonic (fig.8). Spectral analysis (fig.9) revealed that the second harmonic lay at a very low –97dB (0.0014%), and while higher-order harmonics were present, these were all lower in level. The spectrum at the same voltage into 4 ohms was similar, though the second harmonic had risen to –90dB (0.003%). Repeating the spectral analysis at 50W into 8 ohms in bridged-mono mode gave a very similar spectrum to that shown in fig.9. Intermodulation distortion with an equal mix of 19kHz and 20kHz tones at 40W peak into 4 ohms was impressively low in level (fig.10).

The Quad 303 offered excellent measured performance, with very low levels of noise and distortion. Notably, it met its specified power into 8 ohms with a 20kHz signal as well as with the usual 1kHz.

—John Atkinson

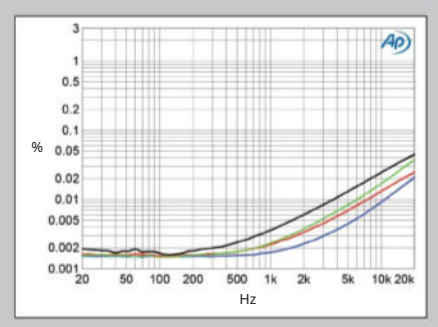

Fig.7 Quad 303, THD+N (%) vs frequency at 12.67V into: 8 ohms (left channel blue, right red) and 4 ohms (left channel green, right gray).

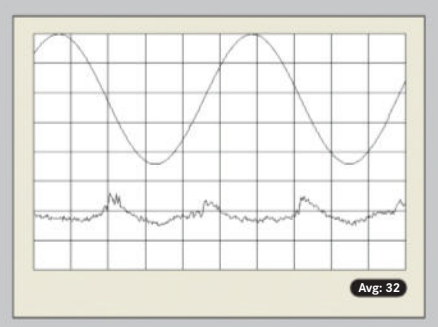

Fig.8 Quad 303, 1kHz waveform at 20W into 8 ohms, 0.0017% THD+N (top); distortion and noise waveform with fundamental notched out (bottom, not to scale).

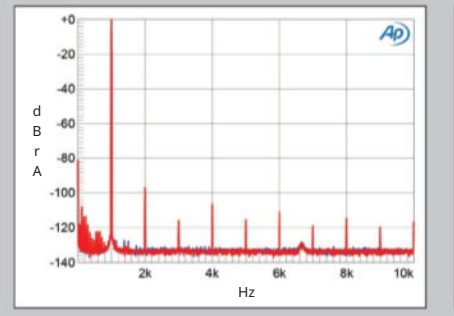

Fig.9 Quad 303, spectrum of 1kHz sinewave, DC–1kHz, at 20Wpc into 8 ohms (left channel blue, right red; linear frequency scale).

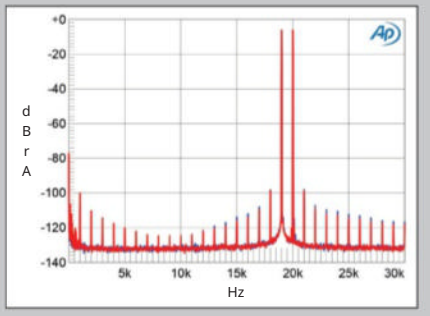

Fig.10 Quad 303, HF intermodulation spectrum, DC–30kHz, 19+20kHz at 40Wpc peak into 4 ohms (left channel blue, right red; linear frequency scale).

supplied generic cable; everything improved a notch, confirmed in a single-blind comparison. This is a clear demonstration that some potential remains unrealized.

Without a doubt more open and dynamic, the bridged-mono mode sounded well timed and refreshing, displaying fine microdynamics but also a correspondingly impressive dynamic range. Playing the third-movement *Allegro* from Scarlatti's K.115 Sonata in C Minor on *Continuum* (CD, Alpha 399), Justin Taylor was spellbinding: six minutes of densely packed notation played with verve and presence—all seriously arresting via the 303 monoblocks. This amplifier illustrated the huge difference in recorded soundstage when compared to the alternative, classically laid-back, almost polite rendition from Igor Kipnis.

Perennial CD review favorites including Rickie Lee Jones's *The Magazine* flowed well and were also rendered fresh and lively. My much-played reference from 1989, "Monkey's Paw," from Laurie Anderson's complex and varied *Strange Angels* album, provided the requisite attack and surprise. Also from Laurie, "Slip Away," from *Life on a String*, was exceptionally spacious and atmospheric—so much so that I played the album all the way through. The superclear and superdynamic "Dreaming in Colour" from the Art of Noise's *The Seduction of Claude Debussy* was convincing on these monoblocks, now well–run in, demonstrating ample dynamic range and rock'n'roll loudness with my nominal 8 ohm Fink Team KIM loudspeakers.

Conclusions

This is classic, timeless audio engineering at its best, beautifully functional, versatile, elegant, essentially self-effacing, and possessed of a calm, almost relaxed musicality respectful of its legendary roots in Quad audio history. Evidently, much thought has gone into the reinvention of these classic Quad solid state amplifier separates. The new 33 full-function preamplifier and 303 power amplifier complement each other in sound, style, and price. I am won over by the high-quality engineering, the sensitive interpretation of the classic modern style and finish, and not least the fine performances I experienced through all the range of inputs. The monoblock 303 in particular has potential beyond this pairing; bridged, as I auditioned them, these monoblocks should pair well with more costly units, though they do prefer more efficient, higher-impedance speakers. Quad has not overplayed its hand.

This versatile new 33/303 pre-power pairing is just right. ■

ASSOCIATED EQUIPMENT

Analog sources Linn Sondek LP12 turntable with Keel chassis, Karousel main bearing, Radikal motor control, Naim ARO tonearm, and Lyra Delos cartridge.
Digital sources Naim UnitiCore network server and S/PDIF source. Roon Nucleus+. Naim ND 555 Streamer-DAC with two 555 PS (DR) power supplies, Ariston CD player used as a transport.
Preamplification Townshend Allegri Reference (line), Naim SuperLine-SuperCap DR (phono).
Power amplifiers Naim NAP 250 (2023), Constellation Revelation 2.
Loudspeakers Fink Team KIM, BBC LS3/5a.
Cables Speaker: Transparent XL MM2, Naim NAC A5. Interconnects: Naim standard and Super Lumina, Transparent MM2 and Van den Hul Carbon TFU. Power: Transparent XL series, Naim Powerline and Powerline Lite.
Accessories Several four- and five-tier Naim Fraim racks.
—Martin Colloms

THE REVIEWER REVIEWED, OR, THERE'S NOTHING NEW UNDER THE SUN

I reviewed the original Quad solid state amplifiers in the early 1970s, a time when my reviewing style was considered too outspoken and confrontational by the established old guard of UK hi-fi publishers and manufacturers. At *Hi-Fi News*, the great John Crabbe had inherited an industry-friendly policy of not discussing the sound quality of audio electronics. In the US, this situation had started to change in 1962, when J. Gordon Holt launched *Stereophile* guided by the notion that hi-fi reviews ought to focus on the sound, but in the UK, change came more slowly. Most in the UK audio establishment still held that if an audio component measured well, it must sound fine, and that was the final word on the subject. Subjective comments were censored. At an unsighted amplifier listening test I hosted, Crabbe entered the same median score for every test presentation, on principle.[1]

I fought for the right to critically review sound quality. Some members of the audio establishment, including Quad founder Peter Walker, fought back, staging events to prove it could not be done with well-designed amplifiers because their electrical specifications were below then-accepted levels for the audibility of errors—hence, they all sounded alike. I was challenged to a blind test to prove that my subjective observations were not imaginary. I had to agree that Quad test my ability to discriminate between two technically benchmarked and nominally matched amplifiers, one chosen by Quad, the other by me. Both were pretested by Quad to ensure that they were free of defects and so could be expected to sound identical.

The Quad team were dispatched with the amplifiers to be compared to an adjacent room, linked to my studio only by speaker cable. Presented randomly with music samples of calibrated loudness, I did not attempt to identify A or B but rather scored each trial on whether a given presentation was more musically communicative than the alternative.

After many tests, they departed. When I enquired as to the results, they reluctantly admitted that they had failed to prove that I could *not* hear amplifier differences, which had been their goal. Consequently, they agreed to discontinue this fractious public dispute, which by then had spilled over onto the pages of the prestigious electronics journal *Wireless World*, edited by Tom Ivall. It was a harrowing experience.

Working weekends as a demonstrator at an audiophile retailer, I found it difficult—impossible, really—*not* to hear sound-quality differences among a wide range of audio amplifiers when I listened in a relaxed and familiar setting. Never mind complete amplifiers: I was able to show that almost every component of an amplifier had identifiable characteristics and could be ranked for sound quality.

Paul Messenger, who became deputy news editor in 1975, pioneered *Stereophile*-style listening-based reviews in *Hi-Fi News*. Other UK publications, including *Hi-Fi Answers* and *Practical Hi-Fi & Audio*, also started reviewing subjectively during the 1970s. **—Martin Colloms**

1 John Atkinson participated in a similar trial around the same time; JA was responsible for collecting and tallying listeners' scores. He reports that an engineer named Reg Williamson did exactly the same thing, entering the median score for every trial. JA says Williamson "went ballistic when I refused to include his, not the least because I saw him filling in the non-identifications on his score sheet before the blind tests started."

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Canor Hyperion P1

PREAMPLIFIER

Just when I thought my equipment reviewing schedule was locked in for many months, an unavoidable last-minute cancellation sent me scrambling for an alternative.

Jim Austin to the rescue. To his query, "How would you like to review a tube preamp from Canor, of Slovakia?" I answered with an enthusiastic "yes!"

In addition to the exciting prospect of reviewing the first tubed preamplifier to come my way in a long time, hearing the Canor Hyperion P1 preamplifier ($12,500) in my system would enable me to get a handle on the sound of gear I'd only encountered once, at High End Munich 2024.[1] As is often the case at shows, I left without a clear sense of the preamp's contribution to the system's sound, let alone its ultimate potential.

The Canor Hyperion P1's price is far lower than that of my two reference, solid state preamps, the Soulution 727 ($74,975) and the D'Agostino Relentless ($150,000). Because of the huge price discrepancies, this was a review where it only made sense to explore the sound of the gear at hand without comparing it to gear with a heftier price tag.

A brief history

Canor was established in Slovakia in 1995, a mere two years after the separation of Czechoslovakia. Although Canor has designed its own equipment since day one, the Canor brand took a back seat to the company's primary role as an OEM/ODM (Original Equipment Manufacturer/Original Design Manufacturer), anonymously

1 See stereophile.com/content/fink-team-and-epos. Julie Mullins encountered Canor at AXPONA 2022; see stereophile.com/content/verdant-audio-wilson-benesch-canor-weiss-antipodes-avm-puritan. Robert Schryer heard some of their equipment a month later at Montréal Audio Fest 2022; see stereophile.com/content/capital-sound-room.

SPECIFICATIONS

Description Class-A vacuum tube preamplifier with zero global feedback and balanced attenuator. Tube complement: four 6922, two 6H30PI. Inputs: four XLR (balanced), five RCA (single-ended; one pair can be set to fixed output). Outputs: two XLR (balanced); one RCA (single-ended). Gain (XLR output): 11dB. Input impedance: 30k ohms. Output impedance: <150 ohms. Frequency response: 10Hz–80kHz, ±0.1dB. THD (XLR output): <0.005% at 1kHz, 2V RMS, XLR; <0.3% at 1kHz, 49V RMS. Channel separation: >110dB. S/N ratio (20Hz–80kHz): >115dB. Power: 115V, 50–60Hz. Volume control: 1dB increments with a maximum attenuation of 63dB. Maximum input voltage: 26V RMS at full rated output. Maximum output voltage: 50V RMS balanced (XLR) (THD <0.5%), 30V RMS balanced (XLR) (THD <0.05%), 4V RMS balanced (XLR) (THD <0.005%), 25V RMS unbalanced (RCA) (THD <0.5%), 12V RMS unbalanced (RCA) (THD <0.05%), 3V RMS unbalanced (RCA) (THD <0.005%). Power consumption: 0.82W standby.

Dimensions 17.72" (450mm) W × 18.31" (465mm) D × 7.48" (190mm) H. Weight: 63.93lb (29kg).

Finish Silver or black.

Serial number of unit reviewed 07 628.

Manufactured in Slovakia.[1]

Price $12,500. Approximate number of US dealers: 6.

Warranty: 5 years.

Manufacturer
Canor, spol. s r.o.
Družstevná 39, 080 06 Prešov, Slovakia.
Tel: +421 51 7710396.
Email: sales@canor-audio.com.
Web: canor-audio.com.
US distributor: Verdant Audio,
12 Howell Dr.,
Far Hills, NJ 07931.
Tel: (475) 350-9876.
Email: info@verdantaudio.com.
Web: verdantaudio.com.

1 Canor emphasizes that Slovakia is a member of the European Union.

designing and producing equipment for other brands.[2] The company first began to seriously market equipment under the Canor name in 2020. Five years later, Canor products are distributed in at least 30 countries; US distribution is handled by Scott Bierfeldt's New Jersey–based Verdant Audio.

Canor currently employs 80 people, including 15 engineers, and occupies a facility of more than 86,000ft² that includes an anechoic chamber, CNC machines, and equipment for PCB assembly and for anodizing, sandblasting, and brushing metal. Canor launched an enhanced version of its first amplifier, as well as some new lower-level products, at High End Munich 2025.

To learn more, I scheduled a Teams chat with Bierfeldt, Sales and Marketing Director Ivan Bosnovic, and chief engineer/designer Zdenek Brezovjak. Brezovjak is one of the company's three highly engaged owners,[3] all of whom remain with the company after three decades in business.

Most Canor products use tubes. Abetted by their own Aladdin I and Aladdin II tube-testing devices, the company measures multiple tube parameters before assigning an individual ID number to each tube. All tubes are burned in, again on proprietary devices, for 200 hours; this allows them to stabilize before they are measured, selected, and paired. Canor stores all measurements and identifying parameters to enable precise tube matching down the road.

The company applies what they call "Canor PCB Milling Technology" (CMT) to the production of printed circuit boards (PCBs). Bosnovic said, "Our PCB methodology achieves excellent parameters that can be equaled by wire-to-wire connections only by using very expensive high-quality wires with Teflon insulation. However, our new technology has the advantage of repeatability in production, with a 100% identical geometric arrangement, which is not possible with wire-to-wire connections. In addition, our advantage is that the signal paths are several times shorter than it is possible to achieve wire-to-wire."

What it is

The Hyperion P1 is Canor's top-of-the-line, class-A reference tube preamp. Launched in December 2022, it's the intended partner and a good match for the Canor Virtus M1 reference monoblocks ($30,000/pair). Among the Hyperion P1's key selling points are a zero global feedback design that uses four 6922 and two 6H30PI tubes. Its 64-step balanced attenuator adjusts volume in 1dB incre-

2 For an introduction to Canor, see youtube.com/watch?v=ibGUSenKbHA.

3 Jan Kosco handles mechanical design and finances, and Jozef Curlik oversees production and machinery. All three men have been with the company since its inception.

MEASUREMENTS

When I unboxed the Canor Hyperion P1 preamplifier, the four 6922 tubes, two for each channel, were installed, but the 6H30PI dual-triode tubes, labeled "1" and "2," were packed separately. I carefully installed these tubes in the sockets that corresponded to their numbers and checked that the 6922 tubes were correctly seated. I performed a complete set of tests with my Audio Precision SYS2722 system[1] then repeated some of the testing with the magazine's APx500 analyzer.

I immediately encountered a problem in that there was no output from the right channel, from all the balanced and unbalanced inputs and outputs. I checked that all the cables I was using were okay. Then, after powering down the Hyperion P1, I rechecked that all the tubes were correctly installed. The problem persisted, so after powering down the preamplifier again, I swapped the tubes in one channel with those in the other. The right channel remained dead. The 6H30PI tubes are a very tight fit in their sockets; it is possible that either when the right channel's tube was removed before the preamplifier was shipped to me, during shipping, or when I installed the tube, the printed circuit board on which the socket was mounted had flexed and a trace had gone open circuit, though I could see no indication that this was so. However it happened, this malfunction obviously occurred after Jason's audition. I restored the tubes to their original locations and continued the testing with just the left channel.

All the inputs and outputs preserved absolute polarity, ie, were noninverting. The Hyperion P1's input impedance is specified as 30k ohms; I measured 53k ohms from 20Hz to 20kHz for the balanced inputs, 24k ohms at 20Hz and 1kHz, 21.6k ohms at 20kHz, for the single-ended inputs. The preamplifier's source impedance, specified as <150 ohms, was 274 ohms at 1kHz and 20kHz but 6.6k ohms at 20Hz for the balanced outputs; the unbalanced impedances were half those values. The rise in the source impedance at low frequencies is presumably due to the outputs being capacitor-coupled.

The volume control operated in accurate 1dB steps. At 10.9dB, the maximum gain at the balanced outputs was very close to the specified 11dB with both balanced and unbalanced input signals. The gain was the expected 6dB lower at the unbalanced out-

1 See stereophile.com/content/measurements-maps-precision.

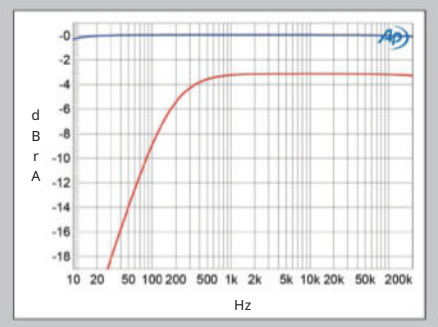


Fig.1 Canor Hyperion P1, balanced frequency response with volume control set to the maximum at 2V into 100k ohms (blue) and 600 ohms (red) (2dB/vertical div.).

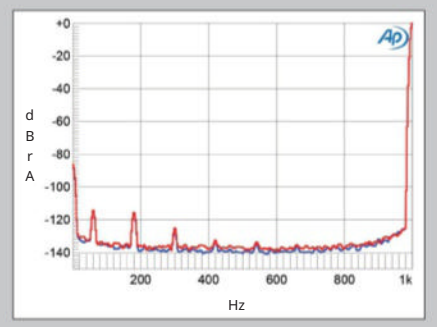


Fig.2 Canor Hyperion P1, balanced spectrum of 1kHz sinewave, DC–1kHz, at 2V into 100k ohms with volume control set to the maximum (blue) and to –12dB (red) (linear frequency scale).

ments and is galvanically separated from other parts of the preamp via an aluminum box with walls 10mm thick. Antivibration columns support the attenuator and the electronics.

With Bosnovic acting as translator, Brezovjak said that he is a violinist and wind player whose father taught and played cello and bass. His goal, he said, is to create equipment that reproduces the sound of real acoustic instruments making real music in a natural way.

Tube rolling is a popular activity among audiophiles, but Canor's position on the subject is ... nuanced. Bosnovic said that "customers are free to roll the tubes we select, which are predominantly from Electro-Harmonix." He noted, however, that because Canor "precisely burns in, tests, selects, and pairs" the tubes in each unit, the advantages of tube rolling are likely to be "questionable. Ultimately, it's very subjective."

Bierfeldt elaborated. "I have a nice stockpile of expensive tubes, but I have not been able to beat Canor's choices. I've had customers try the same thing. They typically return to the originals and are always a little dumbfounded" that the original tubes do as well as they do. "That's because Canor's tube matching is precise and done only after 200 hours of burn-in, which allows them to stabilize. A really narrow match makes a huge difference."

Bierfeldt expects the tubes in the P1 to last for at least 4000 hours of playback. He'd used the Canor P1 I reviewed almost constantly for three years, and the tubes still measured at 85% of tube life.

How it looks, how it sat

I find the Canor Hyperion P1's design aesthetic, which includes a large, centrally located front-panel volume knob distinguished by a yellow-illumined Canor logo and surrounded by yellow light, visually appealing. I appreciate the large LED input and volume readout on the right of the front panel, the bright horizontal strip that extends across its middle, and the visually balanced location of the push buttons that control power on/standby, input choice illumination, mute, and fixed or variable output. I also like the placement of the top's five air holes and the attractively designed air slots. Beauty may be in the eye of the beholder, but this beholder's eyes were happy to gaze on the illumined P1 each time I entered the music room.

The rear panel is the epitome of neatness and clarity, with four pairs of XLR (balanced) inputs and five pairs of RCA (single-ended) inputs; one pair of each can be set to "FIX.OUT" via that front-panel button. For outputs, the P1 offers two pairs of XLR and one pair RCA. Twelve volt trigger outputs (which I did not use) and a three-prong IEC power inlet with fuse holder complete the picture.

The Hyperion P1 arrived with its four 6922 tubes already

put. Fig.1 plots the Hyperion P1's frequency response into 100k ohms (blue trace) and 600 ohms (red trace). The response into both impedances is flat to 200kHz, but the increase in the preamplifier's output impedance at low frequencies results in a large rolloff in the bass into 600 ohms. The Hyperion P1 must be used with power amplifiers that have an input impedance of at least 20k ohms at low frequencies if the bass is to not sound lightweight. (The Dan D'Agostino and Accuphase monoblocks that JVS used for his auditioning respectively have a balanced input impedance of 183k ohms and 39.6k ohms at 20Hz, both of which are ample.) The volume control was set to the maximum to generate the traces in fig.1; with it set to –20dB the output was down by 2dB at 200kHz.

With the right channel inoperative, it wasn't possible to measure channel separation in detail. However, feeding the right channel a 1kHz signal, the crosstalk in the left channel lay at –108dB ref. 5V. With the volume control set to the maximum and the balanced input shorted to ground, the wideband, unweighted S/N ratio (ref. 2V output) was an excellent 93.5dB, increasing to 107.2dB when the measurement bandwidth was reduced to the audioband and to 111.6dB when A-weighted. Repeating this test with the single-ended input shorted to ground reduced these ratios by 12dB, but this is still very good performance. Spectral analysis of the Canor's low-frequency noisefloor with the preamplifier outputting a 1kHz tone at 2V with the volume control set to the maximum (fig.2, blue trace) revealed that both the random noise and the supply-related spuriae in the noisefloor were very low in level. Repeating the analysis with the volume control set to –12dB and the level of the input signal increased so that the output was the same 2V (red trace) slightly

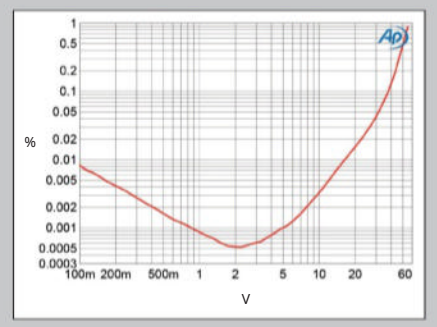


Fig.3 Canor Hyperion P1, balanced THD+N (%) vs 1kHz output voltage into 100k ohms.

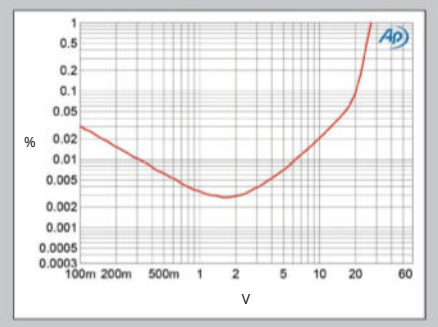


Fig.4 Canor Hyperion P1, single-ended THD+N (%) vs 1kHz output voltage into 100k ohms.

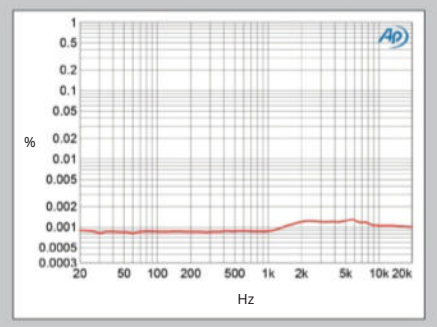
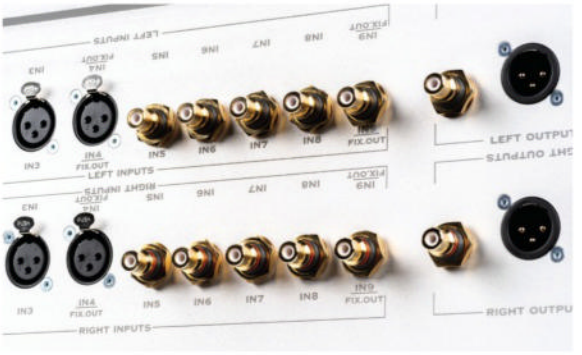


Fig.5 Canor Hyperion P1, balanced THD+N (%) vs frequency at 4V into 100k ohms.

in place. To prepare it for use, I employed a special tool (included in the box) to remove the 10 screws that fasten its top to the rest of its chassis. After carefully removing the top, I inserted the two 6H30PI tubes into their prescribed sockets. To ensure correct positioning, Bierfeldt had labeled both the tube sockets and the protective bubble wrap surrounding those tubes "1" and "2."



To replace the cover, I had to surmount two minor challenges: setting it in place without pinching fingers and lining up the screw holes. Most of us have been through such things before and survived unscathed. As long as you're not fielding texts, watching YouTube videos, or struggling to keep your pet(s) or child(ren) quiet and at a distance, you, too, should make it through safely.

That chore complete, I placed the Hyperion P1 atop Wilson Audio Pedestals on the left top of my Grand Prix Monza double rack. To its right sat the Display and Core of the superb and far more expensive five-piece dCS Varèse Digital Music System, collectively a streaming DAC. The data source was files—either streamed through or stored on an Innuos Statement Next-Gen streamer-server outfitted with ultrarevealing upgraded umbilical cables. Speakers were the trusty Wilson Alexia V with Lōke subwoofers. The two XLR outputs allowed me to send the P1's output to the monoblocks (then on to the main speakers) and the subwoofers.

All front-end components received regulated battery power from a Stromtank S-4000 MKII XT power generator; the D'Agostino Momentum M400 MxV monoblocks got their kick direct from the wall. Cabling, which included XLRs to the balanced D'Agostinos, was a mix of Nordost Odin II and Valhalla II, AudioQuest Dragon and Firebird.

Most Canor Hyperion P1 preamplifier owners will pair it with less pricey equipment. My reference setup is not an obvious match, but it allowed me to hear and determine the best that the Canor Hyperion P1 is capable of.

How it sounded

The Canor Hyperion P1 performed flawlessly during the review period, with no buzz or hum. What did not operate flawlessly was this reviewer. During one of my listening sessions with a friend, I inadvertently buried the small remote under the triple layer of plywood slab, cushioning, and special back support that prevents me from sinking into our vintage couches. Before I even discovered it missing, I had sat on it. By the time a replacement arrived via expedited shipping, I'd grown accustomed to adjusting volume by hand.

In almost the same amount of time it took my tuchus to wreck the remote control, the Hyperion P1 distinguished itself with

measurements, continued

raised the (relative) level of the noisefloor. The (low) levels of the spuriae at 60Hz and its odd-order harmonics were the same, which suggests these are introduced after the volume control.

Fig.3 plots the THD+noise percentage in the Canor preamp's balanced output against voltage into 100k ohms with the volume control set to the maximum. Actual distortion lies below the low noisefloor up to 2V output. It increases above that level but doesn't reach 1%, our usual definition of clipping, until an extraordinarily high 56V. The unbalanced output clipped at 26V into 100k ohms (fig.4), though the THD+N was higher than it had been in the balanced output. Both output types clipped at 5.2V into 600 ohms.

The balanced output's THD+N percentage, plotted at 4V into 100k ohms, was very low across the audioband (fig.5). I haven't shown how the THD+N varied into 600 ohms because this was affected by the rise in input impedance at low frequencies, but it lay between 0.2% and 0.3% in the midrange and treble at the same 4V. The distortion signature at the same voltage into 100k ohms was primarily the second and third harmonics, both close to a very low –96dB (0.0015%, fig.6). Intermodulation distortion with an equal mix of 19 and 20kHz tones was very low in level (fig.7), but even with the P1's reduced linearity into 600 ohms it was still very low (fig.8).

Other than the problem with the right channel, which occurred after JVS's audition, the Canor Hyperion P1 offered superb measured performance, with a wide frequency response and very low levels of noise and distortion. This is commendable given that the tubed circuit doesn't use global feedback. However, this preamplifier does need to be used with power amplifiers that have a high input impedance.—**John Atkinson**

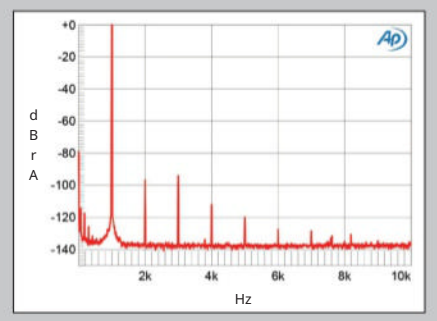


Fig.6 Canor Hyperion P1, balanced spectrum of 1kHz sinewave, DC–1kHz, at 4V into 100k ohms (linear frequency scale).

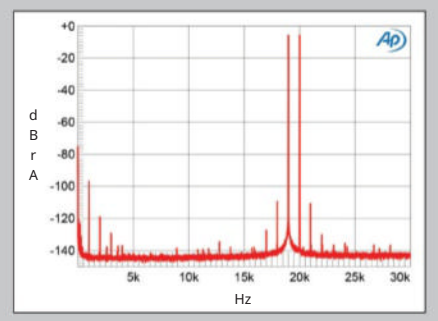


Fig.7 Canor Hyperion P1, balanced HF intermodulation spectrum, DC–30kHz, 19+20kHz at 4V into 100k ohms (linear frequency scale).

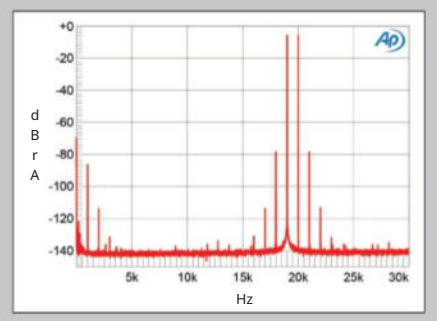


Fig.8 Canor Hyperion P1, balanced HF intermodulation spectrum, DC–30kHz, 19+20kHz at 2V into 600 ohms (linear frequency scale).

one of the airiest and widest soundstages that any preamp has delivered in my music room. I listened to Kristian Bezuidenhout and Freiburger Barockorchester's period instrument recording of Mozart's Piano Concertos Nos.19 and 23 (24/96 WAV download, Harmonia Mundi) and Isabelle Faust and Les Siècles' extremely detailed recording of the Ligeti Violin Concerto, conducted by François-Xavier Roth on *Ligeti: Violin, Piano & Românesc Concertos* (24/96 WAV download, Harmonia Mundi). On both recordings, both the solo instruments and orchestra were set back and spread deliciously wide, with significant air around solo instruments. The effect was captivating. The openness and depth made me want to listen more.

There's a mystery to the Hyperion P1's sound that will draw many listeners in. If you want to hear what it can do with a recording whose spaciousness is superb to begin with, marvel at any track on Morten Lindberg's recently released *Stjernebru* with The Norwegian Girls Choir *(Det Norske Jentekor)* (24/352.8 FLAC download, 2L). For another airy goodie, listen to Debussy's Sonata for Flute, Viola, & Harp, recorded in the remarkably spacious, deep, and resonant Salle Colonne in Paris, on *Debussy: Sonates & Trio* (24/96 WAV download, Erato). Emmanuel Pahud, Gérard Caussé, and Marie-Pierre Langlamet wonderfully perform this masterpiece, composed three years before Debussy's death.

Timbres were neutral and true, and the midrange was quite beautiful, albeit with colors less bold than with some gear. Given that my room is prone to brightness, I enjoyed the fact that the P1 takes a soft and gentle approach to the top octaves. This treble reticence will prove a benefit in many systems.

This is a fine place to acknowledge that although I made no direct comparisons in this review, my ears have been conditioned by a reference system featuring expensive, solid state preamplifiers. This should be kept in mind in considering this review of a much less expensive (though hardly inexpensive) preamplifier that uses tubes.

I spent quite some time using the Hyperion P1 to review Vijay Iyer and Wadada Leo Smith's boundary-challenging new recording *Defiant Life* (24/96 WAV, ECM/download). The sense of space was marvelous, the air tremendous. The Hyperion P1 wasn't the fastest preamp—its "snap" is of the gentle sort—but it's certainly one of the most listenable and nonfatiguing I've enjoyed in my music room.

I also used the Hyperion P1 to review baritone Benjamin Appl's fascinating *Lines of Life: Schubert and Kurtág* (24/96 WAV, Alpha/download). Initial attacks were a bit blunted, and the cores of tones were a mite blanched. Bottom octaves were extended but less than precisely focused. On two of my friend Scott Campbell's favorites, The Modern Jazz Quartet's rendition of John Lewis's "Place Vendôme," from the remastered version of their album *Pyramid* (16/44.1 FLAC, RevOla/Tidal), and the title track from the Remastered 2007/Rudy Van Gelder Edition of Ike Quebec's *Blue & Sentimental* (24/192 FLAC, Blue Note Records/Qobuz), bass pitch was a mite hard to discern.

This characteristic affected the low notes of the piano on another reference, the title track on Grant Green's *Idle Moments* (24/192 FLAC, Blue Note Records/Qobuz). But while edges were a bit blunted, the Hyperion P1's airy, laid-back quality ultimately *enhanced* the realization of Green's musical intentions.

This effect, which to me seemed paradoxical, worked to the advantage of other recordings as well. Returning to Kristian Bezuidenhout and Freiburger Barockorchester's tangy, period-instrument renditions on *Mozart: Piano Concertos Nos.19 & 23*, the copious delight of No.19's first movement came through in spades. Ultimately, the music's joyful warmth was enhanced by the P1's gift of air and space. The Hyperion P1 may not have conveyed dynamic contrasts in big pieces recorded in high resolution, such as a superbly recorded Mahler symphony, or the subtle changes in volume and nuance on a close-miked recording of a chanteuse, but its marvelous sense of air and space and its ease on top frequently trumped other concerns.

ASSOCIATED EQUIPMENT

Digital sources dCS Varèse five-piece music system, EMM Labs DV2i DAC, Meitner MA3 Integrated DAC; 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 fiberoptic modules (2); Nordost QNet switch and 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.
Power amplifiers Dan D'Agostino Momentum M400 MxV monoblocks, Accuphase A-300 monoblocks.
Preamplifier D'Agostino Relentless, Soulution 727.
Loudspeakers Wilson Audio Specialties Alexia V with 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 (fiberoptic). 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 8-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.
Music room 20' L × 16'4" W × flattens at 9'4" H.
—Jason Victor Serinus

Conclusion

Every piece of gear—like every artist and every performance—offers a different window on truth. We rarely get to have it all. Yet if we choose carefully, we can end up so satisfied that, instead of searching and searching some more, we can sit back in our easy chairs, survey the beauty that's before us, and rest, content to breathe it all in.

Such was my experience with the Canor Hyperion P1. Time and again, I sat still in my listening room and marveled at how easy it was to enjoy music. Highs were smooth, and music was graced with such a profound sense of air and spaciousness that it elicited smile after smile. My auditions took place in early spring, but Gershwin's line, "Summertime, and the livin' is easy," perfectly describes the Hyperion P1's many gifts. ■

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VPI Forever Model One

RECORD PLAYER

The first commandment for a *Stereophile* reporter is to remain neutral about any product under review. But when a company has a history of making things you like, that isn't always easy to do.

Reviewing the VPI Avenger Direct turntable with its 12" FatBoy tonearm, I concluded, "The Avenger Direct recasts records I thought I knew well, revealing secrets and expressing a purer sense of each one's interior life." Covering the VPI Scout 21 for *Stereophile*'s sister website, *AnalogPlanet*, I wrote, "this $3300 table seriously swung and played it all warm and toasty, displaying a big heart. I would even say it displayed an inherent love of music, reflected in its wide rhythmic gait and warmhearted embrace of the LPs I spun on it. The 21 'table is quite the fine fit in the VPI sound family."

Despite my scarcely contained enthusiasm for these previous VPI products, I promise an unvarnished take on the Forever Model One turntable ($5250), which builds on one of the company's long-ago bestsellers, the HW-19, which was first produced in the early 1980s.

SPECIFICATIONS

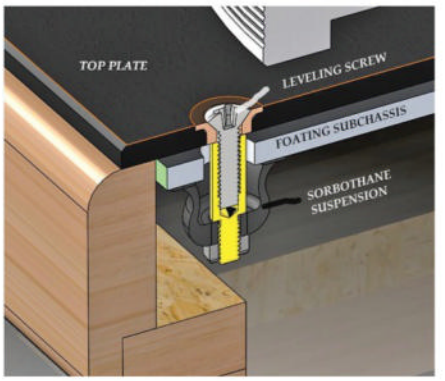
Description Belt-driven, two-speed turntable with suspended chassis, three-point floating suspension. Chassis: wood skirt with machined aluminum top plates. Hinged dust cover. Platter: 12" (305mm) aluminum, 20lb (9.1kg). Motor: 300rpm AC. Speeds: 33 1/3, 45rpm. Wow and flutter: 0.05%. Speed accuracy: 0.05%. Rumble: –80dB. Tonearm included: VPI S, S-shaped, statically balanced aluminum tonearm with aluminum headshell. Pivot-to-spindle distance: 240mm. Effective length: 10" (255mm). Effective mass: 10.4gm. Overhang: 15mm. Cartridge weight compatibility: 5–15gm. Height adjustment: 40–65mm. Offset angle: 21°.
Dimensions 21.5" (546mm) W × 16" (406mm) D × 8" (203mm) H. Weight 40lb (18.1kg).
Finish Black wood and steel with polished aluminum tonearm and platter.
Serial number of unit reviewed 0. Designed and manufactured in the United States.
Price $5850. Approximate number of dealers: 70. Warranty: 10 years.
Manufacturer VPI Industries, 77 Cliffwood Ave. W #5d Cliffwood, NJ 07721. Tel: (732) 583-6895. Web: vpiindustries.com.

During a visit not too long ago to the VPI House in Cliffwood, New Jersey, managing editor Mark Henninger and I filmed an episode of *Stereophile Icons* about VPI, especially its founder, Harry Weisfeld.[1] After the interview, Harry gave me a tour of his basement lair, a museum of audio history that houses equipment: Quad ESL 57 and Ohm F loudspeakers; early Marantz preamplifiers; Denon turntables; reel-to-reel decks from Tandberg, Pioneer, and Technics. I recalled that earlier visit as I talked to Harry by phone.

"We wanted to update the HW-19, which I produced from 1980 until about 1999," Harry told me. "Many things are better now, like CNC machining. When I first made these in 1980, every piece was handmade. ... CNC is amazingly accurate."

"Mat designed most of the Prime turntable. Mat knew the HW-19 well, and I knew the arm well, so we designed [the Forever Model One] together. We tuned it together," Harry added. "Mat designed the base. I did most of the arm work.

"People say they want to buy a turntable that looks like a turntable, right? Not the lunar landing module." Resembling several classic suspended 'tables with separate armboards including the Ariston RD11, Thorens TD 150 and TD 125, and the Linn Sondek LP12, the VPI Forever Model One fulfills that criterion handily.



The Forever One's three-point suspension uses Sorbothane, not springs.

Design and features

The F1 introduces several VPI innovations: their new S-shaped tonearm (dubbed the S-Tonearm), a return to suspended design for the first time in nearly 50 years, and a modular platform intended for future enhancements.

The turntable's dimensions (21.5" wide, 16" deep, 8" high) and substantial 40lb weight juxtapose a modern aluminum plinth and sleek tonearm with the traditional warmth of a solid oak frame, a nod to classic design.

Tonearm

The new 10", statically balanced, S-shaped tonearm uses 6061 aluminum alloy throughout. Throughout, as in the armwand, counterweight, cueing lever, base, VTA dial, antiskate rod, fingerlift, and detachable headshell—all 6061 aluminum alloy, chosen for its mechanical properties, weldability, machinability, and suitability for extrusion. "That's what they use in airplanes," Harry offered. "6061 machines beautifully, it's fairly rigid, and it paints beautifully. The tonearm parts are all CNC machined."

The arm's S-shape was inspired by dearly departed tonearm maker Jelco. "The Jelco arm, when available, was the hit of the audio industry," Harry noted. "The Linn arm, the Grado arm, the Ortofon arm—all made by Jelco. COVID hit, and Jelco—Ichikawa Jewel Co. Ltd.—went out of business. I told Mat, 'We need to make a different arm with a removable headshell; why don't we just copy the Jelco 750D?' They calculated all the angles already. Just reproduce the shape and size; we'll do everything else ourselves."

The VPI S-Tonearm differs from the Jelco 750D it's based on in a couple of important respects. "Most armwands are tubes," Harry said. "This tonearm is *solid* 6061 aluminum. Every tube resonates internally. That's why they stuff things into tubes or make them from sapphire using 3D printing. ... Nordost Valhalla wires, from cartridge to RCA jacks, are hidden inside a small rubber strip inserted in a groove on the arm's base. No connections. Way better. The rubber strip helps damp the arm."

Harry Weisfeld's skepticism about antiskate is well known. "A record hole isn't perfectly centered, so the arm constantly moves back and forth," Weisfeld explained. "Using antiskate constantly lifts and drops the tonearm. Every time it does that, the cartridge can't level. With a very good system, you hear the difference. If you don't use antiskate and set the cartridge at the top of the manufacturer's recommended tracking force, it stays in the groove. Antiskate is like trying to shoot a guy in a car while you're on a horse."

"VPI uses ABEC 5 bearings to eliminate chatter and ensure long life of the tonearm," says some words on the VPI website. I asked Harry to elaborate. "Two ABEC 5 bearings on each side cover vertical motion," Harry noted. "The tonearm goes into the armbase. A rod inside connects to two bearings for horizontal motion. So, four total."

I wrote that the tonearm is all aluminum. That isn't quite true: You wouldn't use aluminum for bearings. It's too soft. "ABEC 5 stainless steel bearings, made in Japan," Harry said. "Japanese bearings are phenomenal. Spin it, and it feels like it wants to run—very little friction. The ABEC 5 is the same bearing type but less expensive than the ABEC 7s in our FatBoy tonearm. They have very tight tolerances, so there's no play."

The 'table

The F1's aluminum platter weighs 20lb. It descends from earlier VPI models (HW-40, Prime, Classic), but with a twist. "This one is damped by an HDF doughnut underneath. Harmonic resolution tests showed HDF beat rubber, Sorbothane, everything. I disliked using MDF due to potential water damage, but that's not an issue in a platter. This is actually HDF—high-density fiberboard—it really damps the platter. Hit the platter: It's completely dead. No ring."

The Forever One features VPI's new three-point suspension. Drawing on earlier suspended designs, VPI assembles the F1's suspension from precision CNC-machined aluminum parts. The suspension's heart is a 0.5" thick 6061 aluminum alloy slab that acts as a floating subchassis, isolated by three inverted Sorbothane stanchions—not springs. This subchassis/Sorbothane combination holds three leveling screws, which attach to the 0.625"–thick upper aluminum plate and aluminum armboard. An inverted stainless steel bearing fits into the floating subchassis, effectively isolating the platter and armboard together so that they can work together, separate from the solid oak frame. A nonmagnetic stainless steel spindle is affixed within the platter bearing.

"The F1's subchassis, the inner chassis holding the components, is solid machined aluminum," Harry explained. "It doesn't bend or vibrate. A polymer coating is on the bottom. It's solid as a rock. If the platter moves, the armboard moves with it simultaneously. No random motion between platter and arm. The suspension screw rod goes through the stationary top plate and the floating subchassis. Beneath the subchassis are the inverted Sorbothane 'bells' it sits on."

The Forever One is a belt drive 'table. VPI attaches a 300rpm, 24-pole AC synchronous motor with a 14-gauge solid-steel base to the oak frame, avoiding contact with the subchassis, upper plate, and armboard, for better isolation from the motor's vibrations. "The motor mounts to the top aluminum plate, which mounts to the wood frame," Harry said. "The AC motor is heatsinked and damped by the aluminum. I love AC motors. An AC motor knows where it

1 See youtu.be/Lx7_QrB_FCg?si=f6l3aRq9u-uACd5r.

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is; a DC motor knows where it was. Feed an AC synchronous motor a 60Hz signal, and it locks speed and never moves." The large adjustable feet are borrowed from the VPI HW-40 Black Edition turntable. It comes with a hinged dustcover.

"I did the bottle test with this 'table," Harry confirmed. "I take a bottle of water, slam it down on the turntable. If the arm doesn't jump, I'm happy."

VPI presents the F1 as a modular, future-proof system, reflecting their engineering history. The most obvious way it's modular is the tonearm: You can upgrade the S version to a gimballed or unipivot FatBoy tonearm, and you can use it with any arm of your choosing. With each arm mounted on its own armboard, swapping out tonearms will be easy. After the first production run, the Forever One will be available without a tonearm at a lower price, and the S-Tonearm will be sold separately. Anticipated upgrades include a dedicated 45rpm control; currently, users who want to play 45s must remove the pully cover and manually reposition the rubber belt on the motor pulley. The Forever One comes with a 10-year warranty, twice as long as (eg) VPI's Prime and Classic series.

"This entire turntable, from design to production, is a love letter to VPI's original foundation, now enhanced by the improved engineering and design capabilities we have today," Mat Weisfeld wrote in an email.

Setup

The VPI Forever Model One arrived complete. Its manual detailed essentials: chassis, clamp, gauge/rod, motor assembly/cover, finger lift, flash drive, belt, power cord, jig, platter, tonearm, and isolation feet. If my experience of other VPI turntables is any guide, the Forever Model One should be straightforward to assemble. By the time this review is published, setup videos should be available.

VPI supplied their Goldy MC cartridge and a pair of VPI-branded, Nordost-made DIN-to-RCA interconnects for use in this review. Neither is included in the purchase price.

Listening

To assess the Forever One, I listened to The Great Jazz Trio's *Revisited* (LP, Eastworld EWJ-90002), Jerome Sabbagh's *Vintage* (LP, Sunnyside SSC 1698), Art Pepper's *Art Pepper Meets the Rhythm Section* (LP, Craft Recordings CR00491), and Frank Sinatra's *Come Dance with Me!* (LP, Capitol Records W 1069), plus vinyl from my latest find, UK keyboardist Greg Foat.

With a perpetual twilight ambiance, Greg Foat's *The Glass Frog* (LP, Blue Crystal Records BCRLP 07) elegantly weaves lush EDM synth textures with subtle jazz improvisations. This creates a bridge that could make jazz accessible to a younger generation while honoring its improvisational core. Imagine Sade crafting adventurous soundscapes for jazz aficionados; Foat's work resonates similarly.

With the VPI Goldy

The F1/Goldy pairing played music with the unmistakable VPI signature: an unwavering rhythmic pulse, a wide soundstage, a gracefully unhurried pace, and palpable pleasure in playback. Its performance reminded me of The Who's *Meaty Beaty Big and Bouncy*: It delivered music with purpose and directness, focusing on fun and forward flow.

While the F1/Goldy's soundstage was consistently broad and deep, its focus was the midrange, with airy treble. The bass, though full, was not exceptionally extended. (Was it the cartridge, the 'table, or both?)

Listening to Sinatra's "Come Dance with Me" from the album of the same name made me feel like I was at the recording console, not in a listening room 66 years later. Sinatra's heavily reverberant vocals flowed from a large stage, sounding rather hi-fi and unnatural, just as it does on this quirky 1959 recording.

Jerome Sabbagh's *Vintage* fared better, with a juicier, fuller low end and truer, more certain tonality. Art Pepper's "You'd Be So Nice to Come Home To," from *Art Pepper Meets the Rhythm Section*, was pleasant and propulsive, with a touch of brightness on top—a constant with the F1/Goldy pairing.

Cartridge comparisons

Exchanging the VPI Goldy for MoFi Electronics' UltraGold MC cart realized considerable improvement in every sonic parameter. Through the F1/UltraGold pairing, LPs acquired fresh lucidity, expressed through more instrumental and ambient detail. Instruments emerged with noticeable definition, creating a more vivid, dimensional soundfield. Crucially, the F1 retained rhythmic integrity, conveying tempo and momentum with agile forward flow. Nuance, subtlety, refinement, texture, and what I call "the interior life of a record" emerged more completely. This was a game-changing cartridge upgrade, the Forever One realizing the cartridge's full potential.

When I mounted the VPI Shyla MC cartridge ($2000 compared to the Goldy's $1200), the F1 seemed to shapeshift, the sound precisely reflecting the sonic characteristics of each cartridge upgrade. Now the soundstage was fully fleshed out—and vast: top to bottom, back to front, side to side. The Shyla also improved micro- and macrodynamics, sounding closer to a live event. On *Art Pepper Meets the Rhythm Section*, Art's playing, Philly Joe Jones's blazing swing, and Paul Chambers's deep, resonant bass now swaggered and swung. More than just hear, I could *feel* the music. With the Forever One/Shyla combination, music playback was large-scale and moving.

Phono stage comparisons

All the listening described up to now utilized the PrimaLuna EVO 100 phono stage, a great all-rounder that allows on-the-fly loading and gain adjustments. The other phono stages I have on hand—the Allnic H-5500, the Tavish Audio Design Adagio, and the Manley Chinook—are very different beasts.

THE ALLNIC H-5500. An all-tube unit in an all-aluminum frame, the H-5500 uses Permalloy transformer cores, four NOS E180CC

twin triodes, one 7233 voltage regulator tube, and no negative feedback. The Forever One took to the Allnic like my ear-brain takes to a Prestige record by Eddie "Lockjaw" Davis. The combination portrayed music with more body and liquidity, though images were smaller than through the PrimaLuna and the soundstage shrunk a little. The channels integrated better, with more treble sparkle. The sound was more intimate, palpable, and immediate. The Forever One and the Allnic H-5500 are a solid match.

THE TAVISH AUDIO DESIGN ADAGIO. I recently heard that the two-box Tavish Adagio is two months backordered. There's a reason it's so popular. The Adagio uses three 5751 tubes, two EF86/6267 tubes, and one 12AU7A tube. Its moving coil input is transformer-balanced using a stock Jensen JT-44K-DX. Art Pepper, Paul Chambers, Red Garland, and Philly Joe Jones now filled my room. Dynamics were superb, center fill was complete, and the top end was wide open, resulting in sounds ranging from sparkling to peaky-hot. The Forever One + Adagio's music sounded alive, robust, and immediate.

THE MANLEY CHINOOK. With nearly endless loading options and a tube complement of two 6922s (gain) and two 6922s (output), the Chinook has been a *Stereophile* Class A Recommended Component for years. Though darker toned and less resolving than the Adagio, the Chinook, paired with the Forever One, swaggered across my room with the most natural, artifact-free sound I'd heard yet. Coherent and smooth, with bold images, the Chinook matched the Tavish for glorious tone and dynamic charge. Once again, the Forever One proved a synergistic partner, producing excellent results.

Conclusion

A well-built, heavy-duty turntable founded on Harry Weisfeld's new suspension system and joined to an all-new aluminum tonearm, the Forever Model One turntable prioritizes playing music. Like all VPI 'tables I've heard, it boogies well, swings hard, and seems replenished with every new spin. Designed for upgrades and highly sensitive to ancillary components, the F1 offers muscle-car performance with speedster handling. Recommended. ■

ASSOCIATED EQUIPMENT

Analog sources VPI Shyla MC, MoFi Electronics UltraGold MC, VPI Goldy MC phono cartridges.
Preamplifiers Tavish Adagio, Manley Chinook, PrimaLuna EVO 100, Allnic H-5500 phono. Rogue Audio RP-7, line.
Power amplifier Rogue Audio Stereo 100.
Integrated amplifiers Union Research S7. Riviera Labs Levante.
Loudspeakers Voxativ Ampeggio 2024, DeVore Fidelity Super Nine, Volti Audio Lucera.
Cables Interconnects: ArgentPur, AudioQuest Pegasus, Triode Wire Labs Spirit II (RCA). Speaker: ArgentPur AgPur12, AudioQuest William Tell (10'), Auditorium 23 (8'). AC: AudioQuest NRG Z, Triode Wire Labs Obsession NCF.
Accessories Pro-Ject VC-S2 ALU, HumminGuru record cleaning machines; AOCISKA soft bristle brush; AudioQuest PQ-707 and IsoTek EVO3 Aquarius power conditioners; Salamander five-tier Archetype rack (2); Pangea audio rack; A/V RoomService Ltd. Equipment Vibration Protectors (EVPs); IKEA Aptitlig bamboo chopping boards (under turntable, preamp, power, and integrated amps); mahogany blocks (three to a stack), under IKEA boards.—**Ken Micallef**

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A RECORD MAN FOR ALL SEASONS

STEVE BERKOWITZ, MUSICAL ARCHEOLOGIST BY **SASHA MATSON**

STEVE BERKOWITZ PHOTO BY M. VAN DORP.

DOES ANYONE USE THE TERM "RECORD MAN" THESE DAYS?

IN AN EARLIER ERA, IT WOULD HAVE BEEN USED IN THE SAME WAY THE TERM "AD MAN" WAS USED, AS A PARTICULARLY AMERICAN JOB DESCRIPTION. PEOPLE WHO SPEND THEIR CAREERS IN AND AROUND THE MUSIC BUSINESS. SOME OF THESE RECORD MEN ARE KNOWN BY THE PUBLIC–SOME OF IT ANYWAY–WHEREAS OTHERS MAY BE FAMILIAR ONLY TO COLLEAGUES.

I met Steve Berkowitz under the best of circumstances: sitting in a basement listening room hearing beautiful recordings made in 1958 that I'd never heard before, by the Miles Davis Quintet. It was the recently issued *Miles Davis—Birth of the Blue* (Analogue Productions APJ 172). The album was, the credits state, "Supervised by Steve Berkowitz." The name rang a bell, though prior to this meeting, I didn't have a face to go with the name. Steve described how he and engineer Vic Anesini had mixed the original three-track tapes from the Columbia vaults to stereo. It was then mastered to LP by Matthew Lutthans at Quality Record Pressings.

Born in 1952, Berkowitz grew up in Bos-

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ton, immersed in the exploding 1960s music scene of that college town. "I'm proudly from Brighton, Mass.," Berkowitz told me, "from the projects of Fidelis Way." A blues guitar slinger from early on, Steve uses his stage name when it suits him: "T. Blade." His band "T. Blade & The Esquires" was part of the Boston club scene in the day. Hanging out, being a roadie, being a deejay, managing a recording studio, getting his start at managing artists: Berkowitz got his hands in the musical clay.

When I started to pull records and CD box sets off my shelf and reading the credits, I realized that for many years, Berkowitz has played a role in wrangling some of the greatest music recordings ever made. Through his work for Columbia Records and other labels, Steve has trod a unique path, becoming an expert in exploring personal collections, libraries, archives, and the radio and record company vaults and advocating for the great music he has found there. As a result, Steve has directly participated in bringing music to the public that they would not have heard otherwise. He has garnered two Blues Foundation Awards and five Grammy Awards along the way. His complete discography would run many pages, so here's a (very) short list of artists whose catalogs Berkowitz has worked with: Robert Johnson, Billie Holiday, Miles Davis, Bob Dylan, Johnny Cash, Leonard Cohen, Elvis Costello, Aerosmith, Louis Armstrong, Paul Simon, Tony Bennett.

It was fascinating to talk with Steve and touch on some of the music history he's been involved with and the process involved in his work.

SASHA MATSON: What year did you first start working for Columbia?

STEVE BERKOWITZ: 1987, as a product manager and a head of artist development.

SM: Did the Legacy project and label exist then?

SB: It did not. I first mentioned that it be called "Legacy." A coworker of mine named Kevin Gore, who is now the head of Rhino Records, and I were supervising a lot of jazz artists and catalogs at Columbia. I had gone from being an artist-development guy. I had been an agent and a manager for The Cars, Ministry, and others, working for Geffen and Robert's Lookout Management from 1979 to 1984. I really wanted to grow up and be Peter Asher: manage a couple of artists and produce them. At Columbia, Gore and I were given the jazz department and the budget that came with that. The contracts for Wynton and Branford Marsalis, Tony Bennett, Harry Connick, Jr., and others were old school—very lucrative. But the jazz market by the early '90s had come

down. So how could we run a department that would gross enough in sales to make any money? It's a record company, not the Library of Congress.

SM: Costs getting ahead of income?

SB: I had championed the ultimate release of a complete Robert Johnson box set, though I didn't produce it originally. I really took it to the mat with the head of the sales department at Columbia. What gave me a lot of credibility was that they said they would maybe sell 14,000 copies. I went to (author) Peter Guralnick, an old friend I used to hang out with at Club 47 in Boston, and got his permission to use quotes from his book *Searching for Robert Johnson* from Keith Richards and Eric Clapton in the ad campaign for the release. I'm going to market this thing as the greatest ever, because they said so! Open the door to the rock market. It isn't what I did; it's because of how great Robert Johnson is.

The company was amazed. We sold a million six. Suddenly it was, "What does this guy want to do? Maybe Berkowitz knows something." The entire original Legacy music team was music oriented and business savvy. When we started Legacy, it coincided with the sales explosion from the advent of CDs. We had located the other 14 tracks by Robert Johnson that hadn't been released earlier and put it out on CD and LP: *The Complete Robert Johnson*.

SM: Hasn't it been gratifying for you over the years, Steve, when you know that something you are working to get out to people is great—that no one's trying to pull a fast one?

SB: Such great artists that have been on Columbia and RCA, you can't injure that music: It's already great. It's classic, not because of what the record company does but because of the music and what the people recognize. It's classical music. It's natural.

SM: So how did you pitch the idea of Legacy?

SB: We went to the heads of the company, Don Ienner and Tommy Mottola, and said: "A big thing for all the labels is market share. Let us add to your market share. Let's take the Miles Davis catalog and stream it back into the jazz department within Columbia. Let's reorganize that so that at least the sales of all the jazz, blues, and old catalog comes through the label. Let's start a reissue division." I wanted to do what Verve Records was already doing: There's old stuff, and there's new stuff, but there's only one Verve. Let's do that at Columbia, and Epic, and Masterworks. Not *Reader's Digest* specialty reissues. I didn't understand why it had to be Ryko, Rhino, or Hippo, or some funny animal name for a reissue label. So they said, "Come in on Monday with a name for the label." I sat all weekend trying to think of a name. I wanted it to be called "The Columbia Legacy." And they immediately turned it into "Legacy."

By the way, in the '50s there already was a "Legacy" label that John Hammond and Goddard Lieberson had been doing. I did not know that till afterwards.

SM: Early Legacy projects?

SB: I really wanted to reissue the Tom Waits soundtrack for *One from the Heart*. We had done the first Miles Davis box, *The Columbia Years, 1955–1985*. That was an important set. CDs had recently come in. The idea was that it would be like a coffee table book version overview of an artist with music. Big and with beautiful pictures. Dylan's *Biograph* collection had come out by then, I was involved with the marketing of that, and that was the beginning of me being the Bob Dylan product manager. There was a Sarah Vaughan box and a five-LP Fred Astaire collection. Those were the first ones done with this idea that there could be a well-archived, high-quality reissue series. Then it became Legacy.

SM: You have worked on all the *Bob Dylan Bootleg Series* sets. For Dylan's *Fragments–Time Out of Mind Sessions*, you and your colleagues did something different. That is not the same as the original; it's a remix, not a remastering. A different approach, stripping away some of that heavy reverb and slap echo for Bob's vocals.

SB: It was Dylan who requested the remix. Jeff Rosen (Dylan's manager) called and said, "Bob wants a remix of *Time Out of Mind*." I could hear on the originally released album that Dylan cut the vocals live, but it's kind of swamped in a bit. Rosen said: "Yeah, let's make it sound more live again." Now Dylan and (producer) Daniel

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Lanois made the album they wanted to, and the album won the Grammy for Album of the Year. The whole idea was to bring back the moment of creation, with Bob singing in the room with a couple of musicians. We wanted to get closer to it, because that's what he asked for.

SM: You've got to use the available technology, which of course is very sophisticated these days. Do you care about hi-fi?

SB: It's a multipronged question for me. I've had the benefit of working in some of the greatest studios in the world, constantly, with some of the greatest people. For my own system at home, I'm mostly still listening while I work on Yamaha NS-10s. For pleasure listening, I move over to the other side of the room, where I still have late-'70s JBL 4312b studio monitors with an Onkyo integrated amp, a gigantic thing I've been listening to since the '70s, and I understand exactly how it sounds. I like mono, and I like stereo. But I also like surround and Dolby Atmos. I did *Miles Davis–Live in Montreal* in Dolby Atmos, with mixer Dave Darlington, and it's fantastic. It's a spectacular presentation of that great live band.

SM: *The Beatles in Mono* LP box set?

SB: I grew up in Boston, and I knew a guy in Boston, Jeff Jones. Jeff and I worked together at Columbia Records as marketing directors; Jeff was the first head of Legacy. Jeff and I had 10 years of making records together. After a number of years, he left and became the head of Apple Records. In 2009, he sent me the stereo Beatles LP box. When I received them, I wanted to hear the second side of *Abbey Road*. First, I took out my original 1969 UK copy. It has ticks and pops, and I'm thinking, God this sounds great! Then I put on the new copy. The hair on my arm stood up. They had cut from digital! Oh my God; it's The Beatles, why would they do that?!

A few weeks later, Jeff Jones calls me up. He says, "So what do you think?" And I say, "Jeff, you did a beautiful job, there are pictures I haven't seen. The covers look great. Other than the fact that the stereo LPs were cut from digital." Jones says, "How do you know that?" And I said, "Because I hear it immediately. The sound goes into a box; it's not as vivid as the analog." He says, "Do other people know that?" I said, "No, not many. They think it's quiet and clean. But it's not as good as the original."

A couple of months later, Jeff calls and says, "If I asked you to do a Beatles *Complete Mono* vinyl box, what would you do?" I paused, swallowed, and said, "What would I do to the records that changed the world? I would do whatever I could possibly do to make them sound like what the producer and the artists did originally. I don't have a better idea than that, and nobody else does either." And Jones said, "Why don't you get involved, come over and do this." When I first arrived, the people at EMI and Abbey Road Studios thought I was bat-shit crazy. Remember, they won a Grammy for those first box sets.

Steve, right, with Garth Hudson

SM: I love hearing the earlier part of The Beatles catalog in this newer mono—like *Rubber Soul*.

SB: When I got to Apple, the first thing I told them was, "We have to find original copies of everything. We have to find the original "IT." I want to explain what "IT" means. When I started at Columbia Records, with the tapes and catalogs of Bob Dylan, George Benson, Leonard Cohen—music that John Hammond had produced—there were cards from the studio sessions where John Hammond would write "IT" next to notes for certain takes. I'm thinking, what does that mean? Michael Brooks was one of John Hammond's final assistants, and I asked Michael what IT meant. And he said, "Oh, that means the final take, that's 'IT': the selected, final, releasable version." When I first got to Abbey Road, I needed to find the IT records; the ones approved by the producer, approved by the band, approved for manufacturing. The approved release. When you hear the mono version of "Please Please Me," which first came out in 1962—*that* is the work of art. *That* is the Mona Lisa. *That* is IT. There is only one IT.

SM: Tell me more about the process.

SB: So I could compare and get my EQ set together, we transferred everything we could find to digital. We experimented with the track levels and EQ without wearing out the master tapes. Then when we made the final analog lacquer LP cuts. We only ran the master tapes themselves three or four times. I arranged for everyone to listen with the same phono cartridge, the one I always use, an Ortofon Black 2M. I also changed the power cables on the tape machines. They thought I was crazy; they brought me 14 different cords.

SM: How about the Legacy Miles sets?

SB: Miles and Duke were the great bandleaders of all time. Here's Jan Lohmann's book, *The Sound of Miles: The Discography*. I marked it all up according to who was in the bands. How do you take the entire Miles catalog and divvy it up? What's the order? When the musicians change: okay, that's now a different box. See here: When Bennie Maupin joins, and McLaughlin and Holland, that's the beginning of *Bitches Brew*. We divided it into eight box sets based around the changes of musicians, plus certain live shows. I didn't decide to do anything. The music tells you what to do.

SM: The box sets accomplish certain things.

SB: The moment of creation: We can relay that. That's the depth of some of these box sets as a musician and a listener. That is fascinating to me, and I think fascinating to

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others. I can't make the records, the music that was made and released, any better. But we can make them *sound* better, and we can illuminate the circumstances around them in a more detailed, factual, musical-historical way.

SM: Let's go to the Basement. I picked *The Bootleg Series Volume 11* because I love it, and I think others do too. First, you have the release in 1975 of *The Basement Tapes*, done by Dylan and Robbie Robertson. Now on this 2014 box set, you have certain tracks labeled "Without Overdubs," referring to the earlier release. When I first heard the Columbia two-LP release of *The Basement Tapes*, it never occurred to me at the time to worry about the process. Was Garth Hudson involved, or did he just turn over tapes?

SB: Garth was in the room with us most of the time during the production of this box. Bless beautiful Garth, who recently left us: He had the good sense to put a tape recorder up on top of his organ while they were jammin' away down there in the basement, and he knew what to do. People have asked us, since the earlier release came out and won a Grammy, why did you change it? Let me be clear: The album that Bob and Robbie made is how records have always been made. Garth had the tapes over the years, and then basically he sold them to a guy in Canada named Jan Haust, with the understanding that Haust would do nothing without the direct involvement of Garth Hudson. They made a deal with the Dylan camp that they were going to make and produce this thing, with Dylan having approval. I went up to Toronto to listen to the tapes, with engineer Peter C. Moore, answering back to Jeff Rosen at the Dylan office. Sometimes Mr. Dylan is forthcoming and present, and other times I don't hear from him at all, though I get the feeling direction is coming from him.

At the time, people were asking Garth to make a film about The Band and to go back to Big Pink. So I go up to the studio in Toronto, and I'm there already for a week, and I'm going, "I thought Garth was going to be here." And they said, "He is here. He's in the next room." So after about five days, I suddenly see Garth with a big black hat on dash from one room to the other, like a vision. He didn't want to talk to me. It was worked out that we would have a dinner. At that time, Garth was focused on '50s jump R&B tenor sax players. This is something I know quite a lot about. It's a favorite of mine.

SM: Was Garth a shy guy?

SB: He was quiet. He had been a big star for a long time, and who said he wanted to be a big star? He wanted to be a piano player. He wanted to be a musician. He wanted to travel the world and play beautiful church organs. On my iPad, I had all sorts of jump tenor stuff: Louis Jordan, Wynonie Harris, Clifford Scott, a lot of great classic R&B jump blues. So at dinner, Garth is listening. He leans over and says [low growly voice]: "You're not from the record company, are ya?" And I say, "No, I'm independently working for the Dylan office." He growls, "Ah that's good." Then Garth says: "You're not from *Rolling Stone*, are ya?" I tell him no. Garth: "Ah that's good. You're not trying to make a film about Big Pink, are ya?" I say no. Garth: "Ah that's good."

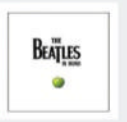
"T. BLADE'S HOT SEVEN"

Some favorites from the Berkowitz discography.

Robert Johnson
The Complete Recordings–The Centennial Collection
(CD/LP/cassette, Legacy 88697 85907 2). 1990/2011. A&R supervision/project coordination/marketing.

Jeff Buckley
Grace
(LP/CD, Legacy 57528). 1994. Executive Producer.

Louis Armstrong
The Complete Hot Five & Hot Seven Recordings
(CD, Legacy C4K 63527). 2000. Grammy Award for Best Historical Album. Coproducer.



The Beatles
The Beatles in Mono
(CD/LP, Apple Records 5099963379716). 2014. Mastering supervisor.

Bob Dylan & The Band
Bootleg Series Vol. 11: The Basement Tapes Complete
(LP/CD, Legacy 88875016122). 2014. Grammy Award, Best Historical Album. Coproducer.

Burt Bacharach & Elvis Costello
The Songs of Bacharach & Costello
(LP/CD, UMe B0036683-01). 2023. Coproducer, A&R.

Miles Davis
Birth of the Blue
(LP, Columbia Records/Analogue Productions APJ 172). 2024. Production and mix supervision.

So after that, we're in the studio together every day for the next two weeks. Garth would tell us things: the instruments used, how songs came together, whose ideas they were. We'd be listening to a beautiful track, and Dylan's singing about God and stuff, and Garth would growl, "You know, he's making this up right here, just as you hear it go down." Some of the tapes were in really rough shape. They were moldy and unevenly wound. And they'd been in some barn, getting baked and then frozen for several decades. Some of them got sent to the Bell Laboratories in Canada. And we also did some more work on them in New York.

I do feel incredibly blessed to have been involved with both Miles and Bob from the beginning, all the way through the reissue process to now. And I still am involved, now for 38 years. I'm the guy next to the guy.

SM: Steve, when you're going through the vaults, it must be exciting to hear things that haven't been heard much, if at all, since they went down?

SB: Totally, completely, absolutely! I can't believe it's my job. And then they pay me.

Anybody who's in the music business for a long time doesn't do it just for the money; that would be really crazy! You do it because you love the music, the process, the communication. You're asking the questions, on the one hand how it happened, the technical, the music, the machinery, and the replication. That's really important: People want to know about that. But then on the other hand, it doesn't make any damn difference how it was made; it either sounds good or it doesn't. It either communicates across to you or it does not. How it was done is the same magic about how records have always been made.

SM: Sometimes, even with current digital streaming and so forth, there must be times when a decision has to be made to set something aside? You can't include everything.

SB: I don't have a flat answer to that question because the circumstances are different each time. The music tells you what to do, the artist tells you, the contract tells you, the quality of what there is on tape tells you, and the appetite from the company's standpoint as to how big it can get—all these things tell you what to do. I want there to be more music in the world, that is my credo: more music, more communication, a better world. And to try to do that within the confines of a corporation whose job it is to make money. I have always wanted to archive the music so that I knew we were saving it. If I was to have a tombstone, it might say: "This guy straightened out the music files of Miles Davis and Bob Dylan." ■

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AURAL ROBERT

BY ROBERT BAIRD

THIS ISSUE: A reissue series from Craft Recordings, Bluesville, and Analogue Productions.

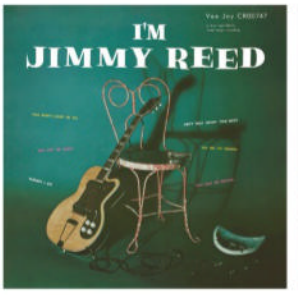
Best of the blues—from Kansas

Chad Kassem knows what it takes to make an immortal blues record. "Somebody who lived down in Texas, Louisiana, Mississippi, the South. They lived through it. Their story is real, and their voice is real."

The founder/owner of Analogue Productions and longtime blues true believer, Kassem's record label, mail-order warehouse, and vinyl plating and pressing plant—all headquartered in Salina, Kansas—were recently profiled in *The New York Times* ("The Wizard of Vinyl is in Kansas," March 5, 2025). Among his many business ventures, Kassem is part of the new Craft Recordings vinyl-reissue series of titles drawn from the Bluesville catalog, which is owned by Craft's parent company, Concord Records.

Kassem's fascination with and respect for the blues began in his hometown. "I'm from Lafayette, Louisiana, so we can start there," he began, when I asked how his love for the blues began. "Clifton Chenier, they call it zydeco, but hey, it's blues with an accordion. [Swamp-pop stars] Warren Storm, Johnny Allen, Rod Bernard, and those guys, we thought they were cover bands. We didn't know they had hits and were on Dick Clark."

"Most white guys of a certain age, the way they first heard about blues was Bloomfield, Butterfield, and Musselwhite. I skipped that. I was listening to Zeppelin, Foghat, and the Allman Brothers. But then I also listened to Muddy Waters, Lightnin' Hopkins, and John Lee Hooker, and I figured it out. So, for me it was either the rockin' or the real version."



Currently up to 10 titles, the Craft/Bluesville series has an impressively broad stylistic reach, stretching (so far) from the Chicago blues of Jimmy Reed and Buddy Guy, to the rhythmic growl of Detroit's John Lee Hooker, continuing through the solo Delta sound of Skip James and Mississippi John Hurt and the Carolina piedmont stylings of Reverend Gary Davis, ending up in Texas with *Last Night Blues* from the greatest of blues raconteurs, Lightnin' Sam Hopkins. Possibly the most rewarding title in this series so far is *Mr. Scrapper's Blues* from Francis "Scrapper" Blackwell. Best known for the recordings he made between 1928 and 1935 in partnership with pianist Leroy Carr, Blackwell, who is reputed to be part Cherokee, had an idiosyncratic gift on guitar, piano, and as a singer. *Mr. Scrapper's Blues* was originally released in the spring of 1962, months before Blackwell was gunned down in a back alley in Indianapolis, Indiana.

It's a measure of how long the blues has been valued in America that the genre has become something of a museum piece. The first generation of Mississippi Delta players has gone, and other than Buddy Guy, the second generation—the guys who moved north and discovered electricity—has also passed. While its creators may be gone, listening to these crisp, timeless new remasterings from the Bluesville catalog gives proof once again of the power inherent in their music—and of the immutable truth that, in Kassem's words, "The blues are the foundation for all the music that came after."

Despite being crowned vinyl royalty in *The New York Times*, Kassem, who is collaborating with producer Scott Billington on the series, allows that having another set of ears on this project has its advantages.

"There's a good side to it not just being me. We're working together, I'm part of a team. I might skip a title whose recorded sound isn't totally awesome, so it's a good thing that it's a joint venture."

"These reissues are a good mixture, a ton of good blues from acoustic to electric," he continues. "I help pick the titles, oversee the mastering, oversee the pressing, the quality, and then help sell and promote it. Our pressing plant"—that's Quality Record Pressing—"presses it. Our mastering engineer, Matthew [Lutthans], who's really doing a terrific job, masters it, and so things have been great."

While Kassem's and Acoustic Sounds' reissue series with Verve, a UMG label, has been an unqualified success—"the sales, the sounds, the looks, those series have just been incredible," he said—the new Bluesville series with Craft, all sourced from tape, is close to his musical heart.

"Lightnin' is my favorite," Kassem concludes. "The way I found out about the Bluesville label is Lightnin' Hopkins' *Goin' Away* and the other Hopkins albums on Bluesville. I love all the Bluesville albums. And a lot of them were recorded by Rudy Van Gelder, so to me there's nothing better than the most real music with the best, most real sound. You combine those two, and you done gone to heaven. What else could you possibly ask for?" ■

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REVINYLIZED! BY ROBERT BAIRD

THIS ISSUE: An album on the Thirty Tigers label combines two New Orleans musical staples: Irma Thomas and Galactic.

An audience with the Queen

In 2010, the funky-eclectic New Orleans band Galactic—known today as much for being the owners of the city's storied Tipitina's club as for their music—cut their song "Heart of Steel" with singer Irma Thomas for their album, *Ya-Ka-May*. The band noticed that Thomas soon included the same tune in the sets that she played with her band. In 2022, Galactic decided to revisit the Thomas connection and came up with the idea of collaborating with her on an entire album of new music.

Thomas, now 84, cut her first single, "Don't Mess with My Man," for New Orleans–based label Ron in 1959. Her biggest hit, "Wish Someone Would Care," rose to #17 on *Billboard*'s Hot 100 in 1964. While her career went fallow for a while in the late 1960s, she's recorded steadily for labels including Rounder and (most recently) Newvelle. She won the 2007 Grammy Award for Best Contemporary Blues Album, for *After the Rain*. She has risen to become the cherished matriarch of the golden era of New Orleans music.

"Everything we do has reference to New Orleans music and the older music that we love," Ben Ellman, saxophonist with Galactic, told me in a recent telephone conversation. "It's kind of an embedded thing within Galactic. It all comes out in the production, the horns, arrangements, tones, those sorts of things.

"So with Irma, we wanted to make a contemporary record with one foot in the future and one foot in the past. We didn't want it all to be in the past, not be a sort of throwback retro record. We wanted a collaboration, to bring Irma into our world of music."

Like a surprisingly large number of acts past and present, Galactic doesn't write their own lyrics. For that, they mostly rely on New Orleanian Sean Carey.

"We reached out to lyricists in Nashville and Los Angeles, but all the outside guys ended up submitting clichéd stuff like 'In a Swampy Moon on Gumbo Night,'" Ellman said with a chuckle. "Sean developed a relationship with Irma. He'd come to the sessions, and they'd have conversations, and he'd take pieces from them and use that for a song. She'd come back and see it and say, 'Oh that's what we talked about!'"

The resulting album, *Audience with the Queen*, was recorded at what Ellman calls "a leisurely pace," in New Orleans at Galactic's Number C Studio. It was produced and recorded digitally by Ellman and Galactic bassist Robert Mercurio from 2022 to 2024. It's now out on CD and vinyl, pressed at New Orleans Record Press, on the Thirty Tigers label. It also streams on all the major streaming services. It has also been released in an "exclusive color variant"—a blue-white spatter—via Galactic's Tipitina's Record Club.

A model of how to craft a listenable, modern update to a legendary performer's sound, this collaboration unfailingly plays to Thomas's interpretative gifts. Her vocals sound like she's feeling the message and melody of every tune. Amidst Galactic's muscular backing, Thomas's voice is wisely front and center of every mix.

Immediately hitting its stride with the opening fanfare, "How Glad I Am," this set jumps into Galactic's snappy, horn-inflected R&B with "Where I Belong," in which Thomas quickly personalizes the emotional tenor: "Times can be good and they can be bad/Either way I gonna make the best of the time I still have." Those conversations with Carey make an appearance in the same track via lines heavy with her biography: "I've been 'round the world on an airplane/Stepped onstage about a million times/I was in Paris drinking champagne/When you were in diapers and cryin'."

In the funky "Lady Liberty," where handclaps, tambourine, and horns drive the rhythm, Thomas takes on racial injustice. The highlight of the album, though, is the big, dramatic ballad, "Puppet on Your String," whose lyrics were written by Boyfriend, a young talent from New Orleans who has toured and written for hip-hop/bounce star Big Freedia. With a hooky, descending chorus and a pace that makes it easy for Thomas to dig into, she returns with gusto to the romantic travails she's been singing about for more than six decades: "Drowning in the very depths of my being, hoping that you rescue me/On repeat, no more love, no more trust, I got nothing left to give you/Will you ever let me go?"

Galactic's Ellman and Mercurio are also the team behind the Tipitina's Record Club,[1] which is now celebrating its fifth year in existence. The club has reissued out-of-print studio albums by Ernie K-Doe, Danny Barker, and Johnny Adams. Even better, they've uncovered, sonically improved, and released previously unknown live sets, most recorded at Tipitina's, by James Booker, Etta James, and Taj Mahal, among others. Ellman told me that upcoming projects include music by Doc Watson, The Wild Magnolias, Elizabeth Cotten, and Jessie Hill. To legally clear and release an unreleased live set by that most influential of NOLA bands, The Meters, is a grail that still eludes them.

"We have relationships with all the surviving Meters!" Ellman says with obvious frustration. "It's something that must be done right. We have a lawyer as a partner, so everything is above board. Nothing funky is going on here. But it's hard being legit!" ■

1 See stereophile.com/content/aural-robert-tipitinas-record-club.

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RECORD REVIEWS

EDITOR'S PICK
RECORDING OF THE MONTH

RYAN TRUESDELL
Shades of Sound: Gil Evans Project Live at Jazz Standard Vol. 2

Truesdell, conductor; 23-piece orchestra

Outside in Music 2014/2025 (reviewed as CD). 2025. Truesdell, Dave Rivello, prods.; James Farber, Tyler McDiarmid, Geoff Countryman, engs.

PERFORMANCE ★★★★½
SONICS ★★★★½

Ryan Truesdell launched his Gil Evans Project in 2012 with *Centennial*. It contained 10 Evans arrangements, including two original Evans compositions, that had never been recorded. The project was made possible by the fact that Truesdell had been granted access to the Evans family archives. Evans was a towering figure who had been responsible for some of the greatest recordings in the history of jazz, like his own *Out of the Cool* and Miles Davis's *Sketches of Spain*. Evans died in 1988, and *Centennial* was something the jazz world never expected to have again: a brand-new Gil Evans record. Truesdell assembled a large orchestra containing many of the best jazz musicians in New York and used an eminent engineer, James Farber.

After *Centennial*, every May, Truesdell began playing annual week-long gigs at the Jazz Standard in Manhattan. In 2015, he released *Lines of Color*, recorded live in the Jazz Standard in May of 2014, with more unearthed Evans charts. Truesdell kept most of the players from *Centennial*. He also kept Farber. These first two albums by the Gil Evans Project were among the most critically acclaimed recordings of the second decade of the 21st century. They earned a Grammy award and four nominations.

Now there is a third. *Shades of Sound* comes from the same week in the Jazz Standard as *Lines of Color*. The first track, "Spoonful," was composed as a one-chord blues by Willie Dixon and first recorded by Howlin' Wolf, in 1960. Later it was covered by British rock band Cream. The tune might seem an improbable choice for Gil Evans, but at the Jazz Standard it became a blues-drenched *tour de force*. As it erotically throbs, it sounds like the orchestra, hunkered down, in no hurry, might play it all night. Then tenor saxophonist Donny McCaslin cuts loose. His long, monstrous solo never quite loses touch with the three-note hook that Willie Dixon left the world. Mat Jodrell's trumpet solo stays deep in the groove. Pianist Frank Kimbrough takes over briefly, incited by riffs from the band. Then alto saxophonist Dave Pietro almost matches McCaslin's intensity, no mean trick.

Much of Truesdell's work with the Gil Evans Project has involved previously unrecorded and even unknown material. But three of the tracks here, "Spoonful," "The Barbara Song," and "The Ballad of the Sad Young Men," had appeared on Evans albums of the '50s and '60s. Truesdell's new versions use Evans's original arrangements, but the solos, which are defining, are of course completely different. Evans's 1964 interpretation of "The Barbara Song" contained a famous Wayne Shorter tenor saxophone solo. McCaslin does not even reference Shorter's rapt, mysterious reverie; he does his own solo and spills his guts. It is almost as wild as the one on "Spoonful." In 1959, "The Ballad of the Sad Young Men" included a profound, soul-baring solo by trombonist Jimmy Cleveland. In 2014, Ryan Keberle extends the song's trombone heritage with his own freshly poignant statement. Another star of this track is Kimbrough. His improvised prologue is somehow both emotionally naked and elegant. Kimbrough, a universally respected pianist, died suddenly in 2020. Truesdell says he was a "pioneering voice of the Gil Evans Project" and dedicates this album to his memory.

These three epic performances take up more than half the album. Of the remaining five tunes, four are heard here for the first time. The most valuable is "Neetie's Blues," which Truesdell found among Evans's manuscripts. It is almost as greasy and funky as the album's other blues, "Spoonful." That an artist as refined as Evans could get so down-and-dirty is downright exhilarating. The other tracks are short historical curiosities from further back in time. Three feature the band's excellent, under-recognized vocalist, Wendy Gilles.

Truesdell's three albums with the Gil Evans Project provide a special opportunity to study an age-old dichotomy: studio vs live recordings. By any objective standard, the masterpiece of the series, the most perfect, is *Centennial*, impeccably recorded at Avatar Studios in New York. But for those of us who love live recordings, *Lines of Color* and now *Shades of Sound* will matter more. They are looser and a little rougher, but they speak truth. They get the night air. They get the crowd and the electricity in the room—a great jazz room that no longer exists. (The Jazz Standard closed in 2020.) They are in fact a time machine that gets us as close as we can come to the impossible: They take us through space and time to relive a precious moment gone forever.—**Thomas Conrad**

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JAZZ

HARVEY DIAMOND/JOHN LENTZ
how strange the road should be so easy

Diamond, piano; Lentz, vocals

Orchard of Pomegranates 006 (CD). 2025. Ayelet Rose Gottlieb, prod.; Craig Welsch, eng.

PERFORMANCE ★★★★½
SONICS ★★★★½

If there was ever a sleeper album, this is it. This is John Lentz's recording debut, at 76. He has been involved with music his whole life but has never quite had a professional career until now. Harvey Diamond makes his recording debut as a leader, at 82. He was one of Lennie Tristano's last students and has been an underground figure on the Boston jazz scene for decades.

You don't hear singers like Lentz these days. Hundreds of vocalists out there have powerful pipes and undeniable chops. Few get under your skin the way Lentz does. "Detour Ahead" has always been an ambivalent love song. Lentz's dead-slow version sounds like someone in a conversation with himself, searching for understanding. His voice is gentle, contemplative, and patient. He does not make every note, and sometimes he seems to hesitate over a phrase. But his voice is so disarming, honest, and human that you trust its emotional authenticity. Even when he sings simpler, happier songs, he lingers over them, turns them inward, and reveals unsuspected nuances in their stories. Who knew that "Ain't Misbehavin'" was a poignant tale of unrequited love?

As for Diamond, who *is* this guy? Why isn't he famous? Four of the 11 tracks are piano solos, and each is stunning. "Somewhere Over the Rainbow" reveals Diamond's gift for getting deep inside a great song and elaborating and enlarging it without ever abandoning its essence. "You Don't Know What Love Is" is another timeless classic that Diamond makes his own. He marks out the familiar theme in firm chords and then begins to add digressions, decorations, and variations all around that melodic core. By the time he is done, it feels like he has left nothing in that song unsaid.

This album has a quality that's rarer than perfection: irresistible charm.

—Thomas Conrad

FRANK KIMBROUGH
The Call

Kimbrough, piano

Sunnyside SSC 1777 (CD). 2010/2025. Maryanne de Prophetis, Matt Balitsaris, prods.; Balitsaris, eng.

PERFORMANCE ★★★★½
SONICS ★★★★½

In the jazz world, Frank Kimbrough was esteemed as a pianist and beloved as a person. It was a hard blow when he died suddenly, in 2020, at 64. *The Call* is a solo album, recorded in 2010 by Kimbrough's favorite engineer, Matt Balitsaris. Apparently Balitsaris recently rediscovered the tapes.

Kimbrough held down the piano chair in the two most significant jazz orchestras of our time, Maria Schneider's and Ryan Truesdell's. His death left an unfillable void in jazz. *The Call* is much more than a posthumous tribute. It is one of the finest solo piano recordings of the current century.

It is surprising that Kimbrough made only one other solo album (*Air*, in 2007), because he sounds born to the format. Alone at the keyboard, he is energized and inspired. His playing is angular and percussive, yet lush. In 2018, he released an epic six-CD set, *Monk's Dreams*, containing the complete compositions of Monk. But he sounds more like Monk on *The Call*, which has no Monk tunes. "Angelica" is an example. It is one of Duke Ellington's catchiest melodies. Kimbrough's version is fragmented, harmonically twisted, dark.

Kimbrough's romanticism is more overt than Monk's. The solo format turns him meditative and deeply lyrical. "Tin Tin Deo," Dizzy Gillespie's classic of Afro-Cuban syncopation, becomes an improbable ballad. The actual ballads here are extraordinary. "I Loves You, Porgy" is drawn out oh so slow, in aching single notes, with long, expectant silences between them. Two other Ellington tunes, "Reflections in D" and "In a Sentimental Mood," are almost as rapt.

This writer once interviewed Kimbrough and asked him what was on his bucket list. He said, "To make a record for ECM and headline at the Village Vanguard." He never made it. It was ECM and the Vanguard that missed out.**—Thomas Conrad**

IVO PERELMAN & MATTHEW SHIPP STRING TRIO
Armageddon Flower

Perelman, tenor saxophone; Shipp, piano; Mat Maneri, viola; William Parker, bass

TAO Forms TAO 18 (CD). 2025. Perelman, Shipp, TAO Forms, prods.; Jim Clouse, eng.

PERFORMANCE ★★★★½
SONICS ★★★★½

"Avant-garde jazz" seems an inappropriate name for a genre so old. It goes back at least as far as Ornette Coleman's first record, in 1958. The insurrectionaries of the avant-garde (or "free jazz," as it is often called) are still hard at it. Ivo Perelman and Matthew Shipp are astonishingly prolific. They have made 46 records together and many more with other people.

Free jazz has a small, loyal, open-minded audience. At its best, this music offers revelations obtainable no other way. The challenge has always been to get new, less courageous listeners to stick around long enough to experience those enlightenments.

Armageddon Flower may be a good place for such listeners to start. This quartet is a rare entity: an avant-garde chamber ensemble. With no drummer and three stringed instruments (counting the piano), the music contains ample open space. It is easier to hear what is going on.

Here are a few examples of revelations: The way that, three minutes into a 16-minute piece, "Pillar of Light" has already become many things: a violent piano tremolo; a series of maniacal cries wrenched from a saxophone; a sudden moody ballad; calls and responses in which a tenor saxophone doubles a viola. The suspenseful conversation between Perelman and Shipp at the beginning of "Restoration" that never quite erupts. The way that William Parker's bass occasionally, dramatically, stands clear.

Because these four players are so profoundly in the moment and so trusting of their wildest impulses, it is a continuous revelation that they keep arriving at meaningful form.

Another reason you can hear what is going on is the clean, objective recorded sound of engineer Jim Clouse.**—Thomas Conrad**

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JAZZ

DAN WEISS
Unclassified Affections

Peter Evans, trumpet; Patricia Brennan, vibraphone; Miles Okazaki, guitar; Dan Weiss, drums

Pi Recordings Pi108 (LP/Digital/reviewed as CD). 2025.

Weiss, David Breskin, Seth Rosner, Yulun Wang, prods.; Marc Urselli, Mike Marciano, engs.

PERFORMANCE ★★★★½
SONICS ★★★★★

To outsiders, New York may seem like a monolith, but locals know it as a patchwork of neighborhoods, each with a particular vibe. The city's jazz scene is the same. One of the hippest zip codes of the past quarter-century has been at Pi Recordings.

One of Pi's unofficial mayors is drummer Dan Weiss. Weiss has served as leader of five Pi sessions. The first two were with sprawling ensembles; the next pair was by his proto-metal project, Starebaby. *Unclassified Affections* is a new zag, a quartet with the unusual lineup of Peter Evans (trumpet), Patricia Brennan (vibraphone), and Miles Okazaki (guitar). This is the first album documenting this group and Evans's first appearance on the label.

In the liner notes, Weiss says that the music was written for these specific players, which is notable considering the cast: Okazaki is at least half philosopher, Brennan has liberated the vibraphone from its pianistic/percussive penitentiary, and Evans can play anything.

The album's eight compositions mix complexity and tunefulness. Every nuance was captured by Marc Urselli, the city's preeminent engineer for ambitious music. Weiss often erects skeletal accompaniment, a welcome change from the technical playalongs often heard on drummer-led albums. Interest comes from Okazaki switching between acoustic and electric instruments, Evans's extended technique, and Brennan's billowing clouds. Moods shift widely, never more than the mid-album pairing of "Mansions of Madness," which is named for and sounds like an H.P. Lovecraft story, and "Consoled without Consolations," which subverts fanfare, march, and waltz across its almost seven minutes. Each of the album's tracks is immersive, and despite the variety, cohesive.—**Andrey Henkin**

ROCK/POP

DAVID BOWIE
Young Americans

Parlophone. DBYA50. Half-Speed Master Neumann VMS80 lathe from 192kHz masters. Cut by John Webber at AIR Studios. David Bowie, Tony Visconti, prods.; Harry Maslin, Eddie Kramer, engs.

PERFORMANCE ★★★★★
SONICS ★★★★½

Young Americans lies midtable in the Bowie album league, overshadowed by his artier-rock music. Fortunately, it has lost the tag of merely being a well-executed pastiche, but Bowie's joke that it was his "plastic soul" album has never done it any favors. To celebrate its 50th anniversary comes the release of a limited edition of *Young Americans* remastered at half-speed. The question is, will it change anyone's opinion?

Sonically, the foundations are solid. Visconti, the producer, understood Bowie. Bowie himself had grown up with soul music during his 1960s mod days. By their side were engineers of the calibre of Maslin and Kramer, both of whom boasted impressive CVs handling the knobs and switches. John Webber, the engineer behind the remastering, is far from being an absolute beginner. It's an impressive team.

Bowie's aim was to produce a smooth "Philly Sound." Vocally, this has always been one of his finest albums, but the half-speed mastering gives vocals—all of them—extra clarity. That's important considering that the backing vocalists are of the very highest quality: Luther Vandross, Diane Sumler, and Ava Cherry, whose interplay with Bowie is such a feature. At times it's almost as if they're collective leads. This quality is heightened in this reissue. They positively soar on "Right" and "Fascination." Sublime. Another beneficiary of the extra space the mastering provides is David Sanborn. His saxophone, always prominent and distinctive on the title track, is now ever-present throughout the album, weaving from speaker to speaker.

This half-speed remaster probably won't change anyone's opinion about *Young Americans*. The differences are nuanced and subtle. It's the quality of the songs and Bowie's singing that make it a great album. There's nothing plastic about it.—**Phil Brett**

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ROCK/POP

LUCY DACUS
Forever Is a Feeling

Lucy Dacus/Geffen Records (24-bit/192kHz streaming on Qobuz). 2025. Lucy Dacus, prod.; Will Maclellan, eng.

PERFORMANCE ★★★★½
SONICS ★★★★½

The title of this album is arguably its only fault, leading listeners to expect something shallow and insipid. Lucy Dacus's fourth solo album is neither of those things. The deliciously odd opening track, "Calliope Prelude," makes that clear right away, evoking that carnival instrument with a symphony of spooky harmonics from violinist Phoenix Rousiamanis.

Mood established, Dacus plunges into her usual insightful commentary into her own life, analyzing a breakup in "Big Deal," pinpointing moments that hinted at the relationship's fate. The gentle drum syncopation and a simple vocal melody expose that particular, universal flavor of human pain.

The aura of boygenius, Dacus's trio with Julien Baker and Phoebe Bridgers, is ever-present. Baker, who herself has a new album out, sings on "Most Wanted Man," an off-hand love song—she and Dacus are romantic partners—set in a "fancy restaurant" where they're flirting, a situation Dacus expands into their deeper connection: "I'll keep circumventing your pet peeves, bending over backwards every time that you say please."

Bridgers is the subject of "Modigliani," which turns detailed memories into a celebration of close friendship. On the duet "Bullseye," Hozier steps back from greater fame to support a talented pal.

The album's title song is thoughtful and poetic but not syrupy. Dacus sustains notes against a pointillistic, synth-led riff that's heavy on dissonance. The song cuts off abruptly, unapologetically—no fade-to-black wistfulness here.

The closest Dacus comes to sentimentality is on the closer, "Lost Time." Anyone who's been in love will know the feeling of not wanting to lose a moment together, seeing every day apart as a tragedy. But even Dacus's lapse into forgivable sweetness gets a gritty gloss from the distorted chords in the final verse.—**Anne E. Johnson**

GABE DIXON
Parts I've Played

Rolling Ball Records (auditioned as LP). 2024. Dustin Ransom, Gabe Dixon, prods.; Dustin Ransom, eng.

PERFORMANCE ★★★★½
SONICS ★★★★½

Three years ago, when Gabe Dixon stepped in to become the keyboardist for the Tedeschi Trucks Band (TTB), he had big shoes to fill. Kofi Burbridge, who had just passed, was not only a gifted musician; he was beloved by his fellow band members. Dixon's experience fronting his own act and working with a wide variety of musicians in a wide variety of genres allowed him to slide seamlessly into the band's repertoire and culture. He also brought great playing chops, vocal skill, and an approach to writing that helped elevate the band's output.

Now he's back, with a solo record that strips back the big band sound he has been surrounded by and delivers a more personal, funky collection of songs. Throughout, he taps into the 1970s approach to keyboards that Stevie Wonder, Dr. John, and at times Billy Joel ("Heart of the World") trademarked. But what holds everything together is a soulfulness that will remind you of Robert Palmer's work with The Meters, as when he was backed by the Meters (and Lowell George) on *Sneakin' Sally Through the Alley*.

The music is largely guitar-free, but what's left—what he and his collaborator, Dustin Ransom, provide in keys, percussion, and bass lines—is full-bodied, bright, and often slick. It all comes together at its best with the third track, "Ain't It 'Bout Time," where Dixon's ability to bring the groove to a boil is revealed several times across the song.

On tour, Dixon sings the wonderful "Passing Through," a song about life on the road, without the support of his band. He channels his best Tom Waits, singing a saloon song you could envision being played on an old upright piano tucked into a smoky corner of the room. It's a reflection of how broad his talents have become and an exciting tease as to what he might bring to the next TTB studio session.

—**Ray Chelstowski**

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ROCK/POP

NEAL FRANCIS
Return To Zero

ATO Records (auditioned as LP). 2025. Sergio Rios, Neal Francis, prods.; Blake Rhein, eng.

PERFORMANCE ★★★★½
SONICS ★★★★½

On his first two studio albums—2019's *Changes* and *In Plain Sight* from 2021—Neal Francis was celebrated for his psych-rock sensibilities, taking a modern-day pop-fusion approach to music with origins and influences you could easily assign to Leon Russell and at times Elton John. The songs were piano centric but surrounded by the hefty muscle of a solid touring band.

Partly inspired by the funk and dance records he spins during his sets working as an all-vinyl deejay, *Return To Zero* takes a turn toward disco; the album that results can be thought of as a party spin. The rhythm is often heavy on hi-hats and throbbing bass, but they are softened by the cosmic textures he continues to apply to his music. One of the most dance-ready tracks, "Back It Up," sails along on glossy synth lines. It acts as the album's centerpiece. *This* is where the record is taking you.

Which is not to say that Francis has left rock'n'roll behind completely. "Broken Glass" stomps forward with a funky bottom and the swagger of a great 1970s rock strut. The standout track, "150 More Times," is a big, rollicking, piano-driven barnburner that will feed long-term fans what they love most. It should also translate well to a live show. Those two songs are like bookends, on opposite sides of Francis's musical spectrum.

In total, the sound is complete and the arrangements are grand and warm, thanks to a collaboration with composer/conductor Dom Frigo. The songwriting benefits from a stacked lineup of partners including Queens of the Stone Age bassist Michael Shuman and Wild Belle cofounder Elliot Bergman.

Return to Zero is a retro album. The record was constructed without digital programming, which helps it feel genuine, even if the music suggests that dance, not rock, is Francis's new ground zero.

—Ray Chelstowski

CLASSICAL

DANCE OF THE NIGHT SKY
Black Oak Ensemble

CR 90000 237. CD (reviewed as 24/96 FLAC). 2025. James Ginsburg, prod.; Bill Maylone, eng.

PERFORMANCE ★★★★½
SONICS ★★★★½

Forgive the pun: Scores of women are active today as classical composers, but we pay attention to relatively few. To right that imbalance, check out the eight works by British women on *Dance of the Night Sky*, the Black Oak Ensemble's third release—all of them intriguing—from Chicago-based nonprofit label Cedille Records.

According to Elinor Olin's liner notes, these compositions offer "a sense of British elegance and adventure." I'm not sure about the elegance, but each woman—including former Master of the King's Music Judith Weir, current Master of the King's Music Errollyn Wallen, and the similarly celebrated Sally Beamish—tells a compelling story.

Although the recording is too closely miked and lacks ultimate transparency, my favorite work on the album is *Insight* by Dobrinka Tabakova. Composed when Tabakova was 22, this gorgeous 10-minute composition explores imaginative "visualization" through sound. Using the techniques of repetition, dynamic contrast, and subtly shifting harmonies, *Insight* begins softly. A little more than halfway through, it breaks open with exuberance and joy.

Beamish's *The King's Alchemist* takes inspiration from John Damian, the daring alchemist to the 16th century court of King James IV of Scotland. Damian failed to transmute ordinary metals into gold, but that failure paled before his attempts to fly to France from the ramparts of Stirling Castle. The four-section work, whose final movement translates as "Bird Man," tells quite the wordless tale.

Four world-premiere recordings deserve special mention and attention: Bulawayo Railway by Carol J. Jones (b. 1993); the foot-stomping, danceable, and thoroughly compelling *Dance of the Night Sky* by Shirley J. Thompson (b. 1958); *Into the Abyss, I Throw Roses* by Grace-Evangeline Mason (b. 1994); and Wallen's extremely beautiful and energetic *Making Hay*.**—Jason Victor Serinus**

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CLASSICAL

DVOŘÁK & PRICE
Piano Quintet 2; Price: Piano Quintet

Marc-André Hamelin, piano; Takács Quartet

Hyperion CDA68433 (CD). 2025. Andrew Keener, prod.; David Hinitt, eng.

PERFORMANCE ★★★★★
SONICS ★★★★★

Dvořák's Op.81 Piano Quintet still attracts high-level performers. Starting things off, Hamelin's firm triplets are surprisingly laid-back; the strings introduce the intense *Allegro* proper with a brief lyrical reprieve. The movement is cosmopolitan; only its air of melancholy hints at its Bohemian origins, more obviously reflected in the pensive *Dumka* and its gently wistful return. The *Scherzo*, a *furiant*, has a nice, quick swing; its main theme continues into the calmer Trio. Jaunty afterbeats bring back a Bohemian flavor in the *finale*.

Florence Price's A Major Quintet, which prefaces the Dvořák, is quite the surprise. Her appealing symphonic music can sound like a pale imitation of—well, Dvořák. But this score is substantial and compelling. The incisive, dramatic first movement goes full-out Brahms; an angular cadenza-like solo for the first violin generates the development, rounded off with an extended coda. The *Andante con moto*, which is simpler and songful, provides repose. The cheerful, scampering *Juba*, a *scherzo*, feels like an uptempo spiritual, with a warmer, smoother second Trio. At under three minutes, the finale is almost too concise, ending before it has really gotten started.

Hamelin's excellent playing takes the palm here. In the Dvořák, his delicate pianos and tasteful accompaniments make the estimable Rubinstein (RCA, with the Guarneri) seem generic by comparison, and his quick scales and runs in the Price are scintillating. The Takács players, as always, have the style down, covering a full range of moods. But compared to earlier installments in the series, the execution is less breathtaking: Fast phrases feel slurry, vertical coordination is less clean. It's still high-quality playing, it just doesn't meet my perhaps unreasonable expectations!

Hyperion's unobtrusive ambience is predictably excellent.—**Stephen Francis Vasta**

MENDELSSOHN
Symphony 3 (Scottish)

Meeresstille und glückliche Fahrt; Three Lieder ohne Worte. Rotterdam Philharmonic/Lahav Shani.

Warner Classics 5021732723253 (CD). 2025. Karel Bruggeman, prod.; Clémence Fabre, Erdo Groot, engs.

PERFORMANCE ★★★★★
SONICS ★★★★★

Lahav Shani considers everything afresh in the once-familiar Scottish, taking nothing for granted. The first-movement development turns up a wealth of rhythmic motifs neglected even in classic performances (Maag, Munch), enriching the textures without upstaging the contrapuntal themes. He also actively shapes the recap's countertheme. The scherzo could be more genial, but Shani projects it with bracing rhythmic address, moving *attacca* into the patiently unfolding *Adagio*, with its ominous outbursts. Incisive, springy dotted rhythms, lean accents, and crisp articulations propel the finale, despite a few unhelpful (and unmarked) ritards.

The Rotterdam orchestra runs a few desks lighter than its counterpart in Amsterdam: In the slow introduction, the oboe consistently dominates the first violins. Otherwise, the string tone has enough body, the winds are nicely unified, and the players respond alertly to the conductor.

The sound, however, is frustrating. The quieter and the more lightly scored passages come across with airy clarity, allowing us to savor the supple clarinet and bassoon. But the *tutti*s are simply a harsh, unmusical din. This especially spoils the coda, which begins so fervently and finishes like tinny AM radio. This is not progress.

The sound is less of a problem in the fillers. The duetting trumpets in the home stretch of the Overture—a nice change from the once-ritual *Hebrides*—are vivid and pillowy. Earlier, the "becalmed sea" is spacious and concentrated; a clear flute sets the wind going to gain momentum, though I wouldn't swear the fast staccatos are precisely aligned. Many of the *Songs Without Words* suggest orchestral textures, and Shani has so arranged three of them. *Lost Happiness*, with its tricky elided returns, works best.—**Stephen Francis Vasta**

DIETRICH FISCHER-DIESKAU
A Centenary Tribute

Dietrich Fischer-Dieskau, baritone; various accompanists and orchestra

SOMM ARIADNE 5038-2 (reviewed as 24/96 & 24/44.1 WAV). 2025. Jon Tolansky, prod.; Paul Baily, eng.

PERFORMANCE ★★★★★
SONICS ★★★★★

Despite the huge number of live recordings of the most famous baritone interpreter of art song in the latter half of the 20th century, this new issue is a must. Released to honor Dietrich Fischer-Dieskau's centenary, this "two-CD" set, also available as a high-resolution download and streaming, complements four performances from his mature prime with a full CD of enlightening English-language interviews conducted on his 75th and 80th birthdays.

The artistry is extraordinary. The rarest selections, from 1960, find the great baritone singing 33 minutes of songs by the great Zoltán Kodály, the composer himself conducting the London Symphony Orchestra. Fischer-Dieskau demonstrates an uncanny ability to sing with urgency, intensity, and honesty while communicating sadness, the devastation of war, a broken heart, and death. Fischer-Dieskau negotiates with ease high-lying passages that would shred many voices. Equally arresting are four late-career songs by Busoni, to poetry by Goethe, that Fischer-Dieskau recorded with Gerald Moore in London in 1962. These recordings derive from an off-air BBC rebroadcast of a Finnish radio recording that no longer survives, yet the beauty and power of the voice bridge the divide. Again, the emotional intensity and vocal beauty take the breath away.

The six Mahler selections, accompanied by Karl Engel in 1970, balance three of Mahler's rare exercises in humor with three of the *5 Rückert-Lieder.* It's a treat to discover Fischer-Dieskau, that most serious and intellectually probing of artists, lightening things and changing voices without hamming it up. He pushes a bit at the top of his range in one of Mahler's greatest songs, but you will be hard pressed to find another recording of "Um Mitternacht" as gripping as this.—**Jason Victor Serinus**

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RE-TALES

BY JULIE MULLINS

THIS ISSUE: Aiming to become visible to new audiences, Gryphon Audio teams up with one of its top US dealers to open its first single-brand showroom.

A solo Gryphon showroom in L.A.

Often in these pages (and in Industry Update), we have reported ways various brands have experimented with the traditional hi-fi–retail formula. An example: the single-company dealership, adopted most recently by the Vervent Audio Group, parent company to Focal and Naim.[1]

The latest to set up a single-brand dealership is Gryphon Audio Designs, which is preparing to open a "mono-brand" showroom in Los Angeles. Gryphon's implementation, though, is a radical departure from previous experiments in one respect: It's in the Pacific Design Center (PDC), a large (1.6 million square feet) multiuse facility that caters to the design community, including professionals in interior design, architecture, and the arts, as well as design enthusiasts. The idea is to give Gryphon products more exposure to architects, designers, and design enthusiasts. The PDC is not accessible to the broader public. Assuming all goes well, the Gryphon store will be open by the time this issue hits newsstands.[2]

Opening a US showroom makes sense because, as Gryphon's director of US sales and marketing Anthony Chiarella told *Stereophile*, in recent years the US has become Gryphon's second-largest market. The L.A. store will remain the only Gryphon "monostore" in the United States, though plans are in the works for Gryphon-only showrooms in other key markets, in cities with a concentration of high-end retailers in other luxury categories. The goal is to have 8–10 Gryphon stores worldwide within two or three years. The US was first because Gryphon self-distributes here via the aforementioned US subsidiary; that made setting up this arrangement simpler than it would be in markets that rely on independent distributors.

Does this mean that Gryphon is moving away from traditional dealerships? Not at all. "We want to be more important to brick-and-mortars, the top dealers in the country who support Gryphon products and other brands." They are not looking to *expand* the dealer network, either; Chiarella thinks the US is well-covered. "We want the dealers we have to be successful." Gryphon is "not going to shift our attention or our support away from the fantastic dealers who helped us grow the brand."

Why L.A., and why the PDC specifically? These choices put the Gryphon showroom in close proximity to other luxury goods. The PDC is home to a broad range of showrooms from fashion and jewelry to many home-décor, lifestyle, and design-related businesses: furniture, lighting, tableware, etc. Also in the neighborhood: music recording studios including the Village, Sunset Sound, and Paramount and iconic music venues including the Troubadour, Whisky a Go Go, and the Roxy. A well-appointed, homelike high-end audio showroom seemed a good fit. This is consistent with the goal of cross-selling Gryphon (and with it high-end audio generally) to audiences beyond audiophiles, including well-heeled consumers and the trades: the PDC's architects and designers, who can propose such products to their clientele.

This is consistent with the goal of cross-selling Gryphon (and high-end audio generally) to audiences beyond audiophiles.

The idea for the store came from Joseph Cali, a passionate, well-connected Gryphon dealer (and former customer)[3] who is also involved in the music business. Cali will own and operate the showroom. He's a huge fan of the brand—as is his wife, singer-songwriter Lori Lieberman. Cali also already had office space at the PDC, for his custom-installation business, Joseph Cali Systems Design, Inc. In the eight-or-so years since he started that business, he became a Gryphon owner and fan—a Gryphonista, as Gryphon enthusiasts are called—and eventually became a dealer. He sold out of his home in Calabasas for a while. Much earlier—even as he was making a mark as an actor—he was working at Audio Exchange in NYC, which eventually became Stereo Exchange, which is still in business today.

Gryphon Audio specified certain design elements for the showroom buildout. "They want a certain look, ... and I was totally on board with that," Cali said. His experience in the custom-installation business helped him oversee the showroom's construction and buildout. Cali will own and operate the business. "It was a very comfortable arrangement for them to help me finance the construction—for which I will reimburse them. Then I am responsible as the sole owner, which is what I really wanted. I pay the monthly lease and the utilities." He plans to continue his successful custom-installation business.

As I noted previously, the PDC is not open to the public, as, say, a shopping mall is. It *is* accessible to those with an appointment, so the showroom will be appointment-only. And there *will* be foot traffic: PDC-based professionals and members of the public who attend special events. Cali and Gryphon plan to host some themselves: press events, listening parties, product launches for Gryphon gear, and so on. Other PDC tenants will visit, with clients in tow. There's a 100-seat screening room in the PDC, and to get to it, you have to walk past the Gryphon store. Cali plans to use the big display window in front to pique the interest of passersby. "It draws you as you go by. You're like, 'What is this?' This is where I'm hoping to have people make appointments who never really thought about" high-end audio.

During our phone conversation, Cali spoke with enthusiasm about this opportunity. It marks a welcome return to his roots. After selling components for a time for Cello, the Mark Levinson brand from the 1980s and '90s, he hasn't been involved much with two-channel systems. Cali's business was mainly with clients doing 40,000ft² houses with TVs, shades, lighting, and built-in speakers.

"It's such a personal thing for me. I'm so excited about this," Cali said. "Two-channel is truly my heart. This is my heart." ■

1 See stereophile.com/content/re-tales-14-reinventing-audio-boutique. See stereophile.com/content/re-tales-14-reinventing-audio-boutique.

2 Sound familiar? That's because in 2019, Cali assembled and promoted an all-Gryphon room inside Joseph Cali Systems, his custom-installation business. Now he is opening a separate Gryphon-only dealership.

3 In his younger days, Cali was, also an actor of note: His most recognizable role was as Joey, the best friend of John Travolta's character in *Saturday Night Fever*.

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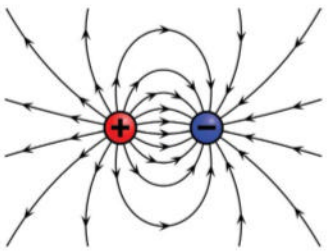

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MANUFACTURERS' COMMENTS

THIS ISSUE: A representative of QUAD responds to our review of the new QUAD 33 preamp and 303 amplifier.

Pathos InPoL Legacy

On behalf of Pathos Acoustics and Harmonia Distribution, we would like to thank Rogier van Bakel for his excellent review of the Pathos InPol Legacy. He seems to have caught the bug we all catch when it comes to Pathos and its products. We are honored to be the distributor of this wonderful Italian brand because of the passionate and positive response their products receive from people who, like us, truly love music.

When Mr. van Bakel wrote, "The sheer power of the performance, funneled through the Pathos, hit me in the gut," we all remembered our first experience with a Pathos product, so this statement resonated with us. It's why we listen to music.

David Schultz (President)
Jesse Luna (Vice-President)
Harmonia Distribution

QUAD 33 and 303

MoFi Distribution would like to thank Martin Colloms and John Atkinson for the thorough "deep dive" review and the exacting measurements.

It is easy to recognize from this review that the QUAD 33/303 combination represents an exceptional value, from one of the most established audio brands. Astonishingly, QUAD was founded in 1936. That kind of longevity is rare in today's complex global marketplace, in hi-fi and beyond.

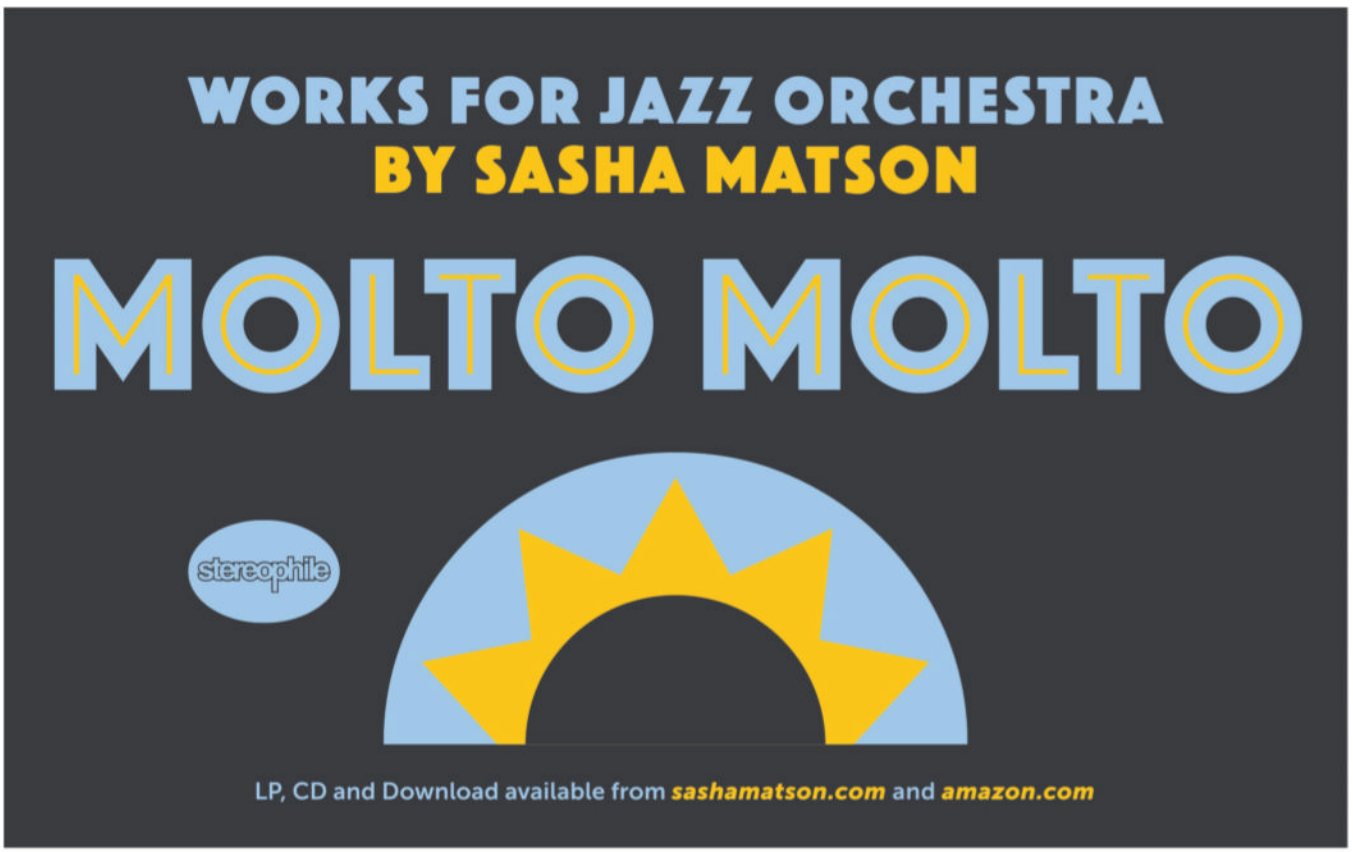
Four decades after the original versions ended their run, the new QUAD 33 preamplifier and 303 power amplifier combine this classic heritage with carefully chosen updates. The new iterations honor the QUAD legacy while incorporating advanced features that make them ideal for today's music enthusiasts. The new QUAD components deliver the same immersive experience the old ones did plus new, cutting-edge refinements. That's a rather tall order, and meeting it is a fulfilling accomplishment.

The new QUAD combo has been immensely successful. Since their arrival last fall, demand has far exceeded availability—and that

was before tariff-induced anxiety started stateside, temporarily disrupting the supply. This success is no accident; rather, it's the result of a long, well-executed research and development cycle. The functionality and the sonic performance Martin eloquently details are precisely what the marketplace was hoping for, especially considering that these are the first new solid state products from QUAD in more than 5 years.

As Martin noted, the QUAD 33/303 combo is "just right," in countless ways. Very few things in life are "just right."

Lionel Goodfield, PR/Marketing
MoFi Distribution



MY BACK PAGES

BY FRED THAL

THIS ISSUE: Analog master tapes are precious cultural artifacts. Audiophiles should demand that record companies, take meticulous care of them and create state-of-the-art digital transfers whenever they're removed from storage vaults.

It's on tape

Why should we worry about the conservation and preservation of old analog master tapes when they've long ago been transferred to digital? It's a reasonable question—especially since AI-powered digital signal processing is on the horizon, promising perfect repair of bad-sounding digital audio files. Musicians and many audiophiles are skeptical that DSP could *ever* perform *authentic* correction on natively analog domain-transferred music files, the way (eg) Plangent Processes can.[1] A forceful argument for better preservation of the surviving tapes is that when they're gone, we'll have lost not only the absolute (if also decaying) reference but also vital information that can be essential to applying authentic corrective processes.

The 1950s through the 1980s marked a golden era of music recording. Over those 40 years, an astounding number of cherished recordings were produced, largely in good-to-great fidelity. Nearly every one of those recordings was captured on analog magnetic tape.

When digital audio arrived in the late 1970s followed by the CD in the early 1980s, record companies went back to those analog master tapes to create new digital products—a process known as "domain transfer," transfer from the analog to the digital domain. The sheer number of tapes in the vaults made the task formidable, and completing it took decades.

From the earliest years of digital, critical listeners complained that some CD reissues sounded inferior to the older, original releases on vinyl LP. In view of the CD's promise of Perfect Sound Forever, the implication was that something had gone wrong. Consumers began promoting the hypothesis that linear pulse code modulation itself was the reason for inferior sonic results.[2]

Some inside the industry began looking for alternative explanations. After observing technicians monitoring only the end-point digital section of the transfer chains, often with their backs turned to heavily worn, aging analog tape machines pressed back into service just for these transfers, speculation arose that the labels didn't fully understand what's required to optimally extract audio from an analog master tape. By late 1987, the consensus was that too many of the domain transfers were being performed suboptimally.

It's estimated that millions of analog master tapes are stored at Iron Mountain by the "Big Three" record labels, Sony, Universal, and Warner. Some of these tapes are now more than 70 years old, and many are affected by chemical degradation that renders them increasingly fragile.[3]

When thinking about legacy master tapes, conservation and preservation might seem fundamental. But the record industry never adopted a "first, do no harm" approach to the handling of master tapes. If a delicate tape needed to be replayed, there

was no preservation-focused gatekeeper, and no qualified specialist was brought in to advise on how best to accomplish the task. Believing that the tapes were durable enough to be handled the way they'd always been handled, the labels assumed that recording engineers and technicians from the analog era would know best how to play them back. Master tapes were handed over to these people, who were always confident their transfer would be the best sounding. If an irreplaceable tape was damaged or destroyed in the process, this was normalized by explaining it as unavoidable and of no real concern, since the music had been captured ideally in the transfer.[4]

Today, no serious people argue that we *don't* have too many poor-sounding CDs and digital files made from analog master tapes that could have—should have—sounded far better. So, what about redoing some of those transfers—the ones that are plainly suboptimal? Assuming that our serious intent was to do it to the highest standards, how would we go about it, and what would it take?

Optimizing tape playback would be a good starting point. Because both the amplitude and time-domain distortions inherent in analog recording are compounded in playback, we face a provocative dilemma: Arguably, no one has heard how good a first-generation analog tape recording can sound until it's been played back on a reproducer with something approaching an order of magnitude lower distortion than that of the original recorder. It's achievable.

That's just the first link in the chain. Paying this level of attention to the *entire transfer chain* could yield—*should* yield—more faithful, better sounding transfers.

These days, labels are again retrieving master tapes, usually to cut new lacquers used to press premium, all-analog reissue LPs. What precautions are being taken? *Conservation* is the preservation of a heritage for future generations, while *preservation* is keeping something valued intact, free from damage or decay. To what standards are the labels doing either?

A related question: Why don't the labels demand a state-of-the-art domain transfer in exchange each time a master tape is retrieved from the vaults? Why aren't audiophiles demanding this? ■

A. F. "Fred" Thal pursued interests in tape transport design and time-domain distortion while working for leading audio-recorder manufacturers. Today, his California company, ATAE, builds playback-only tape machines.

1 Plangent Processes recover a technical pilot signal (often the recorder's latent remnant AC bias signature) from an analog master tape and use that reference signal to correct time-base distortions that compound on the recording and subsequent playback. The resulting correction can be highly accurate and authentic to the original performance.

2 In the 1980s, the most common hypothesis explaining the CD's alleged poor sound quality was that the 44.1kHz linear pulse code modulation (LPCM) sampling rate was too low. It took almost 20 years of ongoing refinement to converter and filter design to convincingly disprove this notion, which is still widely held in the audiophile community.

3 Most audio tapes have either a cellulose acetate or a polyethylene terephthalate base film to which a magnetic oxide mixture is chemically bonded. Each type is experiencing its own set of chemical degradation mechanisms (eg, sticky-shed-syndrome) that can make the tape's oxide coating vulnerable to damage or destruction as it's being pulled through a tape transport for playback.

4 "Storage firm preserves troves of entertainment." This 2013 *Boston Globe* article normalized the destruction of an irreplaceable heritage master tape. See tinyurl.com/Ir0nM0untain.

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