

Kroma Atelier Stella Xtreme

These 'artisanal' speakers hail from Spain and combine Purifi and Mundorf driver tech with Krion cabinets
 Review: **Mark Craven** Lab: **Paul Miller**

These days we could probably name no more than 11 or 12 manufacturers of TVs, but ask us about loudspeakers and you'd fall asleep before we'd got as far as companies beginning with the letter 'D'. The industry appears to be in rude health, with models to suit all tastes and budgets, and there are plenty of options that you might not have come across before. Kroma Atelier's Stella Xtreme perhaps being one of them.

This dramatically styled floorstander sells for £28,800, but such a price doesn't even put it above the half-way point in the Kroma Atelier portfolio. Ever since the company launched in 2016 as Kroma Audio, before adopting a name to reflect new ownership and a 'focus on artisanal production', it has been busy assembling a range of high-ticket loudspeakers. Taking the flagship spot is the Elektra, which will set you back £99,950, while below this are the £69,950 Norma and £51,950 Carmen tower models. Its most diminutive standmount, the Mimi, is priced at £7995, with custom stands for a further £3495.

KRION OUT LOUD

It doesn't take long browsing the company website to understand these price points. For a start, Kroma has turned to fellow Spanish company Porcelanosa (see www.porcelanosa.com) for the Krion material used across all its loudspeaker cabinets. Described as a 'non-conductive and non-magnetic aluminium trihydrate and resin composite material', Krion is more typically employed in the building industry, so you're more likely to have seen it used in a luxury bathroom than on a loudspeaker.

This is, of course, unusual, but there's nothing in the hi-fi rulebook that says a speaker cabinet needs to be made from wood – although the latter is chosen for the Stella Xtreme's twin rear-facing bass reflex ports, each being a cylinder of cedar hand spun by a Spanish luthier.

The drivers are also out-sourced, the AMT (Air Motion Transformer) U80W1.1 high-frequency unit with neodymium magnet being from German marque Mundorf. Measuring 95x55x45mm (hwd), this tweeter is housed within a shallow 'diffuser' to massage horizontal and vertical dispersion and is sandwiched between two 165mm bass/mid drivers from Purifi Audio [see PM's boxout, p59]. Meanwhile, a third 165mm Purifi driver sits at the bottom of the array and is dedicated to frequencies below 450Hz. The bass/mid duo drop as deep, but extend to a claimed 2.75kHz [see PM's Lab Report, p61].

GLAM ROCK

Mundorf crops up again in discussion of the Stella Xtreme's three-way crossover network, which is mounted within its own resin-insulated 'hermetic chamber', and uses components from Mundorf and Duelund. Bi-ampers should note that the entry-path here is on a single set of heavy-duty binding posts (also from Mundorf).

While Kroma Atelier isn't the most forthcoming when it comes to detailed information, it does tell us that a layer of bitumin is employed inside the Stella Xtreme cabinet to control resonances and vibrations, together with acoustic foam supported by a layer of fabric. What I can tell you is that the speaker feels rock-solid, and sounds it too – but more on that later.

And, eye of the beholder accepted, the styling of the Stella Xtreme is gorgeous. Sure, there are not the curved edges beloved of some brands, but our white Krion sample, with carbon fibre panels – other options are Titanium, Aluminium,

RIGHT: Available with a choice of side panel colours, and patterns, the white cabinet is fashioned from 12mm-thick slabs of Krion, a dense mineral/polymer composite. Hard polymer fixings are used to attach the drivers while matching feet are in Panzerholz and Krion



PURIFI'S PROGRESS

Hi-Fi News' readers will be very familiar with Purifi's range of Class D amplifier modules, including the superb Eigentakt solution used in recent T+A and NAD products [HFN May '22 and Oct '22, respectively] but the company's expertise also extends into loudspeaker driver development. All three moving-coil drivers used in the Stella Xtreme are sourced from Purifi (which also supplies detailed 'plug 'n play' cabinet and crossover application notes) but it's the two PTT6.5X04 bass/mid units that are arguably of most interest here. The deep magnet, voice coil and suspension design of this 165mm driver work in tandem with the 'Neutral Surrounds' to deliver what Purifi claims is a driver 'that truly cracks the extended-stroke code'.

Its aim was to exceed the bass performance of a large-cone/short-stroke driver using a smaller cone – thereby extending its reach into the midrange – and far longer throw. Purifi used computer-modelling to predict the ideal cone and surround geometry, the latter disconcertingly irregular on first acquaintance. While this surround promises to reduce mechanical distortion without constraining motion it also works with the suspension spider to prevent the voice coil position from modulating the motor's force factor. All this is key in achieving low IM and harmonic distortion [see Lab Report, p61]. PM

Champagne and Wood (burl walnut) – appears faultlessly crafted. Black is an 'on request' alternative for the enclosure, and you can even splash out £2650 for the limited edition Vacas Art option, which arrives with panels hand-painted and signed by artist Juan Pablo Perez Vacas.

The speaker weighs a considerable 43kg, but its 1.15m height isn't imposing and the design aesthetic looks like it's taking up less space than it actually does. The 45cm-deep cabinet tapers, becoming narrower at the rear, and sits on an integrated plinth that, with its trio of Panzerholz/Krion feet, provides a stable footing. Note that there are no grilles for the Stella Xtreme, nor any inserts to short the reflex ports. Nor does Kroma Atelier supply a guide to speaker placement – it's a case of suck it and see.

TIPPING THE SCALES

The maker has struck it rich with this speaker's combination of drivers, crossover and cabinet architecture, delivering a performance with some very noticeable traits – sheer bass profundity and startling reproduction of vocals being two of them.

At the same time, the sound is both controlled – the Stella Xtreme is a benign load – and exquisitely clean. It's a pleasure to hear, demonstrating

LEFT: A pair of Purifi PTT6.5X04 bass/mid units flank a Mundorf AMTU80W1.1 (Air Motion Transformer) tweeter, crossing over at 2.75kHz. The 165mm bass driver comes in below 450Hz – all are reflex-loaded via rear ports

that musical excitement can come from other areas beyond an aggressive midband.

The scale of the soundstage is vast, and with the speakers happy to play loud without ever sounding stretched, you can drown yourself in music. Drum 'n' bass track 'Back And Forth', from the producer Andy C [Ram Records; 44.1kHz/16-bit], pinned me back as vocals and effects ebbed and flowed across a widescreen stereo image with impressive height.

When the genre's two vital components kicked in, 'pulsating' and 'huge' were the two words I managed to write down before giving in and just enjoying it. Similarly, 'L/R', by Nilüfer Yanya [Painless; ATO Records ATO0594], was drawn with

such depth the chattering drums seemed to appear from behind me.

The above 'trick' was undoubtedly serendipitous in my room, although I found Kroma's floorstanders benefited more than most from some placement tweaks. An initial setup with the cabinets positioned 30cm from the rear wall found the bass performance being over-dominant (without actually being unpleasant), a by-product of the Stella Xtreme's rear reflex ports.

HEAD VOICE

Moving the cabinets further into the room revealed a better balance, as did opting for a regular rather than 'toed-in' position, as this gave the midband more of a forward push. Johnny Cash's gravelly vocal on 'Give My Love To Rosie' [American IV: The Man Comes Around; American Recordings 063 339-2] was just that bit easier to focus on. ☞

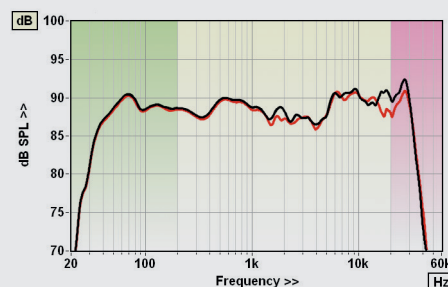
'The drivers' ability to drop deliciously low is astonishing'

LAB REPORT

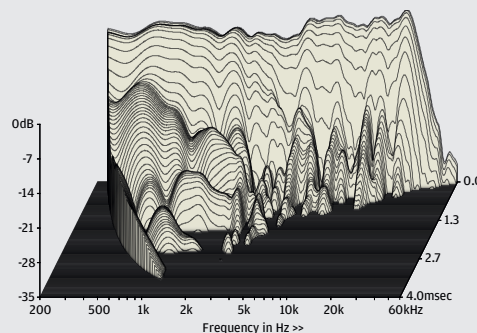
KROMA ATELIER STELLA XTREME

Measured above the AMT axis (in keeping with the likely listening position) this remarkable loudspeaker offers a smooth but slightly downturned mid with a +3dB 'step' above 5kHz exposing an equally uniform but boosted presence/treble. The latter contributes to the acceptable ± 2.3 dB and ± 2.4 dB response errors while Purifi's excellent QC ensures the Xtreme's fine 0.4dB pair matching up to 1.5kHz (the narrowband 1.6dB/1.9kHz and 3.3dB/17-20kHz errors are less significant). Sensitivity is on target at 88.8dB/1kHz and 88.6dB/500Hz-8kHz – both figures broadly in line with Kroma's 89dB rating – and achieved without hitching the partnering amplifier to a bruising load. Indeed, aside from a brief dip to 3.0ohm at 1.5kHz, the Xtreme's impedance lies comfortably above 4ohm across the audio band and while the biggest swings (impedance phase too) occur through the bass, the lowest EPDR of 1.75ohm also occurs at 1.2kHz and 2.3kHz as the AMT tweeter takes over at 2.75kHz.

Purifi's novel 'Neutral Surround' design [see boxout, p59] evidently demonstrates less misterrmination than we often see in our loudspeaker tests [see CSD Waterfall, Graph 2] leaving some discrete, low-level modes associated with the AMT tweeter above 3kHz. As promised in Purifi's literature, harmonic distortion is exceptionally low at just $\sim 0.03\%$ through the midrange (re. 90dB SPL). These 165mm bass/mid units work over a wide 48Hz-2kHz bandwidth while the main woofer, peaking at 73Hz, works over 48Hz-155Hz (all -6dB) and, together with the 33Hz tuning of both upper and lower ports, delivers a very respectable bass extension of 31Hz (-6dB re. 200Hz). PM



ABOVE: Response inc. nearfield summed drivers/ports [green], freefield corrected to 1m at 2.83V [yellow], ultrasonic [pink]. Left speaker, black trace; right, red;



ABOVE: Cabinet and bass/mid driver modes are well controlled, leaving some minor tweeter resonances

HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL/1m/2.83V - 1kHz/Mean/IEC)	88.8dB / 88.6dB / 86.6dB
Impedance modulus: minimum & maximum (20Hz-20kHz)	3.0ohm @ 1.52kHz 17.0ohm @ 24Hz
Impedance phase: minimum & maximum (20Hz-20kHz)	-33° @ 27Hz +42° @ 20Hz
Pair matching/Resp. error (200Hz-20kHz)	3.3dB/ ± 2.3 dB/ ± 2.4 dB
LF/HF extension (-6dB ref 200Hz/10kHz)	31Hz / 33.4kHz/33.5kHz
THD 100Hz/1kHz/10kHz (for 90dB SPL/1m)	0.25% / 0.03% / 0.5%
Dimensions (HWD) / Weight (each)	1150x260x450mm / 43kg

LEFT: The three-way crossover is not split so the Stella Xtreme is fitted with single Mundorf-sourced 4mm terminals. The upper and lower ports are hand turned from cedar wood

Subjectively, there's no indication of cabinet colouration at all as Kroma Atelier's lean-back enclosures become invisible as the music plays.

The most minor of criticisms would be that the Stella Xtreme proves hard to provoke. The way these speakers convey the cut and thrust of distortion-laded rock music, whether ZZ Top's 'Sharp Dressed Man' [Eliminator; Warner Bros. Records 812279975 1] or Black Sabbath's *Heaven And Hell* [Warner; 96kHz/24-bit], might be too 'polite' for some tastes. At the same time, the scale, openness, precision and joyous reproduction of bass on show is a remarkable antidote.

VELVET UNDERGROUND

Indeed, the ability of the three 165mm drivers to drop deliciously low while remaining controlled and subtle is astonishing. The Stella Xtreme's velvety, musical low-end is an obvious benefit to music that's bass-heavy – 'Kiss In Blue', by Yello/Heidi Happy [Touch Yello; Polydor 0602527210957], had a churning, bottom octave rhythm that filled my room – yet it makes its presence felt on all flavours of music. Santana's Latin boogie 'Oye Come Va', from the *Carlito's Way* soundtrack CD [Epic Soundtrax 474994 2], was driven by the speakers' powerful grasp of the staccato bassline, while keyboards, guitar and percussion danced all around it. ☺

HI-FI NEWS VERDICT

A real eye-opener of a speaker, the Stella Xtreme marries high-spec drivers and crossover with a 'next-generation' cabinet material and gorgeous craftsmanship. Of course, all that would count for nothing if it didn't sound every inch the high-end floorstander, yet in this regard it truly sings. Take a little care with setup and you'll be rewarded with open, largescale soundscapes plus best-in-breed bass and soaring highs.

Sound Quality: 89%



And focus you'll want to do, because the Stella Xtreme is, well, extremely articulate when it comes to vocals. Where Cash was an almost careworn presence in the room, Tom Petty, on 'I Won't Back Down' [Tom Petty And The Heartbreakers – Live At The Fillmore 1997; Warner Records 96kHz/24-bit], had that uniquely nasal, melodious twang, while French singer Françoise Hardy sounded playful and almost holographic on 'Oh Oh Cheri' [eponymous, Doxy Records; Tidal Master]. Ensuring this sense of presence is the Stella Xtreme's smooth, airy top end, plus the clean delivery of those bass/mid drivers.