

Clearaudio Performance DC/TT5

Clearaudio's Performance deck, now sporting a DC motor, has evolved almost beyond recognition over the last decade. Will the new linear-tracking TT5 arm propel it further?
 Review: **Nick Tate** Lab: **Paul Miller**

The German turntable giant Clearaudio offers a dazzling variety of decks, tonearms and cartridges to suit almost every budget from the £995 Concept [*HFN* Jul '10] to the £113,000 Statement v2 [*HFN* Apr '16]. The Performance DC reviewed here is the latest in a long line of 'affordable audiophile' vinyl spinners from this busy brand, where it's attempting to offer high-end quality, style and functionality at a mid-market price.

The standard package comprises the Performance DC, Clarify 'magnetic bearing' tonearm [*HFN* Feb '13] and Virtuoso v2 MM cartridge, price £2950 – but as reviewed here we have the elegant new TT5 tangential-tracking tonearm, bumping the cost up to £3800 (or £4295 with the MC Essence moving-coil seen in our photographs). The TT5 is also available separately for £1995.

CLASSIC GERMAN STYLING

The original Performance turntable which came out in 2007 was quite a different beast with its Staron (artificial stone) top and bottom plinth plates and AC motor. An SE version arrived in 2011 which brought aluminium end plates, before this current version was launched with its DC motor and associated electronics.

The Performance DC deck uses tried and tested Clearaudio parts with the emphasis on quality and consistency. Exquisitely put together, it reminds me stylistically of a classic Dieter Rams/Braun design of the late 1960s. It's a non-suspended subchassis design, so there are no springs or other means of isolation other than that afforded by the plinth and feet.

The upside is that it's far less fiddly than rival decks with sprung suspensions and is

RIGHT: Clearaudio's three-speed DC motor is mounted into the alloy/wood sandwich plinth, driving a sub-platter via a flat belt. The TT5 arm has a spirit level to confirm precise levelling

less likely to go 'out of tune' periodically. It's also wonderfully compact, which will be welcomed by many, though you will need to place it on a well isolated support.

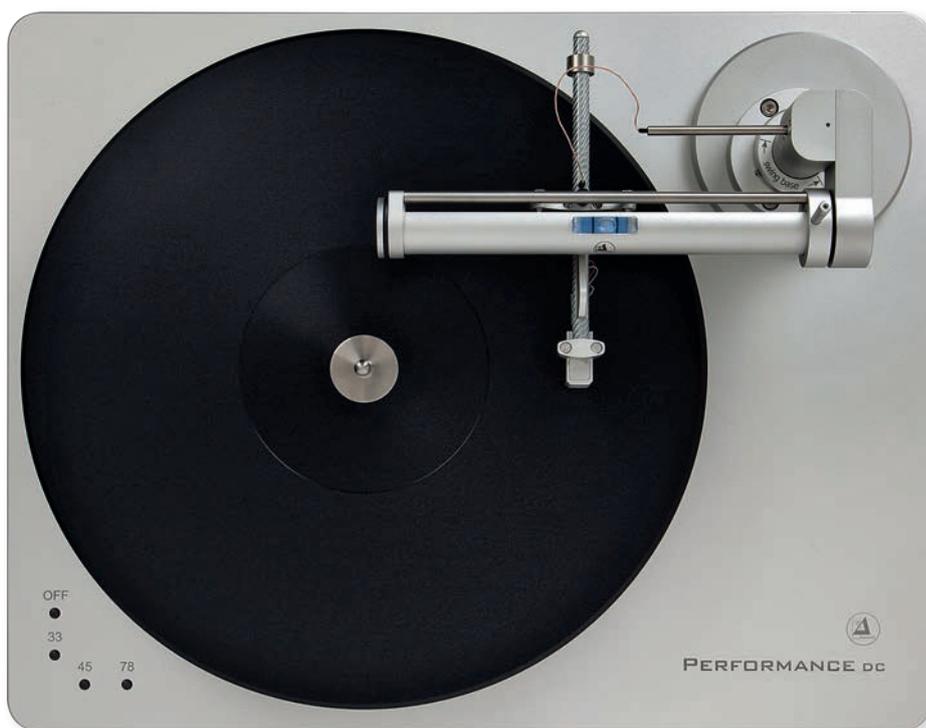
FLOATING PLATTER

Its aluminium and highly compressed wood fibre sandwich plinth is designed to minimise resonance, and set into this is a DC motor similar to that used in Clearaudio's higher end decks. A short, flat profile belt drives the inner platter and this delivers a fast, smooth start-up to the 40mm-thick black Polyoxymethylene (POM) platter. This feels heavy but 'dead' when you tap it – just as it should.

The platter sits on Clearaudio's patented ceramic magnetic bearing (CMB) that supports a good deal of the load if not entirely 'floating' the rotating mass. The

result is ultra-low friction, vanishingly low wear and almost no noise [see PM's Lab Report, p45]. The deck feels swish to use – there are no noises from the belt on start-up, and once the deck gets up to speed it runs reliably and consistently. There's a choice of three electronically switched speeds, 33.3, 45 and 78rpm, and a small external 'wall wart' power supply is included with the deck.

The TT5 is the most affordable of Clearaudio's parallel-tracking tonearms and is essentially a simplified, more value-oriented version of the high-end TT1, allowing the company to extend this technology to a mid-price turntable. Conventional pivoted arms necessarily describe an arc across the LP while linear-trackers move in the same manner as the cutter used in the vinyl disc's production.





So properly set up, a linear-tracker will eliminate tracking error and distortion.

The TT5 is an elegant design, the cartridge carrier assembly running tangentially across the LP surface via a glass collar on two small metal rollers. As the stylus tracks the groove it is pulled inwards towards the record centre, but in order for it to run smoothly and unimpeded, the assembly needs to be perfectly aligned horizontally – hence the arm’s range of adjustments and integral spirit level.

Tracking force adjustment is provided by the simple expedient of moving a weight on the opposite end of the carrier to the cartridge, and securing it with a grub screw. Operating it is straightforward but I would strongly recommend investing in the optional Swing Base (£390) that lets you rotate the

whole arm assembly out of the way when changing records. If not, you’re forced to guide the disc very gently between the deck’s central spindle and the cartridge – which isn’t something for the faint-hearted.

A MASTERLY PERFORMANCE

The sound of this turntable package is quite distinct – clean and crisp. The Performance DC/TT5 sounds confident and smooth, as it gets on with playing the music in an undramatic, matter-of-fact way. Indeed, you could go so far as to say it is relatively characterless, which is what many will

‘The headline news is the clarity and poise of this package’

want from a good record player. Having previously auditioned the deck with a Clarify pivoted tonearm, it’s evidently a key attribute of the turntable but the TT5 takes things a stage further to give an even more mastertape-like feel.

ABOVE: Dominated by its 40mm POM platter, our Performance DC was fitted with the new TT5 linear tracker and Essence Aluminium MC. The optional Swing Base allows the TT5 to be rotated out of harm’s way when changing LPs

Indeed, its sense of sheer unassailability is easy to become enamoured with. It’s rather like moving up to good hi-res digital from CD – suddenly there’s less fuss and bother as your attention falls directly on the music, and not the means by which it’s being reproduced.

Prefab Sprout’s ‘Radio Love’ from *Lions In My Own Garden* [Kitchenware SK 8] is a case in point. It’s a great song but has a rather stuttering, stop-start rhythm. Perhaps the (then) young songwriter Paddy McAloon was trying to be clever, but it can make some turntables falter, when the music becomes disjointed. Not here though, because the Clearaudio combination sounded calm and composed, drawing me into the emotion of the song.

It’s a credit to the deck that my attention wasn’t distracted by the rather lo-fi production values (it’s a very sparse, low-rent, early ’80s recording), and instead focused on the plaintive vocals, staccato drumming and scratchy rhythm guitar work. All this time, despite a rather well-worn pressing, there was a satisfying sense of ease – leaving me blissfully unaware of the less than perfect surfaces.

The only downside to this fine turntable, arm and cartridge combination is, perhaps, an occasional lack of charm. Some will want a vinyl front end that has a strong sense of ‘self’, whereas the Performance DC/TT5 is more like a functional tool than one with a rampaging ego. This is most obvious with jazz or classic rock, when the deck’s refusal to sweeten things up might leave some a little cool. Donald Byrd’s ↻

PARALLEL UNIVERSE

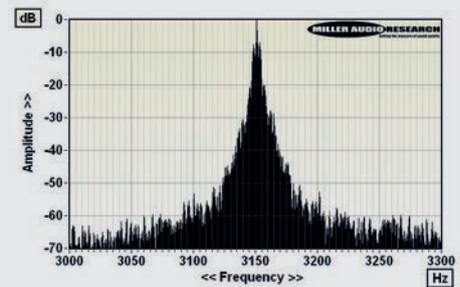
Thomas Alva Edison’s Triumph Phonograph sported the first tangential tracking tonearm back in 1877, but the ‘modern era’ began with designs including the American Truline and Orthosonic of the 1950s, and the British BJ of the ’60s. Turntable packages like the Marantz SLT-12 (1963) and Harman Kardon Rabco SL-8 (1969) followed later that decade, with the Garrard Zero 100SB (1971) and B&O Beogram 4000 (1974) leading the ’70s parallel-tracking trend. Revox brought out its sophisticated, high-end B790 in 1976, and then the B795 followed. It took Technics to really popularise the breed, however, with the radical compact SL10 (1979). Pioneer’s flagship PL-L1000 (1980) was an impressive beast, less so were Mitsubishi’s LT 20 and LT 30 – although the LT-5V vertical version (1981) was fun. In the ’80s, Goldmund made belt-driven servo arms (the T3 and T5), and Souther’s SLA-3 (1984) was a popular design. The same year also saw the Swedish-designed Airtangent – a complex parallel tracking ‘air-bearing’ tonearm that made a real stir in the high-end. In 1987 Clearaudio bought the patents and manufacturing rights for the Souther Tri-Quartz and started production of its TQ-I (Tri-Quartz Improved) tonearm a year later.

LAB REPORT

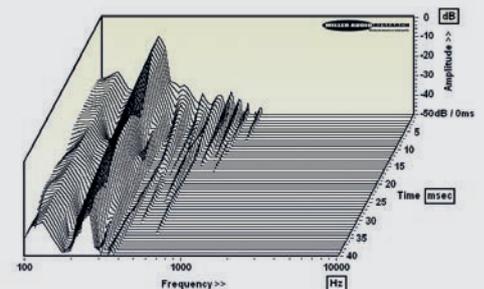
CLEARAUDIO PERFORM. DC/TT5

We tested the first Performance deck – in its ‘Black Pearl’ finish – way back in 2009 when it featured a clear acrylic platter, outboard AC motor, manual speed adjustment and peripheral belt drive [HFN Jun '09]. Fast forward some eight years and the latest ‘Performance’ is really another deck altogether, with an electronically-governed three-speed DC motor driving a POM/Delrin platter via an alloy sub-platter beneath. As supplied it was running +1.3% fast but the grommet-screw adjustment(s) facilitated a final speed accuracy of +0.05%. The 4sec start-up and 0.07% peak-weighted W&F [see Graph 1, below] are good, the latter especially so for a DC motor application which, typically, suffer more low-rate drift than refined synchronous AC motor solutions. The patented ‘CMB’ (Ceramic Magnetic Bearing) continues to deliver the low rumble we’ve measured from previous Clearaudio decks: just -71.3dB here (DIN-B wtd, re. 1kHz/5cm/sec), although the through-groove figure of -67.8dB is marginally less impressive.

The partnering TT5 linear-tracking tonearm is exquisitely constructed with a fine 135mm woven-fibre wand fitted with a ‘pinch’ fingerlift and small, but very secure, cartridge mounting platform. All these features inform both the low 6-7g effective mass of the arm and also its elegant resonant behaviour, the principal bending mode a diffuse 120Hz with a higher-Q harmonic at 240Hz. The short series of modes between 400Hz-2kHz are at a low level and decay reasonably swiftly [see Graph 2]. The nature of the sliding ‘bearing’ inevitably means there is some free play but, correctly set up, it offers a low ~20mg horizontal friction with very low <10mg vertical friction. PM



ABOVE: Wow and flutter re. 3150Hz tone at 5cm/sec (plotted ±150Hz, 5Hz per minor division). Absolute 33.3rpm, 45rpm and 78rpm speed is user-adjustable



ABOVE: Cumulative resonant decay spectrum for Clarify tonearm, illustrating various structural support and tube vibration modes (100Hz-10kHz over 40msec)



ABOVE: Three-point geometry makes for easy levelling, and fine-speed adjustment is achieved via three small screwheads on the plinth rear, next to the DC PSU input. The integral tonearm cable (not shown here) exits from the base of the deck

‘Lansana’s Priestess’ from *Streetlady* [Blue Note BN-LA140-F] sounded slightly too cerebral for my taste, and Aphrodite’s Child’s ‘Aegian Sea’ from *666* [Vertigo 6673 001] sure had a vast, epic soundstage but didn’t seem as sweet and beguiling as perhaps it should.

SCYTHING A CLEAR PATH

Otherwise – and while the headline news is the clarity and poise of this package – the punchline lies in its superlative stereo imaging. In common with all tangential-trackers that I’ve come across, it develops a wonderful soundstage that’s wide, deep and tall, while giving the general feeling that everything within is perfectly in phase and locked into place.

This was particularly evident on Chic’s ‘Happy Man’ from *C’est Chic* [Atlantic SD 19209], a recording that isn’t great by any standards, being pretty densely mixed and rather heavily compressed. Yet this turntable/arm combination delivered a cathedral-sized recorded acoustic, wherein every strand of the mix was clear to hear.

Despite a murky sound with most turntables I’ve played this track on, the Performance DC/TT5 seemed able to scythe through the undergrowth, exposing it as a surprisingly well-produced song. The TT5 certainly seems to be one of those hi-fi components that will have you questioning your previous thoughts on the recording quality of many of the discs in your collection.

Particularly pleasing were the stereo images, for inside the vast recorded acoustic it threw out, all the elements of the mix appeared as granitically solid. There was no sense of the lead vocal being vague as you heard it locked precisely between the plane of the loudspeakers.

Tonally this combo is satisfyingly smooth, but ever so slightly lighter

in the bass than some price rivals. It’s characteristically tidy sounding, like other Clearaudio decks, with a taut upper bass that’s refreshingly devoid of overhang. This doesn’t give the low end any artificial added ‘ballast’, although listeners looking for an injection of warmth and wallop could redress this in their choice of moving-coil cartridge.

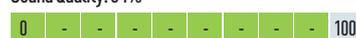
I accept that some vinylistas might feel a little shortchanged by its faint lack of euphony, but the Performance DC/TT5’s general air of neutrality rather suited my musical tastes. The aforementioned Chic funk track with its bouncing bassline was a case in point, and I also enjoyed electronic music very much through this package. New Order’s *Blue Monday* [Factory FAC73] was a delight, the turntable providing a powerful, driving bass line that didn’t overpower things further up the frequency range.

If tonally less than sumptuous, this Clearaudio combination will still pull the listener into the mix and beguile them with the large amount of detail it digs from the groove. Indeed, the solidity of the stereo soundstage proves a joy with any type of music. ☺

HI-FI NEWS VERDICT

The new £3800 Clearaudio parallel-tracking Performance DC package is a highly enticing proposition. Indeed, the TT5 tonearm really makes it greater than the sum of its parts, bringing a wonderfully spacious and stable sound that you’ll struggle to get from conventional tonearms. Factor in the superlative build, finish and compactness, and this combination punches way above its price point.

Sound Quality: 84%



HI-FI NEWS SPECIFICATIONS

Turntable speed error at 33.33rpm	33.34rpm (+0.05%)
Time to audible stabilisation	4sec
Peak Wow/Flutter	0.02% / 0.05%
Rumble (silent groove, DIN B wtd)	-67.8dB
Rumble (through bearing, DIN B wtd)	-71.3dB
Hum & Noise (unwtd, rel. to 5cm/sec)	-55.4dB
Power Consumption	2-3W
Dimensions (WHD) / Weight	428x130x380mm / 9kg