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ZYX R1000 Airy3-X Silver Base & ZN cartridge review

Phillip Holmes



Specifications:

Cryogenic Treatment Temperature: -196C (-320F)
 Output Voltage: 0.24mV [3.54cm/sec., 1kHz]
 Frequency Response (+/- 1dB): 10Hz~100kHz
 (20Hz~20kHz)
 Channel Separation: > 30dB [1kHz]
 Channel Balance: < 0.5dB [1kHz]
 Recommended Tracking Force: 2.0gm [20 ~ 25
 degrees Celsius]
 Tracking Force Range: 1.7 ~ 2.5gm
 Compliance horizontal (vertical): 15 x 10-6 cm/dyne (12
 x 10-6 cm/dyne)
 Trackability: > 80micro m/2.0gm
 Internal Impedance: 4 ohms
 Coil Wire: X type: 6N Crystal Copper 0.035mm/CRYO
 Recommended Load Impedance: > 100 ohms
 Cantilever Material: Boron rod 0.3mm dia.
 Stylus: Microridge Solid Diamond 0.07mm sq.
 Contact Radius: 3micro m x 60micro m, 2000
 Hour/2.0gm
 Output Terminals: 1.25mm dia. gold plated [EIA]
 Net Weight: 5.0gm

If you Google ZYX, you'll find plenty of opinion on the line. An observation that seems to be pretty consistent is that they are accurate. Accurate in that they don't have any obvious colorations, tracking problems, romanticism, etc.. I'd only heard one ZYX in person, and only for about an hour, and in an unknown system. When I was given the chance to review a ZYX by Tom Vu of K.T. Audio Imports, I welcomed the opportunity.

MSRP: \$3,450

I'm not completely clear on how long ZYX has been building cartridges, but my understanding is that they were the OEM for the Monster Cable cartridges from the late '80s to early '90s. That's also borne out in physical similarities between the Monster Cable cartridges and some in the current ZYX line. So, these aren't new upstarts, or a Johnny-come-lately, who purchase cartridges from someone else, adding customized variations on a stock cartridge.

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There are varying ideas on what a phono cartridge should sound like, and there are two large camps on that. One camp is looking for ultra-resolution, channel separation and linear response. The other is looking for the gestalt of the music to come together, with less emphasis on detail and accuracy, and more on a holistic goodness. In the latter camp, the fine cartridges of Koetsu come to mind, though they are more neutral and better tracking than their classic cartridges of the '80s. Matching a system to a Koetsu is relatively easy. They do very little that could be found offensive. Their warmth, for the right person, helps to forget the mechanical nature of disk playback. On the other hand, cartridges from the likes of ZYX and Scan-Tech can sound fantastic, but require a complementary system. Of course, this is an oversimplification of the truth. Within a manufacturer's lineup, there can be rather dramatic differences.

The ZYX designs are totally unique, at least externally. You won't mistake them for another cartridge. With varying colors of clear plastic (blue, red, clear), differing shapes, and even one with a ball on the front (I call it the Globetrotter), there's a kind of outer space feel to them. Kind of like something from Japanese Anime. Or like the alien mother ship from *Close Encounters*.

The cartridge that I received was, now pay attention, the "Airy Sound R1000 Airy3 X/sb,zn with 'Real Stereo' Magnetic Circuit." I'll have something to say about this naming system later. The cartridge has a nicely made silver plate on top, which raises the mass. Otherwise, the cartridge would be too light for some arms. Coils are copper, which I prefer, and the stylus shape is line contact. After deciphering the ZYX jargon, I think these are the specifications for the unit being reviewed: (*See Specifications. -Ed.*)

Loading recommendations are always odd. ZYX specifies greater than 100 ohms, but it has a four-ohm coil impedance. Other cartridges with low impedance windings specify loading as low as a few times their internal impedance. I take loading recommendations with a grain of salt. Unlike tracking force, you really can't destroy a cartridge by experimenting with the load. Adjust by ear after getting the VTA/VTF/Overhang/Azimuth set. Your internal tonearm wiring, headshell (or not), tonearm cable, and the type of phono stage (tube, transistor or transformer input) will affect what load is best for *your* system.

Serendipity helps

When I received the ZYX Airy 3, I was lucky to have reference level components in the system: the AllNic phono stage, the speakers from Sanders Sound Systems, and my own SME V arm. Had I been using ribbons, traditional CR type phono stage and a unipivot arm, my results would have been different. The first time I heard a ZYX cartridge, it was on a Graham Phantom. I was left a little cold. It wasn't a bad sounding combination, but not the most musically engaging. To be fair, it was a completely unknown system to me. But, there seems to be some banter about the ZYX not being a good match for a unipivot. All I can say is that I had first hand experience with a good unipivot and gimble bearing arm combination, and the gimble bearings carried the day. It's something to keep in mind if you've heard (or bad) about the ZYX cartridges. Later, I will theorize on why the ZYX should be used with something like an SME, TriPlanar, or other fine gimbal-bearing arm.

After umpteen cartridges mounted over the years, this one seemed no more difficult than usual, except that there was no stylus guard. Still, because the nuts are attached to the cartridge, mounting is easier than some. It could be a cartridge with no body, no stylus guard, and no tapped holes---those can cause indigestion in a hurry.

Dialing in the VTA, VTF and overhang were quite easy. The body shape and length of the cantilever gave adequate visual cues when using my protractor. I played with loading on the AllNic H1500 phono stage, and preferred the next to highest level of gain, "+26dB/X20". The highest gain setting was occasionally rough during loud passages, though the overall tonal balance was very pleasing. The roughness was either transformer saturation (not likely) or tube overload (more likely). I did use the highest gain setting on quietly recorded material. The higher gain settings will offer a lower impedance load for a cartridge, providing electrical damping, which changes the frequency response, tracking ability and high frequency ringing. I didn't hear any ringing with any gain setting, but all moving coil cartridges will have some ringing in the very high frequencies. The ZYX must have it pushed out very high, like other modern *low output* moving coil cartridges.

My SME V tonearm is a very good design, but presents problems when using moving coil cartridges. SME provided fluid damping and dynamic balancing (the spring loaded VTF option) to force low compliance cartridges to behave. It mostly works, but has negative side effects. There is no free lunch. The high compliance of the ZYX made it a good match with the SME V. Its different vertical to horizontal compliance is somewhat odd, and accounts for some of its "spectacular" attributes (I will discuss later). I also wound up with a low compliance cartridge that behaved much like a Denon DL103 crossed with a Decca, and a cartridge of even greater compliance. If you are married to a low mass arm, like the SME V, you will get better performance out of one of these new high compliance, low output moving coils. With the ZYX, I did not use the damping trough (I don't like it with any cartridge) and used 2 grams of tracking, split equally between passive and active mechanisms. To clarify that statement: I used the counterweight to get to 1 gram, then used the damped spring mechanism for the other 1 gram of tracking, for a total of 2 grams. I gradually worked my way up to 2.2 grams, which seemed to provide a fuller sounding midrange, perhaps at the expense of some dynamics (big whoopee---midrange rules).

The review system comprised the AllNic H1500 directly driving the Sanders Sound Systems crossover/bass amp which doubles (triples?) as a one-input preamp. Roger Sanders' ESL amp and 10B speakers rounded out the rest of the system. I used a Wireworld phono cable, with interconnects from Furutech and Aural Symphonics.

Smooth Sailing

The first thing I noticed with the combination of SME V and ZYX was unflappable trackability. I gravitate to big band, large classical, electronica and rock. The ZYX tracked through like a champion. It might not be up to the level set by the Shure V15vxml, but it had more holographic imaging than the Shure, with better separation of players and sections.

On the Japanese pressing of *In a Square Circle* by Stevie Wonder, the ZYX proved quite a revealing cartridge. Digital processing of background vocals turned sibilants into something of a flanging sound. On "I Love You Too Much", the synthesizer had a lot of springiness. Bass lines were punchy; it was easy to hear the complex layering of tracks. Though I could hear the problems with early digital recording and mixing, it wasn't distracting to the point of forcing me to pull the record. An overall impression was that the ZYX could handle the complex bass lines, especially those on the synth. The bass lines were also well connected to the instruments overtones (synth and bass guitar). With a moving magnet like the V15, I usually feel the bass fundamental is somehow disconnected from the overtones. Not so with the ZYX. So, good tracking and good tonal integration.

On The Doors "When The Music's Over" off of *Weird Scenes Inside The Gold Mine*, the otherworldly sounds were *out there* man. The sounds swirled around, outside, and behind the speakers. It reminded me of "Being For The Benefit of Mr. Kite".

On the 45rpm pressing of Red Norvo's *The Forward Look*, a hammered pressing looking VG+, but playing NM by the ZYX, the ZYX handled ticks and pops better than most cartridges I've used. Noise was put outside the musical images, allowing me to mostly ignore the less-than-perfect pressing. The ZYX also handled the challenging nature of the vibraphone, an instrument that is difficult to record and equally difficult to reproduce. Many cartridges are flustered by the attack of the mallet, creating a "thnk", disassociated with the overtones of the note. The ZYX handled this better than my old Lyra Argo.

The ZYX is ruthless in pulling apart mixes. My 2-Eye Columbia pressing of Miles Davis' *Porgy And Bess* was shown to be a near total engineering disaster. It's as bad as *Kind Of Blue* is good. Think Phase 4 stereo meets Phil-the-Spector-Of-Death. The bass was boomy, edits sucked, and the EQ was awful. It must've been done by Columbia's lousy classical recording team. The ZYX still had plenty of musicality, but the accuracy and transparency showed every disgusting wart in this record. The ZYX's "Real Stereo Magnetic Circuit" revealed ping-pong stereo panning, too. Strings panned hard into one channel, with no bleeding into the other. This is one of those records that a Shure M44 or Denon DL102 mono, neither of which are state-of-the-art, would cover up the disaster and make for better listening.

On the Japanese pressing P-4580A R&R Forever 1500 Atlantic Series WB/Pioneer, which is a reissue of Atlantic 8006 *Ray Charles* by Ray Charles, I was treated to wide range of acoustic spaces and microphone techniques. It seems that most, if not all, of the tracks were done on different days, with different microphones, in different rooms, and with different engineers (or a combination of factors). Some were fat and warm, others a little edgy and aggressive: the AM radio EQ curve that would grab people's attention. There was a lot of attack from Ray's piano. "Greenbacks" really swung, with great dynamics and a luscious midrange. More than any other track, it had Ray's jazz heritage on display. The subtle nuances of timing were well done, and the saxophone solo had a lot of authentic reediness.

The two-LP soundtrack of *American Graffiti* mastered by Artisan is faithful to the varying quality of original sources, and the amazing array of microphones, acoustic spaces and tonal balances. The high degree of truthfulness from the ZYX transported me to different places and times. At the end of the day, this is what I want from a cartridge.

On Radiohead's *Kid A*, the strengths of the ZYX were on full display. On "Everything In Its Right Place", Thom's voice is almost exactly 45° from the ethereal background images. His voice was well centered and focused, a foot or two in front of the centerline of the speakers. The background was well behind and sometimes well outside the speakers. The percussion on "Kid A" was clean and tight, with no overhang. The horns on "The National Anthem" were in their own acoustic space, clearly separate from the other tracks and with individual horns much easier to follow than many cartridges.

General Observations

It's one of the best tracking cartridges I've used. Nothing seemed to perturb the suspension or stylus. It could reproduce the underpinning bass lines and present the rest of the music as if the bass line weren't there – in other words, some bass lines will cause intermodulation distortion and adversely affect the rest of the music. The ZYX was almost the best I've heard in this regard.

The ZYX is not able to minimize ticks and pops quite as well as some other cartridges, notably those from AirTight, and some from Lyra. Compared to the majority of cartridges, it is above average. I think some of this stems from the effort to make the stereo separation as pronounced as possible. The imaging is almost too good at times, especially on ping-pong records. The degree of separation makes classic "Stereo Action" records sound downright bizarre.

On well recorded stereo disks, especially early RCA and Deccas, the stereo width and imaging behind speakers was state-of-the-art. On very early two-microphone recordings, there was a "V" shape to the soundstage, making the early RCA "hole in the middle" recordings even more distinct from their later efforts.

I feel that this cartridge will be at its best with gimbal bearing arms like my SME V, the highly regarded Tri-Planar, or similar. Dialing in the last ounce of nuance from the ZYX took a few weeks. Though initial setup was a breeze, experimentation showed that the ZYX is quite particular about VTF and VTA, and especially sensitive to *antiskate* setting. If you aren't getting tremendous stereo spread and depth, experiment with your antiskate adjustment. As such, I would recommend against arms without antiskate adjustment (AKA bias). Also, considering how rewarding and revealing it was to tweak the cartridge to best performance, I would bet that a unipivot or similar arm design would only give you approximate images and approximate reproduction.

On mono, the image is a little spread out from a theoretical point source. However, the depth on mono recordings was first rate. On the whole, this cartridge does quite well at playing mono recordings.

The ZYX is a wee bit thin in the bottom octave. It's not bright at all. Just picture a flat response from the highs down to about 40Hz, then a slight dropping off in that last octave. It's possible that it was a flaw in my system or setup, but one I could not alleviate. Luckily, the Sanders 10B was quite good in this area and blended well with the ZYX. Where a few popular cartridges are a little plump or warm, the ZYX seems almost perfectly flat, leading some to think it is a bit edgy. I'd argue the point that with certain associated equipment, the overall result would definitely be bright. With the correct associated components, the result will be very flat, smooth and honest.

I tried the ZYX with several different phono stages, but much preferred the transformer loading on the AllNic H1500. The result with an all transistor unit was a little bland, though still good. The AllNic H1500 does have a great bottom-end, which blended with the ZYX to produce a holistic result, or gestalt.

A Perfect Cartridge For Some

The ZYX strikes me as a perfect cartridge for the buyer most interested in image width. It tracks wonderfully. It has very little character of its own. There is no MC ringing. The frequency response is quite accurate. It has many strengths going for it.

If your system is slightly warm or ripe in the bass, the ZYX should be considered. Or, if your system is already a little bright or lightweight, consider a more luxurious model.

In the end, I decided that it would be a good cartridge to keep around the house. Since it mated up well with the SME V, it made the decision an easy one. Though it does have a sound of its own, it has much less of a sound than much of the competition. Recommended.

