

Absolute Analog



Yukiseimitsu Audio AP-01 Analog Record Player

Rules Are For Fules!

Michael Fremer

Had Stanley Kubrick the choice, he might have picked this turntable over the admittedly more glamorous-looking Transcriptor seen in *A Clockwork Orange*.

That was the thought when I first gazed upon the original, now sold-out AP-0 edition of this unique-looking turntable a few years ago at High End Munich.

Other than having a platter and a tonearm, the AP-01's looks are unlike those of any other turntable—other than, of course, the AP-0 it replaced in the Spring of 2023. The thinking behind its design is equally original. No need to describe its general appearance with words, the image sure to accompany this review will more than suffice.

Yuki Precision Co., a Japanese manufacturer of high-precision parts for the medical, aeronautical, and watch industries, asked

itself the question: “Can’t we bring together our technologies to create products that enrich people’s hearts and minds?” With that idea the goal—and without heeding the age-old audio manufacturing riddle: “How do you make a million dollars in the audio business? You start with two million dollars.”—someone at the company got the go-ahead to utilize the firm’s fabrication skills to create something well outside the bounds of its mission statement.

That someone is Yuki Precision’s 40-something President, Nagamatsu Jun. Before assuming that position, he was head of development and R&D division director, and, of course, his hobbies included audio equipment and classical music. He is responsible for conjuring up this clearly unique turntable design. Uniqueness is

not necessarily a pathway to commercial success, as OMA (Oswalds Mill Audio) found out. The K3 that Jacob Heilbrunn reviewed in these pages remains among the most original-looking turntables, its shape the result of function not fancy. I admired the K3’s “Guggenheim Museum topped with a construction crane” looks as much as the company’s owner/founder was offended by that description in my review (published elsewhere). I’m not sure how many—if any—K3s have sold, and not because of the expense or because it’s not among the world’s best-sounding and -performing tables. Its looks put off the vinyl enthusiasts I know who can afford it.

I can’t predict your reaction to the AP-01’s industrial design. However, the marketplace spoke, and the AP-0,

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Specs & Pricing

Yuki AP-01 Turntable

Drive: Non-elastic thread drive

Motor: DC coreless brushless motor with encoder feedback

Speed: 33 1/3, 45, 78rpm

Bearing: Magnetic bearing (magnetic repulsive radial non-contact)

Platter: Aluminum 12.2 inch diameter, 0.78 inches tall, 8.8 pounds

Tonearm

Type: Static balance, straight arm

Length: 240mm

Overhang: -15mm

Arm height: 0-10mm adjustment range

Output: RCA jacks

Dimensions: 560mm (22") x 213mm (8.3") x 352mm (13.8")

Weight: 65 pounds

Accessories: Two counterweights, peripheral ring, adjustment wrench, overhang gauge, record weight.

System price: \$44,975 without tonearm; \$49,975 with tonearm

YUKISEIMITSU AUDIO

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AXXIS AUDIO (U.S. IMPORTER)

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Associated Equipment (for this review)

Loudspeakers: Wilson Audio Specialties Chronosonic XVX, Acora VRC

Preamplifier: darTzeel NHB-18NS

Power amplifier: darTzeel NHB 468 monoblocks

Phono preamplifier: CH Precision P10

Phono cartridges: Audio Technica MC-2022, Audio Technica AT ART20, Shure V15VmxR, Morita stylus, Ortofon MC Diamond.

Cable and interconnects: AudioQuest Dragon & TARA Labs The Zero Evolution & Analysis Plus Silver Apex & Stealth Sakra and Indra (interconnects), Hovland Music Groove phono cable, AudioQuest Dragon, Thunder and Dynamic Design Neutron GS Digital (A.C. power cords)

Accessories: AudioQuest Niagara 7000 (line level), Niagara 5000s (amplifiers) CAD Ground Controls; AudioQuest NRG Edison A.C. wall box and receptacles, ASC Tube traps, RPG BAD, Skyline & Abfufusor panels, Stillpoints Aperture II room panels, Stillpoints ESS and HRS Signature stands, Thixar and Stillpoints amplifier stands, Audiodharma Cable Cooker, Furutech Record demagnetizer, Orb Disc Flattener, Audio Desk Systeme Vinyl Cleaner Pro X, KLAUDIO KD-CLN-LP200T record cleaning machines, full suite WallyTools

the first run of Yukiseimitsu turntables, sold out. The AP-01 is the replacement. The revised model incorporates changes to the electronic drive system and is said to better deal with static electricity buildup, which apparently was a problem in the original design. The new model also features improvements to 60% of the parts.

I spoke with Jun-san at High End Munich two years ago, and what's most fascinating about this project is that it's the company's first self-conceived, fully developed offering. Its business has always been as a contract player building-to-order parts and components specified by others for *their* projects. Designing and building a useful product that could showcase the company's manufacturing prowess and build "team spirit" was the project's original intent, but enthusiasm was

I concur with the marketplace's appreciation for both its looks and its sonic performance.

muted until the turntable idea surfaced. Records, turntables, and vinyl seem to have a magic about them that drives crazy digital enthusiasts, who just don't get it, crazier. Maybe that's part of the magic!

Project development began behind the back of the then CEO Otsubo Masato with a team of young "CD generation" engineers, who didn't "get" the turntable project until they visited Jun's home and heard how great records sound. After spending a few months with the AP-01, I



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This is the first time the technology has been applied to a tonearm.

concur with the marketplace's appreciation for both its looks and its sonic performance, though the 9" "underhung" (*minus* 15mm), non-offset tonearm breaks every known proper geometry rule, so first let's get that out of the way.

A Call to Arms

How best to minimize LTE (lateral tracking error) in a pivoted tonearm was "settled law" almost 100 years ago. The problem to be solved is that the cutter head describes a radius across a lacquer. Pivoted arms describe an arc. LTE is the stylus' deviation from groove tangency as it moves across the record surface.

The mathematicians examining the problem determined that minimizing LTE required the arc described by the stylus to "overhang" the pivot-to-spindle distance (the arm's actual length) by a specified length. That length (pivot-to-spindle distance plus "overhang") is the arm's *effective* length. The longer the arm, the lesser the LTE, but longer arms create other issues, and like everything else in audio (and in most everything in *life*) you choose your poison.

In addition to the math guys (foremost Löfgren in 1938 and Baerwald in 1941) who did the geometric work, a British audio scientist/journalist named Percy Wilson is said to have devised the idea of an offset angle either at the head shell or created by bending the arm into an "S" shape. Both arm types exist in varying lengths to this analog day, and both help keep the stylus closer to groove tangency than it otherwise would be.

Both Baerwald and Löfgren geometry produce two "null" points across the record surface where LTE is zero (each geometric solution locates the points differently). Where those points fall and how much LTE there otherwise is across the record surface is mathematically certain (two other geometric solutions,

Stevenson, and more recently UNI-DIN offer two alternative solutions more useful for classical music and modern records not cut as close to the label as older records are).

Then why did the AP-01's designer opt for an "underhung," no-offset-angle tonearm? The other force at work in pivoted tonearm design is "skating." That is a vector force that causes the arm to "skate" inward as it travels toward the record center. The longer the arm, the less the arm skates, because longer arms require less "overhang." Yes, put somewhat more simply than is actually true, but true enough for our purposes, "overhang" causes "skating."

Properly designed and executed anti-skating mechanisms (weights on strings, magnetic repulsion, springs) produce a counterforce that effectively but not perfectly compensates for "skating," which varies across the record surface. Not

applying an anti-skating counterforce guarantees the stylus will ride the inner groove wall across the entire record surface—not good for records or styli or sound.

A design faction centered in Japan claims that while overhang and offset do lower LTE, skating's negative sonic effects are more obnoxious than those produced by LTE and that eliminating skating produces more pleasing sound by eliminating the severe skating side forces that negatively impact, among other things, elastomer suspension performance critical to how cartridges track and sound. However, as I demonstrated (to myself), underhung, zero-offset arms like the AP-01's still skate, though differently and with far less force. Place the AP-01's arm at the beginning of a grooveless record and the arm begins to skate inward, stopping close to the record center. Place the arm near the label and the arm skates *outward*, stopping close to where the "inbound" arm stops, but in either direction the movement is leisurely compared to standard skating, and that's the "underhung" arm advocate's point. The elastomer suspension is far less stressed and/or laterally squeezed.

End of Lecture

Geometry aside, the AP-01's static-balance arm appears to

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What was immediately impressive and obvious was the Yuki/Shure/JICO combo's midband timbral neutrality.

be precision made, as you'd expect from a company with aerospace and medical bona fides, though it also looks "basic"—no tapered tube fabricated from exotic materials, no elastomer-isolated counterweight, obviously no anti-skating mechanism. Azimuth is adjustable at the headshell, and since it has no offset, the adjustment will not affect stylus rake angle (a good thing). An online feature list says the arm incorporates a stabilizing, non-contact, magnetic braking system. It is an application of hysteresis brakes used in industrial products. This is the first time the technology has been applied to a tonearm. Arm height can be varied 10mm to adjust VTA/SRA. The arm has a solid feel and is easy to set up and use.

At High End Munich 2024, the company introduced an armless AP-01EM edition for those who want to mount their own arm choice in the prime position. The original and EM versions feature an additional rear arm position.

The turntable drive features a "spring-loaded" dual-opposing pulley, a single DC coreless brushless encoder feedback-controlled motor design that uses a knotted non-elastic Teflon thread to rotate the 12-inch, 3/4" tall, moderately heavy (almost 9 pound) aluminum platter at 33.33, 45, and 78rpm. The pulleys are substantial grooved metal cylinders.

Again, like the arm, the platter doesn't make use of any exotic materials, sandwiched construction, embedded brass cylinders, or elastomer damping. The platter, however, is made through a unique manufacturing process. According to Yuki, "Although it looks like an aluminum platter with no ingenuity, it has an interesting feature in its manufacturing process. These machined plat-

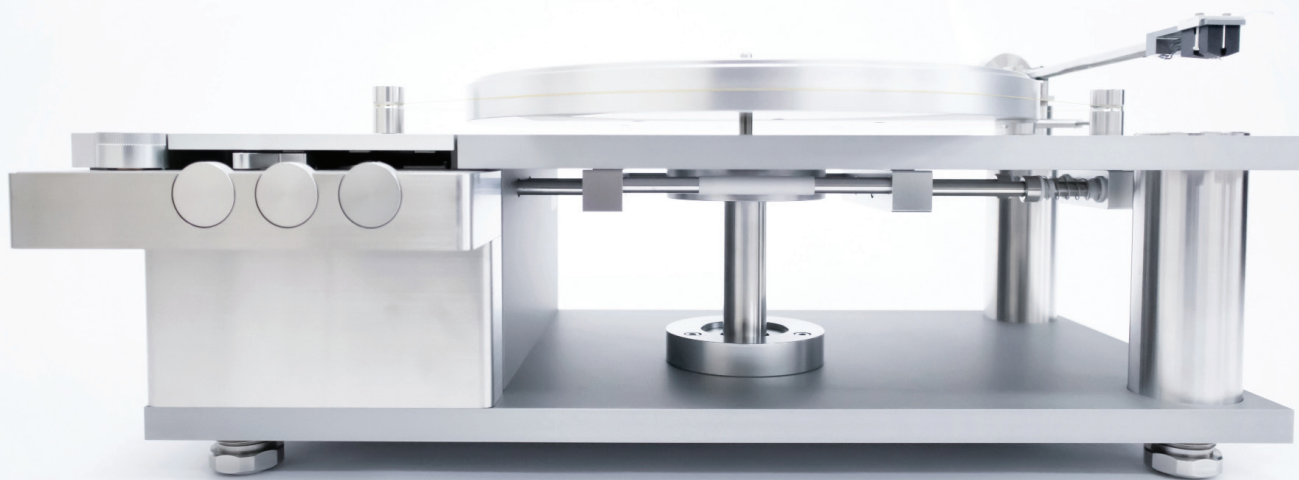
ters were initially manufactured by cutting plate sheets into rounds. However, plates are manufactured by extruding them laterally, so the aluminum's microstructure is stretched laterally. Cutting it round means that the platter will have a lateral directivity. When developing the AP-01, we wanted to pursue a more correct condition, so we prepared a base material of aluminum that was arrived at by extruding a large round piece of wood. We then cut it into rings and used those rings. This way, the structure is longitudinal and not oriented to rotation. This ingenuity is possible because Yuki is a company that specializes in materials processing."

The platter includes a superbly machined peripheral outer ring ("superb" because unlike so many others, it fits precisely, so there's no need

to push it around to center) you can use (or not) to limit outer edge warp and to increase effective platter mass and improve inertial drive. The platter is conductive to suppress static electricity and is designed to be used without a mat. Yuki also supplies a relatively high-mass record weight.

The platter bearing is a magnetic-repulsion, radial, non-contact type, featuring a permanent magnet which is in contact with only one sphere at the lowest point. Magnetic repulsion maintains a constant spacing around the bearing, enabling quiet, sustained rotational motion without bearing noise. The unusually long cylinder running from base to the platter itself rotates rather than there being a rotating spindle within a bushing. It is unique in both mechanical design and looks. Somewhere among the company's literature it's described as a self-stabilizing spinner, similar to a top. And indeed, if you give the platter a lateral nudge, there's some "give" to the entire mechanism. (To make that point, at High End Munich 2023 the company gave away miniature, precision-machined tops.) So yes, the AP-01 is unique in looks and design. I'll also point out here that this table's isolation

Absolute Analog Yukiseimitsu Audio AP-01 Analog Record Player



from impulse-type interference (the “tap test”) is among the best I’ve encountered. The upper platform tap produced just a slight and quickly ended high-frequency impulse from the speaker. Nothing I could write about the AP-01 can adequately convey its exquisite machining and superior “fit ’n’ finish”—it’s one of the visual cues beyond its outrageous design that drew the Munich crowds.

Setup And Use

Setup is quick and relatively easy. The AP-01 basically comes assembled and ready to use—once you place the platter onto the spindle. The control box’s left side features an IEC AC jack and an on-off switch. The RCA jacks and ground lug are built into the right rear support. Level the feet, place the knotted Kevlar string over the spring-loaded pulley’s top with the platter in place, and once you’ve installed a cartridge, you’re ready to go.

A rotary switch atop the control panel starts the platter spinning, while an adjacent lever selects 33 1/3, 45, and 78rpm. Each speed has an associated pitch knob that memorizes the setting. However, accidentally brushing the knobs with your hand will change pitch, and you’ll need a strobe disc to re-set it, so best to be careful. A “lock” feature on the AP-02 would be nice!

Speaking of speed, while a knot in the thread would seem to be an impediment to speed accuracy it really isn’t—at least in a spring-tensioned, double-pulley design like this, which produces surprisingly strong torque. The shake ’n’ spin results were extremely good, including W&F RMS 0.02/Jitter 0.094%.

The Yuki AP-01 with peripheral ring, record weight, and ad-

ditional counterweight for heavy cartridges is \$44,975 without tonearm and \$49,975 with.

Max SLP (Surprising Listening Pleasure)

Figuring the relatively low-mass arm might work best with a high-compliance cartridge, first up was a Shure V15VxMR mm cartridge fitted with one of JICO’s unusual Morita wooden cantilevered spherical stylus replacements for the no-longer-available Shure original (though mine is almost new). I figured I’d go for the full “low detail/high distortion spread.”

I was writing an annotation for the upcoming Analogue Productions UHQR reissue of Steely Dan’s supposedly tech-plagued *Katy Lied* release (the dbx noise-reduction system) so it was one of the first records I played (admission:

I got an advance copy but pressed on black non-UHQR 180g vinyl). I’d played it more than a few times on my reference OMA K3 prototype fitted at the time with the Audio-Technica AT MC-2022 cartridge—the one with the Orbray one-piece lab-grown diamond cantilever/stylus. It’s difficult to compete with that cartridge’s dynamic *slam* (also used in DS Audio’s Grand Master Extreme optical cartridge), so I wasn’t making a comparison on that basis.

Aside from noting the stability and certainty with which the stylus entered the groove of every record I played, what was immediately impressive and obvious was the Yuki/Shure/JICO combo’s mid-band timbral neutrality. It delivered a different kind of detail compared to my reference, perhaps not in terms of transient precision where it

was less resolving (though not objectionably soft), but timbrally all the instruments in the midband, which amounts to most of them, were presented cleanly and convincingly separated with unforced ease. “Everyone’s Gone to the Movies,” one of the Dan’s creepy/salacious songs, has vibes/marimba, sax, and Fender Rhodes piano, as well as three backup singers all operating in the same territory, and all were effortlessly well separated out.

I’ll skip a list of records played using the Shure and just conclude that whatever noticeable detail the spherical stylus was losing didn’t diminish listening pleasure (and was beneficial on a few nasty recordings), but more importantly the increased LTE distortion presented itself as a pleasing minor additive, much like second-order-harmonic tube distortion. Rather than fighting it, my ears dove right in, especially attracted to the AP-01’s rhythmic grip, which more closely resembled that of an idler or direct-drive turntable because of the no-give Kevlar thread “belt” and spring-tension double-pulley system that produces the aforementioned high torque. The combination of rhythmic certainty, suave timbral balance, and the second-order kiss produced the most inviting Shure V15VmxR performance I’ve experienced. (Usually it’s “I respect it, but I’m bored.”)

There was one too many variables for the Shure to be useful in the context of this review so next I installed the Audio Technica AT ART20, which is in many respects the MC-2022 with a more standard boron cantilever/line-contact stylus (I also used it in a video review for the TAS website of the Auris Bayaderer 1 turntable). Despite what appears to be a low-mass arm, it was sufficiently high to produce a vertical resonant frequency in the desired 8-12Hz range. That established, I set about serious listening.

In my review of the Masterline 7 phono preamp (Issue 355), I used an AudioNautes reissue of the BIS release *La Spagna* (AN-1401). After turning in the review, I ordered off Discogs an original pressing (BIS LP 163-164). I used the AP-01 to compare the two pressings. Wow. God bless the late Stan Ricker, but though he claimed no EQ and I believe him, either his rig adds bottom end elsewhere or the original cuts it, because the original is far more open and transpar-

ent and has far greater attack precision and longer sustain on high-frequency percussive transients. And the bottom end on the one track containing a small Spanish drum that excites the recording space is far more natural on the original. It’s bloated on the reissue. Glad I made the small investment.

This comparison demonstrated the table’s overall neutrality, its resolving power, and its exceptionally low noise floor. Listening through the entire double LP brought the kind of listening pleasure Nagamatsu Jun surely intended. It brought me into the space.

As I was about to turn in this review, an Electric Recording Company treasure arrived: *Schubert Sonata for Arpeggione and Piano/Bridge Sonata for Cello and Piano* (ERC 108) performed by Rostropovich and Benjamin Britten himself and engineered by Gordon Parry and Kenneth Wilkinson. It’s a reissue of Decca SXL 6426. People complain about ERC reissue prices, but the least expensive original pressing on Discogs is around \$800, shipped from Iceland, and it’s only VG+. A mint one from the U.K. is around \$1000. The cover has some age spots, but who reading this doesn’t? The now sold-out ERC, an edition of 300, costs around \$500. Set against a jet-black backdrop, Rostropovich’s cello and Britten’s piano were reproduced with no audible distortion artifacts. With precisely drawn pizzicato plucks, the enticing sheen from Rosty’s cello, and lingering wow-free sustains massaged all pleasure zones throughout the two sides in ways, I’m here to tell you, no digits deliver, and it did so, despite the underhang, minus any audible analog blemishes or less than epoxy-solid imaging.

Before packing it in and declaring another review complete, I had to check out this table’s bass capabilities, so out came an old audiophile warhorse I’ve not played for decades. Don’t ask why I chose *Michael Murray Playing The Great Organ in the Methuen Memorial Music Hall* (Telarc 5035 DD-2), a direct-to-disc record with measured response down to 16Hz, but I did. The Yuki sounded firm, full, clean, and in complete control all the way down. When I repeated on

the OMA K3/SAT CF1-12 arm combo, there was a difference in brute-force scale and wall-shaking extension, so yes, the big gun delivered the bang.

Conclusion

This double decker is surely one of the coolest pieces of analog kit. It doesn’t take up a great deal of space, and the top platform offers real estate for accessories. The build-quality and ease and pleasure of use are off the visual and tactile charts. Even the peripheral ring is easy to use thanks to the precision machining.

I’m overwhelmed by the underhung tonearm and still processing how and why it sounds so convincing and full of life despite the added distortion, but it’s no doubt like why tubes entice (as long as the distortion is even-order and held to a dull 2-3% roar). WallyTools’ J.R. Boisclair posits that the lack of elastomer stress is key to the arm’s sonic performance, despite the added LTE. I now understand why some designers make the underhung choice.

The arm’s seeming simplicity is a big plus both in setup and use. Its stability in the groove (and the soundstaging results) must be due to the magnetic braking system, the details of which are not available. It also must be related to one odd behavior: Occasionally (only a half-dozen times) throughout the many months the Yuki was in the system, the arm just stuck in place. A tiny nudge freed it. Otherwise, it tracked as if on rails at 1 gram with the Shure, at 2 grams with the Audio-Technica, and at 2.6 with the Ortofon Diamond, which also worked really well on this table.

I’m also overwhelmed by the unusual background quiet. I’m used to quiet backgrounds from top-tier turntables. The AP-01 is in the top tier of the top tier of quiet.

I hope you get to see, touch, and hear the Yuki AP-01. If you’re budget stretches to \$50k, it’s worth considering, especially if your space is limited. For those who can drop this much on a second turntable, this one gives you something new and different that you’re sure to appreciate. **tas**