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INSIDER VIEWS ON EVERYTHING VINYL

## ANALOG BY MICHAEL FREMER CORNER

THIS ISSUE: Dan D'Agostino's  
Momentum Phonostage and Gold  
Note's Tuscany Gold MC cartridge.

### Driving the Vinyl Deniers Crazy!



**The Momentum  
could be the solid-state  
phono preamp to  
win over tube lovers.**

**A**t the beginning of this century, when the vinyl resurgence was at best nascent and few believed it would be as strong as it is today, Boulder Amplifiers manufactured a phono preamplifier that cost \$29,000. I reviewed that model, the 2008 (now discontinued), in the July 2002 issue.<sup>1</sup> With a power supply that would probably be more than adequate for a high-wattage power amp, it was built to a standard approached by few other makers of phono preamps.

More than a decade later, today's audio market is well populated with luxury phono preamps costing \$30,000 and up. That this fact drives the anti-vinyl crowd absolutely crazy only adds to our pleasure.

With his lines of power amplifiers

and preamplifiers well established, Dan D'Agostino—the founder, CEO, and chief designer of the company that bears his name—set about designing a phono preamplifier. At an audio event a few years ago, he asked me a question that I thought, at the time, was

rhetorical: What would I like to see in a phono stage designed for the top of the market?

My answer: a phono stage with multiple, easily selectable inputs, easy-to-set loading and gain options, and memory in which to store those settings for each input.

D'Agostino then asked me about

<sup>1</sup> See [www.stereophile.com/phonopreamps/621/index.html](http://www.stereophile.com/phonopreamps/621/index.html).

equalization curves. I delivered my usual lecture about consumers' abuse of EQ curves, but concluded with "If people want them, why not?" Still, I implored D'Agostino *not* to pass on the misinformation about various non-RIAA curves being used well into the stereo era.

Some time later, D'Agostino announced a forthcoming phono preamp, and said he hoped to send me a review sample in August 2015. It arrived more than a year after that, in September 2016. Ironically, the delay was caused by the need for additional work on the preamp's digital switching, not its signal-path electronics.

**DAN D'AGOSTINO'S MOMENTUM PHONOSTAGE ARRIVES:** Cradled carefully in its Pelican road case, the Dan D'Agostino Master Audio Systems Momentum Phonostage (\$28,000) dazzled me, even when the only things visible were the vents machined into the thick, solid-aluminum top panel. As in all D'Agostino products, the Momentum's appearance, craftsmanship, and fit'n'finish are eye-poppingly gorgeous. I wanted to run my hands across the main enclosure's surfaces, just to feel their cool, satiny finish. And I did. The review sample was finished in gleaming silver; it's also available in dramatic black.

But that main enclosure is only one of three of the Momentum's components. The first is the external transformer box, an unglamorous case (4" wide by 2" high by 10.5" deep) that's intended to be separated by "at least a couple of feet" from the main enclosure, according to the owner's manual.

The main enclosure (15.5" wide by 3.5" high by 12.75" deep) contains the signal path. It's supported by large screw-on cones that nestle into openings in the top of the curvaceous *power regulator base* (13.5" wide by 2.5" high by 11" deep), which is machined from aluminum and which supplies DC to the main unit as well as physically supporting it. (I know some readers who don't think that such cones do anything, and who would prefer energy drains like those from Stillpoints, but that's another story.) An XLR-terminated cable connects the main enclosure to the power regulator base; the latter connects to the outboard transformer with another umbilical, terminated with multi-pin DIN plugs. Stacked, the main unit and base stand 7" high and weigh 48 lbs.

This arrangement of main enclosure and base/power supply, as well as the Phonostage's industrial design, mirror those of D'Agostino's Momentum line-level preamplifier,<sup>2</sup> even if, ironically, necessity dictated that

D'Agostino's signature round analog meters be replaced by digital displays.

The Momentum Phonostage's front panel features six of those displays—small, rectangular, tiny-red-dot LED screens similar to those used by the military—with a row of four at the top and two more below. In the upper row, the two leftmost screens display resistive loading for moving-coil cartridges (10 choices, from 5 ohms to 47k ohms) for inputs MC1 and MC2, while the two on the right display the same for moving-magnet cartridges (16 choices, from 23k ohms to 391k ohms) for inputs MM1 and MM2. (Adjustable resistive loading for MM cartridges is something that's found on few phono preamps because it's widely and wrongly assumed that 47k ohms is *always* the correct load for MM.) The two lower screens indicate gain (the user can fine-tune it, with a range of  $\pm 6$ dB) and the MM capacitive load (16 choices, from 18.75 to 281.25pF). Below each of the six screens are Up and Down buttons for making settings.

The array of screens is flanked by two machined knobs. On the left is Input: MC1, MC2, MM1, MM2. On the right is Equalization Curve, with settings labeled R.I.A.A., F.F.R.R. (or *ffrr*, for pre-stereo Decca/London LPs), RCA Orthophonic, Columbia, and D.G.G. (Deutsche Grammophon Gesellschaft).

On the Main rear panel are four sets of inputs—two each MC and MM, single-ended (RCA) and balanced (XLR)—and a single pair of balanced (XLR) outputs. If you run single-ended, you'll need correctly configured RCA-to-XLR adapters for the Momentum Phonostage's output. A toggle switch selects between single-ended and balanced input.

The Momentum's specifications include a wide frequency response of 20Hz–100kHz,  $\pm 1$ dB; low distortion of  $<0.003\%$ , 20Hz–20kHz; and a signal/noise ratio of 75dB (standard reference, unweighted). The specified gains are 70dB MC and 50dB MM, adjustable as described above.

**ELECTRONIC NOTES:** The Momentum is hand-built at the company's Arizona factory, and features "through-hole" circuit boards stuffed with components carefully selected by Dan D'Agostino based on their reliability and sound quality.

Instead of transformers, the Momentum's MC input stage uses multiple parallel direct-coupled, current-mirror, bias-regulated, differential field-effect transistors (FETs). Equalization is passive. The output/gain stage is identical to the one in the Momentum line stage. To ensure

the quiet performance essential for a phono stage, there are three layers of power-supply regulation.

**PLUG PROBLEMS:** The RCA jacks for the Momentum's inputs are costly ones from Cardas, and the first time I used them I had the oddest experience: When I pushed in the Furutech RCA plugs that terminate the phono cable of the Schröder CB tonearm supplied with the Döhmman Helix 1 turntable I'm currently reviewing, they fell right out again. I then tried the locking WBT plugs on the Swedish Analog Technologies arm, but no matter how much I tightened them, they, too, fell out of the Momentum's sockets. How odd was that? I thought about using adhesive tape to hold them in place, but you know what happens if one plug falls out with the volume up. I didn't want to destroy my speakers.

So I used a Cardas RCA-to-XLR adapter. The fit was snug, and of course the XLR connection was secure. I reported all this to D'Agostino via e-mail, and a week later Bill McKiegan, the company's president of sales, who was already scheduled to drop by, paid me a visit.

I removed the RCA plugs from the adapters and again pushed them into the Momentum's RCA jacks. Now they fit perfectly. Same thing with Furutechs and WBTs. I think it was a problem of warm-up: the jacks needed to expand to room temperature to produce an ideal fit. Other than that, the Momentum Phonostage performed flawlessly in every way. Its convenience features made for a reviewer's ergonomic dream.

**FAMILIAR SOUND?** Over the years, I've found that there's usually a strong sonic correlation between a company's line-level and power-amplification products on the one hand and its phono preamplifiers on the other. That only makes sense: aside from the RIAA implementation and a heroic effort to eliminate noise from the ultra-low-level signal path, the phono preamp's gain-stage implementation can, more likely than not, be derived from the company's line-level products. That's what Dan D'Agostino has done in the Momentum Phonostage.

Switching from Audio Research's Reference Phono 3—a hybrid design with a FET input stage and a tubed output stage—that I reviewed in January to the all-solid-state D'Agostino Momentum Phonostage *could* have produced a jarring difference in sound character. It didn't. While the D'Agostino's sound *was* different from the ARC's, it didn't have the thread-

<sup>2</sup> See [www.stereophile.com/content/dan-dagostino-master-audio-systems-momentum-line-preamplifier](http://www.stereophile.com/content/dan-dagostino-master-audio-systems-momentum-line-preamplifier).

bare, speedy, analytical qualities so often heard from solid-state. Instead, like the other D'Agostino products I've reviewed, the Momentum Phonostage had a relaxed, almost tube-like richness in the midband, without sacrificing the transient clarity, detail, speed, and, especially, the transparency I expect from a top-shelf solid-state design.

The Momentum couldn't quite match the Reference Phono 3's vibrant, richly saturated harmonic presentation—nothing else I've heard does—but it produced taut bass lines, dynamic slam, and resolution of microdynamics and inner detail that the tubed Ref 3 could not. In audio, you can't have everything.

Tonally and texturally, the Momentum sounded closer to the Ypsilon VPS-100 phono preamplifier, with its metal-encased tubes, than to ARC's Ref Phono 3, and that's about as strong an endorsement of a solid-state phono preamp as I can make.

To get such richly developed textures from a solid-state phono preamplifier is, in my experience, highly unusual. Take, for instance, a recent reissue of Johnny Hartman's *Once in Every Life*, originally released in 1980 (Bee Hive 7012/Analogue Productions APJ105). (The album was recorded by the late Ben Rizzi, who went on to run Mastersound Astoria Studios—where, in 1993, I recorded the narration for *The Ultimate Test CD* (ESX ESD-7059), later mocked on *Late Show with David Letterman*.) I know *Once in Every Life* well. It's an intimately set sonic stunner, and AP's reissue is even more so. Hartman's career was past its peak, and he died three years later, but in 1980 his voice was still supple and his phrasing impeccable, even if he didn't always get the lyrics 100% correct. He's backed by top veterans: Frank Wess on tenor sax and flute, Joe Wilder on trumpet and flugelhorn, guitarist Al Gafa, pianist Billy Taylor, bassist Victor Gaskin, and drummer Keith Copeland.

Hartman thrived in small combos, and, as an intimately miked studio recording that used lots of isolation, this one is exemplary. In "Easy Living," Hartman's voice is out front, rich, round, and full-bodied, but with an extra, mike-induced sibilance on s sounds (it's on the CD, too), with Taylor's piano well back at stage left, and Gaskin's bass—sounding as if its pickup was plugged directly into the board—tightly plumbing the depths.

The Momentum did this LP full justice, presenting a transparent window onto the recording. Hartman's voice was three-dimensional, and possessed all the warmth in his lower register,

even as his precise articulation was fully delineated, and the slight bit of added reverb was put in proper context.

In the second chorus, as Billy Taylor's piano subtly floats down in the mix, behind and off to Hartman's side, to create a relaxing bed, and as Wilder's three-dimensional flugelhorn emerges from pitch "black," I heard the Momentum's reproduction of air and honest texture (not too soft, not too etched) and harmonic rightness—not quite as ripe as through ARC's Reference Phono 3, but sufficiently developed to make the case. But in terms of dynamics and transparency, the Momentum won.

When I reviewed D'Agostino's Momentum line preamplifier in the August 2014 issue, I said that it had "delicacy, transparency, three-dimensionality, and especially liquidity and freedom from grain without softening transients—all floating above the blackest backdrops." All of this was also true of the Momentum Phonostage, which served all musical genres. The latest vinyl from the Electric Recording Company is Leonid Kogan's recording of the Brahms Violin Concerto, with Kiril Kondrashin conducting the Philharmonia Orchestra (ERC027), first released in 1960 on EMI/Columbia. Following its usual practice, ERC pressed only 300 copies of its reissue—which, the label says, will never see another pressing—priced at £450 (\$563 at time of writing). Expensive? Yes, but an *original* pressing of this album sold in February 2016 for \$3750.

I haven't heard an original pressing, but I imagine that ERC's restored, vintage, all-tube mastering chain is far superior, as are the its plating and pressing. The reissue, too, will only appreciate in value. The sound of Kogan's violin is silky-smooth, effortlessly transparent, and realistically sized on the soundstage in ways that no digits manage, which helps explain the original's rising price.

Granted, the ARC Reference Phono 3's harmonic presentation knocked this one out of the park, but both the D'Agostino Momentum Phonostage and the Ypsilon VPS-100 produced more finely focused images, greater transparency, and more supple instrumental attacks, particularly of Kogan's violin, which glistened with a delicate silky sheen—as well they should, for twice the ARC's price (\$13,995) in the case of the D'Agostino, and nearly that in the case of the Silver edition of the Ypsilon (\$52,000). I mostly used Lyra's Etna SL moving-coil cartridge, but also used Miyajima Laboratory's Madake, which somewhat ripened the

musical fruit.

I also listened to large-scale orchestral music—*eg*, Mahler's Symphony 3, with Zubin Mehta conducting the Los Angeles Philharmonic, Los Angeles Master Chorale, California Boys' Choir, and contralto Maureen Forrester, recorded in 1978 in UCLA's Royce Hall (2 LPs, London/Decca/Analogue Productions APC 117). (This might have been Lenny Kravitz's recording debut—he was a member of the Choir, and is on this recording.) While Mehta's interpretation of Mahler's sprawling ode to nature is considered good if not one of the best, the sound produced by the Decca team in the specially treated hall makes it one of the best-sounding Thirds on record, if not the best.

The Momentum's ability to effortlessly reproduce full-scale orchestral dynamics, and to control the flow of the majestic double basses, all had me thinking it could be the solid-state phono preamp to win over tube lovers, especially given its ergonomic flexibility.

I tried the Ypsilon MC-16L step-up transformer into one of the Momentum's MM inputs. That produced a different but equally spectacular sonic picture that worked really well, especially for hard rock.

**CONCLUSION:** Of the solid-state phono stages I've heard, the Dan D'Agostino Master Audio Systems Momentum Phonostage is the one that most effectively bridges the gap between tubed and solid-state models. For sure, it's expensive, but its industrial design, ergonomic flexibility, build quality—and, of course, the sound—make it, for me, the most enticing solid-state phono preamp I've reviewed. ■

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