

Press release

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Above Dan Clark Audio's open-back Noire XO headphones

Open-back in black

Brim full of top-class technologies including the company's Acoustic Metamaterial Tuning System, Dan Clark Audio's latest corded headphones take the closed-back Noire X and declare them 'open'

Buckinghamshire, England – Dan Clark Audio follows the launch of the Noire X closed-back headphones with an open-back version, the Noire XO – now shipping to the UK via distributor Electromod.

Based in San Diego, USA, Dan Clark Audio (DCA) is an artisan headphone maker of the highest order. The company focuses on technical innovation and holds six patents, its headphones earning global acclaim for their exceptional sound, build and ergonomic qualities.

While DCA has forged a reputation for exceptional closed-back planar magnetic headphones, the company also makes a small, perfectly formed collection of open-back designs including the Aeon 2 Open (£900) and reference-level Expanse (£4100). The Noire XO, which adapt the Noire platform to an open-back format with technologies developed from the Expanse, launch with an RRP of £1300.

Closed-back vs open-back

Closed-back headphones offer reduced sound leakage and superior passive noise isolation, which makes them more practical for those who listen in a range of environments and want to stop sound getting in or out. This consideration aside, open-back headphones are often assumed to be superior in a 'hi-fi' sense, offering a more 'open' sound (depending on how well they are designed and engineered, of course).

DCA expertly engineers its closed-back headphones to remove the sonic downsides whilst fully capitalising on the advantages. Yet there remain differences in the acoustic characteristics of well-designed open-back headphones that may lead some listeners to prefer them if their listening environment does not require closed-back isolation. For this reason, DCA creates open-back headphones too, each pair painstakingly designed to maximise the sonic benefits.

While the Noire XO headphones are ostensibly an open-back version of the Noire X, the engineering applied to the design involves far more than replacing the sealed backs with open mesh. Delivering the performance DCA demands from an open-back format with inherently different acoustic characteristics required rigorous additional design work and retuning. The result is a pair of headphones that share the overall sound signature of the Noire X but with significant differences that some listeners may prefer.



Left Unique DCA technologies and high-quality materials deliver class-leading sound, striking looks and top-notch ergonomics

DCA never designs down to a price by 'de-featuring' its headphones; rather, the company aims to take the technology, comfort and performance of its flagship models and cost-reduce them to realise superior performance at lower prices. Like the Noire X, the XO headphones utilise proprietary planar driver and metamaterial tuning technologies developed for DCA's top-tier headphones such as the closed-back Stealth and open-back Expanse – the result is a pair of headphones ahead of the curve technically and sonically in comparison to its price-point competition.

Speaking of curves...

Owing to the subjective nature of sound quality, it is impossible to design headphones that perfectly match the sonic preferences of *every* potential customer. How, then, do you create a product with maximum appeal?

This is a question that Harman International attempted to answer when it created the Harman Curve as an 'ideal' frequency response profile for headphones. Extensive research was conducted to develop a

frequency curve that elicits the highest level of satisfaction from the largest number of listeners and the Harman Curve was born, for designers and engineers to use as a 'target' profile.

In the headphone world, this has become an important baseline to underpin performance. Harman Curve tuning is not strictly 'neutral', but it can produce a tonal balance that is engaging without being fatiguing, expressive whilst also natural and unforced. While many other aspects affect the overall listening experience, it provides assurance of a well-balanced performance that is valued by the 'head-fi' community and has become an industry 'gold standard'.

From an engineering perspective, tracking the Harman Curve is not an easy thing to do and few headphones genuinely achieve it. This is especially true of open-back designs, which exhibit natural roll-off in the bass – delivering the required bass response whilst keeping everything else on track is a tricky challenge. The Noire XO headphones achieve this goal, underpinning their adroitly balanced performance across a wide range of music.



Left DCA has engineered the Noire XO to track the Harman Curve, providing a firm foundation for their supremely balanced performance

Noire planar magnetic driver

Most headphones use dynamic drivers, which combine a stiff diaphragm with a voice coil to produce sound waves through pistonic movement. In contrast, DCA headphones (apart from the electrostatic Corina) use planar magnetic drivers – these incorporate a thin membrane immersed in a magnetic field to cause it to vibrate. Among the advantages of planar magnetic drivers are increased accuracy, reduced distortion and superior soundstaging.

The Noire XO open-back headphones incorporate an enhanced planar driver created by DCA for the Noire X platform. Its 62x34mm diaphragm is significantly more rigid than the Aeon driver from which it was developed, with superior unit-to-unit consistency, reduced distortion and improved reliability.

New manufacturing processes combined with highly optimised V-Planar knurling deliver a remarkably smooth frequency response with low distortion throughout the listening range, achieving levels of detail that were previously the reserve of DCA's top-tier headphones.

Acoustic Metamaterial Tuning System (AMTS)

Like the Noire X, a critical addition to the Noire XO is DCA's proprietary AMTS tuning system, previously found only in the company's top-of-the-line Stealth, Expanse, E3 and Corina headphones.

A significant advance in acoustic engineering for headphones, AMTS uses advanced metamaterial design concepts to shape frequency response and eliminate high frequency standing waves which cause the 'synthetic' treble quality heard with many headphone designs.

By eliminating these standing waves, the Noire XO headphones deliver a remarkably balanced, nuanced and airy treble performance, free of the fatiguing artefacts that diminish the listening experience.

Built for comfort and style

Planar magnetic headphones can feel bulky compared to their dynamic-driver-based brethren. This is not the case with the Noire XO, which are pleasingly lightweight and fold up neatly for storage or travel. Aesthetically, these are cool and classy headphones with top-notch build quality, 'black on black' finish and exquisite, understated detailing.

Like the Noire X, the XO sport newly designed ear pads for a supremely comfortable listening experience. Formed from improved, ultra-stable memory foam and wrapped in high-quality synthetic leather, the ear pads eradicate 'foam rolling' to ensure a more consistent fit and longer usable life. Using Alcantara synthetic suede on the ear pad's contact surface reduces heat and moisture build-up, ensuring cool comfort during extended listening sessions.



Left The self-tensioning headband combines with newly designed ear pads to ensure excellent comfort for long listening sessions

The Noire XO's self-tensioning headband reduces listening fatigue by distributing pressure evenly across the listener's head for a balanced, 'barely there' fit. This helps to prevent hot spots and pressure points, making the Noire XO ideal for many hours of immersive, strain-free listening.

Noire X or XO - which is right for you?

The Noire XO are refined, open-back planar magnetic headphones that strike an impressive balance between engaging musicality and reference-grade accuracy. Fusing DCA's proprietary technologies and engineering with effortlessly cool aesthetics, high-class ergonomics and impressive ease of drive, their price/performance ratio is exceptional. But how do they compare to their closed-back 'X' siblings?

Retailing at a lower RRP of £1000, the Noire X headphones are a masterclass in closed-back design. They deliver an impressively wide soundstage, engaging dynamics and impactful bass, with crisply defined yet smoothly rendered detail – all in a comfortable, portable package with excellent passive isolation. But while the Noire X are ideal for listeners seeking immersive sound in shared or noisy environments, the

Noire XO excel with their deep, spacious soundstage and vivid, three-dimensional imaging, conveying instruments and voices with captivating body and texture.

The Noire XO headphones sound wonderfully revealing yet never fatiguing, a supremely difficult balance to strike. Although immediately impressive, they are not the type of cans to grab you by the lapels the moment you press 'play' – the more you listen, the more you appreciate their remarkable qualities across all manner of music, not favouring one type over another but excelling with all.

Designed and built in San Diego, California, DCA's Noire XO headphones are now shipping to the UK and available at selected retailers from mid-June at an RRP of £1300 inc. VAT. They come with a detachable cable, terminated with the customer's choice of connector (balanced 4.4mm, 4-pin XLR or 6.35/3.5mm) and a purpose-made storage case.

The UK contact for consumers is Electromod, Dan Clark Audio's official UK distributor.

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| DAN CLARK AUDIO NOIRE XO – SPECIFICATIONS SUMMARY | |
|---|---|
| Transducer principle | Open-back, over-ear, planar magnetic |
| Materials – chassis | Aluminium and carbon |
| Materials – headband | Nickel-titanium alloy with leather-wrapped suspension band |
| Materials – ear pads | Memory foam with synthetic leather outer, Alcantara synthetic suede contact surface |
| Frequency response | Extended and tuned to the Harman Curve |
| Sensitivity | 94dB/mW |
| Recommended min. power | 250mW @ 16Ω |
| Weight | 408g |
| Included accessories | Detachable cable in fabric pouch; storage case; microfibre cloth; certificate of authenticity |









Based in San Diego, USA, Dan Clark Audio (DCA) specialises in the design and manufacture of open- and closed-back planar headphones. In just a few years, the company has earned a reputation at the forefront of headphone design, its R&D-focused approach delivering unique technologies and exceptional performance. With six patents for technology and design already secured, DCA continues to push value/performance ratios to secure its position as the first choice for many head-fi enthusiasts.

danclarkaudio.com



Founded by Mark Dolbear, Electromod is a leading UK distributor specialising in head-fi gear, from DACs to amps to headphones and associated accessories. The company focuses on product excellence and a personal style of customer support, operating as the official distributor for class-leading brands such as Dan Clark Audio, Dekoni, Topping and Violectric. Mark has an engineering background and has worked in the audio industry since 1995, servicing products from the likes of Mark Levinson, Goldmund, Ayre Acoustic and Stax before forming Electromod.

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