## Bass reflex for PSI Audio speakers




When people listen to PSI Audio speakers for the first time, one of the most common reactions is surprise at how well separated instruments in the low frequency spectrum are. A major contributing factor to this bass transparency is the painstakingly designed bass reflex integrated into all PSI Audio monitors. The Swiss manufacturer chose to use ported designs after much consideration and experimentation, ultimately proving the superiority of bass reflex compared to other designs.

There are some major misconceptions regarding ported cabinet designs that often surface when discussing the topic. Many seem to see bass reflex concepts as simple ways to move a lot of air, thus generating more bass – and in a way, it is. The challenge lies in making it work properly, integrating the bass reflex with the overall sonic structure of the speaker so it works in harmony with the drivers. Frequency is only one piece of the puzzle, time accuracy is the other. This is exactly where PSI Audio excels: the ported speaker designs from Switzerland are very finely tuned to provide optimal tonal balance and incredible phase linearity. PSI Audio monitors prove that, when done correctly, ported cabinets yield better results than any other type – resulting in breathtaking clarity and precision.



Phoca PDF

In essence, PSI Audio conforms with the general idea of bass ports: making use of the energy the speaker emits backwards into the cabinet and guiding this energy back to the front to improve acoustic performance. The difference lies in how PSI Audio goes about that business, employing its globally famed knack for absolute precision. The ports do not simply emit stray soundwaves; instead, they emit carefully controlled energy in coherence with the other drivers. Closed cabinets would require three times as much air displacement to achieve the same bandwidth and sound pressure, calling for more low-frequency drivers and all the problems that this entails. With passive membranes, speakers introduce more inertia and thus compromise on the temporal accuracy of the reproduction. The true no-compromise solution lies in ported designs, they just need to be done perfectly. And doing things perfectly is what PSI Audio does.

People often think of ported designs as the “easy solution”, when in fact, it is only easy when you cut corners. A properly implemented bass reflex requires research, simulations and prototypes, measuring and calibrating, customising and finetuning to achieve perfection. Additional challenges may arise when the speakers grow in size: the PSI Audio A23-M and A25-M required additional care to eliminate unwanted resonance from the bass reflex. A specially designed flow guide inside the port controls the acoustic velocity and reduces resonance and aerodynamic noise, proving once more that with the attention and care imparted by PSI Audio, ported speakers attain unmatched clarity and accuracy.

The express goal of PSI Audio with each and every speaker design is the unaltered reproduction of sound as it was intended by the creators. For comprehensive bandwidth and high sound pressure in a compact cabinet, there is no way around ported designs. Especially when combined with proprietary PSI Audio technology like Adaptive Output Impedance (AOI) and Compensated Phase Response (CPR), ported cabinets allow for the most natural, homogenous sound with impressive instrument separation and without latency, distortion or colouration.

With every PSI Audio speaker being a symphony of details woven together for ultimate results, it is important that these details are woven together proficiently. With 45 years of experience under its belt, PSI Audio builds everything in the company’s own manufacture in Yverdon-les-Bains, Switzerland. Every component, every part, every solder point, every screw, magnet, wire and membrane is chosen, measured and set by well-trained specialists. Once assembled, every single speaker is measured and calibrated in the anechoic chamber, the protocol of which is individually printed and included with the speaker. This commitment to quality is what shapes the undeniably awe-inspiring experience of listening to a PSI Audio setup.

www.psiaudio.swiss



Phoca PDF