

# System Audio Signature 5

'Big sounds' are promised from this Nordic brand's slender Signature speaker range that includes floorstanding, standmount and AV-ready on-wall models. Is the Sig 5 a star?

Review: **Mark Craven** Lab: **Paul Miller**

If you have a preconceived notion of System Audio, chances are it's been formed by its Silverback range of active, wireless loudspeakers. Occupying the top tier in the Danish manufacturer's catalogue, models including the Silverback 60.2 and Silverback 40.2 [*HFN* May '21 and Aug '21] combine DSP-based crossovers, DACs and integrated amplification, with cable-free transmission via the WISA standard. Add in the app control and room EQ and there is, to put it bluntly, a lot going on in the Silverbacks – something which can't be said of System Audio's new Signature series.

This five-strong family, of which the £999 Signature 5 auditioned here is the junior model, marks the first passive speaker design from the company since 2018. This is quite a gap considering many rival brands at this affordable end of the market will have refreshed their lineups two or even three times in the same period. But not only does the series find System Audio returning to its speaker 'roots' of 1984, it also adopts a 'less is more' approach.

## SIMPLE TRUTHS

At the speaker's launch at the UK Hi-Fi Show *Live* [*HFN* Jan '24], founder Ole Withthøft told *HFN* that he was 'proud of the level of simplicity we've achieved here', and by this he means not the Signature 5's external appearance (although this is also clean and uncluttered) but the internal design. 'We've spent quite some time getting rid of stuff', Withthøft explained further. 'Removing components, materials, and so forth. Complexity can be fascinating, but our speakers shouldn't stand in the way of the music signal.'

This pursuit of simplicity is continued throughout the Signature series, and no doubt contributes to its keen pricing. There's the range-topping Signature 40 floorstander at £1999, and two on-wall options: the compact Signature 6 (£799)

and larger Signature 10 (£699 each) – the latter can be placed horizontally or vertically as an LCR speaker in a home cinema installation. The Signature series also offers the Sub 8 active subwoofer, which will set you back £1099.

## FIBRE 'N' FABRIC

Returning to the speaker at hand, the Signature 5 is a traditional two-way standmount (albeit without dedicated stands) and partners a 140mm bass/mid driver with a 25mm dome tweeter. As befits the price tag, System Audio isn't employing any particularly 'exotic' materials here – the HF unit is a coated, woven fabric type and the bass/

mid cone is made from glass fibre. That said, the drivers are promoted as custom designs.

The tweeter has been devised specially for the new Signature

series and uses a neodymium magnet system with an internal chamber that 'allows the tweeter to be used at a lower crossover frequency' – in this instance, 1.9kHz. It looks familiar to other System Audio tweeters, though, as it is surrounded here by a DXT (Diffraction Expansion Technology) waveguide that's claimed to aid off-axis response and mitigate cabinet-borne diffraction [see PM's Lab Report, p73].

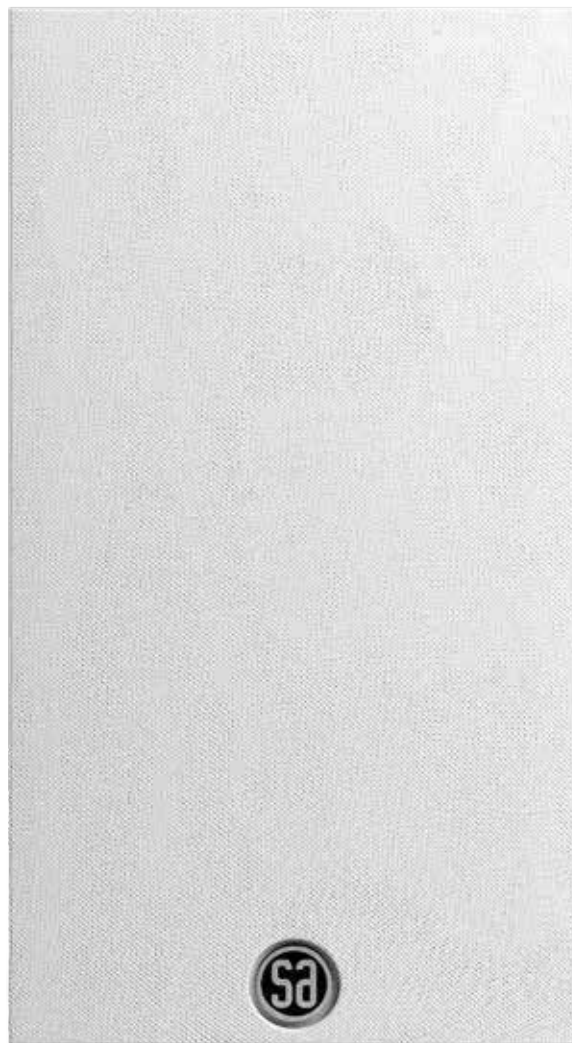
Below the tweeter, its mounting plate extending close to the edges of the Signature 5's slender cabinet,

**RIGHT:** Offered in satin black and satin white [pictured] finishes, the Signature 5 also has a flush, magnetically-attached grille

is the new bass/mid driver that Withthøft says involved a lengthy design process to achieve 'a touch of sonic sweetness'. Its composite cone terminates in a ribbed surround, developed to facilitate the driver's long throw and manage midrange breakup. Meanwhile, a bass reflex port to the rear of the cabinet tunes the output down to a claimed low-frequency response of 40Hz [see PM's boxout, p71].

In practice, the Signature 5's 24.5cm depth and 30cm height puts it in small standmount territory so bookshelf

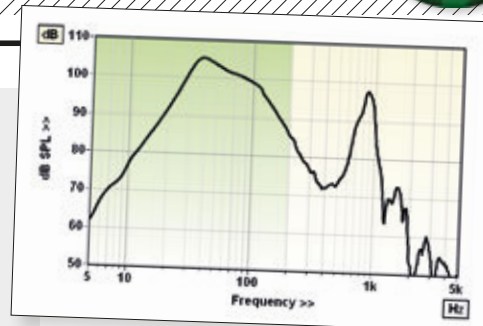
'It has a  
winning way  
with upbeat  
pop and rock'



## PIPE DREAMS

Ported, reflex-loaded speakers exploit the Helmholtz resonance to boost their low frequency output. It's a tried-and-tested technique to improve both bass extension and sensitivity over what might be achieved with a sealed box, even if it's traded for a steeper bass roll-off and poorer transient response. This bass resonance is a function of the mass of the air in the port tube and the volume of the air in the cabinet which acts as a 'spring', but designing a port tube for a low Helmholtz resonance is not simply about increasing its internal air mass. In practice, the resonance frequency of a cylindrical port is proportional to the square root of its cross-sectional area (A) divided by its length (L) – ie,  $\sqrt{A/L}$  – so wider ports need longer tubes to achieve the same Helmholtz resonance.

The Signature 5's small cabinet will not accommodate a fat tube, so SA has opted for a narrow but long tube to achieve a low 38Hz resonance. Air velocity and turbulence increases as a result – which is why fat tubes are often preferred – while, at midrange frequencies, the tube takes on the properties of a *pipe* with a resonance of its own. The Graph [right] shows the uncorrected nearfield output of the port with its desired Helmholtz resonance at 38Hz together with a prominent pipe mode at 860Hz. This mode is sufficiently strong that it punches through to the forward output of the speaker [see Graph 1, p73] and is also clearly revealed on the CSD waterfall [see Graph 2, p73]. If you like the high octane, vocal-forward sound of the Signature 5, this is probably why... PM



instruments, the smooth, unfatiguing nature of its upper frequencies, the punchy bass, and the ease with which it can lure you into the music. There's a distinctive rather than neutral voicing to the Signature 5, but it's an enjoyable one, especially considering the price demanded.

## CASH RICH

Johnny Cash's 'There's A Man Coming Round', from the Rick Rubin-produced *American IV* [American Recordings 063 339-2], places the microphone close to the Man in Black's guitar and voice. The Signature 5 leaned into the effect, giving a nicely etched rendition of this track's sparse introduction, and – in particular – Cash's thick, gravelly vocal. It avoided any feeling of dryness, too, so that the

placement is an alternative, although with due consideration given to that rear-facing port (System Audio doesn't provide any foam inserts to short it). Additionally, four small holes on the back of the Signature 5's black or white satin cabinet make the speaker compatible with the company's W.5 wall brackets, for £120 per pair.

The potential for on-wall installation ties into the Signature series' do-it-all, affordable ethos – these are loudspeakers that, perhaps, might end up being used in a home office, kitchen, games den, etc. For audiophile use, however, the manufacturer suggests placing them on stands between 5cm and 40cm from the rear wall, adjusting the distance to suit the room acoustics and personal taste. On-axis listening, toed-into the seating position, is also recommended.

## LEADING VOICE

I began with the Signature 5s laced up to an Arcam SA30 integrated amplifier [HFN Jul '20], the speakers sat on 26in/66cm stands around 40cm from the rear wall, before positioning them a little further back to give some boost to the low-end. At the same time, there's only so

much extra to be gained from boundary-loading System Audio's compact speaker, as genuine bass extension isn't its forte. Instead, its strengths are the texture and presence wrought from vocals and

strummed acoustic guitar chords had a sweet and rich tone. When the piano and bass arrived to bring weight to the chorus, the sound bloomed appropriately.

This sense of a warm, rich midband is aided by the Signature 5's genteel approach to the upper frequencies, where (even after experimentation with toe-in angle) there's a lack of explicit air and openness. Small percussive elements in Allan Holdsworth's 'Atavachron', from the album of the same [Manifesto Records; CD resolution download], felt a little damped compared to the main synth lines, just as John Bonham's hi-hat during the final throes of Led Zeppelin's ↻



**LEFT:** The Sig. 5 combines a new 25mm soft-dome tweeter with a custom 140mm glass-fibre coned bass/mid driver that's reflex-loaded via a long port to the rear [see boxout, above]

# LAB REPORT

## SYSTEM AUDIO SIGNATURE 5



**LEFT: Single cable terminals sit below the rear-firing reflex port. Note screw holes to accommodate on-wall bracket (not recommended unless the port is plugged)**

as evidenced by Francine Thirteen's 'Queen Mary' [self-released; CD resolution download]. This Texas-based artist claims she 'loves rhythms that growl', but while System Audio's speaker placed her at the centre of this track's percussive electronic swirl it could only hint at the sub-bass notes that lurk beneath.

However, while you can spend less on standmounts with a bigger, weightier sound, not all can match the Signature

'Stairway To Heaven' [*Led Zeppelin IV*; Atlantic 7567 826382] didn't slide through the rest of the band.

Yet there are two sides to this coin. Even paired with WiiM's fairly 'lively' sounding Ultra streaming amplifier, and with a good twist of the volume control, the Signature 5s avoided the glassy, brittle sound that's sometimes a trait of affordable speakers. There was a smooth, inviting quality to the double-guitar harmonies of Iron Maiden's 'The Trooper' [*Piece Of Mind*, Sanctuary Records; 96kHz/24-bit], matched by the well-rounded bassline below. Indeed, adding the '5s to a compact all-in-one amp such as the Ultra resulted in a system that could happily sit on a desktop – although System Audio's active, wireless Silverback 1 models, at £1699, are a more obvious option in this regard.

### SHAKE DOWN

The Signature 5's punchy low-end helped to drive this Iron Maiden classic along, capturing the energy and aggression of the band in their pomp. It did the same with Taylor Swift's 'Shake It Off' [*1989 (Taylor's Version)*; Republic Records 0245597656] where bouncy, varied rhythms fill in for the otherwise minimal instrumentation; and the title track of Michael Jackson's *Bad* [Epic EPC 450290 2], with its propulsive, meaty bassline. This speaker has a winning way with upbeat pop and rock, always sounding fun and rhythmically solid.

Deeper bass effects are dealt with less convincingly though,

5's honeyed tones. Often, its presentation seemed wonderfully simpatico with the music. For example, Allison Krauss and Robert Plant's 'Somebody Was Watching Over Me' [*Raise The Roof*, Warner Music UK download; CD resolution] sounded both luxuriously rich and precisely staged, the singers' slick harmonies framed by reverberant guitar chords, then making way for big, bluesy piano licks.

Switching to the 'Flying' theme from *E.T.: The Extraterrestrial* [*Boston Pops Orchestra: John Williams*; UMG download; CD resolution], the Signature 5's midrange presence continued to delight as strings and woodwind sent Williams' melodies soaring. The unflagging but sprightly nature of the sound, the fine timbral details, and the scale and drama these small speakers muster is bang on the money. ⚡

### HI-FI NEWS VERDICT

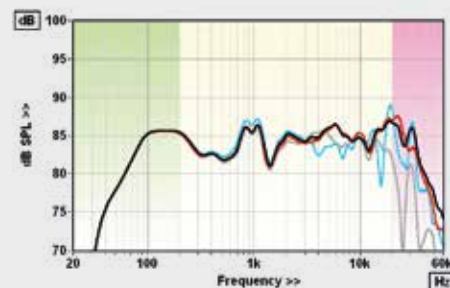
By squeezing in under the £1000 mark, System Audio's Signature 5 enters a hotly contested section of the market. Helping it stand out are a smart, unflashy design and easy to accommodate form factor, plus a sonic signature that focuses on midband presence and detail rather than bass and treble pyrotechnics. Put that altogether, and you have a budget loudspeaker that some will find hard to resist...

Sound Quality: 84%

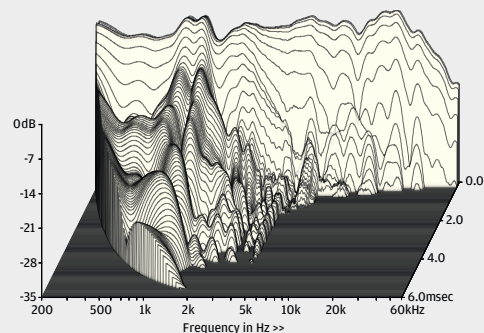


The Signature 5's axial response [Graph 1, below] is dominated by its bass alignment, both directly in the peak output of the 140mm woofer at 115Hz, supplemented by the very low 38Hz tuning of the port, and indirectly with the port's pipe mode (and possibly a cabinet quarterwave resonance) clearly revealed in the +5dB boost from 800Hz-1.1kHz [see boxout, p71]. These features are responsible for the, perfectly acceptable, ±2.9dB and ±3.1dB response errors (200Hz-20kHz), respectively, in what would otherwise be a fairly flat response. Pair matching is a very tight 0.65dB while the diffraction-corrected bass extension is a creditable 56Hz (-6dB re. 200Hz). Also, the soft-dome tweeter has a useful extension to ~40kHz [pink shaded area, Graph 1] without the bold ultrasonic resonance shown by metal/hard dome types. However, despite its 'DXT' waveguide, the Sig. 5's off-axis response [grey trace, Graph 1] shows a drop in treble beyond ~14kHz which may yet be subjectively preferable – toe the speakers away from the listening axis by ±15°, listen and decide but take off the grilles first [blue trace, Graph 1]!

SA also claims an ambitious 88dB sensitivity, but this is at '1W/1m' so, bearing in mind the '4ohm nominal' rating and minimum impedance of 4ohm (at 166Hz), it's far from the 85.8dB measured here at 2.83V/1kHz/1m (or 2W/4ohm). This value also benefits from the speaker's midband boost so a figure of 84.5dB is more realistic (500Hz-8kHz). That said, THD is held to a low 0.5% at 90dB SPL (100Hz-10kHz) and loading is fairly 'budget amp friendly' with swings in phase angle of +42/-53° through the bass and a minimum EPDR of 1.95ohm/124Hz. PM



ABOVE: Response inc. nearfield summed driver/port [green], freefield corrected to 1m at 2.83V [yellow], ultrasonic [pink]. L, blk; R, red; ±15°, grey; grille, blue



ABOVE: The CSD waterfall is dominated by the port/quarterwave resonance at ~860Hz [see boxout, p71]

### HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL/1m/2.83V - 1kHz/Mean/IEC)	85.8dB / 84.5dB / 82.5dB
Impedance modulus: minimum & maximum (20Hz-20kHz)	4.0ohm @ 166Hz 43.0ohm @ 1.75kHz
Impedance phase: minimum & maximum (20Hz-20kHz)	-52.0° @ 2.6kHz +44.5° @ 739Hz
Pair matching/Resp. error (200Hz-20kHz)	0.65dB/ ±2.9dB/±3.1dB
LF/HF extension (-6dB ref 200Hz/10kHz)	56Hz / 45.3kHz/39.9kHz
THD 100Hz/1kHz/10kHz (for 90dB SPL/1m)	0.15% / 0.4% / 0.3%
Dimensions (HWD) / Weight (each)	300x165x249mm/ 6kg