Contents

ISSUE 366

the absolute sound®

THE JOURNAL OF HIGH-END AUDIO

Absolute Analog

Equipment Reports

Departments

Acoustical Systems A*Stellar Turntable

The Road of Design Excess Leads to the Palace of Wisdom

Michael Fremer

How big a turntable do you want? One didn't exist big enough for Acoustical Systems' Dietrich Brakemeier, so he designed and built the enormous Apolyt. Net weight: 855 pounds. The platter alone, made of Delrin, three specific alloys, V2a stainless steel, and HD18 Tungsten, which almost disappears within the folds of the Apolyt's enormous chassis and suspension system, weighs more than 110 pounds! Its debut at Munich High End 2019 both wowed and disgusted attendees and later did likewise on the YouTube video coverage I posted. Comments ranged from "I want it!" to "Feed the poor." In between were ones that read "All that for a plastic waffle?" and "We have CDs now."

Not that Brakemeier cared. He'd created the turntable more as a design exercise in what was possible to extract from "plastic waffles" than as a commercially saleable product. Much to his surprise, more than a few buyers emerged from the digital mist, and his Frankenstein monster came to commercial, though limited life, forcing him to figure out how to package and ship the beast overseas. The Apolyt is still available for $750,000.

A few years later at High End Munich 2022, thanks in part to his Apolyt R&D (and a total of 35 years of turntable design work experience), he first introduced the A*Stellar as a computer animated rendering and, a year later, an A*Stellar "in the flesh" or, put more accurately, "in the multiple metallurgy." Brakemeier describes the A*Stellar as "literally the design result of the road of excess leading to the palace of wisdom."

Still a large and heavy 3-speed turntable, weighing in at almost 200 pounds and measuring approximately 27 inches by 19 inches by 9 inches tall, the A*Stellar, a curvaceously sculpted layer cake of a design, exudes a commanding presence, more industrial than jewelry-like—though the manufacturer wants it to fit in with your decor, so it's available in five finishes: metallic black, Apolyt-dark anthracite, dark titanium, silver, and light titanium. There's also a large preamplifier sized outboard power and air-suspension supply that connects electrically to the turntable via LEMOs and pneumatically via air hoses. Current cost in the United States is $130,000.

Let's Dig in More Deeply

Despite its diminished size and weight compared to the Apolyt, Herr Brakemeier insists the A*Stellar is mechanically and especially sonically superior thanks to what he'd learned creating the Apolyt. The A*Stellar is a complex belt-drive design. The multi-layer construction makes installation relatively easy, though it's still a two-person operation—none of the five units that comprise the A*Stellar weigh more than 59 pounds.

The base unit contains a Swiss-made, brushless Maxon DC motor and pulley housed on one side, with a passive spindle bearing and pulley on the other. Each corner of the

Absolute Analog Acoustical Systems A*Stellar Turntable

Specs & Pricing

External power supply: 17" x 15" x 5" including motor management, full DC supply, air suspension control
Finishes: Metallic black, Apolyt-dark anthracite, dark titanium, silver, and light titanium.
Dimensions: 27" x 18" x 9"
Weight: 194 lbs., Astellar turntable; 39 lbs., Astellar power supply
Price: $130,000

ACOUSTICAL SYSTEMS
acoustical-systems.com
Axinia Schäfer, acoustical systems
Am Büchele 2
86928 Hofstetten
Germany
info@acoustical-systems.com
+49 (0)8196 9984447

Turntable: Wilson Benesch Prime Meridian
Tonearms: Acoustical Systems Axiom, Wilson-Benesch Graviton Ti, Supatrac Nighthawk
Digital: dCS Vivaldi One SACD Player/DAC/Streamer
Preamplifier: darTZeel NHB-18NS
Power amplifier: darTZeel NHB 468 monoblocks
Phono preamplifier: CH Precision P10
Phono cartridges: Lyra Atlas Lambda SL, Wilson-Benesch Tessellate Ti-s, Mutech RM Hayate,
Loudspeakers: Wilson Audio Specialties Chronosonic XVX
Cable and interconnects: AudioQuest Dragon & TARA Labs The Zero Evolution, Stealth Sakra and Indra (interconnects), 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 & Abffusor 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, Audiodesksysteme Vinyl Cleaner Pro X, Kirmuss Audio KA-RC-1 and Klaudio KD-CLN-LP200T record cleaning machines, full suite WallyTools

base incorporates an active pneumatic isolation "air spring" puck. The second isolated layer holds the unusually large, captured platter bearing, on top of which is placed the extremely heavy two-piece platter. The spindle (there are three options), totally isolated from the bearing, gets screwed on afterwards. An unusually large, thick rubber belt is then fitted over the motor pulley on one side and over a passive pulley mechanism on the opposite side, with the platter between the two. Finally, the top layer holding five bolted-on arm mounts—the icing on the cake—is placed on top, fitting onto corner POM inlays, thus completing the table's basic construction. Five arm mounts? Yes. One located in each corner plus a central rear mount for a tangential air-bearing type arm (there's an optional extra cost "drop in any time" 30mm top plate made of titanium). The precision-machined arm board construction guarantees perfect arm geometry if you swap boards to change arms.

Once everything's connected between the motor-drive/air-pump box, and it's powered on, the two upper layers rise to isolation height and only then does the entire cake get leveled on its three feet (there are two additional feet solely to prevent tilting). The 1.2Hz resonant frequency air-spring isolation system has an auto-level feature, so it never requires attention. Acoustical Systems' instructions are thorough, complete, well-organized, and written clearly (sadly, an outlier in our industry). All necessary tools are provided.

The A*Stellar's drive features an active motor management system and a "force-free" horizontal-bearing plane located precisely at the center of gravity, like the bearing concept used by Allen Perkins in his RPM and Spiral Groove turntables, which also feature similar isolated layer construction, though not on this high-mass level.

Mr. Brakemeier told me that the core idea behind this design concept is "to get the energy emitted by the tracking process away from the source as fast as possible—through tonearm and bearing into the armboard and ultimately offering it a 'path' of decreasing speed and thus no way back (to the source)." In other words, the goal is to continually flush that energy down the drain and for it to never find a path back up.

This is accomplished using multi-layers of alloys sequenced in decreasing density/hardness—getting slower from the tonearm layer down to the base layer. He very carefully specified the various materials used to accomplish this, but for review purposes it's probably TMI.

Both the platter and bearing are extremely complex constructions. The platter consists of more than 38 layers, built of 18 different materials including tungsten HD18, titanium, AW6082 aluminum alloy, and vanadium steel. The platter surface is a bonded two-inch-thick vinyl layer with the underside glued under pressure with "four pounds of resin onto 38 layers of different density organic materials"—all of which sits inside the aluminum outer platter. Brakemeier says he wanted a non-reflective interface for the record and underneath, "an absorbing 'swamp' for any energy."

The sealed bearing, which extends well below the base, has no direct contact with anything other than the underside of the aluminum platter, and it is vertically magnetically levitated with the 30mm diameter bearing and isolated spindle resting inside the vinyl top for a total of 42 layers and 140mm of space. The result, he told me, is levitation in air like a vertical air bearing as found in "turntables from Japan and Scandinavia."

There's far more to the bearing story—the many materials within it, the multiple magnet structures that allow pre-loading of the bearing to increase magnetic field densi-

ty and damping, both of which act to damp the bearing itself—but that too is TMI. Safe to say Brakemeier poured everything into A*Stellar that he gleaned from creating the Apolyt. Some would say "simpler is better," but not he.

A Maxon-based motor management system controls the motor and the drive power/applied inertia. That produces strong starting-phase drive torque that decreases continuously as it approaches the selected speed. The result, when the platter is finally spinning at either 33 1/3 or 45rpm, is an ultra-smooth low-torque drive. A Hall sensor-based encoder at the motor provides constant feedback to the motor management system about the actual RPMs as they approach the set value.

Two extra-cost options were included: a second spindle, smaller in diameter at the platter surface, to allow for more "wiggle room" should you, for instance, choose to use a DS Audio ES001 or 002 record centering device and the DARC 888 record clamp.

Clearly, Acoustical Systems' turntable design approach is opposite that of Rega, for instance, which prefers the "no mass" ideal to the "a lot of mass" ideal. As pleasurable months with both the Rega NAIA and the Acoustical Systems A*Stellar demonstrate, both can be valid if design strategies are effectively implemented and both can be valid "to the max" if implemented to fanatical degrees as these two are. Acoustical Systems supplied one of its Axiom Titan tonearms for the review, an outstanding "laboratory arm" I'd previously reviewed. Later, I installed on the rear left position the Supatrac Nighthawk reviewed on TrackingAngle.com.

Observations

Once set up, the A*Stellar remained set up and required no "tweaking" or leveling or adjustment of any kind. If the small air pump located in the control unit ever came on to "top up" the isolation system I didn't hear it. When you've spent $100K+ that's how you want it.

If you insist upon "instant gratification" start-up, the A*Stellar might not be for you, though once you hear it, you might forgive its relatively long time to reach speed (around 13 seconds to reach 33 1/3). I measured the speed twice following the initial setup and check. The first time, in late June, the average speed was 33.219, in August it was 33.275 and the deviation percentage using the Shak'n'spin app improved from 0.33% to 0.17%. Maybe it was a variation in the not-lab-grade measurement tool or maybe after a longer break-in the speed accuracy improved. I double-checked speed using the RPM phone app and it too measured 33.27. Close enough and important to mention because there's no pitch adjustment possible.

"Tap tests" on this turntable demonstrated that the isolation system works as promised. Tapping on the HRS isolation base produced no impulse sound from the speakers, and even tapping on the top plate—on any of the secondary arm boards or the one on which the Axiom was mounted—produced only a barely audible sound from the speakers, a relatively high-frequency, quick-to-decay impulse, with volume turned to normal listening levels. Unwanted groove impulses (pops and clicks) are effectively dealt with and disappear down the sonic drain as the designer intended. How you want and expect it to be for $100K+.

Sound that Lingers on the Ears

We can all agree that the biggest sound determinant in a turntable setup is the cartridge. Online, you'll find people who are convinced turntables don't make much of a difference or have a "sound" at all. There's not much you can do about such people other than to do an online sound demo comparison. I did one comparing the vacuum-holddown-equipped belt-driven Air Force III Premium ($39,500) and the direct-drive OMA K3 prototype I once owned (production K3 with Schröder arm $363,000). Same cartridge (Lyra Atlas Lambda SL), same tonearm (SAT CH1-12), and same phono preamp (CH Precision P10). I recorded the same D2D track on both, moving only the arm, making the appropriate arm set-up adjustments. The only variable was the turntable. One sounded rich, suave, supple, quiet, and relaxed with generous instrumental sustain. The other bristled with excitement and sounded fast, "tight," and rhythmically "snappy" with instant, sharp, precise transient attack and crystalline clarity.

Despite YouTube's sonic "meatgrinder," most listeners easily heard the differences, but opinions sharply differed as to which was preferable. And I'm not going to make the value judgment here either.

The A*Stellar's sonic performance resides on the belt-drive side of the sonic fence, not surprising, because it is a belt-drive design. It has a *big*, full-bodied sound more like the $495,000 Air Force Zero that emphasizes instrumental textures, rich, saturated harmonics, long sustain, and generous decay. Notes seem to hang in the air longer than expected only to then slowly decay into the black backdrop. The overall presentation has a highly desirable colorlessness

lation-booth recording process. A lot of sitting around in a room "live," and you can hear it in the production. But the mix has Petty appropriately large, centerstage, and way forward of the band. If the jazz and classical albums sounded warm, enveloping (which they did), this record was hard-edged up front with plenty of bite to the guitars and drums and effectively presented bass lines, which are more supportive here than prominent on jazz albums, and while it's a minimally miked stereo recording, there's plenty of room fill that puts you in a space unlike typical studio recordings. The A*Stellar did rock records as effectively as it did classical and jazz. It's a turntable for all genres.

Conclusion

Acoustical Systems' A*Stellar turntable is an impressive piece of mechanical engineering and design. It has all the attributes of fine German machining, and it sets up easily and stays set up. The pneumatic isolation system is simple, doesn't require a large outboard noisy pump, and is self-leveling, so it's almost as if it's not there. If you have a footfall or other feedback issues, this turntable might solve them, but since I don't have that issue in my room, I can't be sure.

My biggest problem with this design is the depth of the crevice surrounding the platter. If a screw rolls down into it while you're doing a cartridge install, good luck getting it out. A circular plastic "bib" might be a useful accessory. Otherwise, hosting this table in my room for a longer than usual time (for reasons not relevant here) was a complete pleasure. Not for a second was there an "I can't wait to get this thing out of my room" thought. Quite the opposite.

I didn't get into a comparison here with the Wilson Benesch Prime Meridian on the next-door stand, but of course I did some comparisons, and the direct-drive sound was totally different—in some ways like the differences between tubes and solid state, but less stark than the OMA/TechDAS Air Force III Premium comparison. There were qualities and recordings that put one ahead of the other depending upon your listening tastes. And of course, the Prime Meridian costs about twice what the A*Stellar costs when you add in an Axiom arm.

There's room for five arms, which is probably three more than most buyers will use, but they are there if you need them. It's quiet and drains the energy as the design intends as best as I can hear, putting the music on a black canvas. The A*Stellar's supple attack, generous sustain, and decay into black lets the music linger delicately in space like the visual decay of an exploding firework shell. **tas**

Manufacturer Comments

Critical Mass Systems Ultra-Gateway Rack

I would like to thank Drew Kalbach for the time and effort he put into the Ultra-Gateway review. Designing an entry-level rack that conforms to the high standard of performance Critical Mass Systems has come to stand for was extremely difficult. Entry level means low cost. Low cost generally means compromised performance. We overcame this problem by adding the LS 2.25 feet to the rack as standard equipment. The precise materials and fastidious application of damping materials inside the foot drain excess energy out of the entire rack structure. The reduction of mechanical interference in the signal path results in improved component performance. The LS 2.25 feet are the technological edge that earned Ultra-Gateway the CMS logo.

Joseph Lavrencik
Critical Mass Systems

Monitor Audio Hyphn

With Hyphn, the Monitor Audio design team set out to create a loudspeaker that fully embodies our transparent design philosophy. At the heart of this approach is the idea that the speaker itself should disappear, leaving the music and the artist's intent at the forefront of the listening experience. Hyphn delivers on this promise with an audio performance unlike anything else we've created. Developed by our UK-based R&D team, Hyphn stands as a statement piece for Monitor Audio: a design that redefines expectations while pushing the boundaries of high-end audio performance. It is not just a speaker; it's a statement of intent for the brand. Many thanks, indeed, to Andre Jennings and TAS.

Charles Minett
Product Design Director
Monitor Audio

Acoustical Systems A*Stellar Turntable

Picking up Michael Fremer's comment about lost screws and hint regarding covering the crevice surrounding the A*Stellar's platter, we will now include a custom rubber profile with the A*Stellar for easy cover and removal during cartridge mounting. The speed(s) of 33 1/3 as well as 45rpm *can* be adjusted. Michael did not have that information at the time of the review—*mea culpa*. The pitch control only works with direct adjustment in the motor management. There is a USB port located at the rear connection box. The needed software is provided together with detailed, pictured instructions. It is a 2–3 minute procedure and allows freely fine-adjusting the speed(s) in steps as small as 0.005 rpm.

Dietrich Brakemeier
CTO, Acoustical Systems

the absolute sound

STATEMENT OF OWNERSHIP, MANAGEMENT, AND CIRCULATION (39 USC 3685)

1. Publication Title: The Absolute Sound
2. Publication No.: 0494150
3. Filing Date: 10-1-25
4. Issue Frequency: Jan, Feb, Mar, Apr, May/June, Jul/Aug, Fall, Sept, Oct, Nov, Dec
5. No. of Issues Published Annually: 11.
6. Annual Subscription Price: $29.90
7. Mailing Address of Known Office of Publication: Nextscreen, LLC, 2211 Denton Drive, Austin, TX 78758.
8. Mailing Address of Headquarters or General Business Office of Publisher: Nextscreen, LLC, 1801 Red Bud Lane, Suite B, Round Rock, TX 78664.
9. Names and Mailing Addresses of Publisher, Editor-In-Chief, and Executive Editor:
   Publisher: Lance Profyt, Austin, TX 78664
   Editor-In-Chief: Robert Harley, Albuquerque, NM 87111
   Executive Editor: Jonathan Valin, Cincinnati, OH 45202
10. Owner: Nextscreen, LLC, 1801 Red Bud Lane, Suite B, Round Rock, TX 78664. Thomas B. Martin, Austin, TX 78737
11. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities: None
12. Tax Status: Has not changed During Preceding 12 Months.
13. Publication Title: The Absolute Sound
14. Issue Date for Circulation Data Below: Oct 24

	Average No. Copies Each Issue During Preceding 12 Months	No. Copies of Single Issue Published Nearest to Filing Date
15 Extent and Nature of Circulation:		
a. Total no. Copies (Net Press Run):	14,506	13,570
b. Paid Circulation:		
(1) Paid/Requested Outside-County Mail Subscriptions:	11,087	10,651
(2) Paid In-County Subscriptions:	0	0
(3) Sales Through Dealers and Carriers:	1,176	1,115
(4) Other Classes Mailed Through the USPS.	0	0
c. Total Paid Circulation (Sum of b(1), (2), (3), and (4):	12,263	11,766
d1. Free or Nominal Rate Distribution by Mail:	320	328
d4. Free or Nominal Rate Outside the Mail:	393	120
e. Total Free or Nominal Rate Distribution (Sum of d1 and d4)	713	448
f. Total Distribution (Sum of c and e):	12,976	12,214
g. Copies not Distributed:	1,530	1,356
h. Total (Sum of f and g):	14,506	13,570
Percent Paid:	94.5%	96.33%

16 X Total circulation includes electronic copies.
Report circulation on PS Form 3526-X worksheet

PS Form 3526-X

a. Paid Electronic Copies	14,307	17,033
b. Total Paid Print Copies (Line 15c) + Paid Electronic Copies	26,570	28,799
c. Total Print Distribution (Line 15f) + Paid Electronic Copies	27,283	29,247
d. Percent Paid (Both Print & Electronic Copies)	97.38%	98.47%

I Certify that 50% of all my distributed copies (Electronic & Print) are paid above a nominal rate.