

Perlisten S7t

lite Verdict 2024

99/100

Reference class

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HIGH-END
FLAGSHIP FOR
HI-FI AND
HOME CINEMA

**Powerful bass,
great dynamics**

**Excellent 3D
visualisation**



Perlisten S7t

The Perlisten S7t is the flagship of the Signature series - and impresses with its imposing appearance. The slight inclination of the body promotes optimum radiation.

High-end flagship for hi-fi and home cinema

Perfect dispersion - that is the acoustic trademark of Perlisten, which the sound transducer specialist achieves with its high-tech trademarks: the unusual triple tweeter arrangement and the characteristic special baffle. The impressive Perlisten S7t is of course also equipped with these merits, with four woofers and an opulent volume for the bass. The flagship promises sound excellence and power sound both in hi-fi mode and for home cinema sound reinforcement - and the S7t fulfils this promise with impressive performance.

That's a steep climb: Perlisten was founded in 2016, and just over four years later the Americans are already presenting a complete high-end speaker series for stereo and surround sound - and have since been celebrated by the press and the public, receiving top marks and awards and being the first manufacturer to be certified by THX with the Dominus label, the highest standard for home cinema systems. However, this success is no accident: Behind Perlisten are two experienced experts, Lars Johansen and Daniel Roemer, who have already worked for such calibres as the studio and multi-channel sound reinforcement specialist M&K, the loudspeaker giant NHT and the high-end forge Acoustic Research. Johansen and



The white high-gloss finish and the subtly rounded corners and edges of the body enhance the attractive appearance - as do the almost sculptural front baffle and the striking woofer cones.

Roemer then used this expertise to create Perlisten. The abbreviation stands for "Perceptual Listening" - and for this approach of "attentive listening", the Americans rely on a controlled and directed radiation behaviour: In favour of maximum music perception, perfect homogeneity should be achieved at the listening position while avoiding unwanted room reflections.

Impressive tower for hi-fi and home cinema - with THX Dominus certification

Perlisten has brought this concept to fruition for the first time with the S7t: Leaving aside the exquisite "Limited Edition" version - whose fifty pairs make it extremely rare - this floorstanding loudspeaker is the flagship of the "Signature" series. It currently comprises two tower models, a monitor, a bookshelf speaker, two centres, a surround speaker and a corresponding portfolio of in-wall speakers. There are also several subwoofer models. Perlisten therefore has home cinema fans in mind as well as hi-fi fans. It's pretty logical, then, that all American models come with THX certification - and even boast the highest-ranking THX Dominus certificate, which is aimed at large-room home cinemas with its performance requirements. This involves sound reinforcement in rooms of up to 184 cubic metres with a six-metre visual distance to the display or screen. We immediately believe that the S7t easily fulfils this specification: This imposing floor-standing loudspeaker stands 1.30 metres tall, the body is 24 centimetres wide and 40 centimetres deep

Weighty housing with high vibration resistance

The S7t emphasises this visual opulence with its weight of a whopping 56 kilos. The base plate alone, CNC-milled from 13 millimetre thick steel, weighs ten kilos. This elegantly waisted plate with four screwed-in and there-

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Model:	Perlisten S7t
Product category:	Floorstanding loudspeaker
Price:	starts from 9,500.00 € / piece
Versions:	High-gloss black, high-gloss white; real wood veneer: natural cherry, natural black cherry, natural ebony, high-gloss ebony - Other finishes on request
Distribution:	Audio Reference, Hamburg Tel.: 040 / 53320359 www.audio-reference.de
Dimensions (HWD):	1,295 x 365 x 470 mm (incl. base plate, clamps, covers)
Weight:	55.5 kg / piece
Design:	4-way, passive, bass reflex tuning or "closed" enclosure (when operated with port plugs)
Tweeter:	1 x 28 mm (beryllium dome) 2 x 28 mm [TPCD]
Mid-woofer:	4 x 180 mm [TPCD]
Frequency data:	linear frequency response (± 1.5 dB): 80 Hz - 20 kHz Typical bass reproduction in the room: - 16 Hz (bass reflex operation) - 23 Hz (operation with port plug)
Cut-off frequencies:	500 Hz, 1.1 kHz, 4.4 kHz
Efficiency:	92.2 dB / 2.83 V / 1.0 m
Recommended amplifier power:	100 - 600 W

Score

Sound (60%):	99/100
Practicality (20%):	98/100
Features (20%):	98/100
Overall rating:	99/100
Class:	Reference class
Price/performance:	Good



The front is an eye-catcher with the characteristic complex design of the baffle. A closer look reveals that it houses a total of seven chassis.

fore height-adjustable feet guarantees that the towering loudspeaker stands securely and without tipping, even on uneven surfaces. This in turn is responsible for the residual weight, particularly with its housing design: The thick-walled body is made of several centimetres thick HDF. This highly compressed fibreboard has a density that is around twenty percent higher than the MDF normally used and offers greater vibration resistance. It is conveyed internally by an elaborate bracing and chamber subdivision as well as by the bitumen lining. This also prevents reflections and standing sound waves in the cabinet. The solid housing of our test model is finished with a neatly applied high-gloss white lacquer. Alternatively, the S7t can be painted in high-gloss black or a Pantone colour of your choice - or finished with a real wood veneer.

Radiation-optimised front with special woofers

The real eye-catcher, however, is the baffle in front of the body: This up to five centimetre high structure has an absolutely extraordinary design. The complex shape with numerous curves is the final result of a radiation optimisation process that Perlisten invested one and a half years in. This front presents us with a total of seven drivers in five surrounds for four-way reproduction. Sounds unusual - well it is. Let's start with the bass-midrange drivers: Here, the S7t operates with four identical woofers, each 18 centimetres in diameter. With their attractive membrane in a chequered pattern look, they are another eye-catching feature. The cone is made of TeXtreme braiding. This special carbon fibre is around thirty percent lighter than conventional carbon fibre with the same thickness. At the same time, it is extremely strong thanks to a special, multi-layered weave. What's more, the braiding is less sensitive to deformation. This is something that stiff materials undergo at high frequencies because the force of the drive no longer acts evenly on all areas of the diaphragm.



One of the two inner woofers. As with all four cone drivers, its cone is made of an extremely lightweight carbon fibre that is woven into a multi-layered yet thin-walled mesh. The lightweight and highly robust fabric enables high acoustic agility and impulse fidelity - and produces an attractive chequerboard look.

Low-frequency power thanks to a quartet of woofers and bass reflex tuning

Thanks in part to these membrane material merits, the chassis offer powerful performance and can be used in a wide range of applications - and that's exactly what happens: Although the woofers are identical, they perform different tasks during playback. All four chassis play down to the abysmal twenty-hertz region. But towards the top, the two outermost woofers stop at 550 Hz. They are therefore responsible for bass and low mids. The inner woofers, on the other hand, play up to around 1.4 kilohertz, which is already in the upper mid-range. Despite this division of tasks, the resulting diaphragm area is large overall. In combination with the spacious enclosure volume on which the drivers work, this guarantees powerful mids and a rich, deep bass. It's also boosted by the bass reflex tuning. This is realised with two large-diameter vertical tubes. They lead into the lowest area of the speaker cabinet - itself separated from the bass volume. The sound is projected from the tube ports towards the bottom of the body chamber ...

Sound alternatives: ventilated or closed housing

... and from here directed to the cheeks and the back. This is made possible by the three narrow grilles that are inserted into the lower housing area. This discreetly and attractively integrated downfire solution in the S7t ensures defined and homogeneous dispersion to several sides. However, the two bass reflex tubes of the S7t can also be sealed using the foam plugs supplied. The floor-standing speaker then operates virtually with a closed enclosure. This achieves an even more contoured bass. This solution is also suitable if the bass in your own room is too pronounced. Due to the closed housing, the S7t doesn't play quite as low. With a typical bass response in



The shape of the attached baffle and especially the DPC array, which houses the three domes, ensures optimised sound dispersion in conjunction with the driver arrangement. With the cone woofers, there is a division of tasks: all four chassis start at around 20 hertz, the outer woofers then stop at 500 hertz, while the inner woofers work beyond that up to around 1.4 kilohertz. Here you can see the top partner of each woofer team.

the room, the low frequency range now extends to "only" around 32 Hertz. To be able to insert the foam plugs, however, you first have to unscrew the plinth plate and then a panel in the base of the cabinet. But this sound tuning is only carried out once, if at all, during set-up.

The grilles set into the sides and rear of the enclosure give a hint that a bass reflex tuning system based on the downfire principle is used here to boost the low frequencies: The bottom of the enclosure for the bass volume is retracted above it. Two ports ensure its ventilation. The sound emitted at the port openings is radiated homogeneously into the horizontal plane via the lower chamber and the side grilles.



Tweeter triad for mids and highs

Now we come to what is probably the most astonishing part of the S7t: the DPC array, which is positioned fairly centrally on the baffle. The upper mids and treble are converted here - with a solution that is as clever as it is unusual: Instead of the usual woofer-tweeter arrangement, a tweeter team is used here, namely a triad of 28 millimetre diameter domes. This means that sound conversion is possible right into the mid-range without heavy diaphragms. This drastically reduces mass-related inertia and significantly increases agility. This means that the S7t can also shine in the mid-range with excellent impulse fidelity and dynamics. Once again, the tweeter teamwork results in a large resulting cone area, which in this case reaches a size worthy of a midrange speaker. All three domes start working at an astonishing 1,000 hertz. The low use of the tweeters also works because they work together to distribute the load across all three chassis.



The DPC array is Perlisten's trademark and the central eye-catcher. The array consists of the complexly shaped panel and the vertically arranged tweeter trio. Three 28-millimetre domes act as a team for the treble and upper mids.

Agile domes thanks to carbon and beryllium

All the same, the chassis needs to be resilient. This is why the two outer domes - recessed into the array and therefore almost hidden behind a grille - are again made from the extra-light, extremely robust braiding of the special carbon fibre TeXtreme. These two domes then stop at four kilohertz. From here, the central dome alone transforms sound up to well over twenty kilohertz - and even well over a stratospheric thirty kilohertz (depending on the room). The chassis achieves this with a dome made of beryllium. Due to its combination of maximum rigidity, minimum weight and favourable damping properties, Perlisten considers this expensive metal to be the ideal tweeter material. However, the interaction of the chassis is important for performance: Perlisten also achieves the goal of controlled, directional dispersion behaviour with the S7t due to the frequency range overlaps. The low positioning of the small domes avoids undesirable focusing effects, which generally occur with chassis towards their upper frequency range. This enables wide-ranging, homogeneous dispersion.



The main tweeter is positioned in the centre of the DPC array. It delivers the wide frequency range from 1.1 kilohertz to well over twenty kilohertz. This is made possible by the lightweight yet extremely hard beryllium membrane. The setback and the horn-like sound guide promote homogeneous interaction with the other drivers and the desired directional, wide dispersion



Behind the finely perforated grille are the framing dome tweeters, which convert sound in the range from 1.1 to around 4.4 kilohertz. Here you can see the area of the lower domes. The curved perforation, which extends into the edge of the horn, serves not only as a sound outlet but also as a sound diffuser.

DPC array for defined sound control

However, the desired dispersion behaviour is now achieved in particular by the DPC array in which the tweeter triad is embedded. This complexly shaped "Directivity Pattern Control" array has always been the Perlisten trademark and ensures the high recognition value of the speakers. The development took 18 months, numerous simulations on the computer and several prototypes in practice finally led to a design that fulfils the desired functions: The recessing of the central tweeter in a horn-like embedding results in phase alignment in the high frequencies on the one hand, and sound guidance and sound pressure amplification for the entire transmission range on the other. On the other hand, the perforated grilles extending into the rounded edge area of the sound funnel, behind which the outer tweeters are located, ensure deliberate sound diffusion. All in all, the DPC array produces both defined sound guides with energy directed towards the listening position and targeted sound cancellations. This tames the vertical sound radiation, thus reducing unwanted ceiling and floor reflections - and provides the desired wide, homogeneous horizontal radiation.

The Perlisten Audio S7t in practice

We finally want to test all this in practice. That's why we're now hoisting the S7t into the listening room. Here we start with the tried and tested positioning in an isosceles triangle. Between the loudspeakers and the listening room we have a triangle with a side length of around 2.30 metres - the sound transducers are about 50 centimetres away from the rear wall and are slightly angled. To optimise this, we are now streaming "Kiss In Blue" by Yello via Qobuz. The Swiss duo's production is once again superb. Heidi Happy is also a singer here. Thanks to her voice, we can change the setup so the reproduction is stable and true to size and Heidi Happy is right in the centre. We start the track - and the S7t already delivers a homogeneous, largely harmonious reproduction. Wow! It stays that way even if we move from the centre of our sofa to the left or right.

Wide homogeneous sound reinforcement

This is where the speaker fulfils a promise: The reproduction is coherent even away from the normal sweet spot. The display is even more stable and consistent thanks to a stronger angle. Only the bass reproduction is not yet as voluminous as we expected. This changes drastically when we move the sofa further back: From a distance of around 3.30 metres, the S7t delivers a low-frequency sound that packs a punch! "Kiss In Blue" begins with a slightly varying synthesiser bass motif that runs through the entire song: In the core, the bass goes up a whole tone and then drops down an octave - and here we're in the ultra-low frequency cellar. Many loudspeakers can only reproduce this last tone with a weak contour and thrust. The S7t, on the other hand, delivers it with the voluminous sonority present in the recording - so that this sound floods the room, makes the furniture vibrate and massages our stomachs.

Powerful bass, great dynamics

This powerful and powerful, voluminous bass always remains defined. The other frequency ranges can therefore develop freely. The S7t shines in these regions with an exceptionally clean, transparent sound conversion. This begins with the kicks of the bass drum, which are set exactly to the synthesiser bass tones, but don't blur with them - though they're clearly audible tonally. Let's stay with the drums: This is where the S7t can prove its great dynamic capability. Thanks to the excellent impulse fidelity and rich pressure, we hear a real drum set with a great punch, nimble attack and finely nuanced intensity gradation. This lends the snare hits - which are actually played discreetly and lapidary as a rim click - a marvellous directness. The beats on the mostly closed, occasionally open hi-hat offer a fascinating materiality with the accentuated-accurate clash of wooden mallet and metal cymbal. This also applies to the interspersed percussion parts, where we can literally hear Beat Ash's fingers patting on the skins.



The wide, relatively soft surround supports the cone's ability to deflect. The complex carbon fibre mesh is manufactured by a specialist for Perlisten, while the Americans have developed the entire chassis using their own expertise.

Excellent 3D visualisation

We can also experience this lively vitality with the undistorted electric guitar: A wonderfully silvery, free-sounding chord - identifying the guitar as a Stratocaster - is followed by stopped string attacks, making the guitar both a melody and rhythm instrument and perfectly complementing the drums and percussion. The music sounds infectiously fresh and is at the same time relaxed and groovy, because the timing is just right - both for the musicians involved and for the sound-shifting S7t. The harmonious interplay becomes virtually visible through the spatial reproduction: The S7t achieves an extremely vivid and three-dimensional representation. The audible materiality gives the instruments a tangible physicality, and the instruments in front of us are generously distributed in the room - with excellent stage width and excellent depth graduation. This freedom contributes to the boundlessness that this rendition conveys: Yello always enhances voices and instruments with impressive reverberation chambers and echoes, so the music plays in an unlimited artistic cosmos - ...

High resolution and richness of detail

... und diese Grenzenlosigkeit vermittelt die S7: Sie löst ... and the S7 conveys this boundlessness: It dissolves the wall-related limitations of our real space with ease. This immersive effect can only be achieved with a high-resolution reproduction that makes the reflections of the imagined space audible - and here it's a pleasure to immerse yourself in this 3D illusion created by reverb and echo with your eyes closed. Thanks to this wealth of detail, Heidi Happy's performance is now a real attraction too. The singer has an incredibly attractive, clear, warm voice and cleverly pulls out all the stops of vocal artistry: She breathes the vowels sensually, sings the syllables with a gentle vibrato, sometimes cooing lasciviously, sometimes sounding vulnerable and fragile - and wraps us around her finger. We hear every little inflection, every breath, no matter how minimal, even the opening of the lips before each vocal phrase. Heidi Happy seems to be standing right in front of us, singing just for us and to us.



If you want to conceal the chassis, put on the magnetic covers. The separate covers for each chassis preserve the overall attractive appearance. The elaborately crafted, finely perforated metal covers are framed by protective rubber mouldings.

Double the pleasure

We experience all these merits with music from a wide range of genres. In "Arabian Desert Groove", the abysmal, oppressive bass of Wolfgang Schmid and the fish and vitality of the drum and percussion fireworks ignited by Charly Antolini and Nippy Noya bring a grin to our faces. With Donald Fagen's "Morph The Cat", we're amazed at the tidiness of the reproduction: Despite the dense musical movement and the thirteen-strong lineup, the S7t makes every musician's voice heard. We can even hear the middle voices of the brass section and the background choir. This makes the action comprehensible in every detail and the music really understandable - and so the excellent reproduction of the S7t is a double pleasure. This applies all the more to orchestral pieces, such as the famous Handel aria "Lascia ch'io pianga": Here, the world-class soprano Cecilia Bartoli touches us with her heartfelt interpretation, because we directly experience every vocal nuance, every little increase in intensity in her singing.

Instrumental discovery experience

Cecilia Bartoli is accompanied by the Academy Of Ancient Music under Christopher Hogwood - and here, too, the outstanding three-dimensional power and transparency of the S7t pays off: We can easily locate the individual instrument groups and hear every musician from the group of instrumentalists. This is particularly beneficial for this excellent ensemble, as the Academy

The terminal is designed with separate terminals for high and low frequencies for bi-amping and bi-wiring; single-wiring operation is then possible with the bridges used. Thanks to the large receptacles on the terminals, cables with high-cross-section stranded wire can be connected. The clamps should have free-running pressure discs, which would protect the fine veins of the stranded wire when tightening. For cables equipped with banana plugs or shoes, this is of course irrelevant.



ger, Batman in the Tumbler and the Joker in the truck. In this scene, we were already impressed by the monitor Perlisten R5m in the test - but the S7t naturally has an even more impressive effect. Thanks to the stupendous dynamic ability and the immense bass power, this scrapping orgy full of lorry pile-ups and exploding cars seems even more brutal. The detonating explosive charges from Joker's bazooka literally press us into the sofa, and the police helicopter crashing over our heads has a highly immersive effect thanks to the outstanding acoustic three-dimensionality - despite the pure 2.0 sound! Despite all the explosiveness, the soundtrack remains transparent down to the smallest raining glass splinter and perfectly intelligible in the dialogue - because the S7t's power and reserves mean that even at extreme levels it cannot be disturbed. Grandiose!

Conclusion

The Perlisten S7t delivers the acoustic trademark of the Americans with flying colours: perfect dispersion. The four-way floorstanding loudspeaker achieves this in particular with the characteristic Perlisten trademarks: the unusual triple tweeter arrangement for treble and upper mids and the special baffle with central DCP array. They ensure a controlled, directional dispersion behaviour that provides excellent homogeneity at the listening position. The presentation shines with great plasticity, outstanding spatiality and excellent depth gradation. This enables an almost immersive 3D experience. Thanks to the excellent dynamics, the music reproduction is thrillingly vital and the performance in home cinema mode is breathtakingly explosive. The quartet of woofers and the large body volume also contribute to this. As a result, this THX Dominus-certified speaker offers immense pressure and stupendous low-frequency power in the low mids and bass. The S7t shines with sound excellence and power sound and presents itself as a high-end flagship for hi-fi and home cinema.

*Test & Text: Volker Frech
Photos: Branislav Čakić*

Of Ancient Music is committed to historical performance practice: She performs exclusively in the manner of the time and on old original instruments or their exact replicas. This turns listening into an instrumental discovery experience: In the strings we hear copies of the famous Cremonese violins by Stradivari, Guarneri and Amati, as well as the harpsichord, which used to be obbligato and accompanies the second half of the aria with its silvery string sound, exotic to today's ears - and the delicately plucked notes of a theorbo throughout, which rounds off Cecilia Bartoli's graceful singing with warm long-necked lute sounds.

Highly immersive effectiveness in home cinema

Finally, we're excited about the cinematic class of this THX-certified loudspeaker. From the Batman blockbuster "The Dark Knight", we choose the furious chase between public prosecutor Harvey Dent as a police van passen-



The Perlisten S7t in the listening room: It quickly becomes clear how effectively this speaker is designed for sound reinforcement in larger rooms - and in the test it proved its excellent dispersion, dynamic range and level stability.