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Artemis Labs SA-1 Turntable

Cha-do, the Japanese phrase for what we in the West call the tea ceremony, literally means "the way of tea." Its Zen-inspired aesthetic strips the visible down to bare essentials for the task at hand -- the glazed bowl, the hand-crafted bamboo whisk, a bronze kettle of steaming water, powdered green tea spooned from a small jar, a hardwood table on which everything rests, and the spare tearoom where it all takes place. A way to create and foster meditative respite for lives in tumult (it gained popularity among Japan's warrior class, the *samurai*, in the 14th century), *cha-do* focuses the mind, enhances attention for detail and subtlety, and expands appreciation for the senses even as it reduces the manifold universe to a mere handful of items carefully selected, artfully crafted, and deliberately presented. Even its preparation is choreographed in a kind of dance-mime by the one who prepares and serves the tea. Though nothing in *cha-do* is casual, neither is it rehearsed; rather, it's the expression of a practice acquired and a pathway -- a *tao* -- arrived at through a near lifetime of elegant execution.



The new SA-1 turntable (\$7800 USD) from Artemis Labs strikes me as a product of a similar aesthetic and fully considered practice. It seems the culmination of its creator Frank Schroeder's long journey through the world of analog. In the privacy of his workshop, where he also builds world-class tonearms, Schroeder has been continuously experimenting with building turntables from scratch for over 25 years -- trying out various plinths, testing motors, experimenting with drive systems, and assessing the finely machined dimensions of bearings and the sonic characteristics of different platter materials.

Frank Schroeder and the art of analog

"I had the ideas for the 'table before it was made," Schroeder said in a recent telephone conversation. "Three years ago, when Sean Ta [of Artemis Labs] asked me to consider designing one, I didn't have to make drawings or calculations or that sort of thing -- it was already in my head. Except for trying out materials, all the R&D was done years beforehand, in my workshop."

Ta had come to Schroeder with only a few requirements: that the new turntable design meet an affordable price point; that it be fairly compact and appeal to Asian customers who use tube gear in small apartments; that it have an exotic and definitive look; and that, without sacrificing resolution, it emphasize musicality and dynamic range and have bottom-end control à la the famed Garrard 301. Schroeder told me that he owns about 40 turntables, but had four specific and different "concept models" from which he drew elements to create the SA-1. What resulted, Schroeder feels, is a turntable different from any other in existence -- complex in terms of the problems it solves, simple in execution and appearance.

In an analog world of massive platters and overbuilt, Erector-set turntables, the Artemis SA-1 stands out for its clean lines and tasteful simplicity. Its tidy, black, 15-pound platter and plinth of layered bamboo measuring 17 3/4"W x 2 5/8"H x 13 3/4"D create a picture of such refinement that I thought immediately of sparsely furnished tearooms in rustic gardens I've visited in Japan -- elegantly eremitic huts of bamboo, stone, mud masonry, and rushes, made to be open to the air of the world via sliding, rice-paper screens and moon-cutout windows. The experience of using the SA-1 brought another pleasure as well: the gentle wedding of natural, eco-friendly materials and aircraft-grade aluminum creates something special and pleasing to the touch, like handling a fly rod of split bamboo balanced perfectly with a stainless, single-action reel from Scotland. *Zen and the Art of Analog* . . .

From top to bottom, the SA-1 exudes thoughtfulness of design and superb mechanical execution (all parts are US-made). Schroeder began with several proven elements of turntable design -- a sealed, non-inverted platter bearing with phosphor-bronze bushings, an eddy-current braking mechanism, an anodized aluminum platter and armboard, a constrained three-layer sandwich for the plinth, a high-torque DC brush motor (its clever feed-forward circuit was designed by John Atwood), three feet of differing materials (two polymer, one aluminum) -- and to them added his own innovations. From his years of workshop experimentation came the plinth of bamboo for natural beauty and damping; magnetic tape for the drive to eliminate elasticity, guarantee sample-to-sample thickness, and ensure consistent speed transfer; an adjustable tensioner placed extremely close to the platter to minimize side-thrust and prevent slippage; and a spindle machined to have a semirough surface to ensure enough hydrodynamic drag to keep constant the pressure of the lubricant within the sealed bearing. Whisking all of these together into an efficient, eye-catching design has made for an amazingly holistic product. Like the

deftly elegant gestures of a dancer who has dedicated years to the practice of the art, the SA-1's visible but understated beauty harbors within it depths technological sophistication and craftsmanship.



Setup

For all these intricacies of design, unpacking and assembling the SA-1 was a snap. The turntable is shipped in a large cardboard box and packed in layers. Each component is isolated -- either nested among thick sheets of polystyrene or in its own smaller cardboard box. The inventory of parts to assemble is minimal: external motor controller and umbilical, plinth with bearing and motor already installed, three cone feet, platter, tension roller, drive tape, circular armboard, paper/felt inlay mat, bubble foam mat, and acrylic mat. Artemis provides a well-illustrated, 12-page owner's manual that's a breeze to follow -- it literally took me longer to read the manual (ten minutes) than to set up the 'table (seven minutes). The last thing I did was to run a power cord (not provided) to the external power regulator, then connect it to the motor in the plinth via the umbilical. Although completely unfamiliar with the SA-1 and how to set it up, I spent only about 30 minutes unpacking, assembling, and installing it in my system.

To operate the SA-1, you set the speed choice (33rpm, 45rpm, or variable) via a beautifully machined selector knob on the faceplate of the external supply, then flip the On/Off switch below and to the knob's left. Although Artemis includes a nice strobe disc to measure the platter's speed, I used a KAB SpeedStrobe, which comes with a disc with digital graphics instead of bars or stripes: Point the SpeedStrobe's light at the spinning graphics on the disc and read the speed numbers. When the numbers stay still, you're dialed in. If adjustment is needed, Artemis provides a small plastic screwdriver that fits into a screw recessed in a hole below the speed-selector knob on the motor control. You just snook it in and turn it to adjust the motor's speed.

Of course, correctly rigging the tonearm and cartridge takes as long as it takes -- in my case, quite a while, as Sean Ta had loaned me the excellent but immeasurably fussy Schroeder DPS arm. But once that was done, the system rewarded me with weeks of outstanding sound. The SA-1 armboard, made of the same aircraft-grade aluminum as the platter, is cut specifically to match the user's tonearm, and secured in place with three screws that fit into curved, oblong slots near the board's outer rim. The board's circular shape allows for the precise correction of geometries by simply loosening the screws and rotating the board. Thus, with a single adjustment, you change the spindle-to-pivot distance and minimize cartridge fussing. For finer adjustment, I also rotated (albeit only a smidge) the silver-anodized base of the Schroeder tonearm itself by loosening the large Allen bolt that fastens it.

Artemis offers a few upgrade options. Though my review sample lacked them, you can order customized Stillpoints (\$300/set of three) to replace the stock Artemis feet. Additional armboards, cut by Artemis for any commercially available tonearm, can be had for \$300 each. Also available is a lovely, diminutive (1.5" diameter, 2.7 oz.) record puck of a dense, Delrin-derived polymer (\$100). I tried using the SA-1 with and without this puck, but quickly found that this little devil, no bigger than a *sake* cup, worked wonders for making violins sound smoother and sweeter and increasing the bottom-end tightness and presence of just about every LP I played. Once I started using it, I never stopped.



System

The Artemis SA-1 and Schroeder DPS tonearm went into my reference system: Cary CD 303/300 CD player; Nottingham Spacedeck turntable with Heavy Kit, Nottingham 9" Spacearm tonearm with Pete Riggle VTAF, and Shelter 501 Mk.II (0.4mV) and Zyx Airy 3 (0.24mV) moving-coil cartridges; Herron VTPH-2 phono stage; Thor TA-1000 Mk.II and deHavilland Mercury 3 preamplifiers; deHavilland KE 50A monoblocks (40W, class-A) and Electrocompaniet AW220 monoblocks; Von Schweikert Audio VR5 HSE loudspeakers (91dB/6 ohms); Cardas Golden Reference and Verbatim interconnects (RCA); and Verbatim speaker cables with jumpers.

I use Balanced Power Technology's Clean Power Center passive line conditioner for the phono stage and preamps. The Cary CD player goes straight into the wall with a Fusion Audio Predator power cord. The power amps were plugged into an Isoclean 104 II power strip with Cardas Golden Reference power cables, the strip itself plugged into the wall with another Golden Reference. Other AC cords were BPT L-10, Thor Red, Fusion Audio Impulse, and Harmonix XDC Studio Master. I have two 15A dedicated lines, both with Oyaide R1 duplex outlets. I used PS Audio Critical Link fuses in the Cary player and the deHavilland preamp and amps.

My equipment rack is a Finite Elemente Signature Pagode with Cerapucs under the Cary player. The room is treated with sound panels from Acoustic Sciences Corporation; bookshelves line the right wall, shelves of LPs the left. The listening room, which is also my study, is fairly small (12' x 15' x 8.5'); I listen both in the nearfield, and on a couch about 8' away from the plane described by the front baffles of my speakers. The Von Schweikert VR5s are toed in about 3", so that the tweeter axes fire slightly to the outside of my ears in my standard listening position.

The sound of one 'table . . .

After more than two months with the Artemis SA-1, using the Schroeder DPS arm and mainly the Zyx Airy 3 cartridge, I still find it hard to attribute a definite "signature" to the turntable's sound. Its character was more retiring than obtrusive -- it simply got out of the way, adding no sweeteners or bleaches of its own to the sound of any of the classical, jazz, or rock LPs I played on it. What I heard instead was great scaling and dynamics, a consistent solidity to the presentation of instrumental sounds, fine resolution, image stability, a natural sense of air and spaciousness, and a precision of timing such that what were most prominent were the overall ebb and flow of music, its organic sequences, the virtuosity of performers, a singer's unique character and expressiveness, and the rich timbral quality of each instrument.

The stability, precision, and cleanness of the sound presented by the SA-1 was immediately noticeable from the first LP I dropped onto its platter -- Mozart's Piano Concerto No.22 in E-flat, K.482, performed by Alfred Brendel with the Academy of St Martin-in-the-Fields, conducted by Neville Marriner (Philips 9500 145). The orchestral introduction had at once more resolution and a more precise feel to it than I'd become used to with my reference 'table-and-arm combo, the Nottingham Spacedeck (with Heavy Kit) and 9" Spacearm. Throughout the first movement, cellos and timpani came in with fullness and timing in a way I was able to discern as never before, as both the coincidence and the nanosecond of difference between a cellist's bowstroke and a tom-strike from the timpanist were quite apparent. As is characteristic of the Nottingham, there was a warm, solid orchestral foundation from cellos and double basses. But, unlike

the English-made 'table, which tends to deliver macrodynamics and a general density of tone over details and nuance, the SA-1's wealth of sound contained great finesse and sharpness as well. For example, Brendel's deft pedalwork was supremely evident through the SA-1, giving his playing a fuller expressiveness than I'd been able to appreciate before. I heard lovely, trilling, crystalline pianissimos, and thrilling forte runs in unison with woodwinds -- a properly woody oboe, a throaty flute. Bass notes started and stopped precisely, arpeggios flowed but didn't overflow, and each note of each trill seemed anchored in time, arising in its proper musical and temporal sequence, both its presence and ephemerality in keeping with the flow of the music. Here, details were continually at the service of the music's purposiveness as an entirety rather than as isolate, constituent parts. Musically speaking, that the timing was so right allowed the dynamic flow of the concerto to come pleasurably together in a sweet coherence without my attention being distracted by such audiophilic irrelevancies as spotlight transients.

"Better Git It in Your Soul," the first track on Charles Mingus's *Ah Um* (Columbia/Legacy 8697-33568-1, 180gm reissue), is as hard-driving a post-bop jazz tune as one can find, and a great test of a turntable's timing, speed, and tonal articulation. On the SA-1, this gospel-inspired jam came across with superb clarity and cleanness. The track features chattering drums, a repeated figure on piano, an insistent vamp by three horns played in unison (alto and tenor saxes and trombone), Mingus's calls and hollers, and bluesy solos -- one of them a solo break on tenor from Booker Ervin, with syncopated hand-claps by other bandmembers in the background. Throughout, Danny Richmond's drumming sounded crisp and full of texture, the varied timbres of his snare, toms, and floor tom easily distinguishable. The music -- full of rich interplay, varied instrumental textures, and the sympathetic artistry of improvisation -- calls for high levels of timing and resolution. The Artemis SA-1 handled it all with ease and clarity, the spontaneity of interplay thoroughly evident, each note solidly presented and on time.

To listen for delicacy of presentation and the ability to communicate drama in a voice, I turned to Emmylou Harris, whose light, lyric alto is full of angelic nuance. If ever there was a song that could be described as a Kentucky aria, it's "Hickory Wind," from her *Blue Kentucky Girl* (Warner Bros. BSK-3318), composed by country-rock pioneer and martyr Gram Parsons, who was Harris's lover and musical partner. In a stripped-down, simple arrangement -- at first just voice and guitar -- the tune is set to a deliberate Scottish march cadence by Harris and The Hot Band. I remember the way Parsons, in concert with the Flying Burrito Brothers, used to hold his Martin 00-18 up to the mike and strum the same sort of introduction -- solemn, as if it were a call to assemble and muster sentiment. In this version, one by one, the fiddle, pedal steel, piano, and electric bass then enter, each playing with restraint, giving Harris's plaintive country coloratura lots of room. Via the SA-1, I could hear the breath and pathos in her voice as she sings "But now . . . that I'm lonesome . . ." and her voice lifts, then trails off into the air around it. Then, when the backup choir of Dolly Parton, Linda Ronstadt, and Tanya Tucker join in, their voices emerged from an airy expanse behind Harris's tremulous lead, giving it feathery wings that seemed to lift it gently out of the mix.

Staying with country rock, I listened to a 180gm reissue of the Band's first album, *Music from Big Pink* (Capitol SKAO 2955). "We Can Talk," the second tune on side 2, begins with the coordinated punch and chatter of Levon Helms's drums and Richard Manuel's piano. Then, Rick Danko's tuneful bass comes in and, hearing it through the Artemis 'table for the first time, what struck me was the marvelous clarity of the overall sound. I remembered, too long ago now to tally the years, hearing the Band perform this song live at the Pasadena Civic Auditorium and, at the time, comparing it to how the LP track sounded through my poor dorm-room system -- a tinny hash of countryish voices. And I noticed the same kind of difference this time around. "We Can Talk" can be a barnyard squabble of voices and instruments, but via the SA-1, what might otherwise have come off as a grungy cacophony instead struck me as a raucous three-part lead vocal and a rousing rendition of rock'n'roll call and response as well. It's the Band's version of Storyville jazz, albeit arranged rather than completely improvised: three voices simultaneously sharing the lead, then two dropping away so one can tailgate, then another call back in a riffing response. Throughout, Danko's hooty moans and wails echo Manuel's reedy piping, then Helms's gritty tenor chases them both down. I attribute the superb resolution, the definitive separation and stage depth of the voices and vocal effects I heard, to the machining of the SA-1's platter, the smoothness of its bearing and clever eddy-current braking, and the stable speed of its motor and tape-drive system. Maybe nostalgic distance, too, had something to do with it, but so did the exacting German design and fine American craftsmanship invested in the Artemis 'table.

I then returned to orchestral music, and, without fail, but with utter ease and refined resolution, the SA-1 sorted out difficult complexities, intricate tonal and timbral interplays, and dynamic range from the majestic to the pianissimo. Period instrumentation, especially, can be hard to render -- in the absence of vibrato, many analog rigs tend to reproduce the sound of massed strings as if they were wind instruments being overblown: glossy, even glassy, and a little hard in peaks. But the Artemis SA-1 'table, in conjunction with the Schroeder DPS arm and Zyx Airy 3 cartridge, presented period strings only with openness, so that the harmonic richness and sweet tone innate to this music came through with each bowing, whether sprightly or mournful. Layering was always superb, presenting a good front-to-back illusion of a chamber orchestra. And the timing was so wonderful, I felt each string section nimbly digging into its instruments, the vibrancy and dynamics of multiple players in concert coming across to create in me a kind of thrilling "jump factor." This was so with Franz Joseph Haydn's Cello Concertos, performed by Christophe Coin with the Academy of Ancient Music conducted by Christopher Hogwood (L'Oiseau-Lyre DSDL 711), and with Handel's Concerto Grosso No.5 in D, Op.6, performed by Neville Marriner and the Academy of St Martin-in-the-Fields (London CSA 2309).

For the past two years, I've tended to use one LP above all others in my collection to test for analog authority, bass, and tonal color. This recording has a fabulously rich palette of orchestral sounds -- the blare of trumpets and horns, sonorous midrange notes from the woodwinds, plaintive upper mids and trebles from violins, delicacy from a harp, thrilling bowstrokes from the double basses, and, on top of all that, timpani thumping away. It's Mahler's Symphony No.2, "Resurrection," performed by the London Symphony Orchestra and Choir conducted by Georg Solti (Decca 63835). The first movement, *Allegro maestoso*, begins with brisk and rapid *forte* bowstrokes from the double basses that state the fiercely declamatory theme, while the other string sections keep up a suspenseful tremolo in G octaves, until the woodwinds and violins pick up the theme too, though more mournfully. The brass instruments follow with a series of fanfares (underscored by more forceful timpani) worthy of Wagner and his Valkyries. Then the woodwinds and violins play for a stretch, sweetly and at moderate volume, transforming the theme into a plaintive dirge, whereafter the double basses return and a harp plucks out a graceful accompaniment. It's demanding enough, both in tonal complexity and in the intricacies of symphonic timing, to confuse and congest many systems, but the Artemis SA-1 performed terrifically, showing off nimbleness, speed, and tonal range throughout. The bowing of the double basses never sounded indistinct, with blurred articulations, but started and stopped with expressive, romantic majesty and German precision. I never felt the sound congest nor heard the soundstage collapse, and enjoyed every moment of the music. The SA-1's ability to capture orchestral scale, dynamic swings (the symphony has passages that are both bombastic and fit for a lyric soundtrack to *Bambi*), and the lavish variety of tonal requirements was exceptional.

Conclusion

I'd say, in general, that the Artemis Labs SA-1 would be a turntable for discerning music lovers rather than for audiophiles questing for a component that would reveal utter details like the smack of lipstick on a wet pair of lips. Yet I never got a generalized slurry of mood or presentation; instead, the SA-1 delivered an articulate brocade of audio precision, each note there to be recognized, both in its individual gleaming and also its intricate interweave with the entire musical tapestry. The opposite of analytic, it was all about flow, solidity,

coherence, and timing, rather than flattering the fantasy of measurable micrometers of detail. In talking with Sean Ta of Artemis Labs, I joked that, to maintain my credibility as an audio reviewer, I was looking very hard for negatives and drawbacks to write about. So far, I hadn't come up with any.

The SA-1 won me over. The charming simplicity of its look, the complete ease of its operation, and the accuracy and fabulous tonality of its sound -- all came together to make for entirely pleasurable, unfussy musical experiences. If you're looking to upgrade from a beginner's or mid-priced analog rig, or if you're looking for one of the finest 'tables out there for a relatively affordable price, I encourage you to give the Artemis Labs SA-1 a serious audition. It definitely has a special way about it -- the Tao of Audio.

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Artemis Labs SA-1 Turntable
Price: \$7800 USD.
Warranty: Five years parts and labor.

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