



Ant Eater

The brand new Kora 3T phono stage from ANT Audio looks set to consume its immediate competition, thinks Adam Smith...

New phono stages are seemingly ten a penny right now, but this cannot be said about products from Alex Nikitin. The chief electronics engineer for Creek from 1993 to 2002, he has recently gone solo and come up with a range of electronics from phono stages to headphones amps, all of which we'll be seeing over the next few months.

Since leaving Creek for a career in industrial electronics, Alex kept working on the ways of improving the quality of audio electronics in his spare time. The end result is A.N.T. (Alex Nikitin Technology) Audio, and his first product was the Amber headphone amplifier (available as a DIY kit), which has been very well received by enthusiasts on the www.head-fi.org headphone forum, amongst others. Alex's next step however, has been to venture into the world of vinyl reproduction with the phono stage you see here...

The name actually stems from the fact that the design is a simple one, and uses three transistors per channel with local negative feedback

in a single-ended Class A circuit. The RIAA equalisation is achieved using passive circuitry, there is only a single amplification stage and, as might be expected by the basic nature of the circuit, the unit is suitable only for MM or high output MC cartridges. As a result of the circuit's simplicity, Alex explains that the quality of the components become of paramount importance, and consequently the 3T is available in three variants. The first of these is the standard type, retailing for £175 and complete with fixed DC biasing, standard polypropylene capacitors for load and RIAA duties, standard Panasonic FC types for the power supply and biasing duties, and a green power LED. Main supply juice is provided by a standard regulated 24V 'wall wart' type PSU.

Upping the budget to £325 buys this 'Special Edition' variant, which adds polystyrene load and RIAA capacitors and ELNA types for the output and biasing duties. Circuit bias is also adjustable on this model, via a small trim pot on the rear panel, the power supply is a high performance type and illumination is provided by an orange LED. Finally, £775 brings

you to the 'Limited Edition', made to order only. This goes the whole hog with tightly toleranced capacitors and Holco resistors throughout, Black Gate bias capacitors, and ultra low noise PSU and a red LED. The 3T comes in a very neat and unobtrusive package, measuring 48x91x133mm and weighs less than 1kg.

SOUND QUALITY

Heeding the instruction leaflet's advice regarding warm-up, I duly left the 3T SE idling for a couple of days before listening began, when initial impressions were favourable. The Kora's arch rival is the Trichord Dino at £320, which is a far more feature-packed affair, being adjustable for gain, load and use with MC cartridges. It's a very fine performer at the price, but definitely comes in at one end of the sonic spectrum, being quite forthright, snappy and mechanical sounding in the wrong system. The 3T SE however is right at the other - as its simple Class A innards endow it with a marvelously flowing and sweet nature that brings forth vocalists and instruments in a highly satisfying way.

Spinning 'The Blue' from David

HI-FI WORLD

Gilmour's 'On an Island' LP, the Kora took David's guitar work and had it pouring from the loudspeakers in a sublime manner, each note flowing into the next exactly as intended. Combined with a surprisingly capacious soundstage depth that let backing instruments line up behind the main action in a broad space, such as a gentle hi-hat which appeared to be out in the garden, the overall result was exactly the sort of atmospheric performance that one expects from good vinyl.

The good works continued with Duffy's 'Rockferry' album, where the Kora captured fine nuances of the lady's vocal performance with effortless ease, without making her sound shrill, as some less capable stages can tend to do. However, there was a certain curtailing of the soundstage in lateral terms here – once again the image stretched off into the distance by a quite surprising amount, but seemed to stop dead, width-wise, beyond the limits of the loudspeakers – almost like listening at the mouth of a tunnel, but without the echo. A spot of adjustment of the biasing control seemed to help to focus the central image a little better but didn't increase the overall width.

Increasing the pace a little further to 'Shut Up and Let Me Go' from the Ting Tings' 'We Started Nothing' album, the Kora proved more than happy to carry a rhythm without falling over itself, but it does lack some of the rhythmic snap of the Trichord, or even the Cambridge 640P, that propels this track. Yet the 3T SE dug the heart of the performance out very well, offering up fine levels of low end detail.

By now I was beginning to grasp the measure of the Kora, so I cued up Van Morrison's 'Enlightenment' and the track 'Start All Over Again'. This is a more thoughtful and gentle performance than offered by those ruffians the Ting Tings, and the 3T knew exactly what to do with it. Van's vocals were gruff by just the right amount and the backing vibraphone shimmered out from the loudspeakers. Once again though, a little tweak of that bias control helped to bring cymbals into better focus. As my listening session wore on into the evening, it became clear that the Kora likes to settle back with something smooth and considered, as opposed to material that is



"those craving subtlety, delicacy and ease will be delighted to hear this..."

more upbeat and raucous. It never sounds uncomfortable or messy, but seems more sensitive than many to the material that is played through it. Get this right however, and it rewards handsomely.

CONCLUSION

Whilst Trichord's Dino has been an automatic recommendation at its price for many years, it won't appeal to everyone. Those craving subtlety, delicacy and ease will be delighted to

hear of the arrival of the ANT Audio Kora 3T then, because it offers precisely these attributes. Its simple, single-ended Class A internals endow it with a mellifluous nature that shows just how sophisticated and enjoyable vinyl can be, even at fairly affordable prices. Some attention is required to set up the circuit's bias for optimal results and the Kora doesn't quite rock with the best of them, but it's still a music maker *par excellence* at the price.

REFERENCE SYSTEM

London Acoustical Developments GAJ942 turntable/Funk Firm Achromat Audio Origami rebuilt Helius Aureus Gold tonearm
Goldring 2500 cartridge
Naim SuperNait amplifier
Ferrograph S1 loudspeakers (modified)

MEASURED PERFORMANCE

With just three FET transistors per channel and not an integrated circuit anywhere the Kora 3T will measure a little differently to normal, but it is a minimalist design that just needs to be satisfactory. Output swing was a little less than the usual 9V or so, measuring 6.5V, but this is adequate, translating into a 74mV input overload value – plenty high enough. Gain (MM only) was on the low side at x90, so solid-state power amps cannot be driven direct through a passive volume control. Accompanying integrated amplifiers will need high input sensitivity of 200mV or thereabouts.

Noise (equivalent input noise, IEC A weighted) was 4dB higher than is possible, measuring 1.1uV, but the difference is small and in fact the Kora is quiet enough, as this low level of hiss is swamped by Johnson (thermal) noise from the high Z generator coils of MM cartridges.

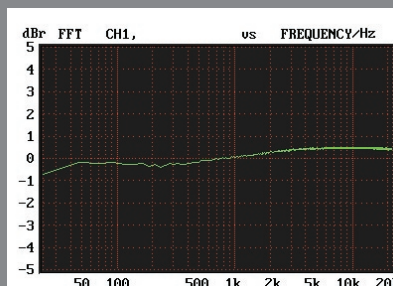
Equalisation was accurate, with a small lift at high frequencies our analysis shows, plus a deliberate roll off below 20Hz to give -7dB attenuation at 5Hz, where warps are at their worst. Although distortion was higher than the usual vanishingly low amount from ICs, this

is only because less open loop gain and feedback exists, and at 0.05% second harmonic distortion for 10mV input it is not an issue.

The Kora 3T is a neat little design, one that frees itself from the usual 'high gain plus feedback' topology intrinsic to the integrated circuits found in most solid-state phono stages. It measures well and is likely to sound good. NK

Disc MM	
Frequency response	20Hz-85kHz
Separation	73dB
Noise (input noise, A wtd)	1.1uV
Distortion	0.05%
Gain	x90
Overload (at 72dB gain)	74mV/6.5V out

FREQUENCY RESPONSE



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VERDICT

Simple affordable phono stage that impresses with exceptional warmth and musicality at the price.

KORA 3T SE £325
A.N.T. Audio
www.ant-audio.co.uk

FOR

- flowing nature
- surprising image depth
- fine levels of detail

AGAINST

- bias needs setting carefully
- curtailed image width
- too soft for some tastes!