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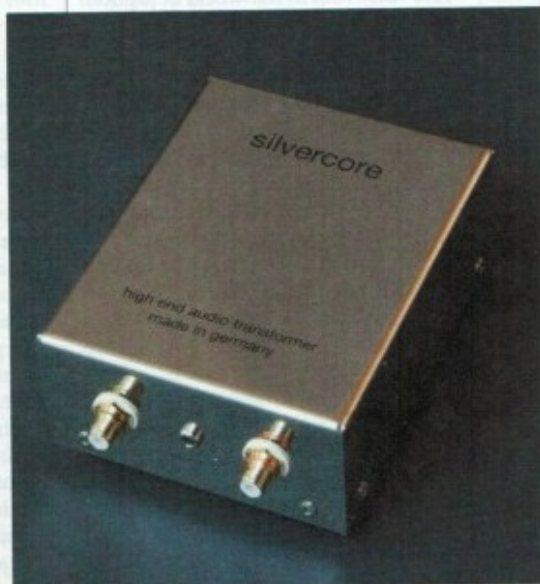
Tyrannosformer rex

Like most people who are neither radio talk-show hosts nor members of the Westboro Baptist Church, I'd rather be known for my loves than my hates. And after wandering this audio wilderness for umpteenth years, I can stand before you and say without shame: An unlovable phono transformer has yet to step into my path.

No surprises there. After all, a phono transformer requires only a primary-coil impedance that's electrically right for the cartridge in use, and a gain capability—itsself determined in part by the transformer's turns ratio (see "Listening" columns *passim*)—that likewise suits the user's gear. Given all that, one can assume virtually any phono transformer to be more or less wonderful.

But the distance from *more* to *less* is greater than usual these days, given the appearance of some truly exceptional new transformers: an unmixed blessing. The latest samples to come my way are from a German firm called Silvercore. Founded eight years ago by an engineer named Christof Kraus, Silvercore designs and builds their own nice-looking tube amps and preamps. And central to everything they design and build—"at their core" were the words that first came to mind—is a belief in the primacy of a well-made transformer.

I had a brief phone conversation with Christof Kraus in January, during which he talked with an expert's ease about various aspects of transformer design. (His English is infinitely better than my German, in which language I can manage little more than "Good day," "Thank you," and "My hat has three corners.") I was delighted by Kraus's enthusiasm for the symmetry of a phonograph-driven, tube-amp-powered playback system in which electromechanical transducers drive or are driven by transformers at both ends: Herr Kraus and I seem to have arrived at the same conclusion, thousands of



The Silvercore One-to-Ten step-up transformer.

miles away from one another.

The name Silvercore suggests a reliance on silver wire: generally true, as it turns out, but not exclusively so. Instead, the feature that's common to all of Silvercore's transformers is their toroidal core. "If you wish to make a toroidal [transformer], you need a special machine," says Kraus, "and it's much more difficult to do, especially with very fine wire." Yet somehow or other Kraus manages, and so well that all of his phono transformers are commendably free of resonant frequencies within or even near to the audio range; consequently, Silvercore step-up transformers are among the few that don't require the use of damping resistors (which Kraus quite rightly calls "veiling" resistors).

Tightly wound

Silvercore offers transformer-based products for a number of domestic audio chores: eliminating hum from non-balanced systems (the Groundbreaker), interfacing single-ended and balanced connections (the Symmetrizer), and even converting stereo sound to mono (the Monokonverter). But the stars of the Silvercore show are their three basic models of moving-coil step-up trans-

former: the One-to-Ten (\$585), the Silvercore MC (\$1250), and the Silvercore MC Pro (\$4800).

Silvercore products are distributed in the US by Oswalds Mill Audio, whose proprietor, the estimable Jonathan Weiss, loaned me samples of the three models named above. (The middle model, the Silvercore MC, was supplied in a version called the Silvercore SPU Spezial, having been tailored specifically for Ortofon's classic low-output, low-impedance pickup heads.) I hope to write about the two more expensive models by and by, but it's their cheapest phono transformer that's captured my heart in the here and now.

The Silvercore One-to-Ten contains a stereo pair of toroidal transformers, wound from copper wire on proprietary amorphous cores, with a primary-coil impedance of 100 ohms. Given that a cartridge performs best when driving a transformer load that's between two and six times its own coil resistance, this Silvercore model would seem a perfect match for such things as the EMT TSD 15 and variants (24 ohms), the Denon DL-103 (40 ohms), and most Allaerts models (22–32 ohms). You'll be unshocked to know that the turns ratio of the One-to-Ten is one to ten (1:10), which is also the transformer's voltage-gain ratio. Thus the 0.3mV output of the Denon 103 becomes 3.0mV, and the 1.05mV¹ output of the EMT TSD 15 becomes 10.50mV. (Most hobbyists would consider the former to be fine and the latter to be a little high but not problematically so, as long as the preamp's volume knob stays toward the left of its range.) Remarkably, Silvercore's entry-level phono transformer is built into a substantial case made of polished stainless steel: irresistibly pretty, charmingly

¹ A common misconception is that the EMT's output voltage is 0.21mV—which is, after all, the specification published by its maker. The problem is, that number is based on a 1kHz groove excursion of 1cm/second, whereas the industry standard is a cartridge's output at 5cm/s. Thus, before comparing the TSD 15's output to that of its competition, one must apply a factor of 5.

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nonmagnetic.

That reminds me to remind you to use numbers as a guide, but not to let them be The Decider. Don't cheat yourself out of hearing some amazing combinations, such as using the Hommage T1 transformer—the input im-

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pedance and turns ratio of which are very low and very high, respectively—with EMT's highest-output pickup heads: Like bumblebees and copious amounts of second-order distortion, it shouldn't fly but it does. Bear in mind, too, that the greatest of all modern ironies takes root in the world of fashion: The garments most associated with the axiom *one size fits all* are the ones we wear on our heads.

With the One-to-Ten in my system, sandwiched between the EMT TSD 15 pickup head and the 47k ohm phono inputs of my Shindo Masseto preamp, music sounded more transcendently, touchably wonderful than the Silvercore's relatively humble price might have led me to expect. Dynamic nuances—the *touch* of music—were excellent, from disc to disc. Listening to the pizzicato strings in the fourth and final movement of the Brahms Clarinet Quintet, Op.115, recorded a half-century ago by members of the Vienna Octet (Decca SXL 2297, in one of Speakers Corner's finest reissues), the *terrain* of their physical presence, for want of a better word,

was distinct and solid. At the louder end of the scale, when I listened to the indispensable 1976 recording of Beethoven's Symphony 7 by Carlos Kleiber and the Vienna Philharmonic—in which neither conductor nor orchestra hit their stride until three or four minutes into the first movement, but which is incandescent thereafter (LP, Deutsche Grammophon 2530 706)—the sense of abandon with which the timpani are played came across better than ever.

The One-to-Ten had a rich, lovely way with timbral colors. The double basses in the Kleiber Beethoven were thick and velvety, with a generous but by no means excessive decay. The same was true of the string sound in the Ramor Quartet's recording of Schoenberg's *Verklärte Nacht* (LP, Vox Turnabout TV 54032 S): rosin, resin, and right.

Another good test of a transformer is that it resist being overwhelmed by intense musical passages (although to fail in that regard is just as often a matter of electrical mismatching, given the ease with which overloading can occur;

see paragraph 8 and temporarily disregard paragraph 9). The Silvercore One-to-Ten, presumably well chosen, performed brilliantly in that regard. Like most of Elgar's oratorios, *The Music Makers* has some densely scored measures, as one can hear in the recording by Sir Adrian Boult and the London Philharmonic (EMI ASD 2311). The Silvercore remained poised throughout, never sounding strident or artificial—yet never with a shortage of force in even the softest passages, such as the five-note rhythmic figure that precedes Janet Baker's penultimate solo.

Unlike Silvercore's other phono transformers, the One-to-Ten doesn't have a switch for lifting the ground connection (although they all have the same very nice banana-plug ground socket). The lack of a lift wasn't a problem in my system, where quiet, hum-free performance was had by grounding my EMT 997 tonearm straight to my Shindo Masseto preamp and leaving the Silvercore's ground connection unused. Physically, of course, the One-to-Ten was position-sensitive: Audible hum could be induced by moving the

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transformer casing too close to the power-supply end of the preamp—but that's common to every tranny I've tried.

I just about *adored* this transformer. Hell, I even loved the box it came in: Rather than wrapping it in last week's newspaper (which pisses me off because it's insultingly inappropriate for an expensive product), or putting it in some elaborately made jewelry box of a thing (which pisses me off because I know my money isn't going where it ought to go), Silvercore packages the One-to-Ten in a lidded box of pulpy gray fiber, held together with silver-colored rivets. Just about perfect: a nicely made, nicely styled thing that isn't foolishly lavish—but that I needn't hide in a closet.

My enthusiasm for Silvercore's One-to-Ten doesn't mean I've banished its predecessors from my home and my heart. Indeed, the intensely huge and dramatic-sounding Hommage T1 (\$4995) remains, for me, the one to beat. At the more affordable end of the spectrum, the phono transformers offered by Bob's Devices are enduringly good, and enduringly superb values.

(Little else can be said of a company that locates, tests, sorts, and sells vintage Altec transformers for as little as \$700.) Consider, too, that the always-recommendable step-up *leit* from K&K Audio has just been upgraded with a new version of Lundahl's own amorphous-core transformers.

But the Silvercore One-to-Ten is a standout. It sounds far better than average—forceful and dramatic, yet colorful and sweet—with the historic EMT pickup head, and sells for considerably *less* than average. I don't know how an imported audio product this good and this pretty can be made to sell for just \$585, but I'm thoroughly impressed.