

SubSeries 450 DSP Controlled Subwoofer

psb
SPEAKERS



- Housed in a high gloss black soft edged cubic shaped cabinet.
- 12" active woofer re-enforced by two 10" passive radiators.
- Woofer is flat to 20Hz, the lowest audible frequency for humans.
- Can produce well in excess of 100dB sound pressure level - In a typical room.
- Woofer motor driven by a large 2.75" voice coil and powerful 75oz magnet.
- The 6" spider assures perfect linearity at high SPLs, with its long excursion throw.

Experience the full power and majesty of a live symphony orchestra, and the explosive dynamics of motion picture soundtracks, with PSB's SubSeries 450 Powered Subwoofer. Remarkably compact yet very powerful, this DSP-controlled high-performance subwoofer is designed to add crystal-clear bass to any music or home theatre system. It delivers accurate and authoritative bass from a beautifully finished high-gloss cabinet with elegant soft edging. Adjustable volume, crossover and variable 180° phase/delay controls, and multiple connection options allow for flexible placement and seamless acoustical integration with the other speakers in your system.

STATE-OF-THE-ART ACOUSTIC DRIVERS

A true PSB flagship design, the SubSeries 450 is crafted using the highest quality components, custom-tooled mechanics, and innovative driver technologies. Its 12" long-throw active woofer is built on a high-powered motor that uses a 75oz magnet and 2 ¾" voice coil, coupled with a 6" spider that delivers perfect alignment and extremely low distortion at high sound pressure levels. Combined with two 10" passive radiators that extend its bass response into the infrasonic region, the SubSeries 450 balances the back wave output of the woofer with the front wave, and is free of any wind noise or 'port chuff' which can be a problem at very low frequencies



SUBSERIES 450 BLOW-OUT IMAGE DESCRIPTIONS

A) Woofer – Built on a powerful motor using a oversized 75oz magnet and 2 3/4" voice coil for high efficiency and power handling.

B) Amplifier – NAD developed amplifier board with built-in DSP.

C) Passive Radiator – Extends the SS450's bass response to 20 Hz.

400W ADVANCED CLASS D AMPLIFICATION

Employing an advanced amplifier developed by sister company NAD Electronics, coupled with an innovative Class D amp module platform, the SubSeries 450 is both exceptionally accurate and musical with nearly zero distortion. The subwoofer's built-in amplifier is highly efficient and features both a high damping factor (low output impedance) and a high current output required for tight, powerful bass response. It also includes a very low power (<0.5W) standby mode, making the woofer instantly available yet very low in power consumption.

PSB'S FIRST DIGITALLY TUNED SUBWOOFER

By incorporating state-of-the-art digital signal processing, PSB has enhanced every aspect of the SubSeries 450's performance; low bass extension with minimal distortion, bass-overload protection, and ideal crossover characteristics. It also allows the subwoofer to achieve a truly flat frequency response of 20Hz, especially at the high sound pressure levels required to accurately reproduce the sound effects from today's most dynamic tracks.

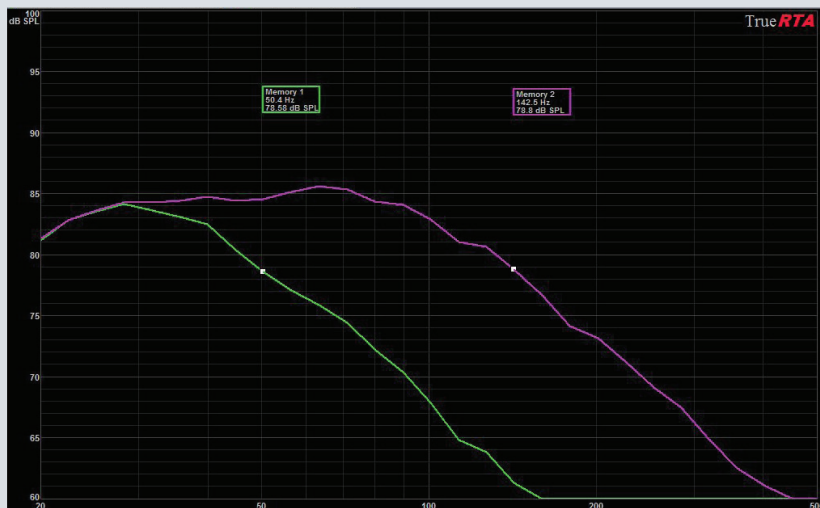


Figure 1: Purple curve is the response with the frequency control set to 150Hz.

Green curve is the response with the frequency control set to 50Hz.

Both the purple and the green curve show the -6dB point at their respective cut off frequencies. This allows for a very accurate wide range frequency adjustment.

Below 20Hz there is a 36dB/octave 6th order high pass filter to prevent any instability below the bass reflex Helmholtz tuning frequency. This results in powerfully stable output down to 20Hz.

ENRICHED SOUNDSTAGE

Music recordings also benefit mightily from the low bass extension of a good-quality subwoofer, and the SubSeries 450 delivers exactly that. Opening up the soundstage and reproducing the atmosphere of a rich live recording, the 450 transports you right to the front row of the concert hall. Instruments rich in low frequencies, from pipe organs and kettledrums, to basses and synthesizers all benefit from the tight, accurate, and powerful response of PSB's newest flagship subwoofer.

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