

# Perlisten S7t LE

Perlisten's flagship gets the 'LE' treatment with lashings of carbon-fibre, plus updated crossover and bass drivers  
 Review: **Jamie Biesemans** Lab: **Paul Miller**

**T**alk about bursting onto the scene. Five years ago, few had heard of Perlisten even though the Wisconsin company had existed from 2016, ostensibly operating in stealth mode. Today it is an established name in hi-fi circles, abetted by two complete loudspeaker series featuring some ambitious technology. The four-way £19,000 S7t floorstander [*HFN* Apr '22] had served as Perlisten's flagship speaker until this £30,000 Limited Edition arrived two years later, boasting numerous detail enhancements. It's at least 25kg heavier too, at 84kg per tower.

'Limited edition' on a loudspeaker generally means you can count on a special colourway, with an odd tweak here and there. In this case, however, the upgrades run more than skin-deep, and this is reflected in the price. Similar to upgrading from, say, Bowers & Wilkins' 801 D4 [*HFN* Nov '21] to its Signature Edition [*HFN* Sep '23], the uplift in cost for the S7t LE is about another 50% on top of the 'standard' model.

The S7t Limited Edition is also truly limited, with only 50 pairs produced worldwide. This might be pertinent if thinking of hi-fi as an investment – admittedly, not the wisest thing to do – and the eventual resale value of such a rare product. Adding to the exclusivity, Perlisten promises that every LE pair is matched to within 0.5dB [see PM's Lab Report, p77] and owners will receive the full set of measurements of their units.

## MISSION CONTROL

Naturally, the S7t LE's core four-way speaker technology mirrors that of the regular model, featuring the brand's proprietary DPC array with three dome drivers in the middle (the central tweeter crafted from beryllium, the other mid/treble drivers from Textreme TPCD), and dual 180mm woofers above and below. Both the array and the symmetric

placement of the drivers aid in managing dispersion [see PM's boxout, p75]. Control of the vertical and horizontal response of its loudspeakers, so the off-axis 'sound' reflected from floor, wall and ceiling boundaries matches the initial, on-axis timbre experienced by the listener, is a key part of the Perlisten ethos.

Bass tuning on the S7t LE is offered via two down-firing reflex ports within the lower section of the cabinet. These exhaust via grilled-off panels at the rear and side while foam plugs are provided should you wish to attenuate the ports still further (not recommended in our experience).

## FIBRE OPTICS

The S7t has a streamlined, modern look to it, which is further enhanced on this

*'It carried me back to the time of the Vikings... Where's my axe?'*

Limited Edition model by the carbon-fibre panels fitted to the sides of the (HDF) cabinet. The new panels have enabled an 8% increase in cabinet volume, which better serves the improved throw and

power handling of the four updated TPCD woofers – now fitted with external copper heatsinking, a secondary shorting ring and new voice coil windings. Every little helps...

At nearly 130cm tall this is not a small floorstander – it's a flagship after all – but its frame is slender and requires compact, hefty outriggers for stability, terminated here in custom soft-polymer damping feet from IsoAcoustics. So, no spikes here!

The aforementioned DPC array is the keystone of Perlisten's acoustic designs and, unsurprisingly, it's been further refined for this Limited Edition model. In fact, there's a substantial change, with the waveguide into which the tweeter ➔

**RIGHT:** Mounted into Perlisten's CNC-machined HDF baffle is its 'DPC array' comprising a 28mm beryllium tweeter and upper/lower 28mm TPCD (thin-ply carbon diaphragm) domes. Updated TPCD bass drivers are configured for either vented or sealed-box alignment





'A trio of drivers is nestled  
into a CNC-machined  
alloy Directivity Pattern  
Control (DPC) waveguide'

## WAVEGUIDE & HEATSINK

Taking centre stage in the S7t LE tower, and nestled into a CNC-machined alloy Directivity Pattern Control (DPC) waveguide, are two carbon-ply domes either side of a beryllium dome tweeter. Dubbed 'acoustic lens' technology, all three domes combine low mass with high stiffness but are optimised over discrete bandwidths. They take over from the adjacent bass/mid cones at ~1.2kHz but the 28mm main tweeter continues to work above 4.8kHz where the two 28mm laminated (thin-ply carbon diaphragm) domes roll away.

Perlisten employed Comsol's acoustic modelling software to work on the dome sizes, shapes and spacing, the waveguide's contours and fine-tuning of the crossover. The physical profile and output of each tweeter unit is designed to optimise the response and dispersion of the ensemble, controlling both the vertical *and* horizontal directivity. The LE version's all-alloy waveguide improves heatsinking and power handling while the crossovers are adjusted so the mid domes now operate over a slightly wider 1.2-4.8kHz from the S7t's 1.4-4.5kHz. Integration remains key, however, so the dishd waveguide still ensures the triple-driver array is optimally mapped to the directivity of the 'Textreme' cones situated immediately above and below. PM

and mid-tweeters are mounted being milled out of a 6061-6T aluminium alloy. This delivers not only a cosmetic upgrade – the anodised finishing looks stunning – but a functional one as the metal waveguide also operates as a giant heatsink, supplementing the existing thermal management of each mid/treble dome driver. Perlisten claims a reduction in thermal compression, better power handling and improved 'temperature tracking' between all three drivers. The upshot, it says, is the DPC array behaving more like a single, integrated unit.

Finally, inside the cabinet, the comprehensive four-way crossover includes improved, 1% tolerance components along with a subtle re-alignment of crossover frequencies and slopes to take full advantage of the S7t Limited Edition's driver and cabinet updates.



### GOING CLUBBING

The original S7t showcased Perlisten's pursuit of uniformity in dispersion and control. This upgrade doesn't stray from those first principles, but possesses a noticeably different tuning, sounding more direct and precise. Forging an immediate relationship with the music, the S7t Limited Edition tries less to evoke a grand concert hall than to place you in the front rows of a club. It's more of an up-close-and-personal listening experience, while previous Perlisten speakers I've auditioned have seemed to 'project' the music more.

The first few seconds with the percussion at the start of 'Beginnings Are Such Delicate Times' on the *Dune: Part Two* soundtrack [WaterTower Music digital download; 48kHz/24-bit] introduced the Limited Edition's bass performance, resounding fairly deep and with good

definition. This is a complex, processed version of what sounds like a large taiko drum, and the Perlisten floorstander preferred keeping a grip rather than pursuing the lowest of frequencies – perhaps the design team assumes music enthusiasts desiring extreme bass would complement the speaker with one (or two) of its flagship D series subwoofers.

Returning to the *Dune* track, this still felt appropriately 'mighty' through the S7t LEs, driven here by the dCS Varèse streaming front-end [HFN Feb '25] and BAT's REX 500 power amplifier [HFN Feb '24]. Following the lengthy passage of breathy, otherworldly flute (actually a duduk) played by Pedro Eustache, the piece ends on a high note (figuratively) with the return of those dramatic drums and composer Hans Zimmer's trademark deep synthesisers. The increase in scale mirrors the action in the film, when Paul Atreides (Timothée Chalamet) transforms from exiled Duke to messianic figure leading a holy war, and the S7t LE successfully relayed this metamorphosis, albeit by turning up the intensity of the score rather than expanding the scope and size of the soundstage.

### THAT'S ALL FOLK

Playing the *Beauté Barbare* album [Alpha 949; 192kHz/24-bit] that I enjoyed while reviewing Eversolo's DMP-A10 server/DAC [p66], it was interesting to hear the same tracks on a very different system. The sense of rhythm was excellent on 'Swiatówka', with the S7t LEs propelling this traditional folk dance with jaunty enthusiasm, and maintaining detail and focus as more instrumental layers were ➞







**LEFT:** The S7t LE's four-way (450Hz/1.2kHz/4.8kHz) crossover is split between the bass/mid and DPC array drivers enabling bi-amping/bi-wiring. Side and rear vents come into play if the S7t LE is configured in reflex mode

feeling of politeness at the top-end,  
adding a soft touch to the flute.

That softness made the slightly bright electric piano throughout Kathryn Joseph's 'What Is Keeping You Alive Makes Me Want To Kill...' [*For You Who Are Wronged*; Rock Action Records ROCKACT144; 44.1kHz/24-bit] more palatable, and ensured it was easier to focus on her smooth-sounding vocals. This Scottish songwriter's carefully delivered, often personal, lyrics deserve a direct listen, which is precisely what the S7t Limited Editions encouraged, echoing her minimalistic but very effective performance on stage at Antwerp's De Roma theatre earlier in 2025.

## NORSE RACING

With emotionally charged music in this vein, Floorlisten's floorstanders are in their element. Elsewhere, though they gave a meaty rendition of 'Hertan' on *Birna* [Norse Music 19802848222; 48kHz/24-bit] from Norwegian multi-instrumentalist group Wardruna. Fairly spatial and three-dimensional, as all historically inspired 'ethnic' music seems to be, once again the focus here was more on power and immediacy than on filling the listening room from top to bottom. Still, it easily carried me back to the time of the Vikings, which is the point of this band's songs. Now, where's my axe? ☺

## HI-FI NEWS VERDICT

There's a deal of engineering behind the S7t Limited Edition that's immediately noticeable on audition. Perlisten's raft of additions transcend the usual 'limited edition' tweaks, taking a sparkling loudspeaker into a realm of greater refinement where it delivers a more personal listening experience. Both stock and LE versions of the S7t will have their fans – potential owners would be wise to audition both.

Sound Quality: 87%

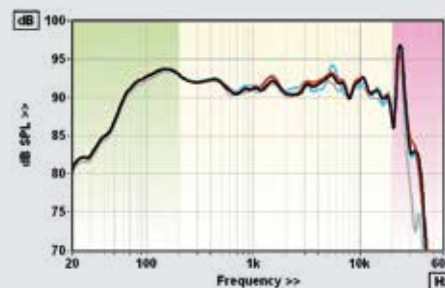


## LAB REPORT

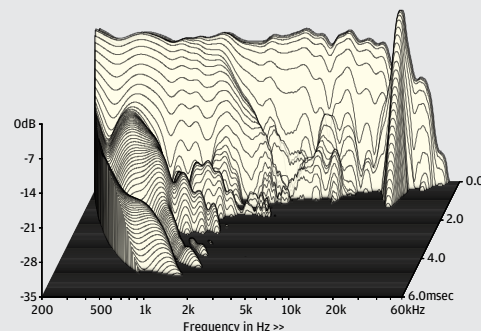
**PERLISTEN AUDIO S7T LIMITED ED.**

Measured again on the tweeter axis – the centre of the DPC array – how does this LE version compare with the standard S7t [HFN Apr '22]? The forward response [Graph 1] remains very uniform with errors of just  $\pm 1.5\text{dB}$  and  $\pm 1.6\text{dB}$  (200Hz-10kHz) increasing to  $\pm 2.9\text{dB}$  and  $\pm 2.6\text{dB}$ , respectively, between 10-20kHz, just as pair matching is a tight 0.75dB. However, the LE adds a broad  $+1.5\text{dB}$  reinforcement from 2.5kHz-7kHz, ostensibly enhancing its presence/treble, while the magnetically attached grilles introduce a slightly more exaggerated  $\pm 0.8\text{dB}$  variation through this same region [blue trace]. Again, there's no avoiding the  $+5.9\text{dB}$  treble dome resonance just outside the audioband at 23.7kHz, and the  $-5.1\text{dB}$  notch at 20.5kHz that precedes it [pink shaded area, Graph 1, and see also CSD waterfall, Graph 2]. As expected, the array's off-axis uniformity is excellent [grey trace].

As in the standard S7t model, sensitivity is only slightly under Perlisten's claimed 92dB (91.2dB/1kHz/2.83V and 91.5dB from 500Hz-8kHz), this aiding low distortion at high levels (<0.2% re. 90dB SPL/1m/100Hz-10kHz). Nearfield analysis shows the mid/bass Textreme cones have an extended 51Hz-1.15kHz bandwidth (-6dB), while all four cones, plus the limited dual-port/slot output at 22Hz, maintain the S7t's modest, diffraction-corrected 49Hz bass extension (-6dB re. 200Hz). While both bass extension and sensitivity are unchanged, the LE model does present a tougher amplifier load from 20Hz-1kHz. The minimum impedance is now 2.68ohm/126Hz which, with swings in phase angle of -39°/79Hz and +51°/975Hz, combine to produce a minimum EPDR of 1.38ohm/94Hz, and a sub-2ohm stretch from 200Hz-900Hz. **PM**



ABOVE: Response inc. nearfield summed drivers/ports [green], freefield corrected to 1m at 2.83V [yellow], ultrasonic [pink]. L, blk; R, red; grille, blue;  $\pm 15^\circ$ , grey



**ABOVE:** Cabinet and cone resonances are very mild, leaving the tweeter mode exposed but short-lived

## HI-FI NEWS SPECIFICATIONS

<b>Sensitivity</b> (SPL/1m/2.83V – 1kHz/Mean/IEC)	91.2dB / 91.5dB / 89.7dB
<b>Impedance modulus: minimum &amp; maximum</b> (20Hz–20kHz)	2.68ohm @ 126Hz 11.7ohm @ 1.3kHz
<b>Impedance phase: minimum &amp; maximum</b> (20Hz–20kHz)	–39° @ 79Hz +61° @ 20kHz
<b>Pair matching/Resp. error</b> (200Hz–20kHz)	0.75dB/ ±2.9dB/±2.6dB
<b>LF/HF extension</b> (–6dB ref 200Hz/10kHz)	49Hz / 28.1kHz/28.5kHz
<b>THD 100Hz/1kHz/10kHz</b> (for 90dB SPL/1m)	0.15% / 0.08% / 0.15%
<b>Dimensions</b> (HWD) / <b>Weight</b>	1334x367x506mm / 84kg