



# Cream Of The Crop?

## Cartridges with a difference from Lyra, Air Tight and Phase Tech

by Roy Gregory and Curtis Leeds

### The Lyra Skala Moving-Coil Cartridge

Scantech's cartridges may not have been the first to dispose of the conventional metal body (that was probably vdH's EMT modifications) but they were the first that really exposed its sonic impact. Their original Spectral MCR and Tsurugi designs both allowed easy removal of the protective bodywork and thus simple a/b comparisons. It wasn't long before audiophiles were stripping their cartridges naked and reveling in the "free" upgrade that resulted. Since then, the company's own brand Lyra designs have become progressively simpler and more refined, both in structural and electromechanical terms, the latest Titan, Helikon, Dorian series offering greater linearity and the advantages of an open chassis combined with an extraordinarily effective stylus guard. Now, with the arrival of the Skala, we see the first in the next generation of Lyra cartridges and a step change in construction and performance.

Priced at £1849, the Skala represents an interim step between the much loved Helikon (although currently it offers neither mono nor the lower-output SL variants) and the flagship Titan i. At first glance its plastic chassis might seem like a step backwards, but in fact nothing could be further from the truth. But to appreciate just why that is we need to get back to the reasons for going naked in the first place.

A moving-coil phono cartridge is a device designed to measure incredibly small vibrations and convert them into

voltage. In doing so it faces a number of conflicting requirements. Any spurious vibration in the cartridge structure will distort the input, making structural rigidity a prime consideration. But at the same time, any non-linearities in the magnetic field used to generate the voltage will also introduce their own distortions, meaning that any excess metallic material close to that field is highly undesirable. So, on the one hand we want to mechanically close

couple the moving parts, but on the other we want to locate them in as near to free space as we can achieve.



Add in the geometrical considerations that govern the positioning of the coils in the field and you have the microscopic equivalent of a Rubik's cube; you can't alter one parameter without affecting others. Then of course there are the minor issues of tracking ability, compliance, overall mass and arm compatibility, which makes cartridge design like doing your Rubik's cube

blindfolded and with a single hand.

Look at the yokeless generator first developed for the Clavis DC and you can see how it simplifies the overall structure, eliminating the pole pieces. Likewise, the open-plan bodywork of the Helikon, with its complex curves and cutaway structure seeks to create a rigid, non-resonant foundation that doesn't impinge on the generator itself. It's an approach that is taken to its logical extreme in the savagely eroded titanium body of the Titan, a cartridge that's noticeably dense and inert when you pick it up. But it has been taken further still by the alternative structure now seen in the Skala. The heart of the new cartridge is a tiny but incredibly dense alloy spine that carries the generator and spaces it from the headshell. Lyra can only use this material because the lack of a conventional body or pole pieces reduces overall cartridge mass so much, allowing a wider choice of alloys for this vital component. Look at the rear of the cartridge and you can see the spine sticking up between the connecting pins. You can also see the tongues that engage the matching grooves in the plastic "body". Now view it from the side and you realise just how minimal that metal element is – and how effectively the design removes eddy currents from the proximity of the magnetic structure. Instead, the cartridge relies on a plastic shroud to carry the mounting hardware, pins, stylus guard and most crucially of all, to create a non-magnetic, non-metallic nose piece and front magnet carrier. Doesn't the use of plastic bodywork compromise rigidity? ▶

► No, because that dense alloy spine actually stands very slightly proud of the plastic top plate. Tighten the screws into the captive brass threads and you force the top of the generator carrier directly against the headshell. It's small surface area further concentrates the pressure and intimacy of the contact. At the same time, this approach creates a significantly simpler primary structure whose resonant characteristics are both more readily understood and damped by the clamping action of a dissimilar material (think tuning fork with an elastic band around it). Okay, you don't want to overdo it with the allen wrench, and it's worth taking care to tighten the bolts evenly so that you don't rock the cartridge in the headshell, but otherwise, the Skala retains the easy practicality of its older brothers. Its cantilever assembly is derived from the Titan i's and is combined with the 70x3 micron fine-line stylus used in all the Lyra models save the Dorian. Despite the enormous differences in their structures, one listen and there's no doubting that the Skala sits far closer to the Titan than it does to the Helikon.

Indeed, comparisons between the two are instructive. Side by side, you'll find that the Skala can't match the Titan's astonishing levels of transparency, focus, dynamic delicacy and discrimination. Listen to the Yepes/Rodrigo *Concierto de Aranjuez* and the Titan still tells you more of the how, more of the sheer effort and technique that goes into the playing. It has a captivating delicacy and intimacy that sets it apart from the competition irrespective of source. But let's not write off the Skala just yet: If it can't match the Titan in its strong suits, how about where the flagship is weaker? For many, the Titan i is too lean, too demanding of record quality and too unforgiving. If you want to hear the benefits of record-by-record VTA adjustment then the Titan's your cartridge. If you want to feel the last ounce of effort that's gone into the instrument reflected in the precise energy envelope it produces, then look

no further. But if all that sounds a little too academic, a little too much like hard work, then have I got a pick-up for you.

The Skala clearly, audibly has more than a strand or two of Lyra DNA (how could it be otherwise?) but this is also, definitely its own beast. Bigger and bolder, solid of presence and confident of step, this is a Lyra like no other. So, whilst it can't compete with the Titan in its strong suits (what can?), it actually does a remarkable job of ameliorating its failings without diluting those strengths too much. By all other standards, this is a precise and highly resolving cartridge, coupling those



qualities to a warmth and weight that results in impressive solidity and dynamic impact. The bottom end power and definition support a wonderfully dimensional acoustic, with clearly defined side and rear walls (where present). Orchestral perspectives are natural and well defined, ranked instruments clearly delineated in depth, but it's the collective coherence that's impressive. The Starker/Dvorak *Cello Concerto* is delivered with such gusto and explosive power that suddenly those premium price Mercury pressings don't seem so expensive after all. Starker's playing has a sweep and majesty, a lyrical authority that marks it out, his instrument rich and vibrant. But it is the orchestra that blows you away. Dorati's masterful control binds them into a single unit, a channel

for his passion and purpose. And for once the cartridge does nothing to dismantle that musical achievement in the name of hi-fi. Just as the space they occupy is coherent, so is their playing. It brings real emotional power and depth to romantic works, a sense of structure and line to the baroque. It picks an unerringly sure-footed path through the disjointed, staccato melody of Joni Mitchell's 'California', a track that all too often descends into a muddled mess of clashing guitars. It brings an overall shape and pattern to jazz as disparate as Coltrane's 'My Favorite Things' and 'A Love Supreme', one a masterful exposition on flexibility within a given

structure, the other almost completely freeform. It's this ability to retain not just the overall picture of the performance but its sense and direction that makes the Skala so special. All too often you get one or the other. And it does it without the weight and warmth clogging or smearing the sound and separation of instruments and voices. Bach's *Musical Offering* (Menuhin/BFCO EMI ASD 414) mixes chamber orchestra with harpsichord and flute, yet the Skala never loses the subtle underpinnings of the cello, never confuses violin and viola and renders the continuo as satisfyingly solid. No scratchy, lightweight here, this harpsichord offers a complex, weighty foundation to its filigree contribution, justifying its role as rhythmic foundation.

Speed has always been a Lyra forte and in this respect the Skala is a chip off the old block. It's its speed through the gears that makes those orchestral swings so explosive, gives crescendos their power and impact. So it's not just about weight but also about the ability to deliver it on demand, irrespective ►

▶ of which end of the dynamic range its operating in. People talk about tracking ability, the ease with which a cartridge can trace a groove. The Skala is no slouch in this regard but what it really tracks is the music, responding to its changes in density and dynamic demands with a suddenness and ease that belies the effort required. You don't hear it working and that moves its contribution further into the background, moving the music further forward in your attention. And because it's right at the business end of the system, it makes the whole thing sound more effortless and less intrusive.

Yes, the Titan puts you closer to the individual performers, creates a more transparent acoustic space. But in doing so it also creates its own specific perspective. It's almost as if the Titan reads the performance from within, the Skala from without. That's one reason why the Titan demands such care and attention to set-up: it connects you so intimately that every blemish is revealed, whether it's a bum note, a poor edit, a surface glitch or less than perfect VTA. Indeed, owning a Titan means owning an arm that will really let you optimize its set-up, or you are only scratching the surface of its potential. The Skala doesn't dig nearly as deep as the Titan, which means it has a wider window when it comes to operational acceptability. Yes, you hear VTA changes, but where the Titan demands a setting down to the individual delineation on the JMW's scale, the Skala will sit happily within a range of  $\pm 5$  without protesting too loudly. That makes it an order of magnitude more likely that you'll actually realize the performance you've paid for – especially in arms without the operational elegance of the VPI.

So which do I prefer? Ultimately there's a special quality to the sheer

intimacy that's delivered by the Titan i. If you want reach out and touch then here it is. But there's no denying the addictive appeal of the Skala's substance, its grasp on the music as a whole. It's tempting to characterize one as the more cerebral, the other more visceral, but that's not only overstating the case, it's oversimplifying it too. These two cartridges start in much the same place, they just reach round the music in opposite directions, not quite meeting at the listener. I'll take the Titan thanks, but there are many who wouldn't. Offered a choice of Skala or Helikon there's no contest and that's really the point. The Skala doesn't match the Titan for performance, but it comes close in terms of appeal. In doing so it totally eclipses the Helikon, bringing forth from the darkness a new light. If this is the first in the next generation of Lyra cartridge designs then the future looks sunny indeed.

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### Technical Panel

Type:	Low-output moving-coil
Stylus:	Lyra line-contact
Cantilever:	Boron rod
Output Voltage:	5.0mV (5cms/sec)
Internal Impedance:	5.5 Ohms
Weight:	9g
Compliance:	12cu
Tracking Force:	1.65 – 1.75g
Recommended Load;	Greater than 100 Ohms
Price:	£1849

#### UK Distributor:

Symmetry Systems Ltd.  
Tel. (44)(0)1727 865488  
Net. [www.symmetry-systems.com](http://www.symmetry-systems.com)

#### Manufacturer:

Lyra Co, Ltd.  
Net. [www.lyraaudio.com](http://www.lyraaudio.com)

## The Air Tight PC-1 Moving-Coil Cartridge

As long ago as Issue 37, JK reviewed (and waxed lyrical) over the My Sonic Lab Eminent, an innovative MC design notable for its energetic, lucid and refined presentation. It's an enthusiasm that I can echo, having also used the Eminent extensively in the last year. But here we have the intriguing proposition of the Eminent's first cousin; the same novel core material but with modifications specified by Miura-san at Japanese high-end stalwarts Air Tight, renowned for their exquisitely constructed valve amplification.

In fact, the story starts nearly thirty-years ago, when Miura-san was working at Luxman and specified the MC-115C cartridge from the legendary Sugano-san at Koetsu. That project passed from the master to an apprentice, Mr. Y. Matsudaira. Some twenty-five years later, after working at just about every cartridge manufacturer of note in Japan, whilst working for Audio Craft he once again met Miura-san. Matsudaira-san finally set up on his own as My Sonic Lab in 2004, producing the Eminent as his first product. Its new former material finally delivered high output whilst maintaining low source impedance, holy grails of the original Luxman design. Miura-san quickly realized that here, with a few subtle modifications, was the opportunity to create the cartridge he'd always desired and so the PC-1 was born.

Outwardly, the two cartridges are quite distinct, but that's mainly down to the large, angular mounting block used by the PC-1 in place of the Eminent's circular top plate. This increases the cartridge's mass and interestingly it's screwed in place as opposed to bonded like the one on its cousin. Compare the body cans and hardware though, and the family resemblance is unmistakable, even if the My Sonic Lab product is all