



Foot-Race...

The ever-longer line of 12" tone-arms

by Roy Gregory

As reported in Issues 50 and 51, it's becoming increasingly difficult to ignore the claims for inherent superiority made for 12" tonearms over their shorter (or should that be "stunted") nine-inch relatives. It's not just the sonic evidence either. Whilst this trail arguably started with the revelatory uplift in performance offered by the SME 20/12, and was significantly reinforced by subsequent experience with the VPI JMW 12.7, Kuzma 313 and Schroeder tonearms, there seems to be no abatement in the flood of new arms reaching the market. Time then to examine these newcomers and discern whether the 12" effective length is of special significance or just a happy accident.

There's no denying the significant reduction in tracing distortion that comes with increased effective length. The questions that go with that observation are whether that increase can be achieved without compromising other areas of tonearm performance (effective mass, structural integrity and resonant behaviour) and perhaps more pertinently, if it's so significant, wouldn't we be better off using a linear tracking design? With these issues in mind, I've assembled a second group of tonearms to assess just how consistent the musical qualities detected in the previous reviews prove to be. Is this a function of arm-length and reduced tracing distortion, or something else entirely?

The Cartridge Man Conductor passive parallel tracking tonearm

Len Gregory's Conductor tonearm fills the spiritual void left by the passing of the ET11. An affordable

passive linear tracker based on air-bearing technology, that's where the similarities stop. This has none of the operational or constructional elegance of the Eminent, bearing as it does more than a passing resemblance to the Meccano meets Bauhaus minimalism of the Forsell arm. This arm adopts the Lotus 7 approach to engineering, performance being its soul *raison d'être*. So, like its four-wheeled counterpart, the Conductor eschews all pretence of luxury when compared to the competition. Of course, it also eschews upwards of 50% (or more) of their price-tags.

Heart of the beast is a single-sided air bearing (it only has outlets along the top edge) on which floats an aluminium sleeve. This arrangement is similar to the one employed by the original Air Tangent and overcomes the tolerances required (and the associated costs that go with them) of an inverted or captive bearing as used by Rockport or Kuzma, but is not without its downsides. The single-sided set up can't match the rigidity of an inverted bearing as well as demanding a long carriage in order to float. This in turn dictates a longer (and less easy to accommodate) beam and allows less control over the lateral mass. Finally, the row of holes in the top of the bearing beam that are not occluded by the sleeve are busy pumping air out into space, meaning more air needs to be put into the bearing (generally meaning a noisy pump) and act as a source of noise in and of themselves. However, despite these considerations,

this is the only serious air-based option at this price.

Atop the sleeve is mounted a carbon fibre arm-tube with a neat circular aluminium head-shell. Between this and the cartridge, the supplier had mounted his cartridge decoupler, an interesting parallel with the Teflon pads advocated by Forsell for use with his arm, along with his latest Music Maker Classic cartridge. I will be examining this in both the Conductor and pivoted arms in an upcoming issue, but for this exercise I stuck with the same range of conventionally mounted cartridges used with the other arms.

The Forsell's cantilever gate VTA arrangement has been replaced by a simple collar and post system, which incorporates a centrally mounted and threaded pole, allowing VTA adjustment via the large, knurled collar. Although this is delineated with small, engraved numbers, a set of much clearer markings would make repeatable adjustment much easier (and less of a strain on the eyes). The base is fixed from below by a single large nut in a similar manner to a Rega, while arm-height is fixed with a simple horizontal grub-screw that engages a slot in the side of the central pole.

The mounting pillar mates to the main beam assembly halfway along its length, again with a single fixing bolt: The plate which mates the two has to be attached to the bottom of the arm cradle, a row of threaded holes allowing some lateral adjustment. A second plate attached to the opposite edge of the cradle supports the

▶ lead-out wires or a pair of RCA/phono terminals, offering a choice of in-line sockets or the captive, one-piece Incognito wiring loom fitted to the review unit. A pivoted wire along the front of the bearing beam performs cueing duties, driven by a simple mechanical linkage, although no arm-rest is provided. The end result has a slightly Heath-Robinson feel, with the sharp edges and surface finish of the components rather giving the limited production, assemble it yourself game away. Likewise, there's a slightly trial and error feel to the first time you build the arm, although an excellent and lavishly illustrated instruction manual certainly helps in this regard.

But mock not; if you want to enjoy the benefits of zero tracing distortion offered by an air-bearing arm, this is by far the most affordable game in town, and if the finish is far from flawless, you can't fault the choice and quality of the materials employed. The arm arrives packed in a rather swish wooden case which contrasts markedly with the obligatory aquarium pump, this one having a central rotary control for setting pressure and hence the ride-height of the bearing. There is also an ample supply of rubber hose which connects it to the far end of the arm beam, allowing you to dispose of the noisy pump well away from the listening room (don't be tempted to place it somewhere cold or damp – such as the garage – or you'll likely develop condensation problems and possible corrosion in the tiny capillaries of the bearing). You also get a nicely fabricated air reservoir (basically a Perspex tube with an inlet at one end and an outlet at the other) that helps even out any variations in air pressure. Again, this is a carry-over from the original Forsell design and is necessary because of the nature of the bearing. Any variation or flicker in the voltage feeding the arm would otherwise cause the ride-height to change, resulting in possible "pumping" or "bouncing"

and in the worst case, grounding of the carriage. The reservoir is effective in preventing this.

Although vertical effective mass is relatively low, the high horizontal inertia that's inevitable with passive parallel trackers means that really high-compliance cartridges are still best avoided. I tried all the cartridge options before

finally settling on the Skala, its combination of energy, detail and substance suiting the conductor's sound perfectly. The arm, complete with the Incognito cable costs £1700 and will mount most happily on solid plinth or at least high-mass suspended designs. However, the ability to level the arm accurately is mandatory, either through the deck itself or the surface on which it sits, so bear this in mind when considering potential matches.

Right, let's get the grumbles out of the way straight off. Even with considerable experience with most of the other air-bearing arms on the market, including the Forsell, I still found the Conductor incredibly fiddly to assemble. Perhaps over familiarity counted against me, and a more studied approach might be less frustrating? The air noise from the bearing itself is considerable and would certainly be intrusive if the deck is positioned adjacent to the listening position. Finally, the lack of constructional elegance does jar. If you are a camera finish kind of guy then the SME or Brinkmann will be much more your cup of tea. Me? I'm prepared to forgive, overlook

or tolerate all of the above for one reason and one reason alone. This arm sounds sublime. So much so in fact that if performance and value for money are top of your list of desirable criteria, then you'll not need to look any



further.

But what about the specifics? The Conductor delivers a wide-open, transparent soundstage that is utterly devoid of truncation or grain, making you realise how constrained in this regard 9" arms really are. There's an unforced ease and sense of crisp dynamic life that allows music to breathe and vocals in particular a naturally expressive range of infection. Subtle details and sunken threads are easily unravelled from even the densest mixes, while tempos are rock steady, pauses and hesitations beautifully captured, underlining musical accents. Bass is quick, agile and slightly light in balance, but nicely textured and again, acoustic bass notes float convincingly, the air around and beneath them clearly audible.

In use, the VTA facility is actually much easier to utilise than its mechanical simplicity would suggest, and with this arm over all the others here, the effects are clearly audible. But the real joy of this arm is the overall coherence it brings ▶

► to music. A place for everything and everything in its place is a phrase that could have been coined to describe the effect of well executed parallel tracking, and tied to the Conductor's vivacious dynamics and fabulous transparency the performance simply unrolls before you, with pace and power when demanded, delicacy and poise as required. It's a combination that makes it considerably easier to ignore the mechanical means of reproduction, the sound of the system, and concentrate instead on the musical performance itself.

With such a quick and agile performer, it's tempting to reach for densely scored and dynamically demanding torture tracks to show off its attributes. Yet, ironically, as impressive as the Conductor is on material as varied as Shostakovich symphonies, Cheap Trick playing live and the Basie Big Band, it's when things get intimate that the real delicacy and low-level resolution and integration of this arm really emerge. Whether it's Martzy's exquisite bowing or the coy vocals of Nanci Griffith, the Conductor conjures them vividly to life. Listening to the sheer range of Ulla Meinecke's singing on 'Lieb Ich Dich Zu Leise' was a salutary experience. Unable to understand a word of German, the song leaves me concentrating on the articulation and expressive qualities in the delivery, qualities that the Conductor writes so clearly across the soundstage, so directly and intimately that this voice you can't even understand has you sitting transfixed.

Communication is the name of this particular game, and whilst the moniker Conductor might conjure

images of tail-coats and batons aloft, the prefix 'Lightening' would not be inappropriate, so directly does this arm connect you to the performance encapsulated on the record. The unfettered dynamic range and easy grasp of time and space act to deliver the music right to you, with an immediacy and finesse that is both commanding and captivating. Delving once again into the Colin Davis *Tosca*, with Caballé singing the title role, the drama and scale of the performance is really impressive, its emotional range driven home by the singers (particularly Ingvar Wixell's demonic Scarpia) and the superb orchestral support. Ultimately, in these largest of works the absolute control exhibited by the Conductor finally starts to crack, but it is only bettered here by the likes of Kuzma's far more expensive AirLine or some of the better pivoted arms which can't match its grain-free clarity and top-to-bottom coherence.

This is a wonderfully musical device. It is also quirky in both construction (and for those raised on pivoted arms)

operation. Fit and finish are more functional than decorative and even Len would be pushed to describe his baby as beautiful. But it can sing, sing with a voice of such purity and immediacy that if performance

matters and the practicalities can be embraced, then I can't see anybody being disappointed with the musical results. Above all, the Cartridge Man Conductor underlines one simple fact; tracing distortion is clearly audible and musically destructive – minimising it is good, eliminating it is better. So much better that you should be prepared to go a fair way to achieve that goal.

Conclusion

These arms, along with the 12" VPI JMW, Kuzma 313 and Scroeder, all share a common quality, a sense of uninhibited musical flow, that can only derive from their increased effective length and the subsequent reduction in tracing distortion. Reduce that factor still further and the gains become greater still. For once the verdict is clear; despite the associated compromises when it comes to complexity, rigidity and effective mass, as far as pivoted tonearms are concerned, longer is indeed better. Factoring parallel trackers into the equation simply demonstrates just how important this issue really is, with even significant deviations from the mechanical ideal easily being outweighed by the performance gains overall. For serious record replay 12" arms are fast becoming the de facto standard – and rightly so. ►+



TECHNICAL SPECIFICATIONS

Cartridgeman Conductor
 Price: £1700
 Manufacturer: The Cartridge Man
 Tel. (44)(0)20 8688 6565
 Net. www.thecartridgeman.com