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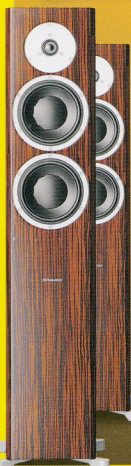
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Crystal Cable Arabesque Minissimo

Crystal Cable offers the benefits of its asymmetrical cabinet shaping in a less extravagant design
 Review: **Ken Kessler** Lab: **Keith Howard**

Derived from the dearer Arabesque Mini, the £9998-per-pair Minissimo is Crystal Cable's most populist take yet on its highly original speaker shape. First appearing in glass in the big Arabesques, then in metal in the Mini, the shape has been applied to the more affordable Minissimo thanks to fresh thinking on cabinet materials.

As seen in the original floorstanding Arabesque, the idea was to create a speaker with 'continuously curved walls'. Crystal Cable soon discovered that it wasn't possible with pure glass – one can only imagine what it would have cost to produce drawn single-piece glass enclosures – so the company used a faceted construction made up of carefully fitted glass panels or sections.

As it was always the company's intention to apply the Arabesque shape to less expensive models, it soon learned that the shape was inherently time-consuming and complex to construct. Even the Mini, with its enclosure formed of milled aluminium, costs nearly £5000 more with stands; the price of the Minissimo includes integral pedestals, which are fixed at the factory – making these small monitors for standmount use only.

The Minissimo departs completely from its siblings' multi-part construction. This charming little beauty is actually milled from a single piece of 'metal loaded polymer material', using a fully automated process. What you then acquire is a true monocoque enclosure, noteworthy for its sublime finish.

True, there are £59-per-pair injection-moulded plastic pieces of junk out there with similarly seamless surfaces, but the Minissimo is a non-resonant, robust work of art that oozes luxury. Even the three-

legged integral pedestal is a carefully-devised stand, with the cylindrical supports arranged to follow the profile in three diameters, to create a further visual treat.

Add to that a choice of colours using automotive paint – the review pair was in a fetching Solar Orange, but you can opt for Aquamarine Blue or Pearl White – and you have aesthetics that are hard to fault. Aside from exposed drive units, which some might find too audiophile-ish compared to a grille, these are cute as a button.

EXPLOITING NEW TECHNIQUES

But back to the technology. Crystal Cable also found that, in addition to simplifying the construction, the new material and manufacturing methodology allowed it to exercise even greater control over the curvature of the walls as well as their thickness. This, in turn, allowed the designer to optimise the structure's resonant behaviour and to determine the internal volume with greater precision.

Crystal Cable fits this enclosure with the same 25mm tweeter and 150mm woofer used in the Arabesque Mini, addressed by a new type of crossover dubbed 'Natural Science'. Aside from the rather vague description of 'a new topology that offers non-reactive electrical characteristics along with significantly improved phase linearity and rhythmic articulation, more realistic harmonic and spatial reproduction', I have no idea what they've actually done – not even the crossover point.

What I can tell you is that this speaker-on-a-stand occupies a volume

RIGHT: Machined-from-solid cabinet has seamless surfaces and a flawless finish. The loudspeaker uses the same two drive units as Crystal Cable's costlier Arabesque Mini





THE ARABESQUE CURVE

Crystal Cable's Arabesque speakers' curves give its enclosures a distinctive cross-section like an apostrophe. In the company's own words, 'The innovative cabinet shape with its non-parallel surfaces and critical venting eliminated the intermodulation distortion and reflected internal energy that muddled and smeared the musical performance of conventional designs.' Non-parallel surfaces are nothing new; Crystal Cable's take on it is simply another spin, but a successful one. From see-through, all-glass enclosures in the original floorstanding Arabesques, Glass Master and Absolute, to the smaller Mini with cabinet construction formed of milled aluminium plates, the Minissimo is a direct descendant with the same drivers used in the Mini. It enjoys the same asymmetrical form, and the same user's choice of whether to use the apostrophe's 'hook' on the inside or the outside. What it adds to the Crystal canon is something the least expensive model ought not to be: it's the prettiest of them all!

of 960x300x250mm (hwd). It is nominally a 7ohm load, but it measured as less sensitive than its factory spec [see Lab Report, p65]. Regardless, the speaker seemed easy to drive, delivering lush sounds with even an inexpensive amplifier like the Musical Fidelity M1PWR [HFN May '12], fed by the Quad PA-One as preamp [HFN Feb '15]

As the Minissimo is (naturally)

wired internally with monocrystal Crystal Cable, I used Crystal Ultra speaker cable and interconnects. Other amplifiers used here included the D'Agostino Stereo [HFN Aug '12] and Audio Research REF 75 [HFN Nov '12] fed by the Audio Research REF 5SE preamplifier.

'Stage width was the first element to dazzle me – it was deliriously broad'

A QUARTET OF STRENGTHS

Initial listening to the Minissimo involved the determining of which way sounded better, *ie*, choosing to have the apostrophe curve on the outside or the inside. Crystal Cable does not label the speakers 'left' and 'right', nor does room size determine which way is better. But guard against placing them too far apart.

One yields a deeper soundstage, the other a wider soundstage, while judicious toe-in can establish a compromise. The owner's manual talks you through all this, using drawings that show the speakers from overhead so you know what they mean by having the curve on the inside or the outside. In close quarters, I used them firing forward, with the 'curve' (or 'hook') on the inside.

What didn't matter at all was concern for the reflex port as it fires downward, so moving them closer or further from boundaries produced consistent,

predictable bass support. (A version with a rear-mounted port is said to be in the works that'll enable the Minissimo to be positioned without the integral pedestal.)

Considering that I may be the only American of my generation who is not a slaving Deadhead, I found the SACD of the Grateful Dead's *American Beauty* [Mobile Fidelity UDSACD 2138] inescapably involving and even comforting. 'Sugar Magnolia' and 'Truckin'' are overly familiar to me despite my lack of interest in the band, but I was delighted to hear four specific strengths of the Minissimo highlighted by this superbly realised edition.

Stage width was the first element to dazzle me, once I stopped futzing around with positioning. It was almost deliriously broad, reminding me of the Denon DL-103 MC cartridge, a wall-to-wall experience that placed the musicians across the room in an array free of 'holes' between the players. Which led me instantly to the second virtue of the speaker: seamlessness.

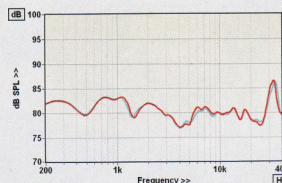
Usually, this applies to consistency across tonal or textural spectra, dynamic contrasts, or the frequency range from lowest to highest. It is freedom from jarring discrepancies. With the Minissimo, especially noticeable during the Dead's lighter, more acoustic/rustic moments, it was evident in airiness and texture of unimpeachable uniformity.

But more intriguing was seamlessness as applied to imagery. This meant working in tandem with the broad soundstage. The best way I can describe it is to liken it to 3D movies. The problem that 3D visuals have is a heightened depth that doesn't mirror reality: it's more of a special effect. With

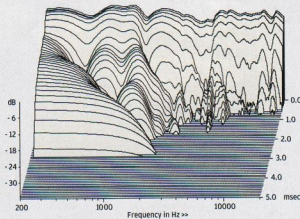
CRYSTAL ARABESQUE MINISSIMO

Crystal Cable's product literature carries limited specs for the Minissimo, but this does include a 70hm minimum impedance, <0.3% THD and a sensitivity of 86dB. The latter is a trifle optimistic: our pink noise measurement recorded a figure fully 5dB lower at 81.0dB, which is much more in keeping with a cabinet this diminutive. Crystal Cable could have extracted more by lowering the impedance but our recorded minimum of 7.2ohm is on the high side for a modern design, ensuring that the Minissimo is unusually easy to drive. Impedance phase angles are high but the EPDR (equivalent peak dissipation resistance) still never falls below a high 3.6ohm, about double that typical of the ubiquitous floorstanding competition.

Forward frequency response (Graph 1, below), measured on the axis of the Scanspeak beryllium dome tweeter, evinces a generally declining trend from bass to treble, suggesting that the perceived tonal balance will be on the 'polite' side. Response errors are nonetheless modest at ± 3.2 dB for both of the review pair (200Hz to 20kHz), and matching error over the same frequency range is fine at ± 1.0 dB, although it would have been even tighter but for narrow-band disparities at 1.5kHz and 5kHz. Diffraction-corrected nearfield measurement showed the bass extension to be 43Hz (-6dB re. 200Hz) – a good result for so compact a speaker – while the tweeter breakup mode at about 33kHz ensures that ultrasonic output is maintained to above 40kHz. The cumulative spectral decay waterfall (Graph 2) evinces fast energy decay at treble frequencies but with hints of resonance around the two frequencies where the pair matching error is greatest. KH



ABOVE: The Minissimo's response suggests a 'polite' treble but has good bass extension for the size



ABOVE: Fast decay, especially through the treble, and only two low-level resonances at 1.5kHz and 5kHz

LEFT: Thanks to a downward-firing port, the Minissimo enjoys great siting options, irrespective of proximity to walls, while the superb WBT silver terminals accept spades, bananas or bare wire

that I could have sworn I was hearing open-reel tape. Throughout, their voices meshed with a silky blending of an angelic cast.

DRIFTING INTO LOVE

Then there was the fourth strength: exquisite retrieval of detail. There was nothing hygienic about this abundance of information, as everything was kept in proportion. But so clear and clean was the playback that subtleties were always easily discernible.

But some might find the Minissimo too nice, too easy-on-the-ears. This speaker is the antithesis of the lock-the-listener-in-the-hot-seat approach beloved of the high end. As much as I was concentrating with the intensity required when reviewing a product, I was able to drift off, unafraid of the martinet demands of a typical high-end overkill situation. Which was just what I needed while listening to the dreaminess of Love's *Forever Changes* [Mobile Fidelity UDSACD 213 1], as ethereal as anything produced in 1967.

We are not short of sublime, small two-ways with big price tags. But the Minissimos combine so many virtues – sweet sound, ease of use, gorgeous looks, a diminutive presence – that it's impossible not to smile when you see and hear them. My only wish, then? I'm old-fashioned, so can you please gimme a grille? ☺

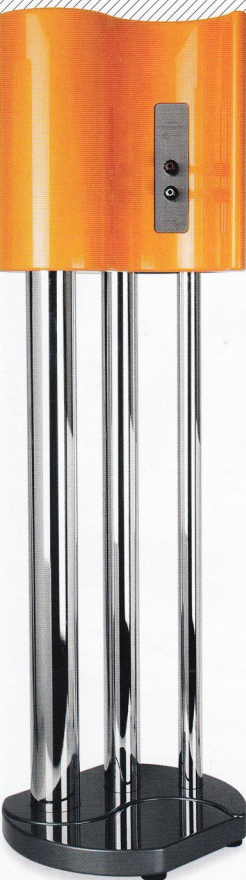
HI-FI NEWS VERDICT

Refreshing in so many ways, especially its unusual form, the Arabesque Minissimo surprised this listener with its friendly sound and ease-of-use. Too many high-end products tax and torment the user. This just says, 'Let's play some music'. Easy to drive, a no-brainer joy to set up, it will also satisfy detail-focused listeners who cannot resist interminable tweaking. Straight out of the box, it's a triumph.

Sound Quality: 85%
0 - - - - - 100

HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL/1m/2.83Vrms – Mean/IEC/Music)	80.1dB/81.0dB/80.7dB
Impedance modulus min/max (20Hz–20kHz)	7.2ohm @ 47Hz 74ohm @ 86Hz
Impedance phase min/max (20Hz–20kHz)	-61° @ 96Hz 55° @ 23Hz
Pair matching (200Hz–20kHz)	± 1.0 dB
LF/HF extension (-6dB ref 200Hz/10kHz)	43Hz >40kHz/>>40kHz
THD 100Hz/1kHz/10kHz (for 90dB SPL/1m)	1.4% 0.2% 0.2%
Dimensions (HWD, inc. stand)	960x300x250mm



sound, seamlessness should also manifest itself as a constancy that places each player with authenticity.

Bass was the third reward proffered by the Minissimos. Listening to the entire 12CD collection in *Simon & Garfunkel: The Complete Albums Collection* [Columbia Legacy 88750 09062], I was struck by the sheer naturalness of the bass on every track. OK, so this was beautifully remastered but, damn, the bongos stage-left on 'Patterns' were so visceral, so vivid, that I looked up more than once in one of those moments of confusion between reality and reproduction.

At around 1m 44s in, there's a wash of cymbal sound from stage right to centre, a swelling that swept in with such utter smoothness