

LOUDSPEAKERS

STEREO LOUDSPEAKERS

KRIX ESOTERIX ALTUM

Furby anyone? Perhaps an obscure reference, considering that the Furby (a small electronic robotic toy with big ears) craze-peaked more than 20 years ago. But when we first unpacked Krix's Esoterix Altum and saw those enormous ear-like waveguides on the front baffles, a Furby was the first thing we thought of. For journalistic accuracy, we then Googled a picture of a Furby to refresh our visual memory and discovered the Altum looks nothing like one... but first impressions are first impressions, even if they're not particularly faithful!

Our first real intellectual thought was that Krix must have had a very, very good reason to fit such a large waveguide to such a small speaker, not only for reasons of cost (waveguides like this cost a motza!) but also because the appearance of the waveguide is likely to alienate a significant percentage of buyers. And it's not like you can hide it with a grille... though we do understand this is something Krix is actually working on, so the best of British with that one guys! (A grille is now available, but it wasn't at the time of this review.)

ELEPHANT IN THE ROOM

Yep, we just have to start with that waveguide. It seems that the reason for it harks back to fundamental research on sound quality initiated by the famous acoustician Floyd E. Toole when he was working at the National Research Council of Canada (before he was head-hunted by Harman to implement his discoveries on speaker brands such as JBL, Revel, Infinity, and Lexicon).

Toole was one of the first researchers to prove that if a loudspeaker does not have a flat frequency response, pretty much nothing else the designer does to try to improve its sound quality will matter. However Toole then went on to prove that once a designer has ensured the frequency response is flat, then the next biggest contributor to the perception of sound quality (after bass extension) is well-controlled lateral dispersion.

Controlling lateral dispersion is particularly difficult to do in a two-way design, because as the bass/midrange driver delivers higher and higher frequencies, lateral dispersion narrows



progressively, but then, when the tweeter takes over, the dispersion instantly widens, so there's a large discontinuity which is clearly audible. This is just one reason why many manufacturers opt for three-way designs, despite their cost and complexity... and their shortcomings.

Krix's solution was to fix a waveguide to the tweeter to control its dispersion in such a way as to create fewer lateral reflections in the listening room, the result being, according to Andrew Bennett of Krix, that listeners would "hear more of the music and less of the room".

The waveguide wasn't simple to design. Krix engineer David Murphy says he went through nearly 100 computer simulations before narrowing the design down to the six he thought would work the best, after which Krix prototyped all six for full 'real-world' testing and auditioning. It's significant to note that Krix is actually one of the few companies in the world that could do this, not simply because of its access to the necessary test equipment, but also because it has its own wholly-owned factory in Adelaide, South Australia, where it manufactures all its own cabinets, acoustic horns... and waveguides... and crossover networks. As a world-leader in the design, manufacture and installation of commercial cinema speaker systems for theatres around the world, Krix has been manufacturing horn-loaded systems for many years.

The sound waves Murphy's waveguide are controlling are generated by a Revelator tweeter built specifically for Krix by famous Danish manufacturer ScanSpeak. Rated with a diameter of 26mm, it's a ring radiator design with a patented phase plug at its centre, a patented 'Symmetrical Drive' (SD-2) neodymium magnet and a non-resonant rear chamber.

Bass and midrange frequencies are delivered by a 165mm driver that has a coated wood-fibre cone that is driven by a 38mm-diameter voice coil and a neodymium-iron-boron magnet whose size is much larger than one would usually expect on a driver of this diameter. All driver elements are mounted on a cast aluminium basket. The driver is fixed to the front baffle from the inside of the speaker, so we couldn't actually see the basket to measure it for ourselves, but the diameter of the moving part of the driver is 140mm, so we're happy to accept Krix's measurement of 165mm. However the important measurement is the Thiele/Small diameter of the cone, which we measured at 130mm, which gives an effective cone area of 41cm². The cone has a conventional outwardly-rounded dust cap made from the same material as the cone itself, which we think gives better sonic results than when the dust cap is made of a different material. It's harder (and thus more expensive) to make a wood-fibre dust cap than a synthetic one, but it's pretty obvious Krix is not about trying to save money in the build of the Esoterix Altum.

The Krix Esoterix Altum is a bass reflex design, but you'll be looking in vain for the bass reflex port if you only check out the front baffle, rear panel, sides and top of the cabinet, because Krix has hidden it away on the bottom of the cabinet, towards the rear. A side view of the cabinet will immediately show how it's managed to do this without blocking the port, because the rear of the bottom of the cabinet slopes upwards, so only the front section of the cabinet makes contact with the surface on which it's sitting.

That surface can be a bookshelf or a wall-mount or some other flat surface but — as with all other small two-way designs — for best performance you should be placing these Esoterix Altums on stands. However, because of the location of the port, this means that many stands won't be suitable, so Krix has optional stands available for it (\$1195 per pair in satin finish). The tops of these stands fit neatly into a squarish cut-out in the base of the Altums, after which the speakers can be screwed firmly to the stands, which gives a truly seamless look, exactly as if the speaker is an integral part of the stand itself and not just sitting on it. The stand has cable management internally, so that your speaker wires will be hidden from sight. Unlike some stands with cable management, you don't have to spike the base to allow wires to run out, because it has four custom rubber feet that elevate the base 15mm from the surface. Of course you can always use spikes if you'd prefer.

A large metal mounting plate on the rear panel of the Esoterix Altum holds two pairs of speaker terminals, the upper pair accessing the high-pass section of the crossover directly, and the lower pair accessing the low-pass section. (This would seem to be the obvious strategy and therefore not worth mentioning, except that we've run across designs where the opposite is the case, so we're mentioning it.) The terminals themselves are very high-quality gold-plated multi-way types. If you don't bi-wire or bi-amp, the terminals must be shorted out with gold buss-bars, which are provided with the speakers.

The Altums are not large, and the angular shape of the cabinet (Krix refers to the shape as 'striking prismatic geometry') means that the dimensions listed in the specifications (390×260×380mm HWD) don't tell the whole story. Best to see a pair in the flesh, so to speak. Also, the design of the cabinet (and Krix being able to build its own cabinets cost-effectively) means that all the joints in the Altum are fully mitred, so there are no visible joins (at least none that we could see on our review samples).

You're certainly not left wanting for cabinet finishes, because Krix offers the Esoterix Altum in Black Ash, Atlantic Jarrah, Walnut and Blackwood (all real wood veneers) plus a very hip colour it calls 'Cola' (which, once again, you have to see in real life to really appreciate; the word

alone doesn't give any inkling of what it looks like). You can also order 'specials' in any timber veneer or high-gloss colour you like, but opting for a premium finish increases the price to \$7895 per pair. (Matching stands in the same premium finish would cost \$1745 per pair.)

LISTENING SESSIONS

Wow! That was our very first thought when first we heard the Krix Esoterix Altums in our listening room. We're prepared to bet that that's what you'll think too when you hear a pair for the first time. What caused this reaction? The soundstage. Note that we haven't said 'stereo soundstage' but just 'soundstage', because there is no 'left' or 'right' with the Altums... indeed there are no speakers in front of you at all, just the performers — and that's as true for a single guitarist as it is for a full orchestra. It's just as if the musicians are right there in front of you... and the soundstage is not just wide, but also high and deep. The aural vista these speakers create is just stunning. We don't think we've heard its like from a small pair of two-way stand-mounts.

What makes this performance even more amazing is that we hadn't yet got around to optimally placing the speakers in the room. We'd just unpacked them, hooked them up and were about to start the process of finding out where in the room they sounded the best. It turns out that they will sound their best almost anywhere in a room, and also in any room, a fabulously useful trait that appears to be a direct function of the waveguide. Yes, the bass did gain some added extension and also some rather useful upper low-frequency boost when we moved the Altums further back towards a rear wall and, unlike most small speakers, the depth of the soundstage didn't diminish when we did.

Krix Esoterix Altum stereo loudspeakers

- Crystalline highs
- Superb imaging
- Easy to position

- Deepest bass

Price: \$6495 (optional stands \$1195)

Frequency range: 40Hz–40kHz (in-room)

Sensitivity: 89dB SPL (2.83V/1m)

Nominal impedance: 4Ω

Minimum impedance: 3.2Ω

Configuration: Two-driver, two-way

Drivers: 1 × 26mm, 1 × 165mm

Enclosure type: Bass reflex

Dimensions (hwd): 390 × 260 × 380mm

Weight: 11kg

Warranty: Five years

Contact: Krix Loudspeakers

Telephone: 08 8384 3433

Web: www.krix.com



Another surprise was just how loudly we could play the Altums without overloading them. One of the Achilles' Heels of small two-way speakers is that there's only the single bass/midrange driver to create the bass/midrange sound (where most of the energy in music is located) and this same driver also has to dissipate the amplifier power that's wasted as heat in the voice-coil, rather than being converted to cone movement. As a result, it's usually quite easy to overdrive a two-way. We're not saying you can't overdrive the Altums — you can — but you'll be able to play them really, really loud if you so wish.

As noted previously, the bass from the Krix Altum was remarkably deep and powerful for a small two-way stand-mount design. But we were even more impressed by the clarity of the bass, such that listening to the title track of Dido's 'Life For Rent', the low drum sounds are impactful, and it's easy to differentiate the sound of the 'live' drumming from that of the drum machine (and not, like the old joke, because the drum machine is keeping correct time). This track is also a perfect vehicle to demonstrate the superb clarity of the midrange with female vocal. Dido's voice just hangs in the air between the speakers, except for moments when there's some out-of-phase vocal effects (deliberate or unintentional?) which the Altums then deliver with almost unbelievable accuracy.

The Altums' outstanding capabilities across both the bass and the midrange were demonstrated perfectly when we played Beethoven's Sonata No 32 Op.111 with Richter at the keyboard. We flinched at the power of his left hand (both hands actually) as he absolutely smashed it out in concert. You can also be impressed by the way the Esoterix Altums deliver the same piano tone from the very lowest notes on the keyboard to the highest. But the Altums could do more than reproduce just one piano precisely: they also easily managed two — proven when we played *Fantasia on a Theme of Thomas Tallis*, as performed by Mark Bebbington and Rebeca Omordia. All the piano sound on this new disc ('The Piano Music of Ralph Vaughan Williams') is superb, and was superbly delivered by the Altums, but please listen particularly to Williams' amazing arrangement of Bach's 6 Schübler Chorales to hear the sonic complexities they're capable of revealing.

The Revelator tweeter in the Esoterix Altums delivered the performance that no doubt gave this driver its name, because it was certainly revelatory. The very highest harmonics of bells and triangles were reproduced with perfect accuracy... so accurately that it required no stretch of the imagination to suppose that someone was in the room striking them, rather than the sound having been recorded. If you regularly play high-res music which has musical content recorded above 20kHz, this is the tweeter you should be listening to.

CONCLUSION

We had been wondering why Krix had called this model 'Altum', because it seemed out of kilter with Krix's usual naming conventions. After we'd consulted a Latin-English dictionary and discovered that the word means 'on high' or 'from above', we had to smile, because the Esoterix Altums truly do deliver sound quality that seems to have come down from the heavens. ■