

ANALOG CORNER

BY MICHAEL FREMER

THIS ISSUE: Mikey reviews the new MC Anna Diamond, a 10-carat star in Ortofon's moving-coil cartridge line.

A Diamond on the Sole of Her Shoe

As I was doing a final edit on this column, I received very sad news from Leif Johannsen, the chief officer of acoustics and technology for cartridge manufacturer Ortofon A/S: Kim Petersen, described by Johannsen as his “right hand and new cartridge design and listening partner” and the company’s “top cartridge expert,” passed away suddenly at age 52. Mr. Petersen had worked all of his adult life at Ortofon (30 years), and, according to Johannsen, “knew everything about our cartridges, how they are/ were produced, and all of the equipment used” in their manufacture. Johannsen added, “He was a dedicated music lover and, according to his partner, had just finished listening to a batch of Anna D’s when it happened, though at this time the exact cause of death is unknown.” Heartfelt condolences to Mrs. Petersen and the Ortofon family.

Anna Domine

In 2018, Ortofon celebrated its 100th anniversary by releasing the MC Century, a limited-edition (100 units), top-of-the-line (\$12,000) cartridge that represented everything Leif Johannsen had learned in more than a decade of cartridge design and construction for the company.

Probably to his surprise—and that of company CEO and eternal vinyl-resurgence skeptic Christen H. Nielsen—the MC Century sold out quickly. That didn’t mean that all 100 MC Centuries immediately found their way into consumers’ hands but rather that distributors and retailers worldwide bought them—which is why, many months after they were sold out, some were still available at retail. (As of this writing, I think, none are left.)

Thus, for Johannsen, the question was now: *What to do next?*

For the company’s 90th anniversary, he’d moved dramatically into SLM (selective laser melting) technology to produce the radically shaped metal body of the limited-edition (500 units) A90 cartridge—something that could not be carved from solid metal using traditional machining. SLM welds metal particle by particle, layer by layer, and its use in manufacturing the A90’s one-piece stainless steel body gave Ortofon unprecedented control over mass and density, creating a structure the company describes as *self-damping*. I believe analog history will judge the A90 to be one of the greatest achievements and advances in phono cartridge design.

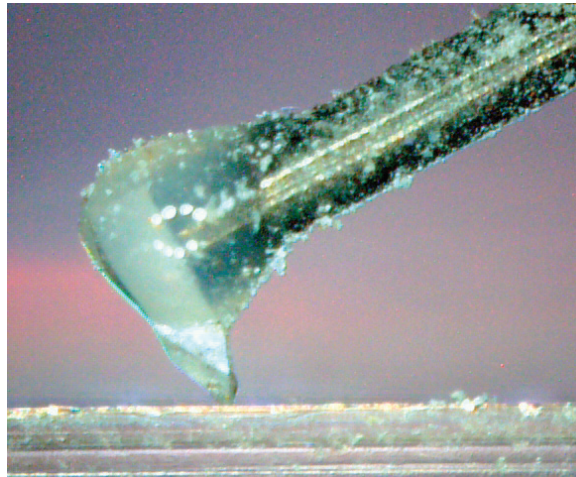
In 2015, in honor of the company’s recently observed 95th anniversary, Johannsen produced the limited-edition (500 units) A95, again using SLM technology—but this time with a frame of titanium. Two years before that, in 2013, Ortofon introduced their new flagship, Johannsen’s MC Anna cartridge, named after opera diva Anna Netrebko. The \$8499 cartridge sold for more than twice the price of the A90 (\$4200 in its day) and was



the first Ortofon to use a titanium SLM body. In addition, the Anna featured a then-new, patent-pending high-efficiency magnet system and a far lower-compliance suspension than that of the A90: just $9\mu\text{m}/\text{mN}$, in contrast with the A90's $16\mu\text{m}/\text{mN}$. The Anna's *zajtig* body (befitting a diva) weighed in at 16gm vs the A90's 8gm . It was fitted with a boron cantilever and a nude Replicant stylus. This was a heavy, low-compliance cartridge that required a high mass arm with chatter-free precision bearings to deliver its best performance.

I reviewed the Anna positively and bought it as one of my references—though I wrote that “compared to the (Lyra) Atlas, transients in the midbass and below were slightly softer, which could make them more or less attractive depending upon the rest of your system.”

The goal with Anna was to step well beyond the A90 in terms of dynamics and tonal richness, and in both of those areas—and in every other realm—the costly Anna surpassed the A90. (But if I were solely interested in electronic rock music, I'd go for the speedy, lean A90.)



Is that a subminiature drinking-bird toy or the solid diamond cantilever and nude Replicant stylus of the MC Anna Diamond?

after six years in production, while the new MC Anna Diamond retails for \$10,499—costly, but \$1500 less expensive than the limited-edition MC Century, just as the original Anna is around

What comes after the Century?

At the 2019 High End show in Munich, Ortofon introduced its new flagship, the MC Anna Diamond. As has become customary, one of my first stops at the show was to meet with Leif Johannsen. I recorded a video of our time together, which began with a tour of the display cases on the show floor!

The original Anna will remain in the line, priced at \$8924—which represents a modest price increase

\$1500 less than the Anna D. Like the MC Century, the MC Anna Diamond sports a solid diamond cantilever fitted with Ortofon's Replicant 100 diamond stylus, said to be the closest of any playback stylus to the lacquer-cutting stylus.

Johannsen told me that the diamond cantilever is of course one of the two biggest differences between the Anna

1 See youtu.be/mNParABvqWA.

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and the Anna Diamond, the other being the new cartridge's suspension materials and tuning, which more closely resemble those of the MC Century: "You can say that [the MC Anna Diamond] is basically an MC Century in an Anna body." He added, though, that when you are talking about cartridges at this price, "everything" makes a difference; although the MC Anna Diamond is very similar to the MC Century, it is not identical, either physically (obviously) or sonically.

Three years ago, Johannsen began experimenting with the solid diamond cantilever, putting it in an Anna and also an A95. Will we see in the future an A95 D? He didn't say (although at High End 2019, Ortofon *did* introduce a boron-cantilevered A95 mono). So after two years of experimenting, Ortofon introduced the diamond cantilever in the MC Century, and this year in the MC Anna Diamond—which will not be a limited-edition design but will remain in the line indefinitely. Johannsen claimed that with the MC Anna Diamond, buyers will be able to get "approximately the same sound" as a few lucky buyers got with the MC Century.

The MC Anna Diamond particulars

In addition to the SLM titanium body, solid diamond cantilever, "thin and light" Replicant 100 stylus, and specially tuned suspension—which uses custom elastomers similar to those used in the MC Century—the MC Anna Diamond's high-efficiency magnet system features an optimized geometry and a neodymium and iron-cobalt blend claimed by Ortofon to produce "unprecedented consistency of the flux density within the system's air gap." The system is claimed to deliver more uniform magnetic field strength, which allows each coil to sense identical flux density regardless of position. The result, according to Ortofon, is the preservation of dynamics and impulse linearity.

On a practical level, this development allowed Ortofon to use a lightweight, precision-molded, high-strength, high-rigidity, nonmagnetic armature that doesn't alter the magnetic field as it moves. That, combined with ultrapure oxygen-free copper coils, is said to produce "perfect," uncompromised electric reproduction of the armature's physical movement. The efficient system also means significant

voltage output is possible using a minimum number of coil turns—which, of course, reduces the system's mass.

The design achieves greater vibrational control using an improved WRD (wide-range armature damping) system. The Anna's WRD system extends the armature beyond the coils, allowing it to interface directly with the rubber dampers in which is sandwiched a small, heavy platinum disc that produces more consistent armature movement. Ortofon claims the changes to this system improve both stereo perspective and transient clarity and accuracy. In addition to the self-damping SLM body, the Anna's body is damped with a thermoplastic elastomer compound that forms the bottom cover assembly. This may strike some as minutiae, but those details are among the reasons an ostensibly state-of-the-art flagship cartridge can be costly—those plus the precision with which all of this must be hand-assembled.

Setting up the Anna D

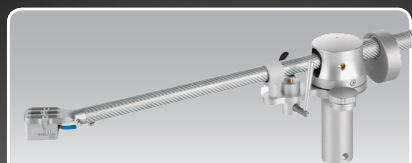
The new cartridge has an output of 0.2mV; channel balance with 0.5dB at 1kHz; channel separation of at



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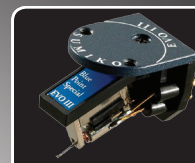


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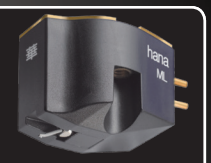


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least 25dB at 1kHz (22dB at 15kHz); frequency response (± 1.5 dB) of 20Hz-20kHz; lateral compliance of $9\mu\text{m}/\text{mN}$; a recommended tracking force of 2.4gm; a tracking angle of 23° ; an internal impedance of 6 ohms; and a weight of 16gm. These specifications are identical to those of the original Anna, other than the 2.4gm recommended tracking force, which is 0.2gm less than the 2.6gm recommended for the original.

According to Ortofon, “both [Anna] models are a perfect match for a high-mass, high-precision tonearm with gimbaled bearings.” I installed the Diamond on the Swedish Audio Technologies CF1-09 arm, which qualifies. When I reviewed the original Anna,



I still had the dual-pivot Continuum Cobra tonearm on the table and did not yet have the CH Precision P1/X1 current-mode phono preamplifier, both of which are also ostensibly ideal for use with either Anna.

Setup was relatively quick and easy. With the arm parallel to the record surface, I observed an ideal 92° stylus rake angle, and minimal crosstalk/maximal separation and balance with the stylus very close to perpendicular to the record surface—as it should be when you fork over this much money!

Spectacular sonic performance

Prior to Ortofon’s MC Century, the only experience I’d had with a diamond-cantilevered cartridge was Transfiguration’s Proteus D. I’d reviewed the original Proteus and liked it a great deal (as I liked all of the many Transfiguration cartridges I’ve heard and reviewed over many years)—but their D version was a big step forward in terms of transient precision and speed, with no sonic downsides. Transparency was greater, and everything was faster and more exciting. The sound was more like a “direct shot”

from the grooves. But then the company’s founder and designer, Immutable Music’s Seiji Yoshioka, passed away in 2018, and per the family’s wishes, the company ceased operations.

Like that cartridge and, of course, the MC Century, the MC Anna Diamond is joltingly fast, clean, and transparent, yet with solidity, weight, and body. Whatever issues I had with the original Anna’s midbass transients have been eradicated. From top to bottom, the Anna D is as tonally (I hate that word, but there it is) balanced and neutral-sounding as any I’ve heard. It unravels detail with the very best Lyras. And, where appropriate, it can sound warm, sweet, and fully fleshed out harmonically. It does not sacrifice body or texture for speed—in fact, I cannot hear any trade-offs whatsoever. I fell in love immediately with the Anna D, fresh and out of the box and carefully installed.

I bought the Kinks’ *The Mono Collection* (Sanctuary 889853281) when it was first released, but for more than a year this 10-LP set, cut by Kevin Gray from the original master tapes, sat unplayed, owing to other listening obligations. Even though these are relatively primitive mono recordings, one of the discs from that set—the album *Something Else by The Kinks*—was among the first records I played with the MC Anna Diamond (with the preamp set for mono). The Anna D presented Ray’s voice in vividly three-dimensional relief as I’d never before experienced from this recording, and unraveled Ray’s vocal doubling and Dave’s harmonies as I’d never before heard them—along with what sounded like Mick Avory’s drums bouncing off the studio back wall. In spite of being in mono, with the Anna D these recordings produced impressive front to back layering and exceptional overall spatial organization. (I went back to the original UK pink-label Pye pressings, and while I think the reissues sound better, the presentation of the originals was better with the Anna D than I’ve ever heard them before.)

Recently, I had the opportunity to spend time inside Van Gelder Studio in Englewood Cliffs, New Jersey, twice in two days: first to be interviewed for a documentary video about Creed Taylor and then to hear Newvelle Records artist Billy Lester perform live on the piano from Rudy Van Gelder’s Hackensack living room, which had been played by Bud Powell, Theloni-

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I was keen to play something that had been recorded there, to see if I could associate what I heard at home with the space I had finally experienced in person. I pulled from the shelves an original pressing of *Africa/Brass* by the John Coltrane Quartet (Impulse! A-6), recorded on May 23, 1961, at Van Gelder's and released on the label Creed Taylor founded. Another reason to play it was a story published a few days earlier in *The New York Times Magazine* about the big 2008 Universal Studios fire that destroyed thousands of master tapes, including, the story said, Trane's whole Impulse! catalog.² The master tapes for this recording no longer exist.

Here, too, the Anna D cast its spell, producing that same room-defining magic. Van Gelder Studio is *not* a dry room. It has a fast, natural reverb that the legendary engineer purposely designed in; he captured it on tape by insisting on not using isolation, at least until his later years when it was made available. The natural reverb is there in *Africa/Brass*, subtly expressed as a lively bloom around sax, drums, and piano early in the opener, "Africa." The key word is *around*: Lesser cartridges make it part of those instruments, while even lesser ones miss it altogether. When McCoy Tyner is given space for a piano solo in that track, the room comes into focus behind him. Cartridges that push midbass warmth produce a "piano in a barrel" sound.

I'm going to skip the usual, specific record references and leave it at this: The MC Anna Diamond is a cartridge for all musical genres. Its frequency balance is as neutral as I've heard. Its dynamic expression at the micro and macro levels (and in between) left nothing on the table, and its response at the frequency extremes was fully articulated. It could be raunchy when required, or silky smooth and refined. It never left me wishing for more or less of *anything*, whether I was playing symphonic music, small jazz combos, female vocals, or '90s-era grunge. The music, not the cartridge, called the shots.

When I returned the MC Century to service (just a headshell change and a few quick minor adjustments were needed), it was clear that although the Anna D and MC Century sound very similar, they don't sound identical—at least my samples don't! The Anna D is faster, with more sharply drawn high-frequency transients. The bottom end

is more nimble. The MC Century's bottom has slightly greater weight and authority; perhaps because of that, while it did recreate the Van Gelder Studio space, it was more blended into the instruments and less well-defined. However, these were minor differences, ones that I had to go looking for to find.



These are two of the best sounding cartridges I've ever heard, and they perform equally well on every kind of music. One is sold out. The other, like the standard Anna, is available as a *non*-limited-edition product. Keeping the original Anna in production is an interesting choice: My thinking is that anyone who can afford to drop \$8394 on a phono cartridge can just as easily (or with equal difficulty) drop \$10,499 on the Anna D. Maybe they're keeping the original Anna around for those who want that extra bit of midbass "coziness" and warmth. Of course, with or without a diamond on the sole of her shoe, Anna should be mounted on only the highest quality tonearms.

There are 10-carat pretenders and 10-carat stars. The MC Anna Diamond is a star. ■

² After it ran, I was told by people who ought to know that *A Love Supreme* was spared because it was being used to make a reissue.

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