

LOUDSPEAKER

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Triangle Signature Alpha

This imposing floorstander has its roots in traditional French speaker design, but still embodies new ideas
Review: Steve Harris Lab: Keith Howard

One are the days when we could be snobbishly insular about the sound of speakers from across the Channel. Like all Triangle's designs, the new £6000 Signature Alpha is unmistakably Gallic in conception, but it's a product that's evolved far beyond any national barriers.

Expanding strongly in the late 1990s, Triangle followed the inevitable trend and moved most of its production to the Far East. Although the lower-priced ranges are still outsourced, the Signature and Magellan models are all proudly labelled 'made in France'. Helping to keep these products competitive, Triangle supplies its dealers straight from the factory rather than through any national distributor.

HIGH-END ASPIRATIONS

While the Magellan series continues at the top of the line, the Signature models are more affordable, but still with high-end aspirations. The range began with the Signature Delta floorstander and also includes the compact bookshelf/standmount Theta, and the Gamma centre-channel. But the newly-launched Alpha reviewed here is the Signature flagship.

The sleek moulding that peeps up above the Alpha's gracefully-curved cabinet houses the latest version of Triangle's horn-loaded TZ2550 25mm dome tweeter, which handles frequencies above 2.6kHz. The horn itself is an aluminium injection moulding originally developed for the Magellan project, but the phase plug visible in front of the titanium dome has now been revised, while behind this the volume of the compression chamber has been increased – enhancements claimed to improve 'detail, finesse and transparency'.

Next is a 185mm midrange unit, a familiar Triangle type using a doped paper cone with a small-pleat short-travel suspension, but again with some improvements. At its centre, the old phase

plug has been replaced with a dustcap of identical shape and size, while the aluminium chassis (or basket) has been redesigned to provide better ventilation for the two-layer voice coil.

Though built on similar chassis, the bass units are naturally very different in design, using a fibreglass cone with an aluminium centre cover or dustcap, and an inverted half-roll rubber surround. At the back, the two-layer voice coil is embraced by a double-magnet motor system which has two large ferrite magnets as against the mid unit's one.

Whereas the slightly smaller Signature Delta uses a pair of bass units, the Alpha has three. With the Delta, Triangle introduced its unique Twin Vent system, prototyped using 3D printing, where the two bass units operate in isolation from each other, the upper and lower units reflex-loaded within their own separate sections of the cabinet.

At the centre of the front panel, a large flared moulded port component is split by a central horizontal divider, to provide the vent outlets for both. And the same principle is used for the Signature Alpha, except that the lower cabinet section contains two bass units instead of one.

FRONT GROUNDING PIN

Curvaceous cabinets are no longer a novelty, and in fact they have almost become the norm, but the floorstanding enclosures in Triangle's Signature series have some further unusual features. Their side panels are made by bending and laminating seven 3mm sheets of fibreboard in a press; the front baffle is reinforced further to a total thickness of 25mm. A closer look down below reveals the way

RIGHT: Drive units include a horn-loaded titanium-dome tweeter, paper-cone mid and no fewer than three bass units, reflex-loaded by the special 'Twin Vent' port in the middle





ETERNAL TRIANGLE

Located near Soissons, about 100km north of Paris, Triangle was founded in 1980 by Renaud de Vergnette. In the early days he bought in drive units from Audax, persuading them to supply the paper-cone units he preferred, even though these had been officially discontinued in favour of plastic-cone types. But in 1985 Triangle began making its own drivers, and does so to this day. In 1995, Olivier Decelle, who'd been one of the first retailers to stock Triangle and had remained a fan of the brand, bought into the company as a minority shareholder. There followed a period of reorganisation that saw Triangle becoming one of the top three French hi-fi manufacturers and in 2003 Triangle launched the original Magellan, the first of a series that aimed to earn a place in the international high-end market. When Renaud de Vergnette decided to leave in 2006, Olivier Decelle took control of the business, with Marc le Bihan as CEO. Today Triangle loudspeakers are available from over 240 outlets worldwide.

the bottom edges are bevelled off at the sides, so that the main plinth supports the cabinet on a relatively narrow spine section along the centre line of the speaker. This plinth doesn't extend to the front edge of the cabinet but is cut off short, leaving space for the prominent conical spiked front foot.

This is what Triangle calls its 'SPEC' system, in which a special fifth foot is placed directly under the front baffle, (which of course carries the drive units). This acts 'like the endpin of a cello', says Triangle, and it 'evacuates mechanical energy to the ground'.

The rear panel just has its terminal panel, with two sets of socket/binding posts, connected by bi-wiring links.

Internal wiring is by Kimber. Finishes are Black or White High Gloss Lacquer, or the MHG High Gloss, a rich mahogany.

PROPER SCALE

Once set up in the Editor's listening room

[see www.hifinews.co.uk/news/article/meet-the-team;paul-miller/9952], the speakers seemed quite at home when fed with high-quality material from hard-disk sources via (also French!) Devialet 800 monoblock amplifiers. They were not unduly fussy about placement, but it seemed the best results came with the two cabinets toed in so that their axes crossed over slightly ahead of the listening seat.

Here was a speaker that gave an immediately pleasing and enjoyable sense of scale. There was a really big stereo image that had a good feeling of height as well as width, which could help to make singers as well as instrumentalists appear before you at a lifelike size. It seemed initially a bit of a broadbrush sound, where instrumental sounds could seemingly

colour the air in an enticing way, without majoring on obvious detail. Yet the detail was there.

Starting with Diana Krall's *Wallflower* [Verve 4701861] and 'California Dreamin'' those wonderful strings arched right over the imaginary stage, above and behind the singer. Even if this speaker does not try to ram detail down your throat, on this recording there were plenty of little details at every turn to remind you what a superbly classy production this is.

On 'Desperado', Krall sounded even more Henley-like than usual here, almost masculine, until you caught the subtlety and artistry of her breath control. Listening to this track at least, you could conclude that the speaker does have a certain slight

lower-mid chestiness.

For some purely instrumental jazz I turned to Bobby Hutcherson's *Enjoy The View* [Blue Note 060253 76544 8 2], and it was indeed enjoyable. On the punningly titled

'The subtle decay on Hutcherson's vibe notes was tellingly realistic'

blues, 'Don Is' it was impossible not to smile as Hutcherson quoted from 'Flying Home', while Joey DeFrancesco's organ bass was deep and breathing like real life, and provided a seemingly bottomless foundation for the music.

Hutcherson's vibes came over with ringing attack, and despite everything else going on the subtle decay on his notes was tellingly realistic. Sanborn's signature sax tone had body as well as its characteristic keening edge. And Billy Hart's drum kit, always happily and properly placed behind the other instruments, took on perceptible dimensions of width, depth and height too.

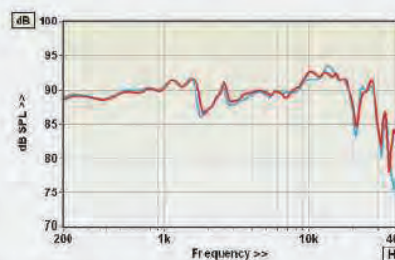
After this studio production, it was instructive to listen to the Signature Alpha on a natural recording where the acoustic of the venue has an important role. With

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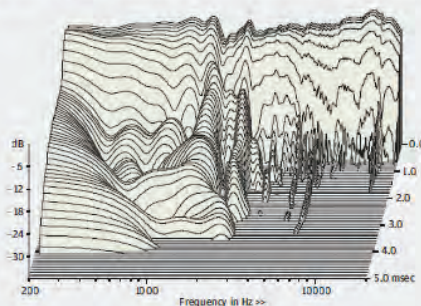
TRIANGLE SIGNATURE ALPHA

Triangle claims 92dB sensitivity for the Signature Alpha but our pink noise figure of 90.1dB suggests this is ambitious, although still sufficient to rank as above average. Nominal impedance is 8ohm but the specified minimum of 3.3ohm indicates a 4ohm rating is more appropriate, and our measured minimum modulus of 3.5ohm supports this. Impedance phase angles are sufficiently high to drop the EPDR (equivalent peak dissipation resistance) to a minimum of 1.7ohm at 90Hz – a typical result for a modern floorstander of this size and sensitivity.

As the horn-loaded tweeter is located above typical seated ear level, initial frequency response measurements were taken on the axis of the midrange unit and then at a height mid-way up the front baffle. The responses [Graph 1, below] are for the former position and show a rise in output above 8kHz but the response through bass and midrange is flatter than at the lower listening height. Mid-way up the baffle, the high treble excess is curbed but a narrow dip of about 4.5dB is introduced at 2.2kHz. Response errors on the midrange axis were ± 3.1 dB and ± 3.7 dB respectively (200Hz-20kHz), and these figures could perhaps be improved slightly off-axis. Pair matching was less satisfactory at ± 2.0 dB but the largest disparity, at 1.7kHz, was quite narrowband. Without this, the error would have been a better ± 1.3 dB. Diffraction-corrected near-field LF measurements showed the bass extension to be 49Hz (-6dB re. 200Hz), again typical for this class of loudspeaker. Origins of the response ripples between 1kHz and 3kHz are clear from the cumulative spectral decay waterfall [Graph 2] which shows two obvious resonances here. KH



ABOVE: The Triangle Alpha's forward response shows a generally flat bass/mid but with a slight treble lift



ABOVE: Cabinet resonances are modest but there are obvious driver modes at approx. 1kHz and 3kHz

LEFT: Double rear panel connections allow bi-wiring when the links are removed. Below, an integral plinth supports the speaker, but the additional front foot is intended to provide stable, mechanical grounding

swirling muddle that engulfs what actually is being said. But when it came to that slow explosion which ends the first section, the speaker was truly impressive, and the sound had a sort of majestic realism right to the final phassey decay.

A PERFECT SOUND PICTURE

With the Voces8's take on Elgar's 'Nimrod', from their album *Lux*, [Decca 478 8053] I felt that the Triangle's attractively big sound really helped it win the day. Here the voices were really laid out beautifully in the recorded acoustic, producing a thrilling effect. There was no shortage of detail, the occasional breath sound and a rolled 'r' just adding to the perfect sound picture they created.

Listening to the next item on the programme, 'Teardrop', the highest notes produced some little frissons of intermodulation that seemed to arc across above the soundstage, but this came over as a natural effect and the treble quality as a whole was surely a tribute to the good behaviour of the speaker's tweeter.

But I kept coming back to Diana Krall's *Wallflower*, and especially her amazing duet with the everlasting Georgie Fame on 'Yeh! Yeh!', the song he'd had such a huge hit with when Krall was a babe in arms. Organ, brass, rhythm, and as Fame sings, 'Groovy hi-fi!'.

HI-FI NEWS VERDICT

That almost daunting array of drive units is harnessed successfully here to give a vibrant, lively mid and treble with a deep, satisfyingly free-sounding bass and huge stereo stage. Though not entirely uncoloured, the Signature Alpha can impress with sonic pizzazz on almost any kind of music. If you're shopping in its price range, this is a fine, likeable speaker with real individuality that demands to be heard.

Sound Quality: 81%



pianist Paul Lewis and *Pictures at an Exhibition* [Harmonia Mundi HMC 902096] there was a real unity between the elements that made up the piano sound, from the initial attack through to the end of a note as the hall reverberation tailed away. There was a real sense that you were hearing a piano on a stage, and the lowest registers – as in 'Bydlo' – were truly impressive.

On 'Things Left Unsaid', the opening track of Pink Floyd's *The Endless River* [Parlophone 825646215423] the Triangle couldn't do much to illuminate the

HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL/1m/2.83Vrms – Mean/IEC/Music)	90.9dB/90.1dB/89.9dB
Impedance modulus min/max (20Hz–20kHz)	3.5ohm @ 115Hz 20.7ohm @ 62Hz
Impedance phase min/max (20Hz–20kHz)	-56° @ 72Hz 33° @ 21Hz
Pair matching (300Hz–20kHz)	± 2.0 dB
LF/HP extension (-6dB ref 200Hz/10kHz)	49Hz / 30.6kHz/29.8kHz
THD 100Hz/1kHz/10kHz (for 90dB SPL/1m)	0.3% / 0.3% / 0.1%
Dimensions (HWD)	1270x233x372mm