

Gramophone Dreams #78: The EMT Experience

Herb Reichert | Oct 18, 2023



The EMT 912-HI Tonearm

During the 1980s, my professional activities included buying and selling used Garrard 301 and Thorens TD-124 turntables. During that time, I began to aspire to own what I imagined as the next step up from vintage Garrard or Thorens. I lusted for a vintage record player manufactured in Lahr, Germany, by Elektromesstechnik, also known as EMT.

Those EMT record players look so extreme-duty, sexy-tech cool that, back then, my hands shook whenever I saw photos of a 927 or 930. In my mind, EMT products have always seemed an apex of analog engineering and industrial design.

Elektromesstechnik introduced its first record player, the broadcast-quality 927, in 1951. Its massive iron, aluminum, and Bakelite chassis measured 27" × 21" × 8.5" and weighed 80lb (footnote 1). It made consumer decks look like toys. Its heavy, cast-aluminum platter looked like a repurposed mag wheel from a German touring car. It—the platter alone—measured a whopping 17" in diameter and featured a bearing shaft 6.6" long and 0.79" in diameter. Sitting on top of the mag-spoked platter was a thick,

rubber-and-mirroglass platter plate. The 927 came with a 12", Ortofon-sourced tonearm called the RF-297. That 'arm was later replaced by a stereo version called the RMA-297. Those arms were configured to be used with Ortofon-sourced, EMT-branded cartridges, all of which had quick-release headshells, tracked above 2.2gm, and included no provision for antiskate.

In 1974, EMT began manufacturing its own version of the Ortofon-sourced 297 tonearm, the 997. The 997 was designed to operate with a pivot–spindle distance of 297mm, exactly the same as the 297. But unlike the original, Ortofon-sourced arm, which was straight with a bend at the end, EMT's 997 featured an aesthetically pleasing curve. Versions of the EMT "banana" arm stayed in production until 2008, when, according to Art Dudley, with the assistance of Keith Aschenbrenner of design-and-distribution firm Auditorium 23, EMT teamed up with retired EMT production foreman Rudi Glaser and brought out an "updated" 997, which came in two versions. One was nearly identical to the original, with headshell-connector pins configured for use with EMT pickups. The second version featured the near-universal pin configuration found on SME tonearms. These arms stayed in production for 10 years until 2018, when the EMT team began working on a new tonearm series with 21st century technology.

According to the EMT-Tontechnik website, in recent years EMT's cartridge manufacturing has been gradually transferred from Mahlberg, Germany, to Micha Huber's HiFiction AG facility in Turbenthal, Switzerland (footnote 2). Now, Huber says, "all EMT products currently listed on our website (emt-tontechnik.ch) are fully manufactured in house at HiFiction AG." (footnote 3)



In October 2022, EMT/HiFiction AD released re-engineered versions of the 929 and 997 tonearms. The 12" model is the 912. The 9" model is now called the 909. Each comes in two versions, one with a fixed headshell ("HI"), the other with a quick-coupling system that fits the EMT Tondose's four-pin diamond pattern ("Professional"); there's a variant that fits Ortofon's square pin-mounting pattern. There is no provision for G-style Ortofon cartridges; only the shorter, 32mm A-style cartridges are compatible. All variations are available with the standard, fixed-wire output or with a 5-pin DIN connector. The 912-HI with fixed headshell costs \$6995 with fixed wire, \$7409 with the DIN connector. The 912 with the quick-coupling connection is \$6495 with fixed wire, \$7095 with DIN. The 909-HI with a fixed headshell is \$5995; with the DIN output, it costs \$6495. The fixed-head 909 costs \$5995 fixed, \$6495 DIN. As with the earlier EMT arms, only the 12" version has the "banana" shape; the 9" 'arm features a gentle S-curve. If you stand back a few feet and don't look too closely at the top of the bearing housing cover, the 912-HI looks much like a classic 997. Look closer, and you notice some differences. The newer version is sleeker, sexier, more refined in machining and finish. Spin Doctor Michael Trei opined that the 912 "seems better built" than any of the many 997s he has installed.



EMT's new arms have eliminated the original's spring-loaded tracking-force mechanism, replacing it with a new, dual-axis ball bearing technology, which I suspect is the new arm's *raison d'être*. They've added a dial-operated magnetic antiskating mechanism that allows users to use cartridges with a wider range of specifications. There is a beautifully machined threaded ring for VTA adjustment and a hydraulic tonearm lift that can be removed if the tonearm is used on vintage EMT turntables equipped with built-in lifting devices.

The review sample of the 912-HI featured the DIN output. I connected it to a 1.5m Cardas Clear Beyond tonearm cable. The whole system was wired with a full loom of Cardas Clear Beyond; I also tried it with Ikigai Audio Kangai-level interconnects and speaker cables.

Arm installation: One of the bigger reasons the Feickert Blackbird is the centerpiece of my reference system is that I love how easy it makes installing tonearms. I simply bolted the EMT arm's base to the MoFi-supplied 9mm thick upper armboard disc, which came predrilled for the 912. I joined it to the Feickert's 7mm-thick bottom disc, which mates the armboard disk to the calibrated (205–320mm) lozenge-shaped cutout in the plinth's rear corner. Before tightening these disc's cap screws, I aligned the bottom disk's indicator lines with the 297mm mark on each side of the cutout. That number corresponds with the tonearm's 297mm spindle-to-pivot distance. That accomplished, I stood back and admired how sleek this Swiss arm looked on the minimalist German deck. To my eyes, the EMT 912-HI arm made the Dr. Feickert Blackbird look more of a piece, more luxuriously appointed than it looked with the Jelco or Schick arms.



EMT JSD 6 Moving Coil Cartridge

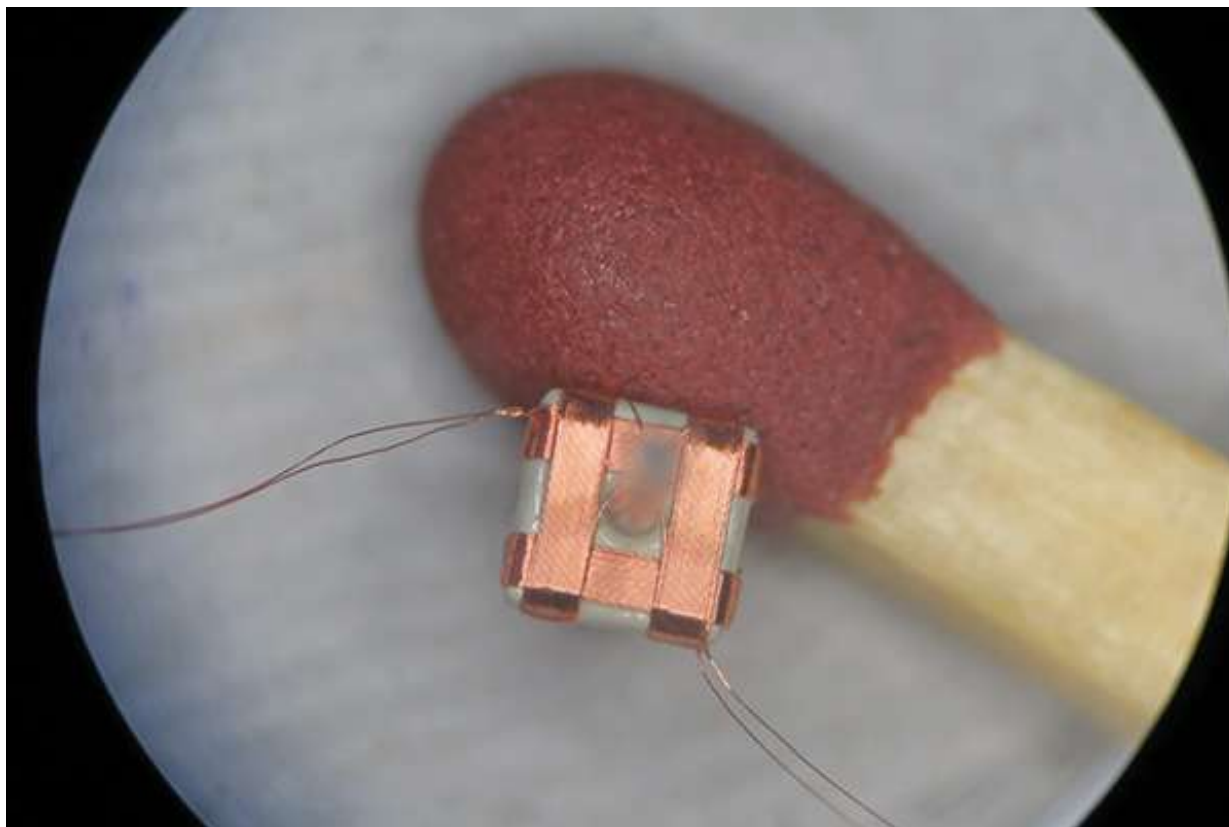
My goal for this column was not to compare the not-free EMT tonearm to the not-very-expensive Jelco or Schick arms. Those comparisons would be interesting but difficult to make. As of this writing, I have only listened to the 912-HI tonearm with EMT's own JSD 6 cartridge, and I have only listened to that cartridge with this tonearm. So I cannot separate the sonic impact of the tonearm from that of the cartridge. If the creek don't rise, in Dreams to come, I will report how a few of my favorite cartridges responded to the 912-HI. In this column, I'll describe what I heard and the feelings that resulted as I played records all day every day, first as the cartridge was breaking in, then to get a feel for how different it sounded and felt from what I'd been using previously.



With their matching aluminum bodies, the \$3195 JSD 6 looks exactly like its boron-cantilevered twin, the \$3795 JSD 5. The chief difference is the stylus: the JSD 5's uses an "MR" (multiradius) stylus and the JSD 6 uses a high-polish Super Fine Line (SFL) stylus. The numbers, 5 and 6, refer to the stylus-tip radius of each cartridge, in microns. Otherwise, their specifications match: Both use gold-plated AlNiCo magnets, both weigh 10gm, both have the same low compliance— $12\mu\text{m/mN}$ —and somewhat-low output voltage: $1.05\text{mV @ }5\text{cm/s}$. According to the specifications, both cartridges have source impedance of 24 ohms; loading at 200–300 ohms is recommended.

Cartridge alignment: I used Feickert's record-thick aluminum alignment protractor (included with the Blackbird turntable) to install the JSD 6, setting overhang and zenith. I used Musical Surroundings' V2 Fozgometer to set azimuth.

In setting up a phono cartridge, aligning its electromechanical system to known Cartesian parameters is just the starting point. I do not presume that my home-brew approximation guarantees minimum distortion, optimal tracking, or maximum listening pleasure. Those things—especially the latter—I optimize by listening. I often start my listening analytics with Shure's Era IV *Audio Obstacle Course* (Shure LP TTR115). Yes, I do play those famous (to old audiophiles) orchestral bells, flute, and harp tracks at all five levels, knowing that when they sound clean and undistorted, my other records will sound that way, too. Not to mention that Level 5 always reminds me how much I enjoy the vivid, forceful sound of wide grooves and high stylus velocities. EMT's 912-HI arm and JSD 6 cartridge sailed through these demanding tracks, sounding relaxed and naturally toned.



The JSD 6 specifies a tracking force of 2.4gm, ± 0.1 gm, reminding me that EMT chose to forgo antiskate on the original 997 because the arm was designed for cartridges with tracking forces greater than 2.2gm; antiskate matters less with heavier-tracking cartridges. With the new 912, there's an antiskate setting dial, but there is no mention of antiskate in the otherwise excellent owner's manual.

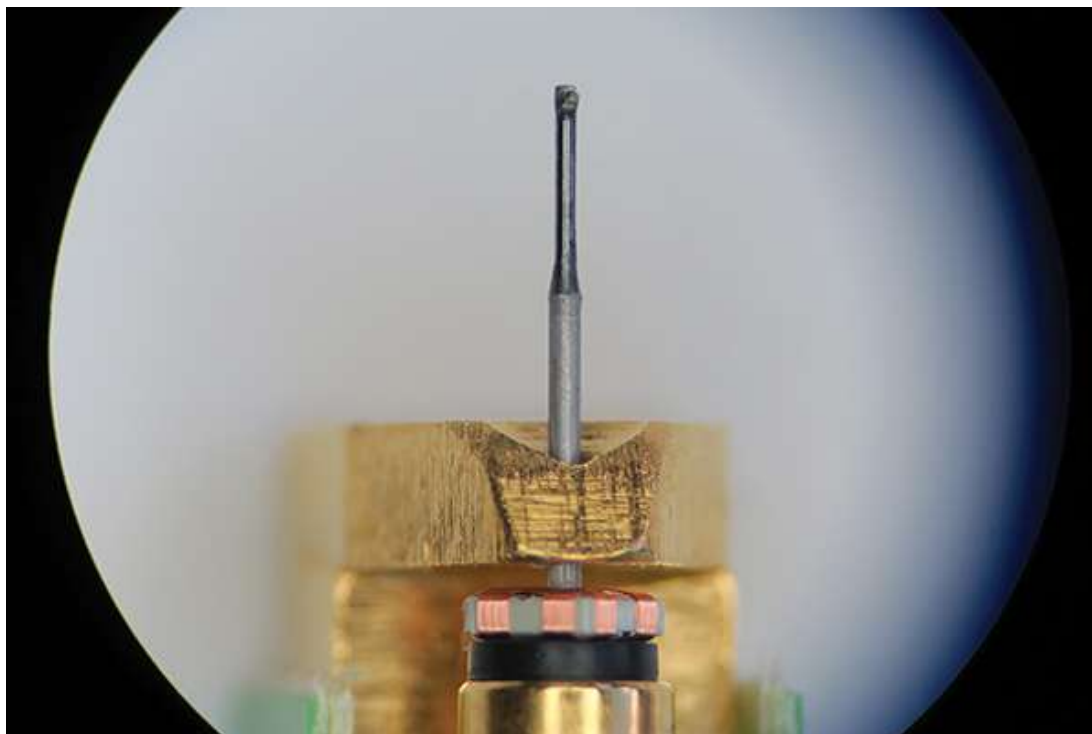
I've always been stingy with antiskate. I use Frank Schröder's method, setting it so that the antiskate mechanism is sufficient to pull the cartridge/arm slowly toward the label on a blank, grooveless disc. With the EMT 'arm and the JSD 6 cartridge, this effect was achieved with a dial setting between 2 and 3.

Over the course of these auditions, I tried most of my in-house tube and solid state phono-preamp options and experimentally loaded the JSD 6 at between 100 and 500 ohms. Regardless of which phono preamp I used, I thought the JSD 6 sounded most naturally detailed at 200 ohms.

I started my auditions with the JSD 6 directly connected to the transformer-coupled moving coil input of the Tavish Design Adagio, which played tight, fast, and über tuneful. I found, though, that the music sounded clearer and punchier with the JSD 6 feeding either of my two favorite solid state phono stages: the Parasound JC 3+ or the Kitsuné HiFi KTE LCR-1 MK5 LCR.

But! For my Herb-taste, a tubed phono stage added a measure of flux, flow, and luminous glow that I felt subdued the EMT's tendency to sound gray and tense, pushing it instead toward a relaxed, color-saturated presentation. I ended up preferring the JSD 6 with Lundahl's silver-wire, amorphous-core LL1931Ag step-up transformer feeding the SunValley EQ1616D equipped with vintage smooth-plate Telefunken 12AX7 tubes, via its moving magnet input. Tubes seemed to beautify without reducing the JSD 6's resolving prowess.

Because I like sound systems that play with resolve and intensity, I complemented the Lundahl and SunValley phono with the HoloAudio Serene preamp feeding Elekit's TU-8900 power amp (fitted with RCA 2A3s) and Heretic's AD614 speakers. The observations below were all made with that setup.



Listening

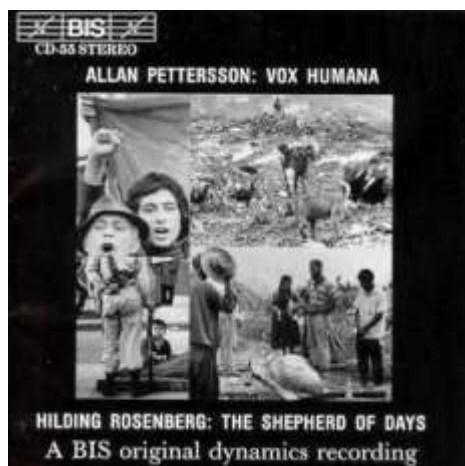
Historically, I've viewed EMT's house sound as a relatively stark, mastering-studio sound that feels like it's getting to the meaty essence of what was carved into the disc, no fragrance added. The JSD 6 was like that, but vocal and instrumental textures were portrayed in a much more supple and grainless fashion than with the TSD 15 and TSD 75 I am more familiar with.

The JSD 6 played with more dimensionality and finer resolve, in the manner of today's top-line moving coil cartridges. When I first started using it, I thought the JSD 6 sounded like a top-shelf Ortofon or Lyra moving coil. It exposed the inner constructions of the mad-bright mix of Dr. John's *In The Right Place* (Atko Records LP SD 7018) to an extreme degree. I've played this album a hundred times, always enjoying how Allen Toussaint's conga drums (!), George "Freak Man" Porter's bass, and Joseph "Zigaboo" Modeliste's drums came through so raw and funky-punchy. With these new EMT bits, it still felt raw and funky but also like I was listening to a 1970s multitrack recording through a laboratory-grade magnifier. At that point, the JSD 6 had fewer than 10 hours on it. The more hours I put on it, the more it relaxed, opened up, and gained color.

With the JSD 6 well broken in, this classic album, produced by Toussaint, sounded like I imagined it did at Miami's Criteria Sound Studios in 1973 when Kari Richardson recorded it. (Criteria Sound was sometimes called "Atlantic Studios South" because Jerry Wexler and Tom Dowd made a lot of records there between 1970 and 1975.)

With the JSD 6, every sound seemed more crisply discernable and dimensional than I remember it being during my previous decades playing this album. I felt I was hearing the inside "view" of how *In the Right Place* was put together, which was fun, and enjoying (or sometimes not) the full-on solid state-ness of Criteria's recording chain. It seemed like the JSD 6 exposed everything in the record grooves, emphasizing the carny-talker side of Mac Rebennack's stage persona, "Dr. John."

My aesthetic viewpoint has been affected heavily by Russian filmmaker Andrei Tarkovsky and Hungarian filmmaker Béla Tarr. Their dark, post-traumatic visions, intensified by long silences, encourage philosophical speculation and achieve the exact mood I'm after in my own art. I find that same type of mind space in the compositions of Swedish composer Allan Pettersson (1911–1980). Pettersson uses song the same way Béla and Andrei use silence: to trance the listener and keep their imaginings focused on art's three graces, space, time, and sacredness.



My current favorite Pettersson disc is a stunning BIS recording of his cantata "Vox Humana," for soloists, choir, and orchestra (BIS LP-55 Stereo, reissued in the US as HNH 4047). With the JSD 6 cartridge and 912-HI tonearm, the Feickert caused this BIS recording to read emotionally darker, more pessimistic than mystical, more dryly existential. Sonics-wise, it was more under-the-rock exposed than I remember it from my past. Detail was delicately layered and naturally formed. As hours accumulated on the cartridge, it approached phantasmagoric.

I played records from every music genre. The EMT arm and cartridge made dub reggae sound extra special, tight and just right. That may have been partly because I was driving the Heretic AD614 speakers



10dB louder than usual. When I played Winston Rodney's "Tradition" and "2000 Years," off Burning Spear's 1975 Island Records EP *Marcus Garvey* (Island 12 IS 332), I was gobsmacked at how cleanly the JSD 6 exposed every sound burst and every loop and track in this complex mix. In the setup section of this column, I mentioned how I like wide grooves and high stylus velocities; well, when you hold this beautiful 12", 45rpm disc in your hands, you can look into its wide grooves and imagine how fast your stylus will travel. When I've played this Burning Spear 12-incher in the past, the extreme density of information in its echo-drenched sound collages sounded messy and distorted. Not with the JSD 6. I observed no blurring, intermodulation distortion, or mistracking—just finely woven, finely detailed protest dub.

This was also the record where the EMT arm and cartridge showed me the deepest, cleanest, most powerful bass I've encountered with the Heretic AD814s. For comparison, Shure's V15 III (on the Schick arm with a new Jico stylus) did not show me more bass and did not trace these wide grooves more accurately or play this record with greater resolve than the JSD 6. The Feickert-EMT record player played this iconic recording with a suave command that, for me, was the high point and defining moment of these auditions.

Conclusion

In my mind, the best record players are the ones that force me to like—and to listen to with interest at length—recordings and music types I would not have enjoyed on a less-great record player. When you start diggin' those field hollers and Alpine yodels like I do, you'll know your sound system is better than good.

In my system, the EMT 912-HI arm and JSD 6 cartridge made every music genre seem like my latest favorite discovery, and that's exactly the trait I'm looking for when auditioning source components. During the course of these auditions, I played more records in six weeks than I'd played during the previous six months. I did that because I kept wanting more. That's my highest praise.

Footnote 1: See enjoythemusic.com/magazine/sound_practices/16/EMT_927_EMT_930_Turntables.htm.

Footnote 2: See emt-tontechnik.ch/files/productfile/Launch-EMT-Tonearm.pdf.

Footnote 3: HiFiction AG, M. Huber Toesstalstrasse 14, CH-8488 Turbenthal, Switzerland. Tel: +41 44 533 88 15 Web: hifiction.ch. US Distributor: MoFi Electronics 713 W. Ellsworth Rd. Ann Arbor, MI 48108-3322. Tel: (734) 369-3433. Web: mofielectronics.com