

# AN OLD CARTRIDGE IS NEW AGAIN

What is remarkable about phono cartridges is not their differences but their similarities. Nearly all the cartridges you are likely to see are either moving magnet or moving coil. Not this one.

Nearly all of them have a diamond stylus attached to the end of a cantilever, whose other end has either a magnet or a coil attached to it. As the coil moves relative to the magnet, or vice versa, a current is induced in the coil.

The long (and, inevitably, not *quite* rigid) cantilever makes the relationship between stylus movement and current generation less than direct, however. For that reason the cantilever is sometimes made of exotic materials, such as beryllium or even diamond. In the 1950's, Decca did away with the cantilever altogether, fastening the stylus to a flexible metal sheet. The London cartridge works the same way. For the details, see *Inside the London* on the next page.

Because the connection is so direct—the stylus is a scant 2 mm below the generating elements), these cartridges can dig out fine detail, and potentially they can score better dynamics too. That they can also have their own problems goes without saying, because what alternative technology does not? You may have heard the claims: it needs a unipivot arm, the stylus pressure is too high, they don't track well, etc. *Caution:* most of these claims are without basis.

After Decca stopped making the cartridge, designer John Wright picked up a license to it, though he didn't get the name. Presence Audio, which had been distributing the Decca, continued its work offering the rebranded new generation. The models now offered are more than just a version of an old design with a new name, however. This top-of-the-line version offers features that the

old Deccas lacked. For that reason, we would caution you against judging the new London by what you may have read about the original Deccas.

The London Reference comes packed in the substantial alloy box shown here, with a bolted-on acrylic lid,



tucked into a gorgeous velvet bag that will be the envy of every Scrabble player. The cartridge itself is a substantial chunk of metal—you can see it on page 46. The shell is threaded, so that it can be screwed into the tone arm without using finicky nuts. The connection pins are rather short, and pushing sleeves onto them was delicate work.

Because of the London Reference's height, greater than that of most cartridges, your arm will almost certainly need raising. The instructions, by the way, recommend setting up the arm

**The design is from a long time ago, but so are tube amps and electrostatic speakers**

so that the cartridge is parallel to the record surface, or even with the back of the arm a little lower than the front. Parallel turned out to work best, yielding the clearest focus, and we set it up that way on both of our turntables.

## In the Alpha system

Our listening sessions consisted of two parts, on two different turntables. However we took a shortcut, to reduce the time the whole gang would be waiting around. To do this, we took a cue from the last time we did a standalone cartridge test.

It was in *UHF* No. 29, whose cover showed several cartridges on a marble chessboard.

To be able to recall instantly the sound of any cartridge, we recorded the sound of each on the best recording system then available

to us, a VHS Hi-Fi machine (and a good one: it was a Harman/Kardon model then going for a thousand bucks). The best available to us today: a high resolution (24-bit/96 kHz) recording on a MacBook Pro, with transfer to a DVD at full resolution. We pulled out three LPs and played them on our Alpha system using our own Goldring Excel MC pickup, then the London. The result was listened to live, and then evaluated on our Omega system, playing the DVD on our Linn Unidisk universal player.

Aligning a cartridge on a straight-line tracking arm like our Lurné SL-5 is a piece of cake, except for correct height. That is best done by ear, and we pulled out the original *Test Record 1* from Opus 3, whose exceptional focus lets you know when you've got the height (and therefore the vertical tracking angle) spot on. We then experimented with tracking pressure. The manufacturer recommends a pressure between 1.65 and 2 grams (much lower than the *3 grams* once recommended. The higher limit is usually

the best choice with any cartridge, and that was the case here. Tracking too light produced not the usual mistracking, but an odd sort of “groove rattle” we had never heard before. Running it at a full 2 g eliminated the rattle...or so we hoped.

The first recording we tried was our old favorite, William Walton’s tone poem *Façade*, played by the Chicago Pro Musica on Reference Recordings RR-16. We have used it a number of times on our Omega system, and Reine complained that it sounded duller this time. Was high-definition DVD not as good as we had thought? In fact what we were hearing was the difference in our turntables. Our Audiomeca table was superior to the Linn LP12 when we acquired it, but the Linn pulled ahead with its original Lingo power supply and has never looked back.

In any case, what we heard was considerably cheerier with the London Reference in place. The brass and woodwinds sounded brighter, but they had a *natural* brightness, not the shrillness we hear from too many products. The clarinet was superb, and even the troublesome piccolo was improved. The pizzicato passage in the counterpoint was a delight, and the piece had regained at least some of the life it had lost. Whatever the weaknesses of the DVD transfer might be, they were not masking differences between the cartridges.

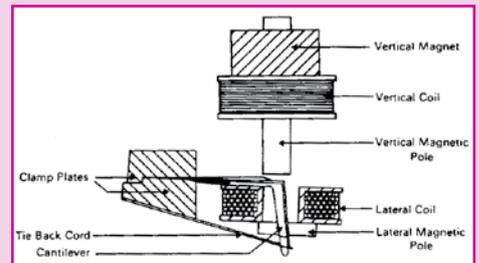
Next we played *Take the ‘A’ Train* from the Ray Brown Trio’s *Soular Energy* LP. Though Brown’s bass was thunderous enough to rattle glass even with our own cartridge, it picked up in both richness and substance. It was more tuneful as well. The piano was pretty much the way Gene Harris chose to play it (he clearly knows it’s a percussion instrument!) but without exaggeration. The often subtle percussion work remained subtle, but it was never less than clear.

We ended that session with Mary Black’s *No Frontiers* from the album of the same title. If it had seemed slightly dull with our cartridge, it took off with the London Reference. Black’s voice was arresting, focused, her words clear (and they’re worth listening to). Even individual syllables, such as leading H’s, were clearer, though not unnaturally so.

# INSIDE THE LONDON

The official diagram, shown here, seems to be intended to discourage would-be competitors from ripping off the unique design. So how does the cartridge really work?

Unlike in other cartridges, which have a moving coil and a fixed magnet, or vice versa, London cartridges have a fixed coil and a fixed magnet. The fine-line contact stylus is fastened to a flexible metallized plate. When the plate moves within the magnetic field, electrons flow through the coil. There have been such cartridges before, usually called “moving iron” or “induced magnet” types, but no other cartridge works the way the London does.



By the way, what looks like a cantilever in the picture on the next page is actually the tieback cord, which keeps the stylus under tension. What London has labelled “cantilever” above is unlike the usual pickup cantilever.

The coil is much larger than in an MC cartridge, and therefore has more inductance, some 130 mH. This is about ten times that of a typical MC coil, but a fifth that of most MM cartridges. It is not high enough to cause the rolloff found in those cartridges. On the other hand, the output voltage is very high, some 5 volts, and it will match MM phono stages.

You probably know that you can’t just slide the stylus off an MC cartridge. It has to be rebuilt at the factory, and that can cost 80 to 90% of the original cost. London cartridges have no cantilevers, however, and Presence Audio says changing the stylus costs less than half of the full price.

The accompanying instruments were a delight. Albert found the bottom end a touch lighter, but wasn’t certain whether that was a bad thing.

Before uninstalling the London, we ran a couple of test recordings. We began by playing what is often considered nearly unplayable: a direct-cut organ recording from M&K called *The Power and the Glory* (RT 114, not that you’re likely to find it even second hand). The final piece, titled *The Bells of Sainte Anne de Beaupré*, includes a melody played overtop a steady 16 Hz note, produced by a pipe the height of a three-storey house. The piece began well, with the London having little problem tracking the cut, but before long we could hear a pronounced vibrato. We would soon see why.

Our next test, with our *Vinyl Essentials* test disc (Image Hifi LP 003) identified the culprit: a resonant frequency, close to 16 Hz, (ouch — much too high!) and

not even well damped. Our Lurné arm is short, since it is a straight-line tracker, and its mass is therefore low. Though the combination had worked quite well with real-life music, it is not ideal. The leaflet does recommend an arm of medium to high mass, and this isn’t it.

Would our other tone arm be a better match? It was time for a lunch break, but we would soon see.

## In the Omega system

This system’s turntable is a Linn LP12 with all of the recent improvements except for the Keel subchassis (see *UHF* No. 80). The tone arm is an Alphason HR-100S, made of titanium with exceptionally hard bearings and Van den Hul silver wiring.

Because this is a full-length arm, with higher mass than the Lurné SL-5, we guessed that it and the London Reference would have a lower resonant frequency. They did. We put the resonance

around an ideal 8 Hz, though it was so well-damped we could determine it only with difficulty. This arm/cartridge combination might turn out to be a marriage made in Heaven.

On the M&K organ recording the London did better than it had with the SL-5 arm, though it still suffered from vibrato, and we could actually see the arm rock from side to side as it played. However it never exhibited the clicking sounds that are a sign of mistracking. The Decca's reputation for mediocre tracking certainly doesn't apply to the London incarnation.

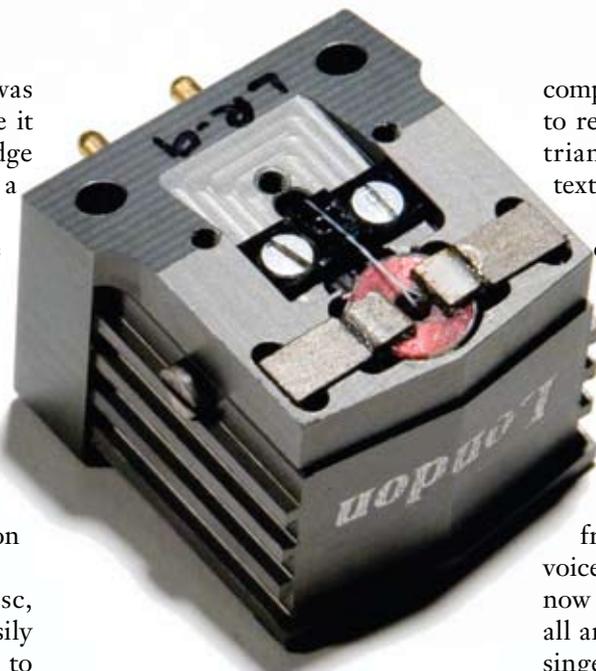
On the *Vinyl Essentials* test disc, the London Reference cartridge easily negotiated all of the bands right up to 100  $\mu$ m. We have actually seen the upper bands throw the cartridge right out of the groove and onto the label!

It was time to listen. We had a stack of seven discs, which we first listened to with our own Goldring Excel cartridge. We were, as usual, more than happy with what we heard. "When it sounds like this," asked Reine, "why would anyone think of buying something else?" But we were in for some surprises.

We began with a two-disc *Mobile Fidelity* pressing of Beethoven's *Symphony No. 9* (MFSL 2-516), with Georg Solti conducting the Chicago Symphony Orchestra. Good as it had sounded the first time, it improved considerably with the London Reference. "The natural tone of the strings is what struck me first," said Gerard, "that and the greater sense of space around the orchestra." The lower strings, and particularly the double basses, played with weight and authority, but with no hint of mushiness. The voices of the soloists in the final movement were almost startling in their purity, and the complex choral passages hung together well, never turning into a shapeless mass.

Though the excellent dynamics made the symphony most satisfying, Albert asked to hear a passage about 5 dB louder. No artifacts turned up, just music.

We confirmed, however, that the London likes its records in good shape. Two minor scratches that might have caused mere ticks with other cartridges actually derailed the London. For-



tunately that never happened again, nor did we note any increase in surface noise.

We continued with a Pavarotti recording, *Mattinata* (London OS 26669), from which we selected Giordani's achingly beautiful *Caro Mio Ben*. Was it better with the London? Perhaps. We noted the silkiness of the strings, and the golden sheen of Pavarotti's voice — he was in his prime when he made this recording.

The Dallas Wind Ensemble's version of *76 Trombones* (from *Beachcomber*; Reference Recordings RR-62) is so overwhelmingly dynamic that it poses a challenge to the entire playback chain, and that of course includes the phono pickup. The London Reference had no difficulty negotiating those awesome grooves. "It's like a photograph that drops into focus," said Albert, who is of course a photographer and often makes

### SUMMING IT UP...

**Brand/model:** London Reference

**Price:** US\$5295

**Output rating:** 5 mV

**Type:** Moving iron

**Most liked:** Superb clarity and natural timbres

**Least liked:** Some unexpected artifacts

**Verdict:** It's delicate to set up, but hey — we're talking about analog here!

comparisons like this. "We're just closer to reality. And did you notice that the triangle actually plays with different textures?"

It was warm outside, but we pulled out a Christmas song anyway: *Julsång (O Holy Night)* from the legendary *Cantate Domino* album. This version is noted for the eerie purity of soprano Marianne Mellnäs' voice, and for the emotional punch of the chorale in the crescendos. It was even better than with the Goldring, which frankly seemed unlikely. The choral voices were easy to keep straight, and now the ensemble seemed to come from all around us. "It sounds as though the singers are gathered right around the microphones," said Albert. He asked to hear the title piece, *Cantate Domino*, in which the recording setup was clearly different.

We went to Opus 3 next, and the lively jazz piece *Comes Love* from the *Showcase* album (LP20000). It impressed us less than the previous albums, not because it didn't sound good (it was, in fact, superb), but because the Goldring had performed so well too. It was enchanting nonetheless, and the music of the Swedish Jazz Kings carried us away. Kenny Davern's clarinet was gorgeous, as were the piano and that rollicking sousaphone. No complaints.

Our next LP was by no means an audiophile recording, but we like it a great deal: Dolly Parton's *I Really Got the Feeling* from her RCA album *Heartbreaker* (AFL1-2797). Parton has a clear and clarion-like upper register, and with the London cartridge she seemed to leap out of the speakers. The music flowed with purity and ease. In the second part of the song the arranger slathers on instruments and backup singers with a broad putty knife, and with the Goldring that passage got rather too thick. The London Reference made it all sound more natural, if just as ill-advised.

But was it *really* natural? Reine found the sound more flashy than realistic, though to be sure "flashy" is what coproducer Gary Klein was possibly shooting for. We were disconcerted to hear another example of "groove rattle," clearly audible in the silence at the very

end of the song. But we had heard it only twice, and briefly at that, over ten records.

How to end what had been a most enjoyable session? We always advise that you evaluate equipment you are thinking of buying not by listening to bass, treble, “air” and image, but by gauging the emotional effect that the music has on you. Our final selection was intended to determine how much feeling this cartridge could wring from vinyl.

It was Barbra Streisand’s version of Stephen Sondheim’s *Send in the Clowns* (from the Broadway show *A Little Night Music*). It is found on *The Broadway Album*, and you should be warned that if you want to get everything Barbra put into the song, you will have to find a copy of the discontinued LP, and not the disappointingly dull CD. Columbia should remaster it in both formats.

For this final song we broke out the adjectives: *remarkable, moving, magnificent*. No one we are aware of has ever sung it quite this way, and the cartridge

delivered it all. We were fascinated by the sensitivity of the performance, and even by pregnant pauses that bordered on the heartbreaking.

It was now about supertime, and perhaps time to unbolt the London from our tone arm. But wait a minute, *did we have to?*

### Reaching a conclusion

We have often explained that our reference systems are working tools, and that a reference that keeps changing is no reference. It isn’t because a tested component outperforms ours that we feel compelled to purchase it. And that’s a good thing, because otherwise we would have gone broke some time ago.

Of course the London Reference tempted us. It would be wrong for our Audiomeca turntable’s SL-5 arm, but oh so right for our Linn and its Alphason arm. Ever have a dog follow you home when you were a kid? Remember what you said to your parents?

This would a costly addition, and

notwithstanding some conspiracy theories we don’t get our cartridges (nor most products) free. The London Reference wasn’t in our budget.

But one can of course rationalize these things. We own two Goldring Excel cartridges, one of which is now quite old, one of which is younger but has run up a lot more hours. Someday one of them might fail, and then what?

(See how easy it is?)

We are adding the London Reference to our Omega system.

### But what about...

The Reference is the top model in a large lineup. Two other versions have line contact styli: the Jubilee (US\$2875) and the Super Gold (\$1260). We know we’ll be bombarded with questions about them, and we need answers.

As this issue goes to press, we have both of those cartridges in hand, and we will be making comparisons. We’ll let you know the cost of dreaming of something better.



## CROSSTALK

I am truly enthusiastic about this cartridge. To be quite honest, our reference cartridge was and is quite formidable, and until now it would never have entered my mind that we could possibly put it aside for another that might be supposedly better. I would have needed proof, and solid proof too.

Well, the hours I have spent listening to a variety of LPs have been exquisite, and have left me in a state close to euphoria (nice country, Euphoria, too bad about all those earthquakes). I was truly touched by the beauty and the realism of sounds, such as human voices — male or female — and orchestral instruments. All of the pieces we had selected for these sessions were reproduced in exemplary fashion, sometimes soothing, sometimes pulsating, sometimes majestic, spotlighting the virtuosity, the expressiveness, and the sensitivity of composers and artists alike.

Of course our own cartridge also possesses these qualities, but with the London Reference it was even better. Faced with this firm evidence, what now?

The ball is in Gerard’s camp it seems to me, though I think I can guess the outcome.

—Reine Lessard

It seems to me I have been hearing about the Decca cartridge all my life. What do I recall about it? That it was loaded with bugs, that it resisted all attempts to make it work truly right, but that there were diehard fans who swore by it anyhow.

I don’t know how accurate a picture this was, but in this, the latest version of this ancient design, the demons have been exorcised, and John Wright’s vision has been vindicated. He believed that this was the right way to build a phono cartridge, and I am not tempted to argue.

Does the London Reference still have flaws? Of course...which of us does not? But it brings me closer to the music, and helps me forget that I am listening to a stack of electronic equipment, and not live musicians.

Digital has gotten pretty good over the past few years. Anyone still listening to the analog alternative needs to make analog as

good as it can get. This remarkable cartridge is a powerful tool for doing just that.

—Gerard Rejskind

This test session left me with an *abbbb...* as in a sigh of relief. This cartridge affected not just the way the music sounded, but the way I *felt*. I felt good.

Was it the realism, the natural-sounding strings, the space opening even wider than I expected and filling it with more music than I remembered? I’m not quite sure.

I wanted to hear more of what each performer had to say and I loved even more the *way* it was said — the tenderness in a voice, the sorrow, the elation of a choir. My sigh of relief didn’t appear immediately, however. First there was an internal *wow* of surprise, followed by doubt. *What if that sense of wonder doesn’t last after a few pieces?* But it did. And it actually improved with every piece, which were all too short, somehow.

And I found myself writing less and less, only wanting to enjoy the beauty. Refreshed. *Abbb.*

—Albert Simon