IT'S ALL ABOUT THE BASS

Bass Optimization

Achieving deep powerful and accurate bass in a listening room with 'full-range' Main speakers can be challenging due to standing waves caused by listening room dimensions and distortion from smaller drivers, typically ranging from 6 to 8 inches in size.

These smaller drivers have bass radiating cone surface areas of approximately 50 square inches in a single 8 inch driver and will often have difficulty adequately pressurizing a room. To enhance bass performance, large subwoofers usually 12 to 15 inches in diameter with a single large voice coil are frequently utilized. For example a 12-inch subwoofer will have about 113 square inches of cone surface.

The Bryston TS-10 Subwoofer Solution

Bryston's TS-10 Subwoofer Towers utilize multiple woofers in a line array to complement the Bryston T-10 Main Towers. Each TS-10 Sub Tower contains six 8-inch woofers, resulting in roughly 300 square inches of total cone area per subwoofer, and a stereo pair providing approximately 600 square inches. Combining the TS-10 Sub Towers with the Model T-10 Main speakers it a stereo setup yields a total bass radiating area of about 1000 square inches. In addition, incorporating multiple voice coils provides significant advantages in system power handling.

At very low
frequencies, the
Bryston TS-10 Sub
Towers and the
Bryston Main Towers
bass drivers operate
together as a
single, integrated
bass source.







MODEL TS-10 SUBWOOFER
TOWER

Seamless Subwoofer Integration

Integrating subwoofers into an audio system can be complex due to differences in Main speaker design and the need to align frequency ranges between the Main stereo speakers and Subwoofers for optimal sound quality.

The Bryston TS-10 stereo tower subwoofers use the Bryston recently designed BAX-2 electronic crossover, two additional amplifier channels, specialized software, and (DSP) to seamlessly integrate the TS-10 Sub Towers with the Bryston Model T-10 Main Tower speakers across the bass spectrum from 150 Hz and below.

So, at very low frequencies, the Bryston TS-10 Sub Towers and Bryston Main Tower bass drivers function together as a 'single bass source'. In a stereo set-up all 'twenty' 8-inch drivers are sharing the bass output together below 150Hz. The consequence is a massive reduction in low frequency distortion. This approach also offers the added feature of distributing the bass from several locations in the room, helping to reduce standing waves.



MODEL T-10 MAIN with TS-10 SUB

1000 Square Inches of Cone Surface