



ROOTED IN LEGACY

# SYNCHRONY

B600 LOUDSPEAKER

## INTRODUCING THE B600: A BOOKSHELF BEAUTY



When he founded PSB Loudspeakers in 1972, Paul Barton had a key guiding principle: he wanted to design speakers that are True to Nature. PSB's new Synchrony Series is the clearest expression yet of that philosophy.

The PSB Synchrony B600 Premium Bookshelf Speaker is a two-way bass-reflex design, featuring an all-new driver platform, new crossover and enclosure designs, and built-in IsoAcoustics isolators.

Like every PSB model ever made, the Synchrony B600 was voiced at the world-famous acoustics lab of the National Research Council in Ottawa, Ontario, Canada.

In addition to measuring loudspeaker performance in the NRC's anechoic chamber, PSB used advanced tools such as scanning laser vibrometer, finite-element analysis, and electro-acoustic computer modeling during the Synchrony Series' two-year development process. The engineering team led by Paul Barton correlated this data with extensive subjective-listening tests.

The B600's 6½" woofer features a woven carbon fibre cone that combines low mass and high rigidity. This results in wider bandwidth (about a half-octave lower than previous PSB driver designs), higher efficiency,

better power handling, and lower distortion. The rubber surround has mass added to the junction with the cone to suppress unwanted reflections; this results in smoother response. The highly rigid cast aluminum basket resists flexing, and is unaffected by cone motion.

A shorted turn (or Faraday ring) in the woofer's motor structure assures that magnetic force remains constant throughout the voice coil gap, regardless of the position of the voice coil. Combined with increased voice coil length, this reduces harmonic and intermodulation distortion.

The B600's 1" titanium dome tweeter features Ferrofluid cooling and a neodymium magnet, allowing for higher sound pressure levels, without causing dynamic compression



or increasing harmonic and intermodulation distortion.

Combined, these refinements deliver significant audible benefits: higher maximum output, greater dynamic capabilities, more impactful bass, more transparent midrange, and enhanced micro-detail — in short, sound that is True to Nature.

### The Crossover

Like other PSB speakers, the B600 features an amplitude-perfect Linkwitz-Riley 4th-order acoustic crossover. Employing high-voltage low-dissipation film capacitors, high-current inductors with high saturation threshold, and oxygen-free internal wiring, the Synchrony Series' new crossovers are PSB's most optimized Linkwitz-Riley 4th-order crossovers to date.

Among other benefits, the optimized crossover contributes to the Synchrony B600's remarkably smooth response. On-axis response deviates a mere  $\pm 1.5$ db from 55-20,000Hz, and  $\pm 3$ db from 50-33,000Hz.

Combined with the placement of the tweeter below the woofer, the Linkwitz-Riley crossover also provides greater flexibility in listener position. Tonal balance remains consistent whether the listener is seated or standing.

### The Enclosure

The B600's rigid MDF enclosure has extensive internal bracing to minimize resonances that can cause uneven response and blur transients. The front baffle is clad in a 5mm-thick solid aluminum plate, which suppresses "baffle talk" that can obscure fine detail.

The aluminum plate on the baffle has threaded pins on the rear that grab six small isolation cups, three on each side, which suspend the aluminum plate between the two sidewalls of the enclosure. The aluminum plate has contact with the cabinet only around its perimeter. The isolation cups decouple the aluminum plate from the enclosure, another measure that helps preserve fine detail.

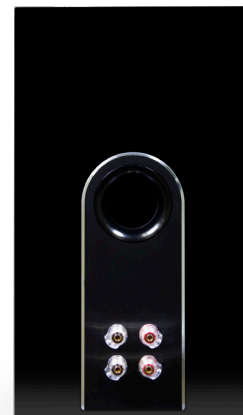
On the bottom of the enclosure are four isolation feet, custom designed for PSB by IsoAcoustics. Based on IsoAcoustics' award-winning Gaia II isolators, the B600's isolation feet adhere to the supporting surface. The isolators prevent energy from the drivers and cabinet from being reflected back into the enclosure, and also prevent structure-borne vibrations from reaching the listener. Benefits include improved micro-detail, clearer transients, a wider soundstage, and more precise imaging.

The flange of the rear-firing port is constructed from CNC-turned aluminum, providing fit and finish that matches the rest of the speaker.

### Finishes and Options

The Synchrony B600 is available in two gorgeous furniture-grade finishes: Satin Walnut veneer and High Gloss Piano Black. Other design touches enhance the B600's visual appeal, including a tasteful Synchrony logo on the top edge of the front baffle, where it meets the top surface of the enclosure.

Two pairs of five-way insulated binding posts allow for bi-wiring or bi-amping. Jumpers are supplied to allow conventional wiring to a single amplifier.





Included with the B600s are two narrow-profile black grilles that complement the enclosures. Thanks to their super-slim cross-sections, the grilles have minimal effect on the B600's sound. Magnets embedded in both the grille and enclosure assure a quick, secure fit.

Custom 24"-high speaker stands are available for the B600s. Finished in black, the B600 stands have adjustable spike feet, and a top plate that provides a stable, non-resonant connection with the speakers' pre-installed IsoAcoustics isolation feet.

### **Natural Harmony**

Considered individually, each of these advances offer meaningful benefits. Considered holistically, they're transformative. With its new driver platform, enclosure design, and amplitude-perfect crossover, the B600 will deliver revelatory, immersive listening experiences with both movies and music. Quite simply, the new Synchrony B600 is the finest bookshelf loudspeaker PSB has ever offered.

- **1 x 6½" woofer with woven carbon fibre cone, cast aluminum basket, mass-loaded rubber surround, and advanced motor structure**
- **1 x 1" titanium dome tweeter with Ferrofluid damping and neodymium magnet**
- **Low-resonance MDF cabinet with extensive bracing and decoupled aluminum-clad front baffle**
- **Amplitude-perfect Linkwitz-Riley 4th-order acoustic crossover**
- **Integrated acoustic isolators from IsoAcoustics**
- **Satin Walnut Veneer and High Gloss Piano Black with acoustically transparent magnetically attached grilles**
- **Optional custom-fitted 24" B600 speaker stands**

# SPECIFICATIONS

## B600

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### Frequency Response

On Axis @0 +/- 3db	50-33,000Hz
<b>On axis @0 +/- 1 1/2db</b>	<b>55-20,000Hz</b>
off Axis @ 30 =/- 1 1/2db	55-10,000Hz
LF Cutoff	35Hz

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### Sensitivity

Anechoic	86dB
<b>Listening Room</b>	<b>88dB</b>

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### Impedance

<b>Nominal</b>	<b>6 Ohms</b>
Minimal	4 Ohms

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### Input Power

Recommended	15-150 Watts
<b>Program</b>	<b>150 Watts</b>

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### Acoustic Design

<b>Tweeter</b>	<b>1" (25mm)</b> Titanium Dome with Ferrofluid
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### Woofers

**6 1/2" (165mm)**  
Cast Basket  
Carbon Fibre Cone  
Rubber Surround

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### Crossover

**2,200Hz, L4**

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### Design Type

2-way system  
Bass Reflex,  
Rear facing port

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### Dimensions

Size (WxHxD) **9 x 15 1/2 x 11 1/2"**

228 x 393 x 298mm

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### Net Weight

**23 lbs**  
10.4 kg

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### Finish

Walnut  
High Gloss Black

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### Features

Dual, 5-way, Gold-plated  
Binding Posts,  
Bi-wireable/Bi-ampable,  
Magnetic Grille  
isoAcoustic isolation Feet  
Rear Facing Port