

WHY THE LINN LP12 IS STILL MAJIK!

hi-fi+



ISSN 1465-5950



REPRODUCING THE RECORDED ARTS JUNE 2015 • 124

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TechDAS Air Force Two turntable

by Alan Sircom

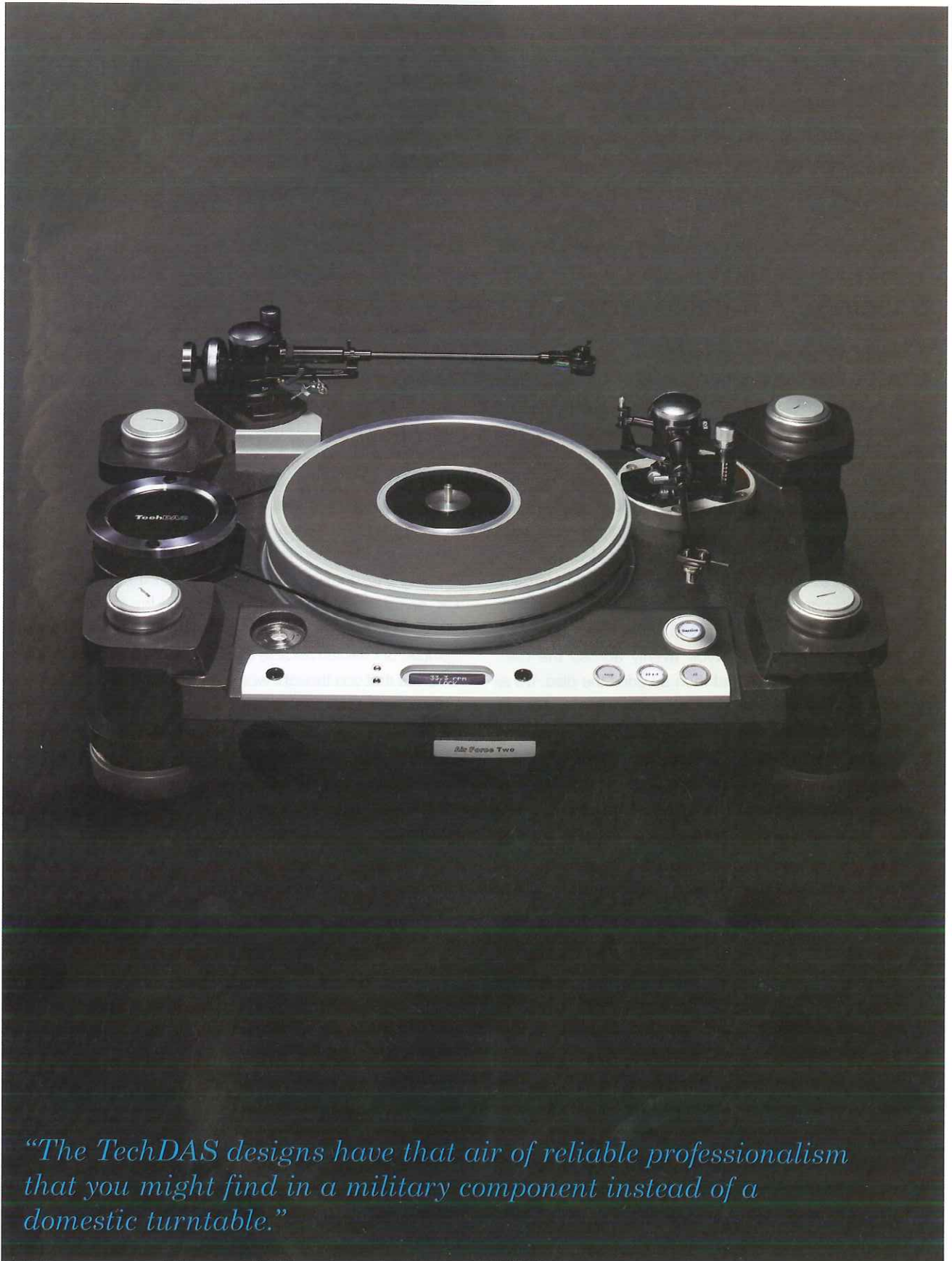
Of all the high-end superdecks, few generated quite as much interest as TechDAS' Air Force One. Everything on a turntable that could be pumped up or held down by air or vacuum, was... and was made to a standard that most other turntable makers could only dream of. With the Continuum project now history, the 'One has become the turntable among 'Vinylista Extrema'. However, the price of the 'One is a big ask for many enthusiasts, and the Air Force Two goes some way to address this (a still cheaper Air Force Three was shown at the Munich High-End 2015). This new turntable is a far smaller, transcription style design, with provision for three different arms. Weird and wonderful!

TechDAS took all the elements of the Air Force One and worked out what could be simplified. This isn't an easy task: simplifying an air bearing or a vacuum hold-down system without fundamentally wrecking the advantages of such components in the process is extremely difficult, especially as Nishikawa-san (TechDAS designer and CEO) is convinced – rightly, in my opinion – that compression is pivotal in the design of any air-bearing system. This means the default, lower-cost way of making an air-bearing (a fishtank pump) is out of the running, and any TechDAS design has to rely on a custom-made solenoid-valve system with extremely small air holes, and an air condenser to cancel out ripple. And, like its bigger brother, the Air Force Two is required to be capable of being used with more than one tonearm, although in standard guise, for most people one arm is probably more than enough. While there is no 'easy way' put simply, the easy way to cut costs is not the right way to make a cheaper Air Force One.

Given that important set of limiting criteria imposed on the Air Force Two design before one fires up the CAD program, just how can you reduce prices? Well, first you remove the option of three different platter surface materials, replacing the 29kg stainless steel platter with a 10kg, solid cast aluminium design in the process. And you replace the air suspension system with oil-damped adjustable towers in each corner of the turntable plinth. And that's about it. OK, so this means a redesigned, slightly smaller, lighter plinth, but the free-standing asynchronous, DC-controlled AC motor block, the air bearing and vacuum disc hold down, the adjustable speed control, and the separate (yet silent) air pump/condenser/power supply box are essentially the same. There is also a commonality of design, although the Air Force Two is more squared off. Although not by much; in fact, the shape of the Air Force Two is not regular, and it's reasonably large, too.

That 'commonality of design' is well worth exploring. Although by its very nature, the Air Force Two is a handbuilt design, absolutely nothing about it gives the game away. This is not in anyway intended as a backhanded compliment, but the TechDAS designs have that air of reliable professionalism that you might find in a military component instead of a domestic turntable. Don't misunderstand this; such equipment is designed to be heavy duty, easy to operate device, capable of doing something complicated millions of times with almost no complaint. The Air Force Two has the same confidence about it. It's push-button control, and those push-buttons light up when activated. Speed control is shown on a blue LED panel on the control block in front of the deck, and speed adjustment (both 33/45rpm speed change, and fine-tuning of speed) are given equal emphasis. This air of complete reliability also comes from the cast upper and lower chassis, the big and powerful build, and the grey on grey finish that makes it look like it should be archiving vinyl in the Library of Congress or the British Library.

The Air Force Two's standard armboard position limits the options to a 9" or 10" arm, but the outrigger rear arm position can also take a 12" arm. Nishikawa-san is the distributor of Graham arms in Japan, which is why so many users end up recommending the Phantom as a natural partner to TechDAS designs, but in reality almost any arm can show what it is capable of sitting on the Air Force Two's subchassis. Construction and build are not simple, but this has more to do with physically moving the substantial parts around, rather than any strange installer voodoo. Given that I suspect most Air Force Two owners will either be 'tear up the manual' types who view the set-up procedure as something to be relished, or wealthy types who would happily pay someone else to do the installation job for them, I suspect going into detail about building a TechDAS in the home is little more than self-flagellation. Just remember that, when it comes to turntable set-up and Aesop's fables, "slow and steady wins the race", so take your time!



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“It’s an expensive way of appeasing Fluffy or Nibbles, but if ‘Nibbles’ is next-door’s guard Rottweiler, the Silencer is money well spent.”



KLAUDIO KD-CLN-LP200 RECORD CLEANING MACHINE

The TechDAS came with an unexpected extra feature, in the boxy, upright shape of the £4,000 KD-CLN-LP200 from audio newcomer Klaudio. The name is mostly descriptive; it’s a 200W LP cleaning machine, but entirely skips over the whole ‘ultrasonic cleaner and dryer’ part.

Although Klaudio is a new brand, its parent company Koolance has been a major player in the liquid-cooling field since the turn of the millennium, and a lot of the mechanics are common to both cooling and ultrasonic cleaning.

Unlike previous cleaners, this is an entirely detergent, near-enough contact-free method of cleaning: the disc is placed vertically in a slot at the top of the LP200, it squirts distilled water from a reservoir evenly across the disc, does its ultrasonic thing, and then air-dries the disc. It’s all completely automated; you just select washing and drying time, depending on the LP crud-factor. There have been some concerns over the use of a 200W ultrasonic motor, as in theory prolonged cleaning could damage the disc: Klaudio’s website shows what happens to a red and a blue vinyl LP run for nine hours at high heat – aside from dirt removal, nada. Thus, a five minute clean is unlikely to damage an LP, and no-one’s going to turn their nose up at a five minute blow j... blow dry. Optional adaptors for 10” and 7” records are available, and there’s even an automatic disc loader for those with thousands of records to clean.

There’s also one more ‘option’ that really isn’t optional for the LP200 in the home – the £1,500 ‘Silencer Acoustic Dampening Case’. The case uses similar damping layers to the ‘blimps’ used by stills photographers on movie sets to cut the sound of a DSLR mirror clattering, and this offers a claimed 50dBA attenuation overall. In fairness, the LP200 isn’t significantly noisier than record cleaners like the Nitty Gritty, but it’s the ‘ultrasonic’ component that is the problem. If you (or your neighbours) have pets, an un-blimped LP200 is like Metallica turning up for a soundcheck on your driveway for them. It’s an expensive way of appeasing Fluffy

or Nibbles, but if ‘Nibbles’ is next-door’s guard Rottweiler, the Silencer is money well spent.

I’m pretty good with my LPs. They get played, and reviewers are not known for their fastidiousness, but somehow my LPs are in generally fine fettle. So, my take on RCMs has usually been limited to helping out those second-hand finds that need a little TLC. And in this context, the LP200 is all the TLC you could ask for. Five minutes cleaning and five minutes drying restores them to the way they looked when they first left the inner sleeve. OK, so there’s nothing you can do about the scratches and divots taken out of an LP by a 1970s stoner missing the spindle, but the remarkable thing is most of those pops and crackles that you thought were just a function of overplaying just go away.

And then, the really crazy part hits. You get one of your cleanest, or newest, LPs... and the same thing happens. The surface noise just drops away, fairly significantly. Even thick 180g virgin pressings get noticeably quieter and the music just flows a little easier.

The Klaudio KD-CLN-LP200 raises the bar in terms of record cleaner price, but it also raises the bar in terms of record cleaning. LPs leave the LP200 in pristine, museum-grade condition, and you really can hear the difference, too. Serious record collectors – start saving!

Manufactured by: Klaudio
URL: www.klaudio.com



“It’s rock solid, both figuratively and metaphorically.”

- ▶ Once set-up, the Air Force Two becomes the ultimate analogue musical reproduction machine, and it stays that way. It’s rock solid, both figuratively and metaphorically: the performance it makes is powerful, deep, and completely controlled, and the reassuring build and absolute stability means it will stay that way for years to come. This is not some high-end extravaganza that you need a road map to navigate to its off-switch – instead, the Air Force Two has all the operational niceties of something like classic Technics direct drive turntable, writ large.

The truth is, I burned through a lot of LPs in very short order listening to the TechDAS Air Force Two, because playing music through this deck is such a pleasure. It manages to combine the authority, weight, and solidity required of a high-end deck with a lot of the easy and unforced sense of timing found in more down-from-the-stratosphere models. The Air Force Two breathed life into an old favourite of mine; a Decca SKL of Gilbert & Sullivan’s overture to *The Pirates of Penzance* from the late 1950s. It was one of those ‘you are there’ moments, where more than half a century vanished and you were listening at the New Savoy Theatre in London. This was a remarkable play of a remarkable recording; the recording completely pitch-stable (a by-product of living in the digital age is turntables that are not pitch-perfect soon get outed), vibrant, and jumping out of a near silent background, despite the intervening years.

So it went on, through Joe Jackson [*Night and Day*, MoFi], Zakir Hussain [*Making Music*, ECM], even to Martha and the Vandellas *Dance Party* [Gordy, reissue]. This last was telling, because it sounded at once fabulous and awful. Fabulous because it delved deep into the recording, and awful because the deeper you went, the more you realised there wasn’t much to salvage beyond the stock Motown sound. That the Air Force Two didn’t try to make a silk purse out of a sow’s ear in the slightest was a significant bonus for the turntable design.

Most of all, though, the Air Force Two shines thanks to the absolute authority it imposes on the music, and yet it’s not so authoritarian as to refuse to allow the music to let its hair down a little. Even complex polyrhythms, such as found in the intrinsically funky West Coast big band meets ska in ‘Footprints’ from the Jazz Jamaica All Stars *Massive Vol. 1* [Gearbox], are not an issue here. The Air Force Two’s absolute (yet not clinical) precision snaps the album into sharp focus, letting those Zappa-esque vibrophone runs play on beautifully.

The TechDAS Air Force Two is one of those turntables that takes ‘Awesome’ in its stride. It always sounds awesome, even when it’s resolving something straightforward like Tom Waits voice. But when faced with an orchestra, complex music, or the kind of rhythmic drive that’s supposed to be the domain of lighter-weight turntables, the Air Force Two just gets out of the way and lets the music shine through. Just shy of £30,000 is a lot to pay for a turntable, but you do get a lot of highly recommended turntable, too! +

TECHNICAL SPECIFICATIONS

Type: Belt-driven turntable with air-bearing and vacuum hold-down

Drive system: Belt drive with surface polished lyurethane flat belt

Chassis: Precision aluminum castings, weight 32.6 kg

Platter: Solid aluminum (A5056), weight 10 kg

Motor: AC synchronous motor. Speed controlled by DC amplifier

Speed: 33.3rpm/45rpm, Precise speed adjustment function

Wow & Flutter: below 0.03% (W.R.M.S)

TT dimensions (WxD): 685x460mm

Total weight: 47kg

Air Pump and Supply Unit

Power consumption: 50W

Dimensions (WxDxH): 43x16x24cm

Weight: 10kg

Accessories supplied with Air Force Two:

Tonearm base wood x 1 (drilled for specified tonearm)

Platter cover “The Platter Top”
x 1 AC power cable x 1
(180cm length)

Optional items & Accessories

Special Damping Table

Second Tonearm Base

Tonearm base wood for supplement
(for 1st and/or 2nd tonearms)

Price: £28,898

Manufactured by: TechDAS

URL: www.techdas.jp

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