

PERLISTEN

perceptual listening experience



S series + **R** series

THX Certified Dominus Speakers

Welcome to the World's first THX Certified Dominus Subwoofer

Congratulations, on your purchase of the world's first THX Certified Dominus family of speakers. We designed these products to ensure maximum output with the lowest distortion to recreate the dynamics that are needed for realistic 2-channel and cinema experiences. This new experience level is created using innovative engineering and many advanced technologies.

We recommend that you take some time to read this manual before starting the installation and setup. For more information about Perlisten speakers and other products, please visit our website at <https://www.perlistenaudio.com/>

Support can be reached at support@perlistenaudio.com

Note: This guide is applicable to all Perlisten THX Certified Dominus S-series and R-series speakers. S7t, S7c, S5m, S4b, S4s, and R5t. Use the bar code below to go to our downloads page on our website for manuals and architectural drawings.



Product Description

Perlisten strives to transcend the room, remove the walls, and take you to that place where it's only you and the music. In order to pursue the perfect fusion of science, technology, and aesthetics every Perlisten speaker is designed by our engineers in the USA with only the best components and infinitesimal levels of distortion. Whether it's the internal quality of the speakers or the industrial design, the team pays attention to every detail. Perlisten wants to bring the quality and art of sound to you through our work, and we are proud to be able to convey the nuances of music to everyone who loves art and enjoys life.

DPC technology

At the heart of the Signature and Reference line is the patent pending DPC or Directivity Pattern Control Wave Guide. Three 28mm high frequency drivers in the Signature and three 26mm High Frequency drivers in the Reference line are placed in specific positions with controls time, and then amplitude, and phase of each of these drivers. Two of these drivers are used as the midrange and the center waveguide middle tweeter is the full range tweeter driver. This allows us to control the vertical polar pattern while still maintaining an impressively wide horizontal polar pattern (figure 1 below). This flexibility creates a vertical polar pattern that is controlled from 900Hz to 20kHz and limits the early reflections from the floor and ceiling that can smear the vocal region (figure 2 vertical). These three drivers overlap in a small band to also reduce the effects of high excursion for super low distortion in the critical voice region. Typical competitive designs would be transitioning from the woofers to a 130mm driver with 4-5 grams of mass compared to our midrange with less 1.2 gram of mass for lightning fast and dynamic vocals not possible with traditional designs. The end results are vocals that are silky smooth while creating lightning fast transients meeting a specification of 92dB sensitivity and 117dB at less than 2% Harmonics.

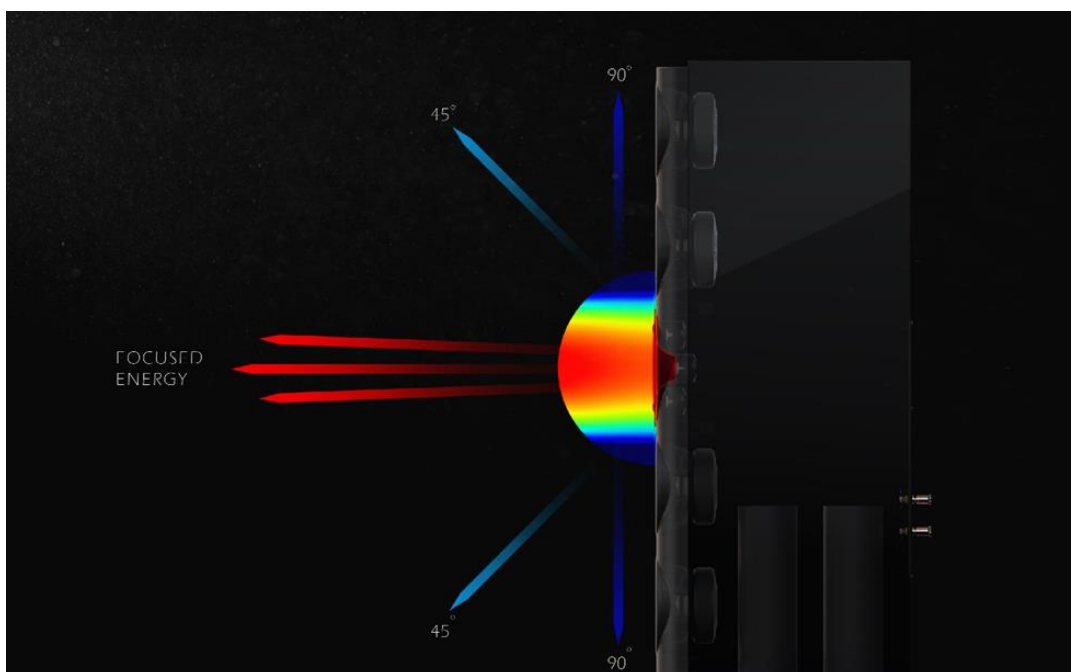


Figure 1 controlled vertical dispersion

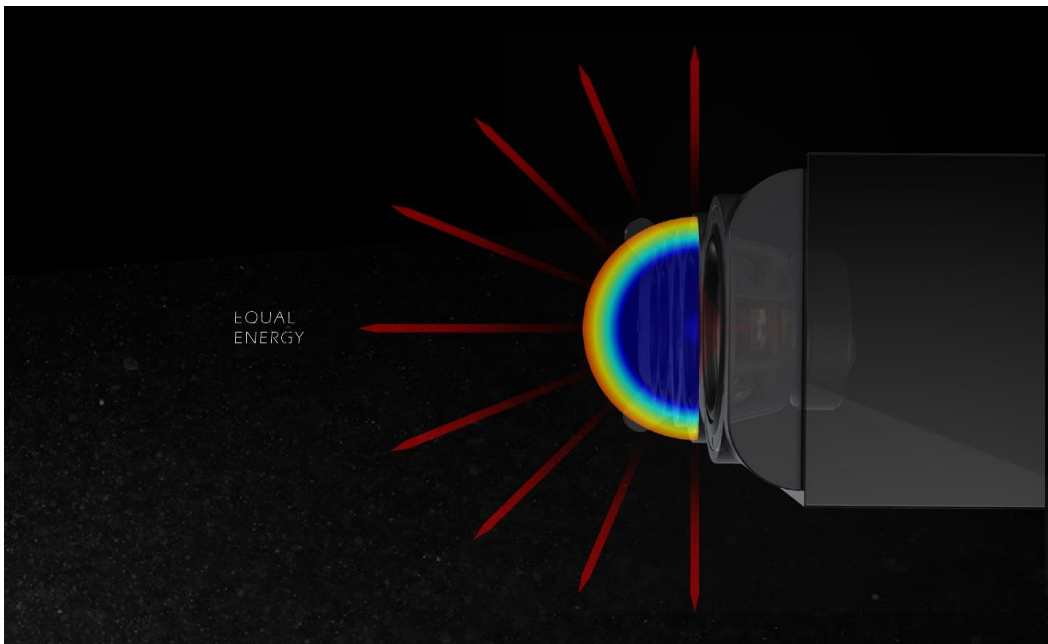


Figure 2 top down view, wide and even horizontal dispersion

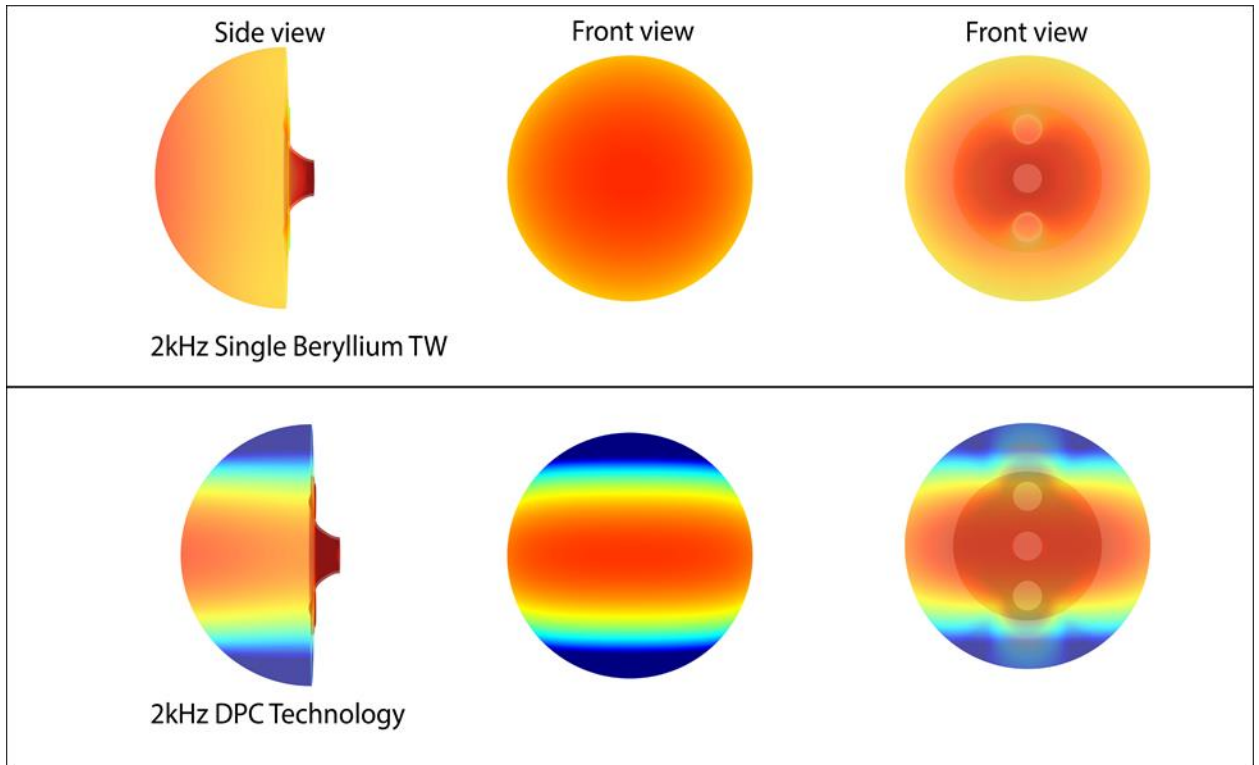
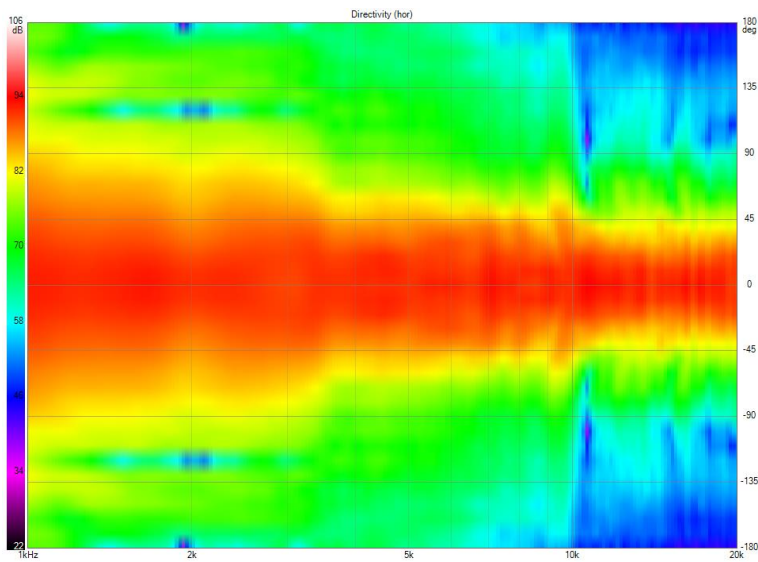
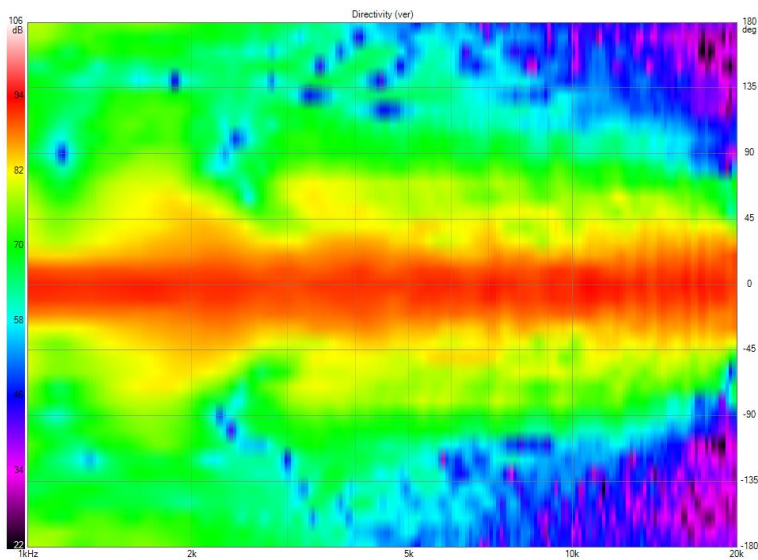


Figure 3 Single and DPC polar plots

In figure 3 above is a comparison showing what would happen if we used a single tweeter in our exact same waveguide with no beamforming (top graph) VS DPC technology in the horizontal dispersion plane (bottom graph). Control of the vertical dispersion is shown as an advantage to have reduced early reflections from the floor and the ceiling where acoustic treatment is not always possible in a typical listening room or less treatment is needed when it is possible to have absorbers in the room design.



The horizontal dispersion at left is an example of a nice wide pattern to help eliminate seat to seat variation.



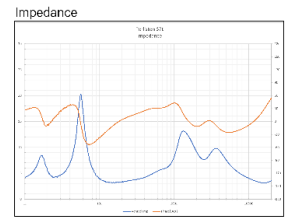
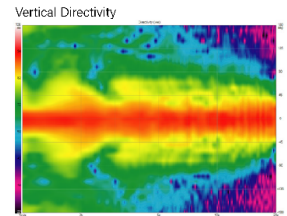
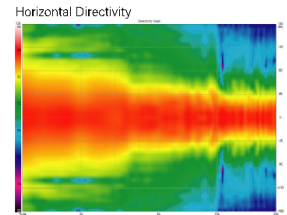
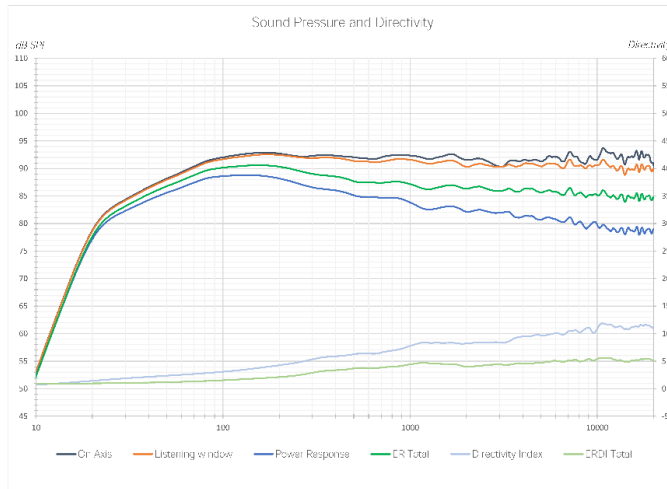
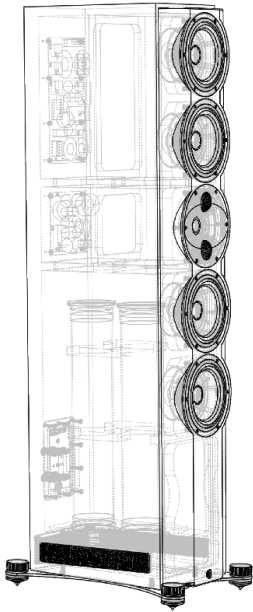
The vertical at left is another visual example of maintaining the same vertical dispersion even down to frequencies well below 1kHz which is enabled by the power of the DPC. The controlled dispersion means that less room treatment is needed to make the speaker sound as good as it possibly can by reducing early reflections.

All Perlisten speaker drivers are designed by the Perlisten engineering team from the ground up using a carbon fiber Textreme composite diaphragms, Beryllium tweeter diaphragms, aluminum alloy shorting rings, huge magnets for efficiency, durable multilayer Nomex spiders and a lightweight aluminum alloy voice coils. The Perlisten engineering team uses advanced FEA modeling technology to simulate and design these raw components and Klippel laser measurement testing is then used to validate the results to ensure every ounce of performance is achieved.

These techniques are used to maximize the dynamics needed for up to 117dB at less than 2% Harmonics in any program material.

S7T





MODEL S7 TOWER: Our most advanced speaker to date. When the highest fidelity is what matters most. Featuring our proprietary DPC-Array controlling Mid/High frequencies, centered by our finest 28mm Beryllium dome and dual 28mm TPCD ultra-lightweight domes. All transducers are developed ground up by our engineers – bringing decades of research, culminating in this world class design. We teamed up with companies in the USA and Sweden to bring modern material science to hi-fi. Utilizing advanced Comsol acoustical modeling, our DPC-array is the result of 18 months of painstaking simulations and prototyping. The result is one of the most technologically advanced loudspeakers available. This new tweeter/waveguide DPC-Array delivers amazing accuracy, smoothness, and directivity control to handle the critical vocal range and delicate treble. All S-Series speakers share the same DPC-Array and benefit from our unique timbre matching technique across the entire series. Custom bass drivers made from thin-ply carbon diaphragms (TPCD) can be configured as bass reflex or acoustic suspension and adjusted for listener preference. True full range performance with unparalleled dynamic range and musical finesse. The PerListen S-Series speakers also have the distinguished honor to be the world's first and only loudspeakers to be certified for THX Dominus - their highest rating. A mark of achievement.



Technical Specifications:

Enclosure Alignment	4-way bass reflex / acoustic suspension
Driver compliment	DPC Array: 28mm Beryllium 28mm(2) Textreme TPCD Woofers: 180mm(4) Textreme TPCD
Sensitivity	92.2dB / 2.83v / 1.0m
Impedance	4Ω nominal / 3.2Ω min
Frequency Response (+/-1.5dB)	80 - 20kHz
Frequency Response (-10dB)	bass reflex: 22 - 37kHz acoustic suspension: 32 - 37kHz
Typical In Room bass extension	bass reflex: 16Hz acoustic suspension: 23Hz
Dimensions (HxWxD)	1295 x 240 x 400mm 51.0 x 9.5 x 15.7"
Weight	55.7 kg (122.5 lbs.)
Recommended Amplifier Power	100 - 600W RMS
SPL capability (100-20kHz)	117dB peak <2% - 2nd, 3rd Harmonics
Certification	THX Dominus
Available finishes	piano black, gloss white, custom finishes available

DPC Array - Directivity pattern control
*USA Patent pending

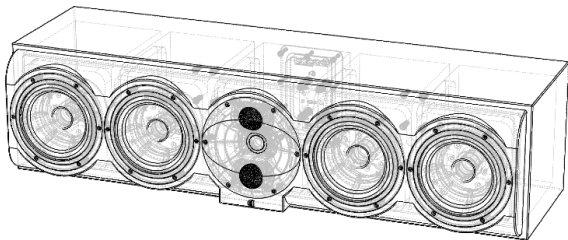
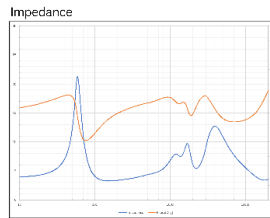
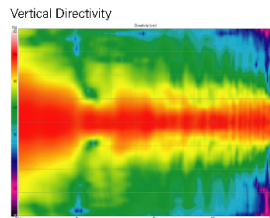
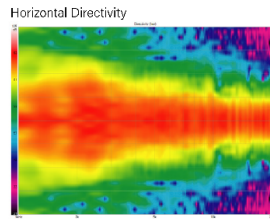
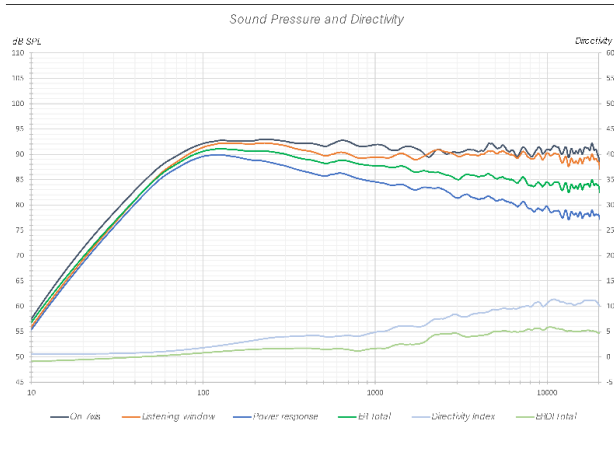


TPCD - Thin Ply Carbon Diaphragms



(S)7c





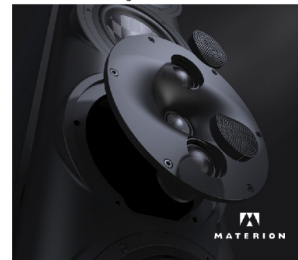
MODEL S7 CENTER: Sharing the same driver compliment as our flagship S7T, this speaker makes the perfect choice where the highest performance theater is desired. Featuring our proprietary *DPC-Array* controlling Mid/High frequencies, centered by our finest 28mm Beryllium dome and dual 28mm TPCD ultra-lightweight domes. This array delivers amazing accuracy, smoothness and directivity control to handle the critical vocal range and delicate treble. All S-Series speakers share the same *DPC-Array* and benefit from our unique timbre matching technique across the entire product line. Custom bass drivers made from *TPCD* deliver unparalleled dynamic range and musical finesse. The Perlisten S-Series speakers also have the distinguished honor to be the world's first and only loudspeakers to be certified for THX Dominus - their highest rating.

S7c

Technical Specifications:

Enclosure Alignment	4-way acoustic suspension
Driver compliment	DPC Array: 28mm Beryllium 28mm(2) Textreme TPCD Woofers: 180mm(4) Textreme TPCD
Sensitivity	92dB / 2.83v / 1.0m
Impedance	4Ω nominal / 3.2Ω min
Frequency Response (+/-1.5dB)	80 - 20kHz
Frequency Response (-10dB)	38 - 37kHz
Typical In Room bass extension	32Hz
Dimensions (HxWxD)	960 x 240 x 400mm 37.8 x 9.5 x 15.7"
Weight	33.5 kg (74 lbs.)
Recommended Amplifier Power	100 - 600W RMS
SPL Capability (100-20kHz)	117dB peak <2% - 2nd, 3rd Harmonics
Certification	THX Dominus - LCR
Available finishes	piano black, gloss white, custom finishes available

DPC Array - Directivity pattern control
*USA Patent Pending

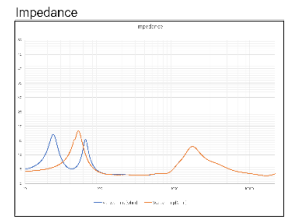
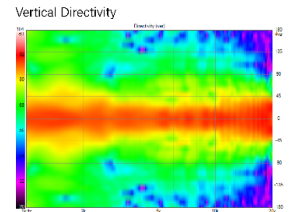
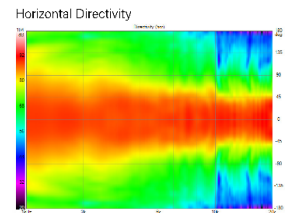
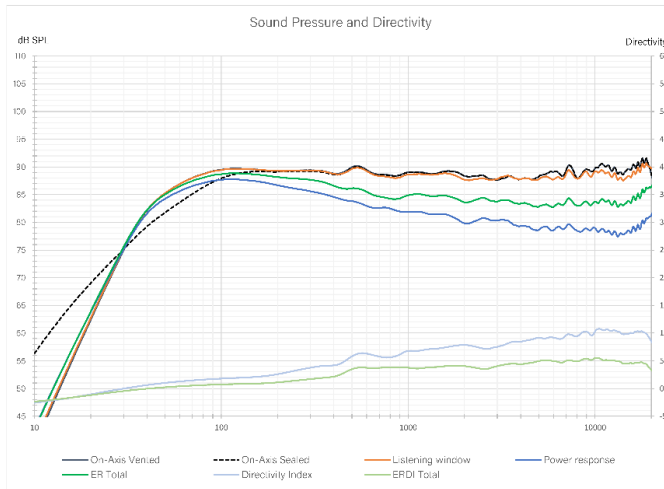
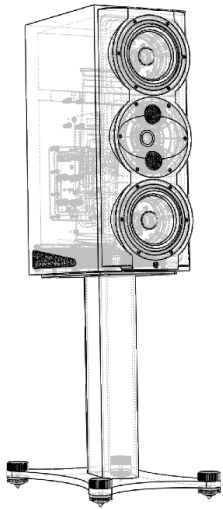


TPCD - Thin Ply Carbon Diaphragms





S 5m



MODEL S5 MONITOR: Sharing technologies and drivers from the flagship S7i. When the highest fidelity is what matters most. Featuring our proprietary DPC-Array controlling Mid/High frequencies, centered by our finest 28mm Beryllium dome and dual 28mm TPCD ultra-lightweight domes. All transducers are developed ground up by our engineers – bringing decades of research, culminating in this world class design. We teamed up with companies in the USA and Sweden to bring modern material science to hi-fi. Utilizing advanced Comsol acoustical modeling, our DPC-array is the result of 18 months of painstaking simulations and prototyping. The result is one of the most technologically advanced loudspeakers available. This new tweeter/waveguide DPC-Array delivers amazing accuracy, smoothness, and directivity control to handle the critical vocal range and delicate treble. All S-Series speakers share the same DPC-Array and benefit from our unique timbre matching technique across the entire series. Custom bass drivers made from thin-ply carbon diaphragms (TPCD) can be configured as bass reflex or acoustic suspension and adjusted for listener preference. Unparalleled dynamic range, low distortion and musical finesse. The PerListen S-Series speakers also have the distinguished honor to be the world's first and only loudspeakers to be certified for THX Dominus - their highest rating. A mark of achievement.

S5m

Technical Specifications:	
Enclosure Alignment	3-way bass reflex / acoustic suspension
Driver compliment	DPC Array: 28mm Beryllium 28mm(2) Textreme TPCD Woofers: 180mm(2) Textreme TPCD
Sensitivity	89.6dB / 2.83v / 1.0m
Impedance	4Ω nominal / 3.0Ω min
Frequency Response (+/-1.5dB)	80 - 20kHz Listening window
Frequency Response (-10dB)	bass reflex: 35 - 37kHz acoustic suspension: 41 - 37kHz
Typical In Room bass extension	bass reflex: 29Hz acoustic suspension: 32Hz
Dimensions (HxWxD)	600 x 240 x 400mm 23.6 x 9.5 x 15.7"
Weight	19.0 kg (41.8 lbs.)
Recommended Amplifier Power	50 - 300W RMS
SPL capability (100-20kHz)	117dB peak <2% - 2nd, 3rd Harmonics
Certification	THX Dominus THX Ultra
Available finishes	piano black, gloss white, custom finishes available

DPC Array - Directivity pattern control
*USA Patent pending

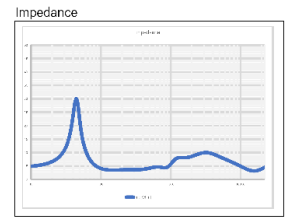
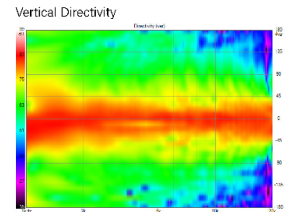
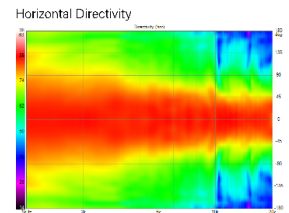
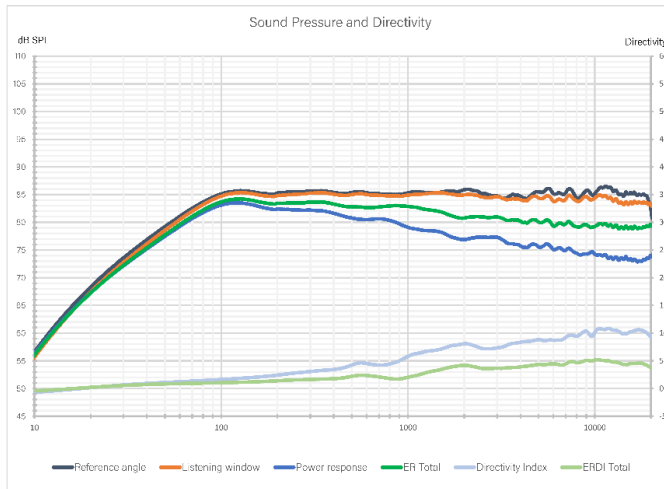
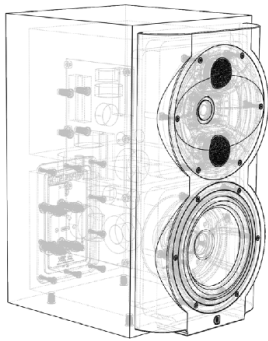


TPCD - Thin Ply Carbon Diaphragms



S 4b





MODEL S4 BOOKSHELF / SURROUND / HEIGHT: Great for use in 2.1 systems or any channel of theater system utilizing subwoofers. Can be used as surround, height or LCR. Bookshelf, stand or on-wall mounting with keyhole or available bracket. Featuring our DPC-Array as for controlling Mid/High frequencies, centered by our finest 28mm Beryllium dome and dual 28mm TPCD ultra-lightweight domes. This new tweeter/waveguide DPC-Array delivers amazing accuracy, smoothness, and directivity control to handle the critical vocal range and delicate treble. The S4b shares the same DPC-Array and benefits from our unique timbre matching technique as found in the entire S-Series range of speakers. Unparalleled dynamic range, low distortion and musical finesse. The PerListen S4b continues the lineup of speakers that have the distinguished honor to be the world's first and only loudspeakers to be certified for THX Dominus - their highest rating.

S4b

Technical Specifications:	
Enclosure Alignment	3-way acoustic suspension
Driver compliment	DPC Array: 28mm Beryllium 28mm(2) Textreme TPCD Woofers: 180mm Textreme TPCD
Sensitivity(2pi)	85.4dB / 2.83v / 1.0m
Impedance	4Ω nominal / 3.2Ω min
Frequency Response (+/-1.5dB)	100 - 20kHz Listening Window
Frequency Response (-10dB)	36 - 37kHz
Typical In Room bass extension	30Hz
Dimensions (HxWxD)	420 x 240 x 185mm 16.5 x 9.5 x 7.3"
Weight	11.0 kg (24.2 lbs.)
Recommended Amplifier Power	50 - 300W RMS
SPL capability (100-20kHz)	111dB peak <2% - 2nd, 3rd Harmonics
Certification	THX Dominus
Available finishes	piano black, gloss white, custom finishes available

DPC Array - Directivity pattern control
*USA Patent pending

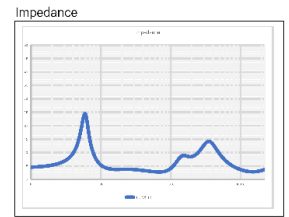
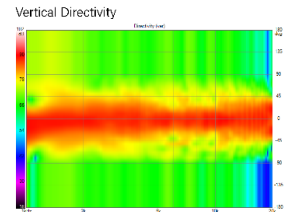
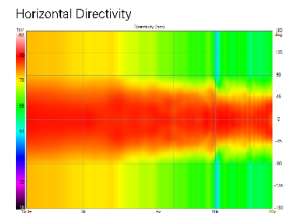
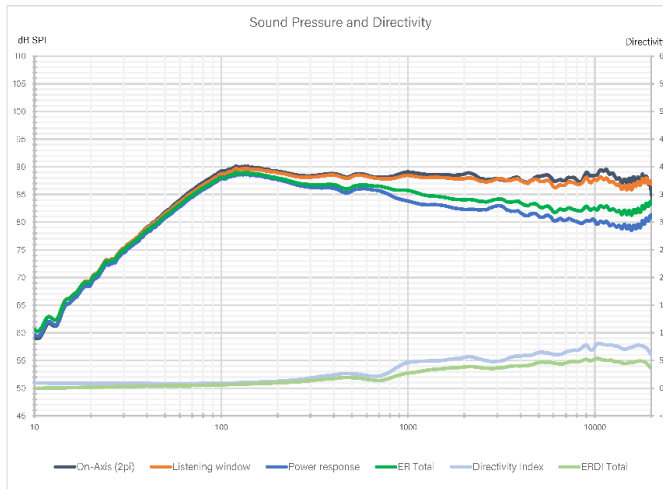
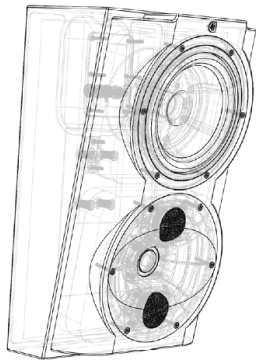


TPCD - Thin Ply Carbon Diaphragms



S 4s





MODEL S4 SURROUND / HEIGHT / LCR: Designed for On-wall or flushed (2pi) applications. Perhaps our most versatile speaker Can be used as surround, height, or LCR. When used as a surround channel the S4s has uncommonly high sensitivity, power handling and low distortion making this the ideal choice for high end theaters. Featuring our proprietary DPC-Array controlling Mid/High frequencies, centered by our finest 28mm Beryllium dome and dual 28mm TPCD ultra-lightweight domes. This new tweeter/waveguide DPC-Array delivers amazing accuracy, smoothness, and directivity control to handle the critical vocal range and delicate treble. The S4s shares the same DPC-Array and benefits from our unique timbre matching technique as found in the entire S-Series range of speakers. Unparalleled dynamic range, low distortion and musical finesse. The PerListen S4s continues the lineup of speakers that have the distinguished honor to be the world's first and only loudspeakers to be certified for THX Dominus - their highest rating.

S4s

Technical Specifications:	
Enclosure Alignment	3-way acoustic suspension
Driver compliment	DPC Array: 28mm Beryllium 28mm(2) Textreme TPCD Woofers: 180mm Textreme TPCD
Sensitivity(2pi)	88.8dB / 2.83v / 1.0m
Impedance	4Ω nominal / 3.2Ω min
Frequency Response (+/-1.5dB)	100 - 20kHz Listening Window
Frequency Response (-10dB)	39 - 37kHz
Typical In Room bass extension	33Hz
Dimensions (HxWxD)	405 x 240 x 185mm 15.9 x 9.5 x 7.3"
Weight	9.5 kg (20.9 lbs.)
Recommended Amplifier Power	50 - 300W RMS
SPL capability (100-20kHz)	111dB peak <2% - 2nd, 3rd Harmonics
Certification	THX Dominus THX Ultra
Available finishes	piano black, gloss white, custom finishes available

DPC Array - Directivity pattern control
*USA Patent pending

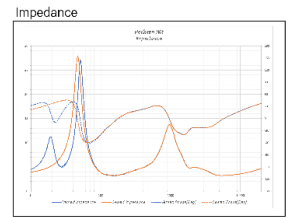
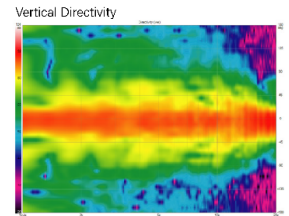
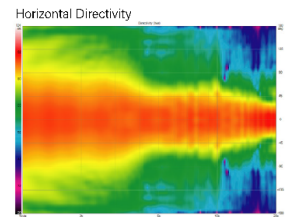
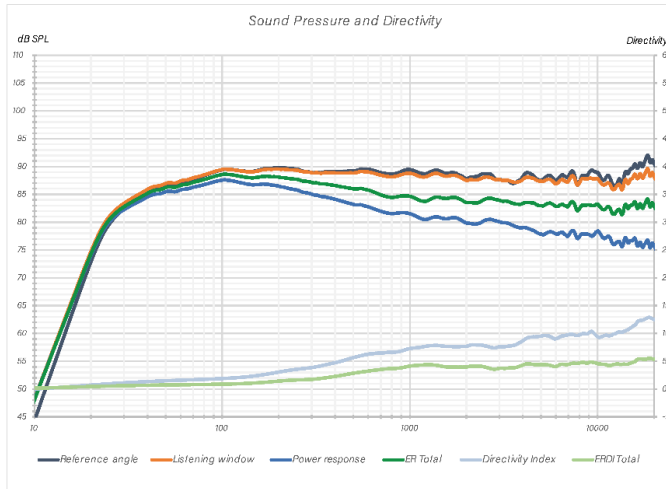
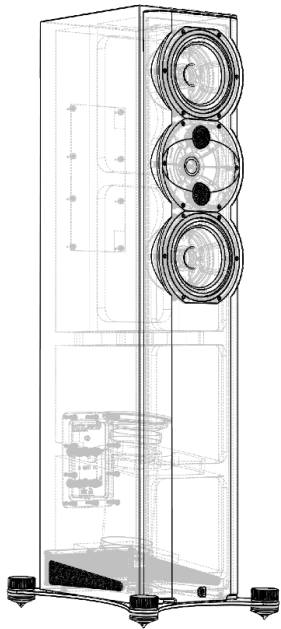


TPCD - Thin Ply Carbon Diaphragms



R5T



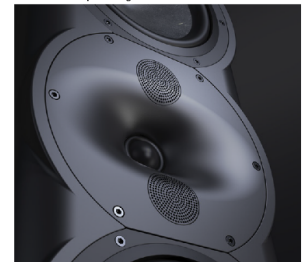


MODEL R5 TOWER: Designed as a stand alone 2ch high fidelity speaker with the versatility to be used as part of multi-channel systems. Sharing "trickle-down" technology from our flagship S-Series, the DPC-Array here based on three 26mm domes, guarantees excellent directivity control and timbre matching with all R-Series speakers. The Silk diaphragms developed ground up, chosen specifically their smooth, effortless representation of midrange and treble. The 165mm woofers are made from our proprietary HPF pulp, two years in development, bringing new technology to one of the oldest materials used in loudspeaker design. These woofers can be aligned as bass reflex or acoustic suspension depending on specific tastes. Rich, dynamic bass matched with advanced mid/treble directivity pattern control and silky highs offer best in class performance.



Technical Specifications:	
Enclosure Alignment	3-way bass reflex / acoustic suspension
Driver compliment	DPC-Array: 26mm(3) Silk dome Woofers: 165mm(2) HPF diaphragms
Sensitivity	89dB / 2.83v / 1.0m
Impedance	4Ω nominal / 3.2Ω min
Frequency Response (+/-1.5dB)	80 - 20kHz Listening window
Frequency Response (-10dB)	bass reflex: 24 - 32kHz acoustic suspension: 38 - 32kHz
Typical In Room bass extension	bass reflex: 21Hz acoustic suspension: 32Hz
Dimensions (HxWxD)	1100 x 230 x 350mm 43.3 x 9.0 x 13.7"
Weight	26.5 kg (58.3 lbs.)
Recommended Amplifier Power	100 - 250W RMS
SPL capability (100-20kHz)	111dB peak <2% - 2nd, 3rd Harmonics
Certification	THX Dominus, THX Ultra
Available finishes	piano black, matte black

DPC Array - Directivity pattern control
*USA Patent pending



HPF - Hybrid Pulp Formulation. Diaphragms made from mixed long fiber hardwood, bamboo and wool



THX Speaker Certifications-Choosing a THX Certified Dominus system

Model	Dominus	Ultra
S7t	LCR Large	
S7c	LCR Large	
S5m	Surround	LCR
S4b	Surround/Height	
S4s	Surround/Height	
R5t	Surround	LCR
D12s	Two Subs	One sub
D15s	One sub	
D212s	One Sub	
D215s	One sub	

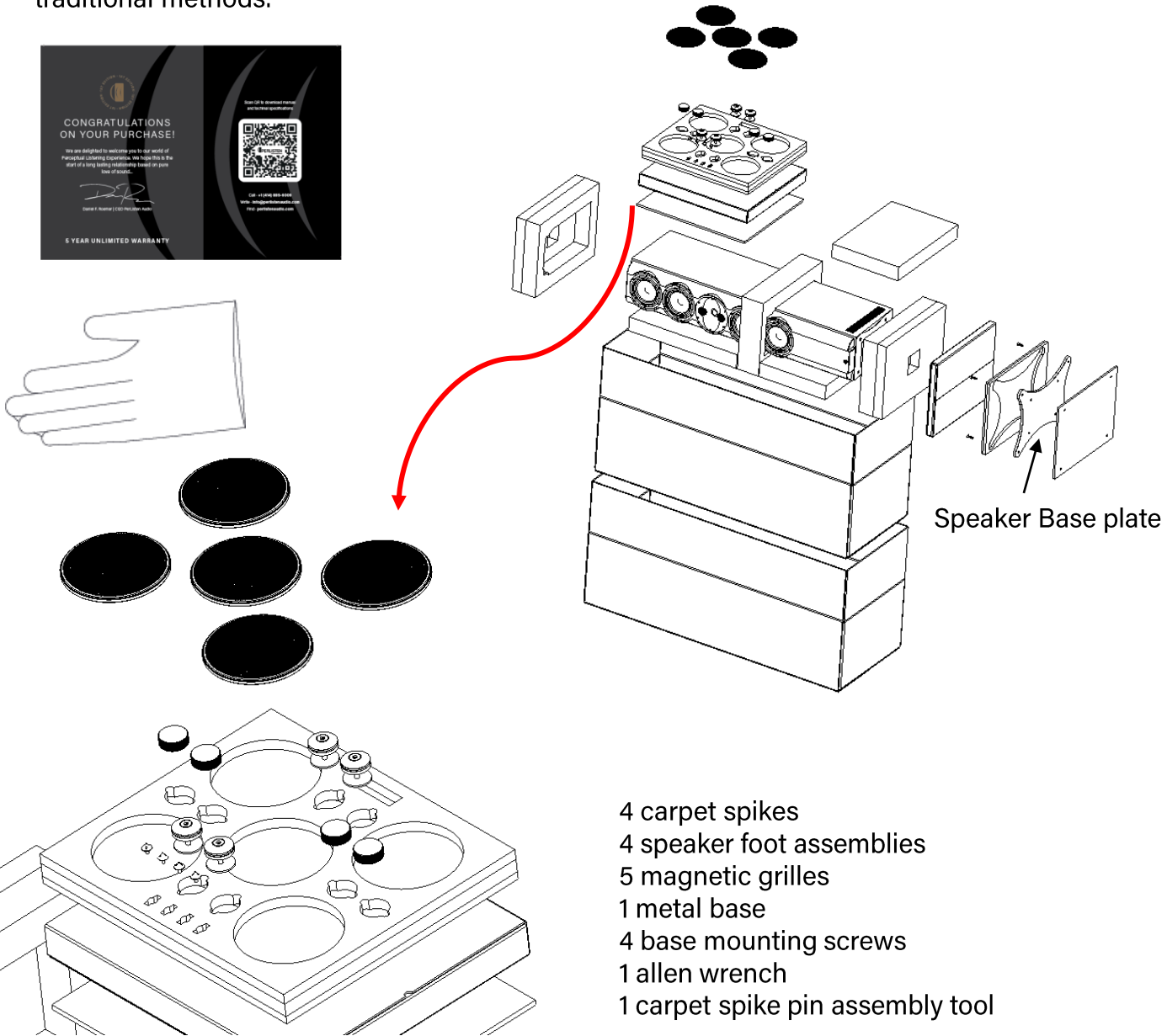
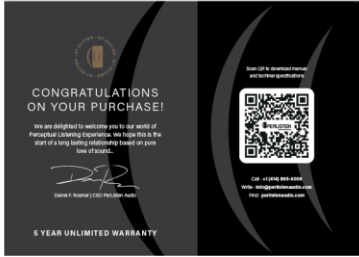
Use the chart above as a guide to choosing the right components to reach the certification required or desired. Perlisten Speakers have been certified to meet the requirements for THX Certified Dominus and thus also meet the requirements for all other THX certification levels as per the chart.

THX Certified Dominus ensures these speakers have the output capability for reaching the reference listening level in a room at 6500 cubic feet or 184 cubic meters with a minimum of a 7.1.4 loudspeaker arrangement that is required to meet Dominus level. Keep in mind that the LFE is considered one single channel as a whole no matter the quantity of the subs in the system. Though all most all of our subwoofers meet or exceed the output and low distortion criteria with a single subwoofer it is recommended to have 4 subwoofers in a system to provide the most balanced frequency response for all seating positions.

S7t and R5t packaging

Speaker box contents, S7t, R5t tower speakers

Warning, your new Perlisten tower speakers are very heavy and set up is best done with two people. The S5mm, S4b, and S4s speakers are smaller and can be un-boxed using traditional methods.

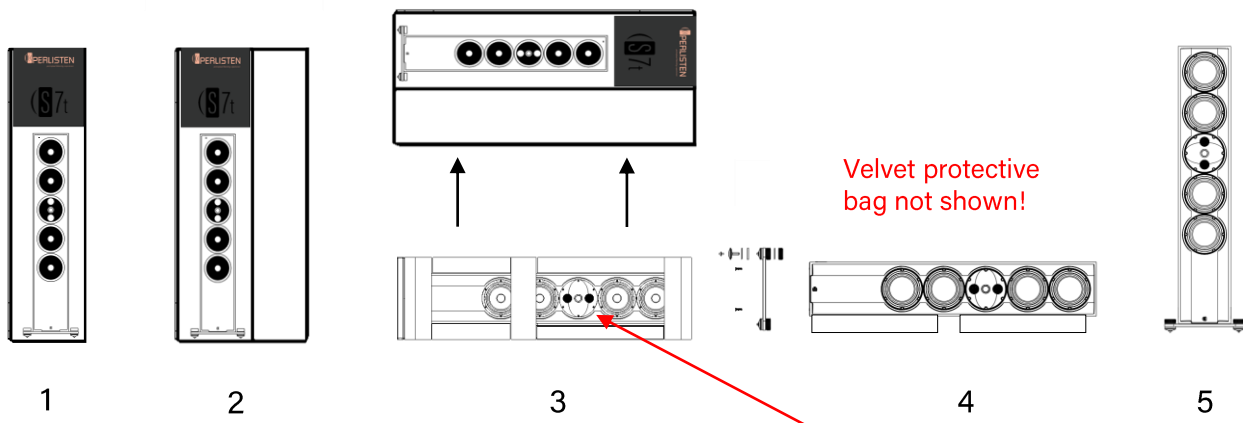


Prepping the area

The speaker artwork on the packaging indicates the front of the actual speaker inside the box. Use this guide to position the speaker as close as possible to its final position before you begin un-boxing your new speakers. The black accessories box will be the first thing you need once you open the package as it contains the feet, tools, and grilles needed for assembly of the base to the speaker.

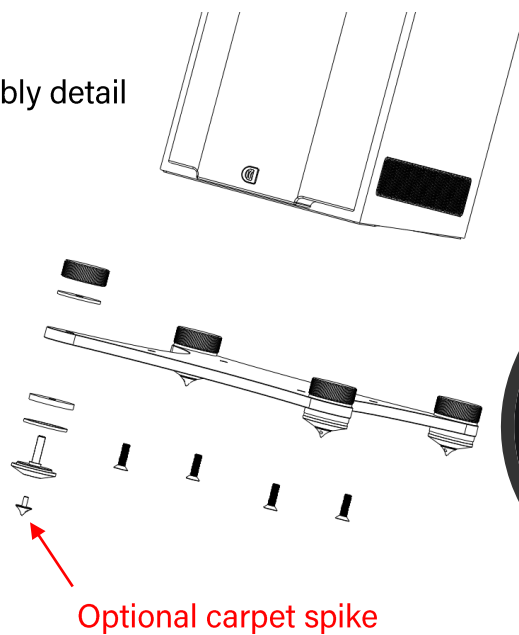
Use the artwork on the front of the speaker to orientate the speaker into position in step 1. The speaker artwork indicates the front of the speaker as it sits inside the box. It's possible to set the box into the desired listening position, unbox, attach the base, and tilt the speaker vertically into the exact listening position using the following instructions.

Open the side flaps and fold the bottom flap under the box in step 2. Lay the speaker on its side while holding the speaker with the box until it is completely flat onto the floor in step 3 and remove the double box carton vertically. Remove excess packaging and find the accessories box. The unboxing and attaching the base to the bottom of the speaker is best done with it laying on it's side on the floor using the foam from the packaging to suspend the speaker off the ground. This will allow enough space for the base to be mounted as per step 5. Detail of the base assembly is at the bottom of the page. Now you can lift the speaker vertically into position with minimal moving of the speaker. You can now remove the protective velvet bag that is not shown in the steps below for your first look at your Perlisten speaker.



Warning! Be careful to not put you hand through the Beryllium tweeter when unboxing the speaker. The protective velvet bag limits visibility of the waveguide assembly!

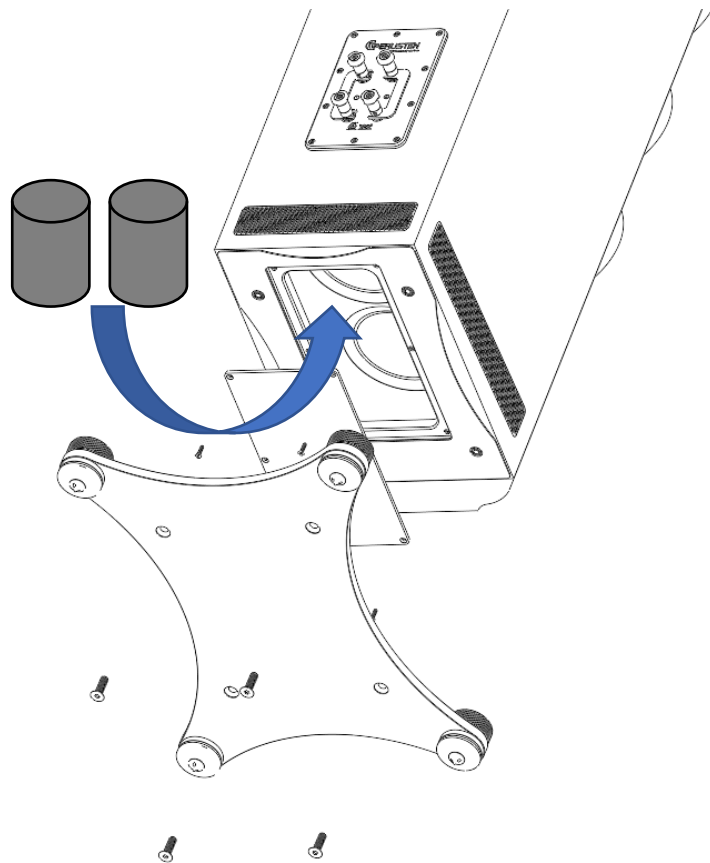
Base assembly detail



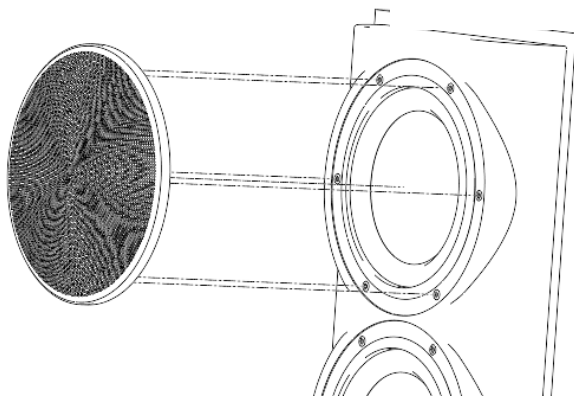
Sealed box setup-S7t, S5m, R5t

Typical applications will use the standard vented configuration for maximum low frequency extension, however some applications where it is known that the speaker will always be used with a subwoofer, it may be preferred to use the speaker as a sealed enclosure. It may also be preferred, when the speakers are used behind a false wall with an acoustically transparent screen, to not worry about venting the cabinet into the space behind the screen. In these applications you can use the supplied foam plugs to insert into the bottom vents to create a sealed speaker.

To insert the foam plugs, remove the base using the four Hex bolts that hold the base to the cabinet. After the base is removed you will see the metal access plate on the bottom of the cabinet. Remove this plate to get full access to the two vents. Push the supplied foam plugs into the port until they are completely flush with the port. Re-assemble the cabinet access plate and base.



NOTE: S5m port sealing assembly is the same but does not have a metal base.



Grille installation

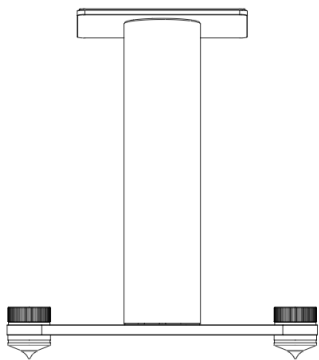
The best acoustic response is achieved with no grilles on the speakers, however if grilles are desired for maximum protection, they can be attached to each individual speaker via magnets that are already mounted in our supplied grille frames. These magnets are attracted to each screw head around each speaker and will prevent the grilles from coming off or rattling no matter the sound level.

Accessories



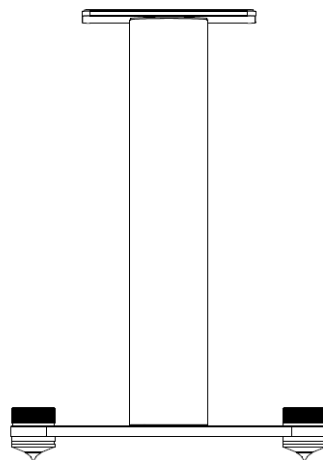
Speaker stands

S-series Speaker stands are designed to mount to the base of the S5m, S7c and S4b speakers with 4 screws and align the speaker for the proper listening height of approximately 39" when sitting down. The S7c also has a speaker stand to sit underneath most screens and Displays with an angled top plate to target the listening position.



Model:SSC-HGB

S-series Stand Center High Gloss Black

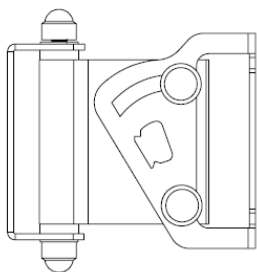


Model:SSLR-HGB

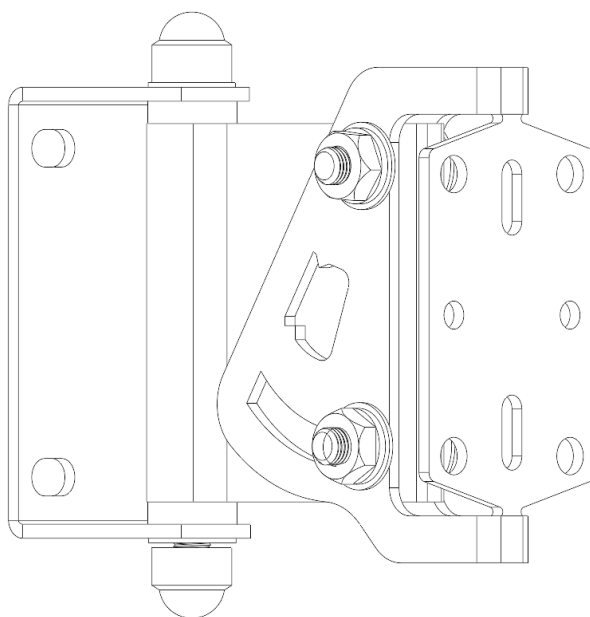
S-series Stand Left Right High Gloss Black

Speaker brackets

Perlisten speaker bracket BRKT-01-B is available for surface mounting S4s, S5m, S7c (two brackets needed), and S4b speakers. This bracket is heavy duty and has swivel and tilt features. Architectural drawings are available at our Perlisten downloads page.



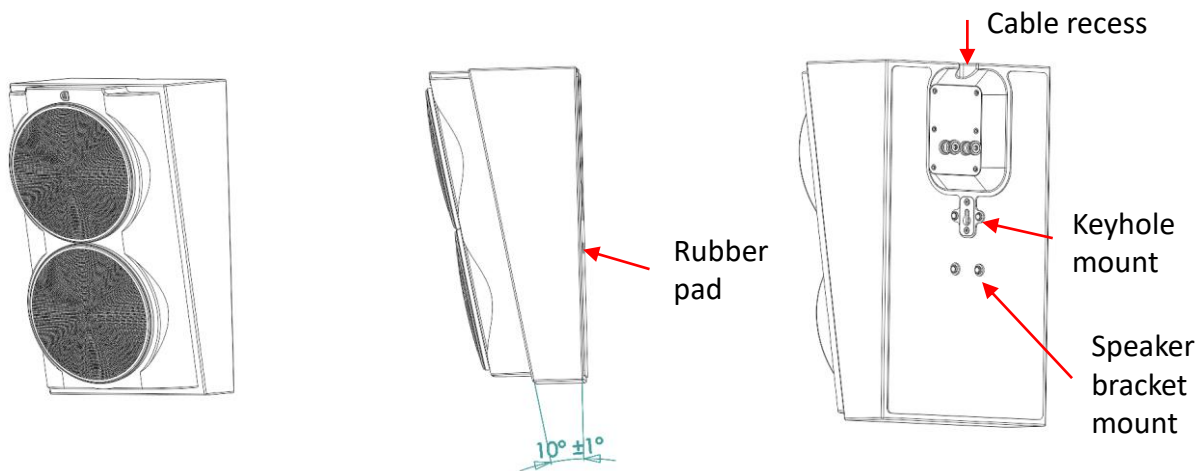
Model:BRKT-01-B
Speaker bracket black



S4s mounting

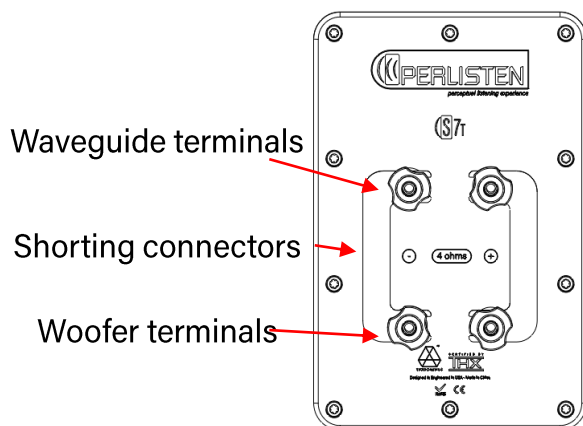
The S4s surround and height speaker is designed with a 10° angle on the front baffle for surface mounting and has a recessed terminal with recess for wire out the top to offer a completely flush wall mount. A pre-installed rubber pad is mounted on the surround to prevent damage or scratching to the mounting surface, as well as noises caused by vibration.

For custom invisible installs this speaker can be designed to be flush in a wall. The data provided in the datasheet is measured in this situation, commonly referred to as a $2\pi(180^\circ)$ measurement, compared to a $4\pi(360^\circ)$ anechoic measurement. With this speaker built into a wall mounted flush with the speaker edge this speaker or flush with the cabinet edge to show off the aesthetics of the S4s. Architectural drawings are available to aid in custom installs.



Bi-amping

Bi-amping allows the option to have an amplifier for the high frequency section and the woofer section with two different channels of your amplifier. This allows each amplifier channel to deliver the power and dynamics needed in a limited bandwidth to maximize transient performance.



Speaker care

Our speakers use the finest quality of finishes and should need little care. We have two main classes of finish. Gloss and natural. Gloss is the external finish for High Gloss Black(piano), High Gloss White, and High gloss Ebony or other veneers with gloss. Our piano black finish is made with the hardest finish available compared to the typical finish used by competitive products, as well as the finest natural real wood veneers. Typical care is a soft cloth to wipe down the speakers. Refrain from using glass cleaner or other chemicals for wiping down the speakers, however in extreme cases, spraying a limited amount of glass cleaner on the soft cloth may be acceptable.

Our natural real wood veneers do not have a high gloss finish and should never have any cleaners used on the surface.

All cleaners should stay away from the speaker front and waveguide and never clean the tweeters inside the waveguide.



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