



Brinkmann EMT Titanium phono cartridge

Art Dudley, August, 2006

There are a thousand different ways to make a loudspeaker. A hundred to make an amplifier. And at least a million to make a piece of wire. But here's the deal with a moving-coil phono cartridge: stylus, cantilever, rubber grommet, tensioning wire, coils, magnet, output pins, and maybe a body. Done.



.. That's one reason I love cartridges so well: The physical and technical differences among various makes and models don't seem remarkable, yet the sonic and musical results of those differences certainly are. Even those audio mavens who think of themselves (howsoever wrongly) as objectivists agree that it's easy to hear differences among phono cartridges, whereas the sonic differences among amplifiers, which contain many more parts and whose workings can be a function of wildly different technologies and operating types, elude them entirely. I could cry.

The Titanium phono cartridge, built by Brinkmann Audio from a moving-coil model supplied by EMT, is a fine example—not only for its individual blend of musical and sonic qualities, but because its sparse internals are exposed to view, inviting much contemplation during listening sessions to come. The basic EMT model is the forerunner of all such naked pickups: The first cartridges from ElektroMessTechnik were built into dedicated headshells, but as the popularity of that style waned, the company simply offered a version of the same thing that was stripped to its essentials—and which has remained mostly unchanged for more than half a century (footnote 1).

The Titanium is unmistakably EMT, with its billboard front and its phenolic sides, the latter serving as miniature tag boards for connections between the coil wires and the output pins. (In other EMT cartridges, including such earlier OEM models as the Roksan Shiraz and Einstein Audio's Tubaphon TU-3, those boards also facilitate the use of very small tantalum capacitors for electrical damping—but those are forgone in the Brinkmann version.) Centered between the boards is a modern-looking generator held in place with three exceedingly small setscrews. Apart from an obvious advantage in terms of rigidity, that mounting arrangement allows the user to adjust stylus azimuth by rotating the generator itself relative to the rest of the cartridge. The Titanium's magnet is made of alnico, which has enjoyed a resurgence of interest from audio traditionalists in recent years.

The 6N copper coils of this low-output generator (0.21mV at the usual groove velocity) are wound onto a square former, and the cantilever is a good old-fashioned aluminum tube. The stylus is a rectangular-shank diamond ground to a 4µm van den Hul shape by EMT, pressed into the flattened end of the cantilever, and cemented from above. Because that process tends to leave a rough edge on the underside of the end of the cantilever (think: exit wound), Helmut Brinkmann uses a microscope and a steady hand to smooth the seam, in order to prevent the buildup of dirt and consequent mistracking. The recommended downforce is between 1.8 and 2gm, and the Titanium's compliance is very slightly higher than average, indicating a good match with all modern tonearms except those of the very lowest and highest mass—avoid the Grace 707 at one extreme, the Zeta at the other. Although EMT doesn't publish a coil-resistance spec, their recommended load for active gain devices is 600 ohms.

Perhaps the most obvious of Herr Brinkmann's contributions to the design of the Titanium cartridge is a mechanical one: The top of the EMT's minimal body structure is bonded to an aluminum shell with a very small amount of damping compound, and the upper plate of the shell—the portion that contacts the tonearm—is a precision-made titanium plate. Brinkman also bonds a pair of cylindrical copper mounting nuts—machined in-house from 6N stock—to the body of the EMT, and supplies with the cartridge a set of aluminum mounting screws and titanium washers. In much the same way that English audio designer Denis Morecroft aims to prevent the propagation of eddy currents within his products (see "Listening" in the [April 2004](#) and [May 2004](#) *Stereophiles*), Brinkmann believes in breaking up electromagnetic energy wherever possible, hence the dissimilar metals.

Another Brinkmann refinement is an improved mounting arrangement for the output pins: a weak point in certain other EMT cartridges, where the pins are on a small plastic plate that's secured only with a drop of cement. In the Titanium, the pin mount is integral to the rest of the alloy body, and the pins themselves—which are slightly larger and longer than average, and appear to have been machined from copper telluride—are nicely spread out for ease of installation.

Setup and listening

My review context wasn't the norm. Helmut Brinkmann believes in a systems approach, and I suppose he spent a long time voicing the Titanium phono cartridge for his company's own tonearm and turntable—but I used the Brinkmann EMT cartridge in my [Naim Aro](#) tonearm on my [Linn LP12](#) turntable, both of which are very different from Brinkmann's designs (footnote 2). So even as you note the excellent results I had with the Brinkmann EMT, feel free to wonder if I still haven't gotten the best out of it.

Interestingly—and setting aside the ease with which the EMT generator can be adjusted for azimuth—I found that the Titanium was one of those few cartridges that forced me to move the Naim Aro's azimuth weight out to its most extreme position. When it came to setting overhang in the Aro's nonadjustable headshell, I saw that the distance from Titanium's stylus to its mounting-hole was about 1mm longer than the "Linn standard"—meaning that a tenacious owner could probably get overhang dead-on by using the small amount of play in the fit between an LP12's subchassis and armboard to his or her advantage. I had excellent results tracking the Brinkmann EMT cartridge at 2gm, and noted that its audible performance changed much less during break-in than I'm used to hearing.

I'll admit I've enjoyed virtually every EMT-made cartridge I've heard, including the aforementioned OEM products, and the Titanium followed suit. If you've never heard an EMT, and if you're conditioned to think of European phono pickups as

being somewhat sterile, you have a pleasant surprise ahead of you. The Titanium was a typical EMT: slightly warmer than average and very nicely textured, with just the right balance of bass and treble. It tracked perfectly well in my tonearm, was reasonably forgiving of beat-up LPs, and imaged quite well to boot, delivering up a realistically large and open soundspace when the music called for it.

Footnote 1: Dedicated-headshell versions of EMT's basic cartridge types—low-output stereo and mono, as well as high-output mono samples—are still available. Also, EMT has just introduced the high-output JSD, their first completely new cartridge design in years.

Footnote 2: Also: While I spent a week or so auditioning the Titanium through a [Linn Linto](#) phono preamp, which is at least superficially similar to Brinkmann Audio's own offering—active gain, solid-state—I spent even more time using it with a step-up transformer, ultimately driving the moving-magnet phono section of a tubed preamplifier.

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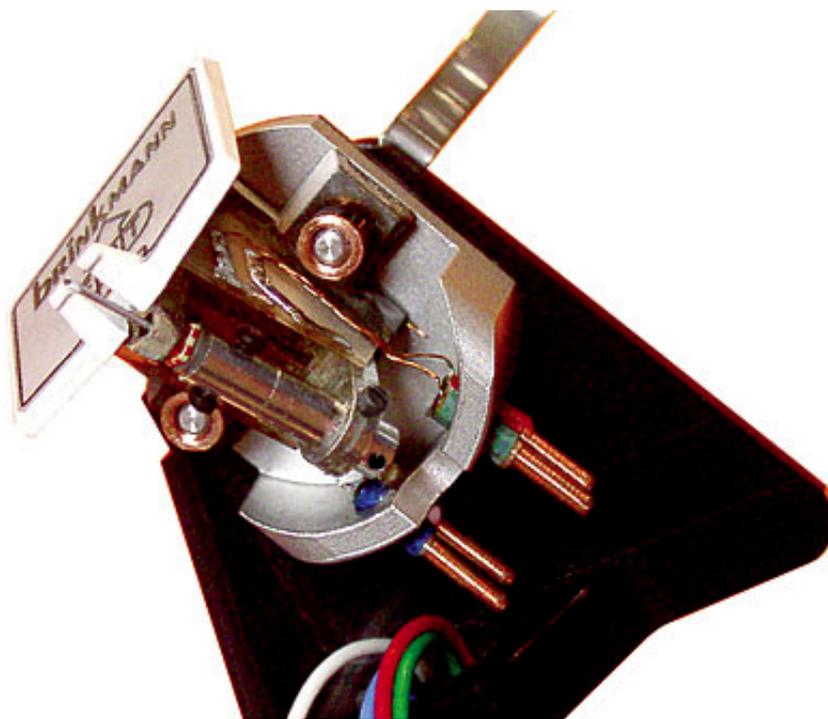
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From within that space, a wealth of realistic sonic detail emerged—something I also like well. I've written before about my fondness for Leonard Cohen's *New Skin for the Old Ceremony* (Columbia C 33167), and how that 1974 album really came to life for me when I acquired my first moving-coil phono cartridge. The Brinkmann EMT extracted still more realism—Cohen's nylon-string guitar sounded even righter than before, with no trace of brightness. The acoustic and electric basses on the record sounded fine, too, with similar gains in texture and believable color.



On John Barbirolli and the Philharmonia Orchestra's recording of Elgar's *Enigma Variations* (EMI ESD 7169), the Titanium impressed me with its unfailingly good sense of flow—another reason I tend to enjoy EMT's house sound. The Brinkmann EMT allowed lines of notes to keep their full temporal meanings intact, and never let me forget that good music is a moving, changing event in time—not merely a nice-sounding still life, as certain "high-end" products would have it.

The Titanium did a superior job—no other words for it—of communicating everything that's special about Ella Fitzgerald's voice on "The Man I Love," from the *Gershwin Song Book* collection (a Speakers Corner reissue of Verve MG VS-6082-5). And on the following song, "That Certain Feeling," the Titanium did all that *and* made the instrumental backing sound more present and real than usual. My only caution: This record (and others) gave proof that the Titanium responded to careful setup, especially of arm height and vertical tracking angle—without which, vocal sibilants could be a bit exaggerated.

The first, eponymous LP by the David Grisman Quintet (Kaleidoscope F-5) gave the Titanium cartridge another opportunity to shine, letting Darol Anger's violin and Tony Rice's Martin D-28 guitar sound exactly like their richly textured selves on such numbers as "E.M.D." and Tony's own "Swing 51." On the latter, the Brinkmann EMT cartridge again did an exceptional job of letting the string bass sound just the way it should: weighty, colorful, and textured, with a fine sense of musical pacing. Ditto Grisman's old Gibson F-5 mandolin on "Opus 57," a reprise of a theme he'd played with Clarence White only two years earlier ("Opus 57 in G Minor," from the recommendable *Muleskinner Live*, Sierra SXCD-6000).

The Brinkmann EMT wasn't just a warm, colorful texture machine with classical music and acoustic folk; it was also well suited to upbeat electric pop. When the mood struck to pull out the old Talking Heads album *Fear of Music* (Sire SRK-6076)—which didn't sound *quite* as dated as I feared it might—the Titanium turned in a good, engaging performance. Rhythms were metronomically right, with a fine sense of drummer Chris Frantz *leaning* into his patterns, and the generally interesting guitar overdubs on such songs as "Mind" popped out of the mix in a convincing manner.

How did the Titanium compare with my "everyday" cartridge, the [Linn Akiva](#) (\$2950)? The two products' *overall* tonal balances were similar, as were their fine spatial presentations. I thought the Brinkmann handled surface noise just about as well as the Lyra-sourced Linn, which has long been the champ in that regard.

Compared with the Linn, the Brinkmann EMT portrayed violin and cello notes as somewhat quicker off the bow, in that they developed, or "bloomed," somewhat sooner after the initial attack. The Linn-Lyra, for its part, emphasized those attack components and gave them a shade more force, which will suit some listeners more than others: Fans of the EMT approach will consider it the more expressive, "romantic" cartridge; those who enjoy the Linn-Lyra sound might frame the debate by saying the Akiva allows more human force behind the notes.

Other comparisons: The Titanium didn't have quite the drama or scale of the Miyabi 47 (\$4000), although the German cartridge was lush and more forgiving of various step-up devices. The ZYX Airy S (\$2895) was pleasant and competent but quotidian by comparison. The Supex 900 Super (vintage or NOS only) was richer still but much more colored, and was no match for the Titanium's timing. And the Lyra Helikon (\$2195) wasn't quite as lushly textured as the Titanium, though neither was it a product that I'd consider sterile—and it's inarguably a superb value.

Conclusions

Like other middle-aged audiophiles, I've followed the pickup industry through all its recent extremes—from the mass-market companies of the 1960s and '70s, with their emphasis on tracking and flat frequency response, to the individual artisans of the 1980s and '90s, whose products and prices went beyond the realm of consumer electronics, closer to art than commodity. It's hard not to miss an era when the major players seemed bent on outdoing one another in terms of price, exotic materials, and the colorful backgrounds (and supposed frailties) of their craftsmen—but having said that, I do think our choices today are better overall.

The Brinkmann EMT Titanium is a fine example: It does everything I expect from a cartridge exceptionally well. There's a great deal of history and humanness behind it. It's fairly priced—a very good buy for what it is, in fact, although I respect the

feelings of people to whom any four-figure needle is beyond the pale—and it's made in such a way that sample-to-sample consistency and the availability of retipping and reconditioning services should both be excellent. Most of all, the Titanium goes beyond merely sounding good: It actually makes *music*. It's the sort of purchase you can imagine a person caring about.

If you're interested in adding a clean, accurate phono cartridge to your collection of same, but you'd like just a little more warmth and *gushiness* than the average these days, consider an EMT. If you want all that and more—even more texture, humanity, flow, and noiselessness in the groove—consider a Brinkmann EMT: That's what the Titanium appears to be all about, and that's why I think it's a wonderful thing.

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Sidebar 1: Specifications

Description: Low-output moving-coil cartridge. Stylus profile: van den Hul. Nominal Output: 0.21mV. Compliance: 15cu. Crosstalk: >25dB (1kHz). Vertical tracking angle: 23°. Recommended load: 600 ohms (active). Recommended downforce: 1.8–2.0gm.

Weight: 11gm.

Serial Number Of Unit Reviewed: 1205.

Price: \$2850. Approximate number of dealers: 14.

Manufacturers: EMT Studioteknik GmbH, Industriestrasse 25, 77972 Mahlberg, Germany. Tel: (49) 7825-877811. Web: www.emt-studioteknik.de. Brinkmann Audio, Im Himmelreich 13, 88147 Achberg, Germany. Tel: (49) 8380-981195. US distributor: Brinkmann Audio USA, 985 Penn Estates, East Stroudsburg, PA 18301. Tel: (570) 426-1791. Web: www.brinkmann-usa.com.

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Sidebar 2: Associated Equipment

Analog Sources: [Linn LP12](#) turntable, [Naim Armageddon](#) power supply, [Naim Aro](#) tonearm; [Linn Akiva](#), Miyabi 47, Supex 900 Super cartridges; [Linn Linto](#), Artemis PH-1 phono preamplifiers; Tamura TKS-83 moving-coil step-up transformer.

Digital Sources: [Naim CD5x/Flatcap 2X](#) CD player; [Sony SCD-777ES](#) SACD player.

Preamplifiers: Audio Note M3 Phono, [Lamm LL2](#).

Power Amplifiers: [Lamm ML2.1](#) monoblocks.

Loudspeakers: [Quad ESL](#), [Quad ESL-989](#).

Cables: Interconnect: Audio Note AN-Vx & Sogon, [Nordost Valhalla](#), Ayre.

Speaker: Audio Note AN-SPe, [Nordost Valhalla](#). AC: [JPS Labs The Digital](#) (CD players), [Cardas Golden Reference](#) (some other components).

Accessories: Mana Reference Table & Reference Wall Shelf (turntables), [Ayre Myrtle Blocks](#) (various other components).—**Art Dudley**

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