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### REVIEW: TECHDAS AIR FORCE TWO TURNTABLE



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by Alistair McKeough (Https://Www.stereo.net.au/Associated-Posts/26)
17th March, 2015



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The Air Force Two **(AF2)** is the younger sibling of TechDAS' flagship Air Force One **(AF1)**. After its debut in 2012 the AF1 took almost no time to sweep away the competition and place itself firmly in every discussion about the world's best turntable.

Likewise, the AF2 has created its own stir. In particular because the younger sibling has drawn just as deeply as its big brother on the traits that made the AF1 what it is. The AF2 isn't a stripped down AF1 — it is a magnificent turntable in its own right. Indeed, it takes up more space on the rack than its older brother.

TechDAS is the in-house brand of Stella Inc, a Japanese distributor of some seriously good hifi gear. While the TechDAS Air Force turntables are relatively young, they are steeped in the most revered history of Japanese turntable manufacture. The AF1 was designed by Hideaki Nishikawa, former technical manager at Micro Seiki, who was reportedly given just one design criterion — to make the best reasonably sized analogue turntable possible.



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That objective required the best possible vacuum systems, air suspension, air bearing, air damping and air suction. These were technologies that Hideaki Nishikawa felt were not sufficiently evolved from his time with Micro Seiki, and so the Air Force turntables represent a better approach, but one that has benefited from decades of learning and development at Micro Seiki.

The good news for those considering the AF2 is that rather than trickling down, the AF1's technology has veritably flooded into the AF2. A hybrid suspension system for the chassis' four feet, in which springs are damped by both oil and air pressure, replaces the "air only" approach of the AF1, but otherwise the key ingredients that set the AF1 apart are all there, with the air bearing and vacuum coming straight from the AF1.

Vacuum hold down turntables aren't novel. As well as Micro Seiki, brands such as SOTA and Basis have produced variations on the theme. This is hardly surprising, as the advantages of having a flat surface for the stylus to track are self-evident.



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But the vacuum does more than simply hold the record flat. It damps vibration. Sonic advantages include higher resolution of detail, a lower noise floor, a more stable and coherent soundstage and more powerful bass.

The AF2 takes vibration damping to extremes. You can tap the surface of the record while it is playing on the AF2, without inducing tracking error. Forget the rest. The vacuum system deployed by TechDAS offers levels of vibration damping that no other turntable manufacturer has currently achieved.

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With an RRP of \$42,000 the AF2 is an eye-wateringly expensive end game turntable. Yet it is around half the price of the AF1, while still enjoying the AF1's technology and performance levels.



(https://www.stereo.net.au/images/articles/Images/DF0\_5215.jpg)

TechDAS achieved this cost reduction cleverly. A large part of the compromise to produce the AF2 at this price point involved cost cutting the chassis production, by casting it rather than machining it. Deliciously, this in no way compromises audio fidelity. Finish is a matter of personal preference, but I like the matte cast metal. It is not as premium as a machined chassis, but it still looks great. And it's as tough as a Le Creuset Casserole to boot.

Once setup, the turntable weighs 47kg and takes up considerable space, with its 684mm(w) x 454mm(d) x 195(h) footprint. Those with narrow racks be warned! Additionally, the power supply and vacuum control unit comes in a separate box, measuring 430mm(w) x 232mm(d) x 150mm(h) and weighing 10kg. This box can be positioned away from the turntable, and I positioned it out of sight with my power conditioner.



<u>(https://www.stereo.net.au/images/articles/Images/DF0\_5216.jpg)</u>

The motor drives the same 4mm polished polyurethane belt used in the AF1, using an optical microprocessor controlled system to regulate speed. The belt has no perceptible stretch and I expect that protagonists for string drive will be happy to leave this one alone. During initial setup the turntable is placed into "Tension Cal" mode and belt tension

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is manually adjusted, while the computer tests the speed for both 33 and 45rpm operation. According to my KAB SpeedStrobe the AF2 is completely accurate and has remained so over four months of heavy use.

The turntable has no conventional bearings. The 10kg aluminum platter is installed on a polished glass plate. With the turntable off, the platter sits on the glass and cannot be rotated. Switch on the turntable and the air pump lifts the platter to precisely 0.03mm above the base, allowing it to rotate. All of this is completely silent.

In operation, the turntable is a delight to use. The brushed aluminum front panel has "Stop", "33" and "45" buttons on the left side and "Suction" and pitch control buttons on the right side. It also incorporates a two line monochrome LCD display, on which it shows platter speed in real time.

Pop on the record, press "Suction" and the record couples to the platter. This occurs even with a badly warped 180g pressing. Select your speed and the LCD displays "wait" on one line as it brings the platter up to either 33 or 45rpm. A couple of seconds later the display confirms "lock" and you're ready to drop the needle. When it is time to take the record off, a push of the Suction button gently, and silently, breaks the vacuum hold and decouples the vinyl from the platter.



<u>(https://www.stereo.net.au/images/articles/Images/\_8C13115.jpg)</u>

In four months of heavy use, the turntable has locked speed almost immediately at both 33 and 45 every single time. Indeed, I no longer wait for the lock, just load it up and then head back to my listening chair. Invariably, it is locked at the right speed before I finish that short journey.

A quick word on tonearms. I tried two with the AF2. I have never seen a record player that places less strain on the tonearm. On every recording the tonearms had essentially no vertical movement. The AF2 plays records so flat and with so little vibration that the demands on the tonearm are lessened to a very great degree.

My listening was done using a Lyra Atlas, mounted on either a Thales Simplicity II or a Graham Phantom II Supreme. Phono duties were handled by the onboard stage of a Dartzeel NHB-18NS preamp, in turn feeding a Dartzeel NHB-108 power amp which is driving Avantgarde Trio loudspeakers. Speaker cables include Jorma Statement, interconnects Evolution BNC Links and phono cable a Tara Labs Zero.

#### LISTENING

Over some four months I listened to an extensive range of music, all of which the AF2 handled with impeccable aplomb.



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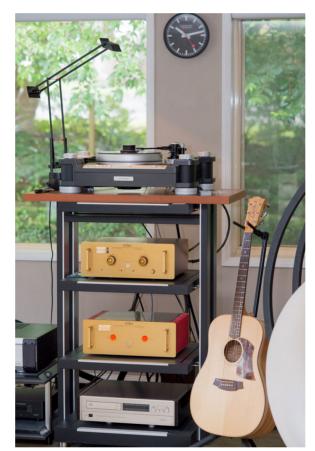
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So, how does it sound? At this point I'm struggling to avoid a series of audiophile clichés.

First up, the AF2 is quiet. *Very quiet*. It makes no mechanical noise during operation and it transmits none through the phono cartridge. The silence in between tracks is complete. On most of my records the noise floor was lower than my room's. Some records where I previously put up with a little hiss and crackle on the outer rim play without noise.



(https://www.stereo.net.au/images/articles/Images/\_8C15733.jpg) It is trite, but of course the lowest possible noise floor is of fundamental importance in audio reproduction. It provides the well spring from which the rest of the audio experience flows. The Air Force turntables require a reevaluation of how quiet the noise floor can be in analogue playback. On the many records where the noise floor is lower than my room's, the AF2 is as good as digital in this respect.

Another stand out character of the AF2 is the power, dynamic slam, and drive it provides. In these respects it is reminiscent of direct drive classics, such as the Yamaha GT-2000, which impart such great weight and presence to the instruments. But at the same time the AF2 isn't overblown, or pushy. Despite its authority it doesn't lack for elegance. It just presents the music with a sense of power and ease. Like a surfer riding a wave, who can sense all of the effortless power of the deep blue ocean, a listener to the AF2 enjoys a sense that the turntable is presenting the music as it should be, without ever straining or becoming breathless.

With a soundstage built on a vanishingly low noise floor and powerful presentation, the AF2 has oodles of bass. It positively drips with rich tones. But to say that might give the impression the turntable is a bit dark and treacly, which it isn't. That bass foundation however is simply the start of a presentation that is equally impressive through the mid and treble ranges.



(https://www.stereo.net.au/images/articles/Images/DF0\_5219-Edit.jpg)

The result is a turntable that is marvelously balanced and impressively versatile. I threw rock, pop, electronica, orchestral, chamber, vocal, metal, folk, bluegrass, country, organ, brass, jazz, blues, and soul at the AF2 and it served them all up flawlessly. I didn't try any hip hop, because I consider it a mild form of torture, but even that would probably sound alright through this turntable.

The most striking thing about the AF2 is how organic and unprocessed it sounds. Upon hearing it for the first time an experienced musician and music teacher turned to me and said, "It's so natural". That sums it up nicely really. The AF2 presents the music without any of its mechanical underpinning intruding.

Top flight digital systems are usually just a little too impressive to be completely natural. On the analogue side, most turntables impart some sense of the mechanical processes behind the music extraction. The AF2 somehow avoids this. It is like the turntable doesn't exist. A consequence of this is that it is by far the most relaxing front end I have heard. Everything is there, in all its glory, but without any of the slightly pressurised impression that often accompanies highly resolving sources.



(https://www.stereo.net.au/images/articles/Images/\_8C15734.jpg)

The AF2 provides a turntable where the audiophile no longer needs to compromise to find a source tuned for their preference. It has it all. Bass and mids are faithful to the recording, with the AF2 able to present them as crisp and clean or warm and rich, as required. Treble

presents as organic and unpetrified. Decays are natural and extended. It can be elegant or provide epic slam. Wow and flutter are in essence eliminated.

In the immortal words of Ferris Beuller, "If you have the means, I highly recommend picking one up".

TechDAS Air Force Two is available now for \$42,000 RRP (excluding tonearm).

TechDAS is distributed in Australia by <u>Pure Music Group</u> (<a href="http://www.puremusicgroup.com/">http://www.puremusicgroup.com/</a>).



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