



## TURNTABLE

Belt-driven turntable with electronic speed control  
 Made by: Stella Inc., Tokyo, Japan  
 Supplied by: Absolute Sounds Ltd  
 Telephone: 0208 971 3909  
 Web: www.techdas.jp; www.absolutesounds.com  
 Price: £18,998

# AUDIO FILE

# TechDAS Air Force III

Finally, the entry-level record deck promised by TechDAS is here – with a smaller price, a smaller footprint and all the magic – the remarkable Air Force III has touched down  
 Review: **Ken Kessler** Lab: **Paul Miller**

**H**owever crass it seems to open a review of a high-end product with the matter of price – surely the preserve of writing about budget kit, where bargains matter and cost is a real issue – it is inescapable when dealing with TechDAS's Air Force III. True to its word, the company has halved prices with each new model since the Air Force One [*HFN* Jun '13] so this third in the series sells for (deep sigh of relief) £18,998.

This is simply staggering value for a deck delivering 90% of the performance of a sibling that leaves little change from £100,000. It goes even further. Unlike the dearer AF One and AF Two [*HFN* May '15], the AF III – note the change to Roman numerals! – can be fitted with up to four tonearms, whereas the larger decks make do with two. At a time when analogue is enjoying an unforeseen renaissance, and the new breed of high-end turntable user leans toward cartridge collecting or fitting different cartridges to suit various needs, this is a boon not seen since the days of its spiritual ancestors from Micro Seiki.

### CUBIST APPEAL

Also true to the TechDAS ethos, the 'III does everything the larger models do, if to a marginally lesser degree, with cost savings made primarily through the use of different materials and manufacturing techniques. So, despite the reduction in price, you still get the air bearing and vacuum LP hold-down, and the sound is so clearly of the same family that it becomes more a matter of perceived virtues rather than actual performance. And let's face it: the One is visually dazzling, the Two less so, while the III is purely

utilitarian. Then again, a Cubist would probably prefer the III to the curvier One.

Measuring 312x160x360mm (whd) – but not including tonearm bases, which extend outward according to the length of the arm to be fitted – this is clearly a 'compact' relative to the 'One's footprint of 680x480mm and over twice the weight. This nearly-square main chassis, the platter extending to its edges and therefore being as small as possible without going round like an SME 10 or 15 [*HFN* Oct '15], certain Avids or a Wilson Benesch Circle, is cut and machined from solid aluminium alloy, just like the Air Force One.

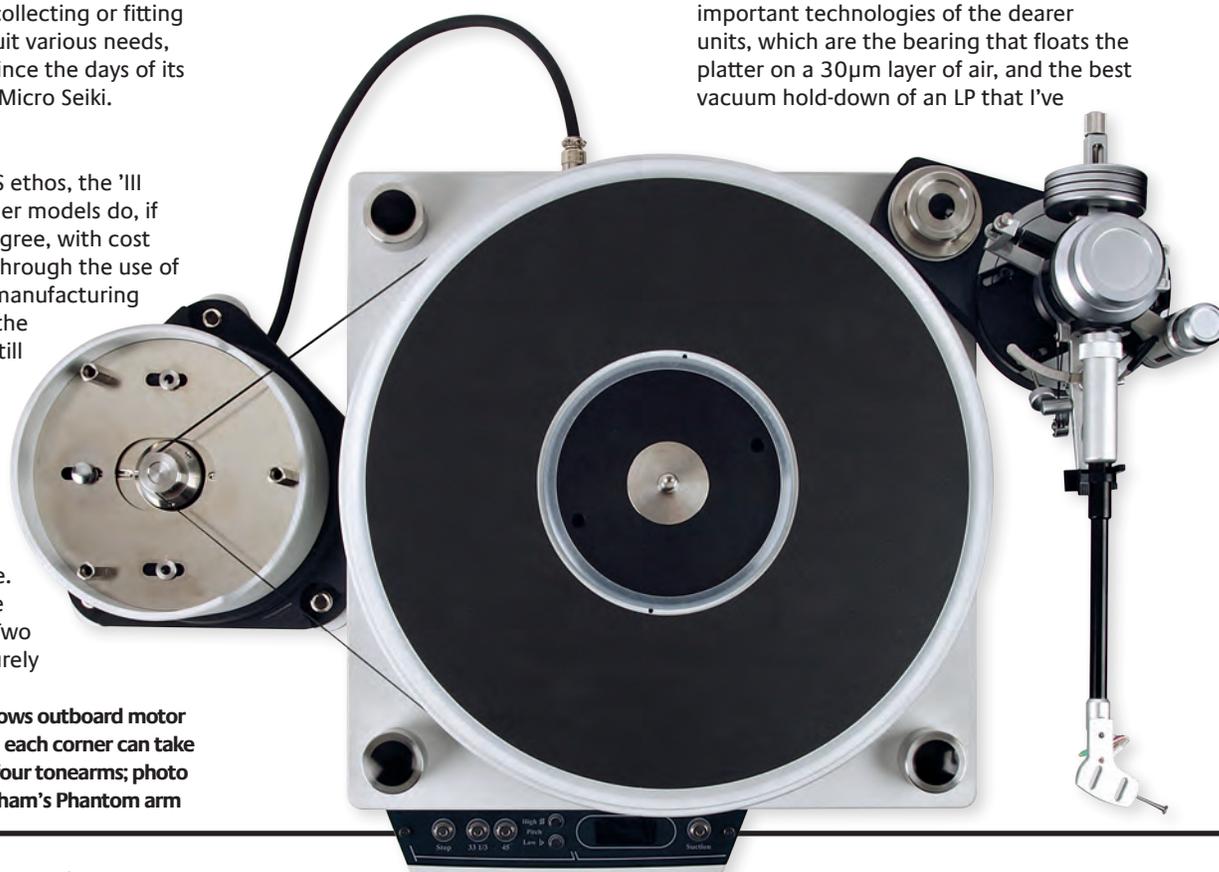
Each corner pillar can accept a tonearm base, hence the optional fitting of four tonearms, from 9in to 12in. They address a basic platter of solid aluminium alloy weighing 9kg, but other types will be developed for customers who want upgrades. The unit rests on four feet

using what TechDAS calls 'a pin-point support method with a sufficient howling margin within an appropriate installation environment'. They also lower the centre of gravity, though I have no idea why that is important in a record deck, as opposed to a sports car.

### FLOATING ON AIR

If the isolation isn't sufficient, one of the optional extras will include an insulation table that provides air suspension technology. Currently, the deck comes with a wooden tonearm base drilled for a specified tonearm, while the other options include extra armboards and the Disc Stabiliser, which is so useful and effective that it ought to be a standard item.

But forget all the extras and the unavoidable enticement of upgrade possibilities: the basic Air Force III still manages to provide the two most critically important technologies of the dearer units, which are the bearing that floats the platter on a 30µm layer of air, and the best vacuum hold-down of an LP that I've



**RIGHT:** Top-down view shows outboard motor and compact footprint, yet each corner can take an armboard for a total of four tonearms; photo shows deck fitted with Graham's Phantom arm





yet to experience (Luxman or Continuum devotees might argue otherwise).

Why the vacuum hold-down? The goal is to remove further any unwanted vibration at the level of the LP itself while also ironing out any mild warps or ripples in the vinyl. Also notable is that TechDAS has done a great job in ensuring that the outboard air pump is unobtrusive, itself the result of trickle-down technology from the Air Force One. It's housed in a nicely-finished enclosure and is easily distanced from the main unit [see inset picture, below right].

Its external motor, as with the other TechDAS decks, is completely separate from the main unit, connected only by the belt-to-platter contact. Unlike the larger models, where the motor assembly sits in a niche, here the motor module is simply positioned to the side. (If necessary, it could actually be positioned *behind* the

There's just no edginess: strings were as sweet as maple syrup'

chassis, as the control panel is mounted in the front of the III, not on the motor unit.)

Here, again, this is a 'baby' Air Force One or Two, the control section providing the usual choice between speeds of

33.3rpm and 45rpm. It also offers pitch control of  $\pm 0.1$ rpm 'for those who have a sense of absolute pitch'. Speed accuracy is assured by a high-precision oscillator circuit, which TechDAS says is also found in

various high-quality mobile phones.

#### LIFELIKE CRISPNESS

My observations involve four intensive sessions with a number of systems, but the most revealing was via the MartinLogan Neoliths [HFN Jul '16] with Constellation electronics. Arms included SME Series V and V-12, SME 3012 and

**ABOVE:** Layout similar to Air Force One and Two, with touch controls in a central panel, offering on/off, speed select, speed adjust and digital display; looks best with just one arm!

the Graham Phantom, while cartridges included Koetsu's Jade and the TechDAS TC01Ti [HFN Sep '14], through the Audio Research REF 3 phono stage.

But to deal with the 600lb gorilla in the room right away, to dispense with paranoia: no, this doesn't blow away a One or a Two. The more you spend, the greater the control over the lower registers and the more 'solid' the sound. Also to be gained by the dearer models are lower noise floors for added dynamic contrast, but I hasten to add, with my italics, *the gains are so subtle that they reinforce the Law of Diminishing Returns*. This is not to say that you will not hear the differences,

because you will, especially through a massive system with plenty of woofery, but, as I said above, the main gains for the added (and huge) outlay will pay more for better looks and psychological reinforcement.

That said, the case made for the AF III is persuasive, just because you get so much for so little in relative terms. (And I stress 'relative' – I mean in comparison with the dearer TechDAS, not with the national average wage.) Using Mobile Fidelity's magnificent 45rpm edition of Bob Dylan's *Blonde On Blonde* [MFSL 3-45009], the cheesy percussion and tambourine had a 

### THE NEXT STEP

TechDAS doesn't seem to take a break. The big news at Munich's High End 2016 was the launch of the even costlier Air Force One Premium, which elevates the company's already-unassailable flagship further into dream territory. And Nishikawa-san has always hinted at his ultimate statement offering, his final design, which is tentatively called Air Force Zero. While awaiting Zero-hour, the near-future holds much for enthusiasts. The 'III is certain to benefit from upgrade options that will narrow the gap between it and the Two, starting with the already-available Disc Stabiliser. The two most important add-ons will be the forthcoming isolation platform, which will allow its suspension to emulate more closely those of the One and Two, and the new platters.

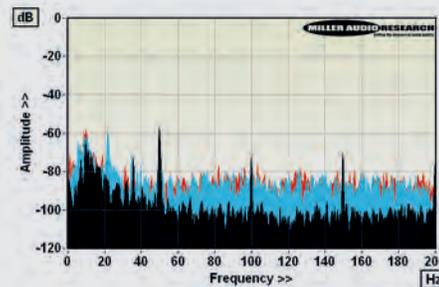


# LAB REPORT

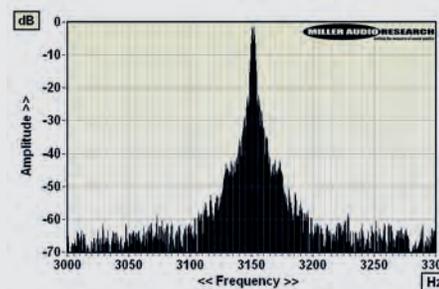
## TECHDAS AIR FORCE III

Despite obvious differences in design, the compact Air Force III shares a similar motor unit, air-suspended bearing and LP vacuum hold-down as the Air Force One [HFN Jun '13] and Air Force Two [HFN May '15]. The Air Force III is machined almost entirely from blocks of aluminium – instead of the composite structure of the One/Two's chassis and platter – but it still employs a disc of polished glass beneath the 9kg platter, the pumped air escaping smoothly across its surface and raising the rotating mass by some 30µm. So while the simpler platter, with its soft foamed mat, is seemingly less effective at suppressing vinyl noise (through-groove rumble is -68.6dB versus -73.0dB for the AF Two), the through-bearing rumble remains just as impressive at a state-of-the-art -74.0dB (all DIN-B wtd re. 1kHz at 5cm/sec). Moreover, the unweighted spectrum shows improvement as the modes at 30Hz and 32Hz measured with the AF Two are replaced here by a single mode at 36Hz that's some 10dB lower in level [black trace, Graph 1 below].

Once calibrated, the platter comes up to speed rather quicker than with either the AF One or Two at 12 seconds, but it'll still not give the likes of Technics' direct-drive SL-1200GAE pause [HFN Jun '16]! Nevertheless, absolute speed accuracy is excellent at +0.03% [Graph 2, below] and W&F is low – if not quite as rock-solid as either the costlier AF Two or One – with a peak-weighted total of 0.06%. Fortunately, much of this is distributed as a 'white noise' flutter with the main discrete/correlated feature visible as shoulders at ±15-20Hz on the spectrum at very low level. Readers may view a full QC Suite report for the TechDAS Air Force III turntable, when available, by navigating to [www.hifinews.co.uk](http://www.hifinews.co.uk) and clicking on the red 'download' button. PM



ABOVE: Unweighted bearing rumble from DC-200Hz (black infill) versus silent LP groove (with vacuum pull down, blue; without, red) re. 1kHz at 5cm/sec



ABOVE: Wow and flutter re. 3150Hz tone at 5cm/sec (plotted ±150Hz, 5Hz per minor division)

## HI-FI NEWS SPECIFICATIONS

Turntable speed error at 33.33rpm	33.34rpm (+0.03%)
Time to audible stabilisation	12sec
Peak Wow/Flutter	0.02% / 0.04%
Rumble (silent groove, DIN B wtd)	-68.6dB (with vacuum hold down)
Rumble (through bearing, DIN B wtd)	-74.0dB (with vacuum hold down)
Hum & Noise (unwtd, rel. 5cm/sec)	-55.4dB
Power Consumption	41W (26W pump on; 6W standby)
Dimensions (WHD – motor unit)	312x160x360mm / 27kg

ABOVE: Pneumatic hoses from the outboard pump are connected to the air-bearing 'Flotation' and LP hold-down 'Vacuum' fittings while power and speed control are communicated via multi-pin and 6-pin DIN connectors. Note separate ground post

crispness and air-moving aspect that made them sound more lifelike than 'papery', as they can tend to do. It was the salvo of brass, though, that fed the Mardi Gras feel right into the room, especially when using the TechDAS TC01Ti in the 12in SME. The 'blaat!' sound makes you sit up and take notice, the wheezing harmonica and that rattling tambourine combining for a drunken party feel.

### CLARITY AND SPACE

Equally convincing was the spread of the instruments, with the party noise (hoots and whistling) placed far behind them. Damn, I knew the pressing was exceptional, but this was another level of authenticity and immediacy.

OK, so the AF III can do 'scrappy' with a righteous mix of abandon and precision, but how about the ordered and deliberate? 'Rock The Boat' by The Hues Corporation from *Freedom For The Stallion* [RCA APL 1-0323 LP], too, has brass galore, plus those lush strings. The top end of the TechDAS is so precise that the punch of the brass cuts the air with an authority that will challenge your tweeters, and yet there's no unwanted edginess – those strings were as sweet as maple syrup. Where the AF III stamps its authority is in its coherence, so the layers of brass, vocals and strings, as well as rolling bass, enjoy their own clarity and space, nothing shouting at the listener or overshadowing the rest.

This sense of balance proved invaluable in a completely different context, dealing with the furious guitar work of Johnny Winter on the nearly-forgotten pre-CBS masterpiece, *The Progressive Blues Experiment* [Liberty LP-12431]. The glorious twang on 'Bad Luck And

Trouble' from Winter's bottleneck playing on a National steel-standard is conveyed with that inimitable metallic edge and its teeth-gritting rattle. With the boogie of 'Mean Town Blues', the descending bass lines, the snare-heavy drumming and Winter's nasal growl, the AF III managed to offer the clarity and transparency of a high-end open window, without stripping away any of the in-your-face attitude needed to get the message across.

The kick-drum staccato behind the guitar break is just dry enough and certainly dynamic enough to counter the lightning-fast guitar pouring out of the right channel. Full marks to Red Turner for sustaining the percussion throughout!

I didn't need to hear this treasure of an LP on the Air Force III to be reminded that Winter was one of the finest blues guitarists ever, but the fluidity of the TechDAS matched the liquid technique that made him an all-around magician. With his leads going from crystal clarity to roiling raunch, the AF III had its work cut out. It won. ☺

### HI-FI NEWS VERDICT

'Phenomenal' is the only way I can describe the Air Force III. Yes, it has a handful of serious, lust-inducing rivals in its price category to consider, especially from SME and Clearaudio, each with its own sonic and aesthetic charms. I suspect that the 'III will win a devoted following for its multi-arm potential, but the sound, too, is going to prove irresistible for those who want but cannot afford a One or Two.

Sound Quality: 88%

