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THE VINYL FRONTIER

**KRONOS BOLDLY GOES
WHERE NO TURNTABLE
HAS GONE BEFORE**



**PMC FACT.12 SETS THE
SPEAKER STANDARD**



Kronos turntable by Alan Sircom

The word 'Kronos' comes from Ancient Greek mythology, but although more correctly directed at 'Cronus' (the youngest and the leader of the first generation of Titans and the father of Zeus), the term is often somewhat erroneously connected with 'Chronos' (the personification of time, and the root of words like 'chronograph'). In fact, both terms fit the Kronos turntable perfectly – alongside the TechDAS Air Force One, it's the youngest of the superdecks and is an excellent timekeeper.

Kronos (the turntable) is the brain-child of Louis Desjardins from Montreal. Just 250 Kronos turntables will be made. It's an exercise in brushed nickel and tankwood. There's a similarity in look between this and

the SME 30/12, especially with the four rubber band sprung towers. But where the SME has just one base plate and one subchassis, the Kronos has two separate subchassis, because the Kronos uses counter-rotating platters.

The counter-rotating platters are rare (just this and the 47 Labs deck at this time), look great, and the fact the bottom one is so carefully and independently speed controlled is fantastic. From an engineering basis, the advantage of counter-rotation is that the two platters effectively cancel out any torsional force that might be generated from a single platter, reducing any inherent vibration from the action of a platter just doing its job of spinning round and thereby stripping back the introduction of anything apart from the needle running through the groove. While the vibration reduction this creates has strong precedent, the benefits are more usually associated with high-RPM systems (like contra-rotating propellers) or in higher far higher mass systems than are usually seen in the home. ▶



The chassis is designed to accommodate a brass mount to hold the tonearm. Not only does this allow flexibility of arm options, it helps raise the arm up to the relatively high platter. However, it seems most who go with the Kronos use it specifically with a SME or Graham arm, and usually in those cases a 12-inch SME or Graham arm, so a brass outrigger armboard is also available. I used it with a Graham Phantom II (12 inch model) and a Lyra Skala cartridge (Cardas arm wiring throughout), and the three worked together as if they were made for one another.

As you would expect with a turntable costing tens of thousands, nothing is simply made out of ho-hum materials. Every single aspect of the product is pulled from the state of the art materials-science used in aerospace or Formula One racing (such as the woven carbon fibre mat on the phenolic encased in aluminium platter). Nothing is left to chance. So the inverted bearing is vapour deposited coated base metal alloy and is the result of extensive research. But in some respects, the clever part is it is a huge inverted bearing housing, several times larger than almost any seen on a turntable today.

The platters are driven by two Swiss-made DC motors, each one with a three-belt pulley (a second passive driving pulley is on the opposite side of the platter in both cases). Both motors and secondary pulleys are connected to the base-plate of the Kronos, rather than the subchassis assembly; if this were a true suspended deck, that could cause some wow issues, but because the subchassis suspension is more for isolation than overcoming torsional effects, in reality no such wow problems manifest. The DC motors use a computer controlled servo mechanism (they read points on each platter to reference speed), but where most DC motors today are driven by small PWM amplifiers, this is fed by a linear Class A amplifier (either a standalone box or built into the stand). Once again, this falls into the 'nothing left to chance' method of construction. ▶

- ▶ Kronos rightly points out that normally any torsional forces are cancelled out by suspension systems. But, claims Kronos Audio, such systems are only part-effective, because there's still some residual rotation in the subchassis that can be transmitted back through the tonearm to the stylus, arriving as an out-of-phase 'blur'. The company suggests this blur is audible as an imprecise soundstage. The usual response to this is to build the turntable as high mass as its possible to make, eliminating the suspension system altogether, but this provides its own set of distortions from vibration, and the cure can end up worse than the disease with a hard-edge and bright sound quality. By hanging the whole turntable (as a complete block) from its baseplate and having the counter-rotating platters, the motor block and the tonearm in fixed geometry, this could notionally provide the best of all possible worlds.

▶ One of the things that irritates me about the superdeck world is the inherent fuss that comes with the package. You've just spent the equivalent cost of a nice Mercedes on a turntable, there's no excuse to spend 25 minutes fiddling with air pumps, warming up the flux capacitor, or any other form of faffing around. Neither should that deck behave like an attention-seeking spoilt brat every other listening session, demanding you attend to the deck's every whim between records and demand a complete strip-down every few weeks. If that's your thing, great... but I was never a fan of the 'Lots Of Trouble, Usually Serious' approach to automotive design and see no reason to pay over the odds for a turntable that acts in so mercurial a manner.

The joy of the Kronos is that it ranks among the least fiddly of all superdecks, and is near enough maintenance-free. Set-up is straight-forward and logical; it's necessarily a little more thorough (in terms of levelling and lubricating) than making an Ikea chair, but the instructions are better. Once set and levelled, it will take a few days for the speed control to bed in, but shouldn't need too much in the way of adjustment, resets or lube-jobs, and even the way the belts are used (three per platter) is designed for longevity.

Operation is simple too; the speed control and two red LED read-outs (left hand for upper platter, right for lower) also has touch sensitive controls. Two fingers to the left of the display turns the deck on or off, two fingers to the right of the display changes speed. It's not the fastest spin-up speed, but this increases with use. This isn't a big problem, even you have a habit of moving between 33 and 45rpm regularly, unless you must stop the platter between discs; fortunately even the record weight is a Michell-like fit-on type, so it doesn't need to be screwed down onto a stopped record in the manner of an SME clamp.

The Kronos is a big deck; its footprint is 56x36cm and that puts it at the limits of most audio furniture. Which is why the company also makes a dedicated four-

column matching stand. It is not cheap, but is beautifully made and shows the company's commitment to excellence extends beyond the deck itself.

There is a clear (but undisclosed) way to spot when the deck has bedded into its environment. The two platters at first generate a small amount of self-noise. Not much (the kind of thing you will only hear with your ear to the motors), not intrusive and uniform (it's a low and mild whirr). When it goes away, your turntable is in its happy place. And that's about the only noise you get from the Kronos. Everything else is music.

The absence of noise floor has been one of the biggest initial attractors of the Kronos among high-enders. If this is down to the counter-rotating platters, or any other aspect of the design is ultimately unimportant (unless you are a rival – or possibly frustrated – turntable designer), but the end result is the sort of absence of background noise that isn't normally associated with even excellent vinyl replay. This sounds like vinyl nerd speak of the highest order, but listening to the transition from lead-in groove hash to the comparative silence of a unmodulated groove shows just how silent vinyl can be and just how little the Kronos brings to the party. This helps give the music a real sense of structure and definition that vinyl's digital detractors feel is impossible to find with LP.

I'm not trying to be contrarian here, but this no-noise thing is perhaps the Kronos' least important positive aspect in its performance. For me, the remarkable thing about the Kronos is it exposes the 'horses for courses' idea as nonsense. There seem to be many ways to crack the vinyl nut at the high-end, but the Kronos is rare in it's an all-things-to-all-people sound. It's got that ▶



▶ depth and across-the-frequency range accuracy that a good high-mass deck can provide without the top-end scratchiness that can sometimes create, and the bouncy, inviting, unforced sound of a lighter, suspended design. That means it performs magnificently when handed a slab of audiophile-friendly vinyl (like the 200g MoFi Muddy Waters *Folk Singer* album), creating an 'in' with the studio like you were standing behind the faders in the control room. It seems as if the vinyl fades away and you are left at the tape machine. But it also means it does the same with less hi-fi-approved pieces of music, like a regular copy of Stevie Wonder's *Innervisions*. Once again you could listen into the mix far more precisely and completely, hearing how that 1970s stereo flanger used on a Rhodes piano had a subtle but almost 'pulsing' effect as it moved between channels that doesn't normally come across. And yet, for all this detail, it didn't lay the music out cold on the slab; this was vibrant, up-beat, foot-tapping and all the things you associate with Golden Era Stevie Wonder. Move on to practically any recording from here (from the most structurally dense orchestral piece to fey girl with guitar singer-songwriter) and the same result takes place – you hear the detail, the sense of solidity, the 'in the studio' sense of 'thereness' rising out of that silent background... but you also get the sense of music as performance, rather than that 'assembly of nice sounds' that can plague top-end superdecks. Which is perhaps why I caught Boney M being snuck on the platter – it wasn't me, honest – and what was surprising was just how a 36 year old, scratched to bits album that most people wouldn't give a tinker's cuss about can sound surprisingly fun.

I dislike reviews that reference other products, but in this case it's hard not to. The Kronos has all the best bits from many turntable sounds and makes something better than the sum of those sounds. You have the depth a Kuzma, the control of a big SME, the scale of a VPI, the naturalness of a Well-Tempered and the boppy beat of a LP12. All rolled into one outstanding package. The Kronos joins a very small, very illustrious set of turntables that do it all and do it well. I can't help but be a little bit jealous of those lucky 250 owners of the best pair of platters around. This one's something special. +



TECHNICAL SPECIFICATIONS

Rotational speed: 33.3 rpm & 45 rpm.

Tonearm length: 9 to 12

Power supply: dual channel pure class A linear DC, CPU controlled.

DC transmission: pico 3 pin cable.

Data input/output bus: RS232.

Transmission: Pico 4 pin cable.

Motors: 2x DC motors

Motor mounts: Delrin enclosure, height adjustable.

Speed guidance system: continuous open loop feedback.

Sensors type: optical diode I/O (each platter)

Correction cycle: every two rotations. 1.5% max. 0.05% min.

Monitoring: twin real time speed LED.

Command input type: 1 capacitance sensor on/off (left), 1 capacitance sensor 33/45 (right)

Platters type: Composite layers and encapsulated & balanced.

Platter weight: 13.6kg.

Drive: 3 silicone/viton 1.8 sting belts/platter

Compensation pulley: teflon and chrome steel bearing.

Main bearings: dual hydraulic isolated inverted sleeve and ball.

Shaft type: grounded heat hardened tool steel pvd coated.

Ball type: ceramic top platter, steel lower platter.

Suspension: full floating top suspended.

Elastomers: 317 o-rings, viton/silicone mix.

Dimensions (WxDxH): 56 x 36 x 28cm

Weight: 41 kg

Price: from £30,000 (stand £10,000)

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