

Gimme Three



With three-point fixing Rega's new Ania Pro cartridge comes alive, finds Noel Keywood.

I was surprised to learn that Rega have started making their own moving coil cartridges, rather than buying in from outside suppliers like Sumiko or Audio Technica. Not an easy thing to do: an exercise in micro-engineering. As I understand it, cantilevers and their diamond tips must be bought in from the few suppliers of micro parts around the world able to produce such items, like Nagaoka and Ortofon.

Into this exotic world of micro-manufacturing Rega have produced a range of moving coils whose bodies and motor assemblies (magnet, coil, etc) are made in-house. At top comes the Aphelion with a boron rod cantilever, then Apheta 3 (£1250) and just below the new Ania Pro (£750) that I'm reviewing here. It's up against stiff competition from Ortofon's Quintet range of budget moving coils and Audio Technica's recent OC9X series that top out at £660 (reviewed October 2019 issue). But Rega have their own ideas on how hi-fi should be engineered and how it should sound, so Ania Pro differs from much else.

To kick off, this cartridge is very light at 6gm, due to use of a lightweight moulded body with aluminium internal mounting block. Our SME309 test arm barely managed to dial on 2gms downforce before the rear weight hit its forward end stop, so arm compatibility is a potential issue.

Then there is use of a third fixing screw ahead of the traditional screws (M2.5) set half-an-inch apart. The only arm that can accept this screw to give three-point fixing is – as you might guess – a Rega arm. Blind captive nuts are moulded into the body to make fitment easy, but they are shallow and Rega supply just three very short stainless steel screws for them. Again, suitable for a Rega arm but otherwise – with thicker non-countersunk headshells – you'd need to buy a screw set with longer screws.

And then there is a peculiar issue of height that Ortofon say is lower than industry standard by a few millimetres. Rega arms suit but others must be lowered at the pillar. A 1mm mounting plate is provided to compensate.

Put all these issues together and you can see that Rega cartridges are purposed for Rega arms. They can be used in other arms, by adding weight to the headshell and lowering the arm pillar. I am not aware of other arms with three point fixing but a removable bayonet fitting headshell could conceivably have a third hole drilled into it.

So before getting past even a simple basic description of the Ania Pro you can see it is different and Rega-ish.

But there is another significant issue to bear in mind: sound quality. Rega products are consistently mild mannered and that's very much the case with their pickup cartridges, including this one. If you want strong treble "just walk away Renee". More later.

The Ania Pro comes in a small clear acrylic case with its three fixing screws holding it to the packaging. There was a short hex key for them too. A Rega arm will, I believe, cope with it – ours did.

The stylus guard terrified me so I barely used it. There's very little clearance between it and stylus, so

miss when trying to locate it onto the frontal spigot and that's the stylus gone.

However, this apart the rear signal pins are well spaced and unobstructed by bodywork, as well as colour coded, making attachment to a Rega fixed headshell arm easy I found. Stylus tracking force is quoted as 1.75-2gm with no optimum stated so I used 2gm.

SOUND QUALITY

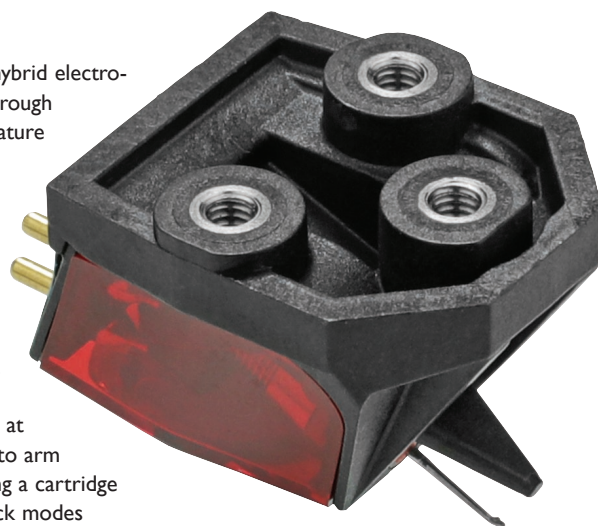
We had a Rega Planar 10 in the office, reviewed in the March 2020 issue, and since the Ania Pro with three-point fixing is purposed for a Rega arm, I felt obliged to mate the two. For measurement though I rely on the quartz-lock accuracy of our Timestep Evo modified Technics SL-1210 MkII with its SME309 arm, partly because test records must run at correct and stable speed for a spectrum analyser to lock-on.

After testing I listened to the Ania Pro in this turntable, then moved it to the Rega Planar 10 where it would receive the benefit of three-point fixing – not a comparison

Martin Logan ESL-X hybrid electro-static loudspeakers through Chord Company Signature Reference cables.

Our measurements of arm headshell behaviour with a Bruel&Kjaer accelerometer show that most are lively at front where they are unconstrained, less so at back where attached to arm tube. Three point fixing a cartridge damps these front-back modes where two point does not. Explaining improvements I heard when I used the Ania Pro in Rega's RB3000 arm.

Moving from our test platform to Rega's dedicated environment was a minor shock. In basic form, nothing changed, but underlying subtleties changed significantly, to the point I squirmed. In our test platform the Ania Pro sounded easy going as expected from measurement: no treble spit and a full bodied delivery that was different to current idiom, in keeping with Rega's preference



Three point fixing made clear in this shot of the Ania Pro. The two rear captive nuts fit any arm, the front one is purposed for Rega arms.

The front spigot accepts a small plug-in stylus guard.

position on the sound stage. Deep bass kick drums have to be mono images with LP or the needle will jump out of the groove, but hand drums can have stereo position.

I got to hear all this with Sing Sing Sing from the Syd Lawrence Orchestra, on the Big Band Spectacular LP (180gm, direct-cut). Drums had a sense of solid and stable power to them, anchored to the ground. Short breaks on side percussion were pinpoint sharp, with a lovely grip on timing, yet a great sense of time domain cleanliness: there was no blur between strikes, it was all smoothly but cleanly correct. No problem with low end dynamic strength either: think a muscular sound. I squirmed at the improvement three-point fixing made here – I should have known.

Much the same with In the Mood where slow plucked bass was firm and trumpets blasted out with a sense of stable confidence free of edginess. There was fantastic insight into timbral properties of individual instruments and the orchestra as a whole had body and was seemingly locked into position on the sound stage.

Spinning Neil Young's After The Goldrush, an all-analogue re-master on 180gm vinyl, I was taken by the sense of strong and steady imaging, as well as the sheer power of Young's acoustic guitar and the forceful expression of his vocals. The Ania Pro in Rega's RB3000 arm delivered this performance with a solid surety I've not heard before – and it was gripping. Missing was the cutting

"I was taken by the sense of strong and steady imaging, the sheer power of Young's acoustic guitar and the forceful expression of his vocals"

I have made before. Preamplifier was an Icon Audio PS3 MkII with silent input transformers and valves, feeding an Icon Audio Stereo 30SE single-ended valve amplifier driving

for a gentle balance. But whilst highs were un-accentuated the Ania Pro had obvious low end strength and control, delivering a big-bodied sound. I liked what I heard and it is different from most rivals, which have a brighter balance.

In Rega's RB3000 arm, with the benefit of three-point fixture, the sound stage became firmer and instruments better fleshed out, as well as stable and assured. Also, Rega arms have always drawn attention to lower midrange image stability, hand drums in particular having definable



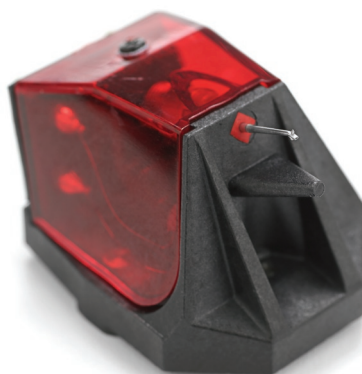
Widely spaced rear signal pins, unobstructed by body overhang, make connection easy. Clear colour coding, Right channel (+red/-green) and Left channel (+white/-blue) help get things right.



Rega arms have a third fixing screw ahead of the two conventional ones, seen here with the Ania Pro in Rega RB3000 arm. It stiffens the headshell in effect, giving a more stable sound.

speed of his guitar strings I've heard from Audio Technica's OC9X Shibata and Special Line stylus tipped cartridges in particular, but in its place there was deep insight into the performance, to the extent I was transfixed. Almost surreal that such on old recording could come over with such wonderful sound – but that's Neil Young I guess.

For inner groove performance I currently use Time To Say Goodbye, where Rosella Caporale holds the most astonishing vocal crescendo at the very last moment, almost into the run-out groove – and here the Ania Pro kept a grip beyond anything I have heard



Rega make much of their stiff but light body moulding. A long stylus cantilever provides good disc clearance with correct vertical tracking angle, for low distortion.

before. Volume right up, Ms Caporale came though our electrostatics like no other, pinning me to the settee. I was left aghast at this.

And finally, this cartridge has incredibly low output, at 0.173mV (173µV) the lowest I have ever measured.

so must be used with a low noise preamp. Our Icon Audio PS3 MkII has input transformers that are super-quiet and there was no hiss after turning volume up, but with some preamps hiss may be audible.



CONCLUSION

I am reviewing not just Rega's Ania Pro moving coil cartridge here, but also Rega's RB3000 arm and the effectiveness of three-point cartridge attachment.

By any standards this is an unusual cartridge with its mellow sound balance, light body weight and low output. All the same, in a Rega arm it delivered a sound that others would struggle to match, ignoring reticent highs that rivals make more obvious.

A spacer is provided for arms other than Regas.

MEASURED PERFORMANCE

Our frequency response analysis of Rega's Ania Pro shows output falls steadily toward high frequencies, measuring -2dB down at 10kHz on outer grooves (JVC TRS-1007 test disc), enough to give a warm sound. On inner grooves (red trace) this increased to -3dB down at 10kHz and -8dB at 20kHz, from tracing loss due to stylus tip geometry, further enhancing warmth on inner grooves.

Tracking of standard 300Hz test tones on CBS-STR112 test disc was excellent, the Ania Pro just clearing a very high 90µm lateral track at 2gm VTF. At 1kHz (B&K2010) where acceleration is higher and tip mass more influential, the highest 25cms/sec band was negotiated, if with slight mistracking – a very good result.

Distortion was higher than usual at 2% on lateral modulation, mostly second harmonic, against a typical figure of 1%. On vertical modulation the figure was

unusually low at 0.4% after mod. slant angle correction, due to a measured vertical tracking angle of 21 degrees (DIN 45 452 test disc). Optimal is 22 degrees and it is rare for any cartridge to get below this figure. This brought distortion down to 1.2% overall, a low value.

Output was unusually low, measuring 167µV Left channel and 179µV Right channel – 173µV average at 3.45cm/sec (Shure TTR-109 test disc). This is 8dB below the output of Audio Technica's OC9X at 450µV for example, so a quiet MC preamp with plenty of gain is needed. Channel imbalance was 0.6dB – tolerable and separation 22dB (Shure TTR-109).

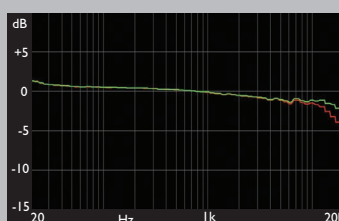
The Ania Pro will have a mild to warm sound, especially on inner grooves. Conversely it will sound full bodied and smooth. Output is extremely low so a quiet preamp is needed. Tracking was superb. **NK**

Tracking force	1.75-2gm
Weight	6gms
Vertical tracking angle	21degrees
Frequency response	25Hz-16kHz
Channel separation	22dB

Tracking ability (300Hz)	
lateral	90µm
vertical	45µm
lateral (1kHz)	25cms/sec

Distortion (45µm)	
lateral	2%
vertical	0.4%
Output (3.45cms/sec rms)	173µV

FREQUENCY RESPONSE



REGA ANIA PRO £750



OUTSTANDING - amongst the best

VERDICT

Big bodied, mellow sound with deep insight in a Rega arm.

FOR

- powerful dynamics
- stable pinpoint imaging
- super smooth

AGAINST

- mellow, easy sound
- light
- best suits Rega arms

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