

Kudos Cardea Super 10 (£3495)

With this limited edition Super 10 version of its compact Cardea model, Kudos has aimed for the ultimate expression of the standmount loudspeaker

Review: **John Bamford** Lab: **Keith Howard**

Since the introduction of its imposing flagship Titan floorstander (£12,950) in 2010, Kudos's proprietor and designer Derek Gilligan has revisited his compact Cardea 12litre 'bookshelf' model, eager to push the boundaries to see just how far its design could be taken for maximum information retrieval.

The result is this brand new Super 10 version of the Cardea, created for audiophiles with small to medium sized listening rooms who can't accommodate a large loudspeaker but who want to build a very high quality music system nonetheless. As any enthusiast will confirm, it's folly to try to squeeze into your room a larger monitor than you can sensibly accommodate. When you're cramped for space, a good little 'un will outperform an imposing floorstander every time.

Kudos already makes two versions of the 12litre reflex-loaded Cardea two-way, each featuring an 18cm bass/mid unit with doped paper cone married to a soft dome tweeter. Kudos has its drivers made to its own specifications by SEAS of Norway, the standard Cardea C1 costing £1950 whereas the more expensive C10 model (£2850) employs SEAS's 29mm Crescendo version of the tweeter. This features a moulded alloy back chamber and is driven by a six-magnet array. The tweeter accounts for much of the C10's £900 price premium over the C1, although it also includes silver-wired Clarity Caps in its low-order crossover. Internal wiring is Rumour cable from The Chord Company, chosen for its immunity to internal vibration – 'with less echo and time smear', says Kudos.

ANNIVERSARY EDITION

Meanwhile in this go-for-broke Super 10 Cardea, only the 18mm-thick MDF cabinet – damped internally and finished handsomely in a selection of real wood veneers: walnut, cherry, oak, rosenut or black – and internal Chord Rumour cabling remain. Under the skin it's an entirely different animal. Says Derek: 'A couple of years ago I was asked by one of our dealers

to try out some very expensive and esoteric capacitors and resistors. We chose our C10 model for this task, as it's most ruthless and demanding of source quality, and crossover parts have a marked effect on its musical reproduction. Initial experiments were good, so it got my mind going to produce a special version of the C10 to celebrate the company's 21st anniversary...'

DRIVER DETAILS

At this point, attention was turned to the drive units, Kudos working with SEAS to produce a special version of its Crescendo tweeter for the Cardea, as it had done in the past for the Titan. Dubbed the 'K2' this has a modified and extended voice-coil along with a new dome profile, which is designed to mate seamlessly with the woofer using the minimal number of crossover components.

And as with the Titan, the bass driver has been upgraded with copper shorting rings in its voice-coil, designed to reduce eddy currents and minimise odd-order harmonics. The Super 10's crossover also employs selected Mundorf OFC inductors, 'Mcap Supreme Gold/Silver/Oil' capacitors, and partnering low inductance resistors.

Needless to say, a compact reflex-loaded monitor such as this is not designed to be tucked away on a bookshelf, rather it should be given space to

RIGHT: Made to Kudos's specification, the 18cm bass/mid driver with treated paper cone and 29mm fabric tweeter are supplied by SEAS of Norway

breathe and sit on high quality stands. Kudos *does* make a serviceable £200 stand for the S1/S10 (the S50), but for this Super 10 recommends a 60cm-tall tri-pointed stand made by Track Audio, Amersham, as part of its Precision range [see www.trackaudio.co.uk].

Supplied for this review, it's a costly stand at £1380 but is exquisitely engineered, with built-in bubble level and ingeniously designed isolation feet/spike arrangement machined out of stainless



steel with a unique 'ball lock' that provides delightfully easy fine adjustment. These are quite the most beautifully made stands I have encountered.

CREDIBLE IMAGING

Kudos recommends positioning the Cardea Super 10s approximately 2m apart and at least 45cm from room corners. After some experimentation I achieved a good overall balance with the speakers almost a metre clear of room boundaries. Placing them closer to the rear wall added a little bass weight, but smeared the midrange clarity. Firing directly at the listening seat they sounded a bit 'toppy'. However, toeing them in so that their axes crossed in front of my sofa ameliorated this to satisfactory effect.

'Rodgers' plaintive vocal brought a lump to my throat, I don't mind confessing'

I was immediately taken with the subtle low-level articulation and lack of obvious midrange coloration in recordings of voices. George Harrison's lead vocal in 'Something' from the 2009 remastering of The Beatles' *Abbey Road* was rich and silky, with the subtle nuances of his phrasing beautifully resolved.

And dipping into some 1970s-vintage recordings of Free, featuring Paul 'the voice' Rodgers, showed how the Super 10 can create wonderful images of musicians performing in space. The languid and achingly beautiful 'Soon I Will Be Gone' from the band's *Highway* album, remastered for CD in 2002 [Island IMCD 283/586226-2], doesn't disguise its origins – dating back more than four decades – the

KUDOS COMES OF AGE

This year marks the 21st birthday of the Kudos brand: a company made famous by the introduction of a high quality speaker stand back in 1991. Based in County Durham, Kudos witnessed a rebirth in 2005 when it was taken over by speaker designer Derek Gilligan. While maintaining the speaker stand and equipment rack business, Derek has added his own range of loudspeakers over subsequent years. He cut his teeth as a sound engineer in the professional audio industry, working on the first INXS tour in the UK with the late Michael Hutchence, before migrating to the consumer audio industry as a speaker designer for, among others, Neat Acoustics.

The Cardea range, which includes some floorstanding designs as well as the 12litre standmount models C1/C10/Super 10, has been a worldwide success – as has its 'project Titan' flagship launched a couple of years ago. Kudos has moved to larger factory premises twice in the last four years in order to keep pace with worldwide demand for its products.



recording lacking true fidelity due to its limited bandwidth. Via the Super 10 this seemed to matter little, the tambourine embellishment appearing fabulously real as it hovered in the soundstage above Paul Kossoff's acoustic guitar chords and the piano accompaniment. Rodgers' plaintive vocal brought a lump to my throat, I don't mind confessing.

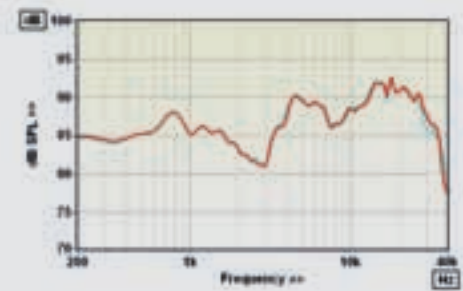
From the same album the classic 'Be My Friend' was similarly depicted as a convincing image of musicians performing in harmony, the sound of drum stick hitting cymbal crystal clear – and bassist Andy Fraser's characteristically 'boxy' and plodding bass style shown vividly by the Kudos despite its small stature and limited low frequency extension. Only the absence of a low-end thump from the kick drum – the familiar wallop in the solar plexus – was missing here, betraying the speaker's compact dimensions.

Further listening highlighted the Super 10's excellent portrayal of fine detail, the sound balance successfully treading a fine line between an in-your-face, warts 'n' all presentation and a more relaxed demeanour. Yes, the speaker sounds ⇨

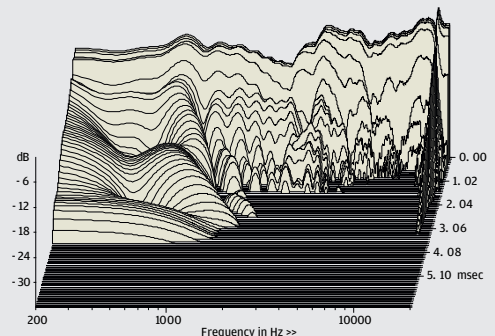
KUDOS CARDEA SUPER 10 (£3495)

Kudos claims 87dB sensitivity for the Super 10, which accords very well with our measured pink noise figure of 87.2dB. This may be a little below average today, but bear in mind the Super 10's compact dimensions and note that it is a genuinely 8ohm speaker, not a 4ohm in disguise. A minimum modulus of 7ohm and a minimum EPDR (equivalent peak dissipation resistance) of 4.4ohm at 130Hz – a testament to lower than average impedance phase angles – together confirm that this is an unusually easy speaker to drive. That said, the wide disparity between the three sensitivity figures quoted in the test table indicates a frequency response trend that is anything but flat, which the on-axis response error figures, 200Hz to 20kHz, of $\pm 5.8\text{dB}$ and $\pm 5.5\text{dB}$ confirm. The response [see Graph 1, below] shows a notch in output at about 3kHz followed by an excess of treble, suggesting that the Super 10 might give a more neutral tonal balance when listened to a little off-axis.

Pair matching, over the same frequency range, is tight at $\pm 0.9\text{dB}$. A -6dB frequency of 50Hz (re. 200Hz) represents good bass extension given the Super 10's box size and sensitivity. Exceeding a clear tweeter resonance at $\sim 16\text{kHz}$, the cumulative spectral decay waterfall [Graph 2] is very clean above 1.5kHz with fast decay. But the ridge below that, a kink in the impedance modulus vs. frequency graph and a corresponding notch in the nearfield frequency response suggest that a resonance is present somewhere between 900Hz and 1kHz. If this is a midrange cone or surround resonance, rather than a structural or enclosed air mode, it might explain the higher than typical THD figure of 1.3% recorded at 1kHz. KH



ABOVE: On-axis response shows a notch at 3kHz and boost to treble, so off-axis listening is recommended



ABOVE: The initial impulse is well-damped but resonant modes persist at $\sim 900\text{Hz}$ and 16kHz

RIGHT: A flared port vents at the rear of the reflex enclosure. There is just one set of sturdy gold-plated terminals: the Super 10's crossover is designed specifically for single-wiring



lively and vivacious, but I never found it fatiguing despite prolonged listening sessions. There was no edginess even with hot recordings, the speakers' clarity and vivid focus achieved without highlighting brittleness in rough recordings.

The last 'go-faster' mini-monitor to reside in my listening room was Acoustic Energy's £2000 Reference Two, which could go louder without appearing distressed and delivered a tad more 'wallop' than this highly refined Super 10; but it lacked the vibrancy and sense of air I experienced here.

This was highlighted when playing Hugh Masekela's live recording of 'The Coal Train' on *Hope* [CD, Triloka KAT 2020-2]. While the AE was undeniably smooth and sophisticated, it possessed a hooded quality that robbed the life from Masekela's musical event. With the Cardea Super 10s the performance was brought to life, the blasting adrenaline-fuelled horns sounding vital and urgent.

A QUESTION OF SIZE

Returning to voices, Peter Gabriel's gruff, smoky baritone in 'Boy In The Bubble' from his *Scratch My Back* album of 2010 [EMI PGCDY12] had a sense of presence I have rarely heard from a speaker. Yet it was an intimate experience, the accompanying piano sounding rich and reverberant within the explicit sound image.

With rock music, the Super 10 was able to produce a pretty good sense of high-level dynamic drive and heft, especially for so small a speaker. However, if I pushed them *too* hard the 10 proved not to have boundless headroom, showing signs of compression. Cranking up 'Vrooom' from King Crimson's *Thrak* CD [Discipline 8 40324 2] proved a stern test. Although the distinction between the bass lines of Tony Levin on Chapman Stick and Trey Gunn on bass guitar remained clear up to a point, when pushed beyond its comfort zone the speaker soon

began to smear and lose detail, the sound becoming squashed.

Needless to say, large orchestral works also lacked the scale one would expect from a similarly priced floorstander. I sorely missed the feeling of air movement when playing a 24-bit/176.4kHz file of an excerpt from Tchaikovsky's *Mazeppa* with the Minnesota Orchestra under Eiji Oue, from one of Reference Recordings' HRx DVD-ROMs.

In a small room this would be somewhat academic. What the Cardea Super 10 does well, it does very well, so if you value clarity and communication over gut-busting dynamics and low frequency extension, the Super 10 would make a highly satisfying choice. ⤴

HI-FI NEWS VERDICT

Compact monitors don't come much better than this. Of course they are expensive, but these limited edition Cardea Super 10s aren't built to a price: rather the cost reflects component selection, the meticulous care taken in construction, and careful pair matching. They sound detailed and airy without being obviously analytical, and are voiced to provide a vivid and articulate listening experience.

Sound Quality: 78%



HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL/1m/2.83Vrms – Mean/IEC/Music)	89.4dB/87.2dB/86.7dB
Impedance modulus min/max (20Hz–20kHz)	7.0ohm @ 213Hz 34.2ohm @ 1.9kHz
Impedance phase min/max (20Hz–20kHz)	-40° @ 3.6kHz 40° @ 838Hz
Pair matching (300Hz–20kHz)	$\pm 0.9\text{dB}$
LF/HF extension (-6dB ref 200Hz/10kHz)	50Hz / 37.4kHz/37.5kHz
THD 100Hz/1kHz/10kHz (for 90dB SPL/1m)	0.7% / 1.3% / 0.7%
Dimensions (HWD)	350x200x270mm