

# SubSeries 450 DSP Controlled Subwoofer



- 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
- Woofer motor driven by a large 2.75" voice coil and powerful 75oz magnet
- The 6" spider assures perfect linearity at high SPLs

The SubSeries 450 is a compact yet very powerful subwoofer housed in a beautifully finished fine furniture cabinet. PSB's legendary design and engineering prowess is evident in the choice of a 12" active woofer supported by two 10" passive radiators (PR). This sub is dead flat to 20Hz and can produce well in excess of 100dB sound pressure level at these 'felt not heard' extremes. There is plentiful power to reproduce movie sound effects at lifelike levels. The SubSeries 450 is also exceptionally accurate and musical, and can clearly enunciate the full power and majesty of a live symphony orchestra.

## Drivers

The 12" (30cm) active woofer is built on a powerful motor using 75oz (2.1kg) magnet and 2-3/4" (70mm) voice coil for high efficiency and power handling. The 6" (152mm) spider assures perfect alignment at high SPLs which directly translates into very low distortion. The treated felt cone offers an ideal combination of stiffness and damping. Combined with a 1" (25mm) rubber surround this driver can respond to the lowest frequencies while maintaining perfect piston motion without 'cone breakup' often encountered on lesser drivers. To extend bass response into the infrasonic region two 10" (25cm) passive radiators are used to sum the back wave output of the woofer with the front wave. The PRs are free of any wind noise or 'port chuff' that can be a problem at very high sound pressures.

## Amplifier

The SubSeries 450 employs a very advanced amplifier developed by NAD specifically for this application. The massive power supply,

capable of the instantaneous high current required for accurate and powerful bass response, is combined with an advanced Class D output stage. This amplifier features an extremely high damping factor and high current output, two of the most important parameters for tight and powerful bass output. It is also highly efficient and includes a very low power (<0.5W) standby mode, making the woofer instantly available yet very low in power consumption.

## DSP Control

The use of digital signal processing has allowed PSB's engineering team to maximize all aspects of performance; low bass extension with low distortion, freedom from overload, and ideal crossover characteristics. Adjustments for crossover frequency and level, as well as variable phase/delay, perfectly align the woofer with the full range speakers in the acoustic system.

## Performance

The careful engineering and precision manufacture of the SubSeries 450 results in truly astounding performance, especially considering the compact dimensions of this top of the line subwoofer. Truly flat response at 20Hz is accurately reproduced bringing motion picture sound tracks to life. Music also benefits mightily from the low bass extension of a good subwoofer, opening up the sound stage and reproducing the atmosphere of a good live recording. Instruments rich in low frequencies, from pipe organs and timpani, to basses and synthesizers all benefit from the tight, accurate, and powerful response of PSB's best ever subwoofer.

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## FREQUENCY RANGE

Response @ 0° ± 3dB	20-150Hz
LF Cutoff -10dB	15Hz

## AMPLIFIER POWER

Continuous	400W
Dynamic Peak	1000W
Type	Analogue Devices DSP & Hypex Amp

## ACOUSTIC DESIGN

Woofer	12" (300mm) Polypropylene Cone Rubber Surround 2.75" Voice Coil 75oz (2.1Kg) Magnet
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Crossover Frequency	Variable 50-150Hz Low Pass Filter
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Internal Volume	0.77 ft <sup>3</sup> (22 litres)
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Design Type	Passive Radiator 2 x 10" (250mm)
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## SIZE (W x H x D)

Gross Dimensions including grille, feet, knobs and terminals	16.25 x 15.75 x 16.5" (413 x 400 x 419mm)
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## WEIGHT

Net	45lb (20kg)/each
Shipping	52lb (23.5kg)/each

## FINISH

High Gloss Black

## FEATURES

Volume, Crossover & Variable 180° Phase Control/Delay  
High Level Inputs  
5-way Gold-plated Binding Posts  
LFE Input and Output  
12V Trigger  
USB Power Output (5V, 500mA)  
Auto on/Stand-by  
<0.5W Standby Power  
Vibration Absorbing Feet

## POWER

Universal Voltage (Automatic)	(100V - 240V - 50Hz/60Hz)
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