

SOUND & VISION®

from test report on the Athena Audition Series home theater speaker system in the November 2003 **S&V**. Copyright © 2003 by Hachette Filipacchi Media U.S., Inc. All rights reserved.

in the lab

Frequency response (at 2 meters)

front left/right.....	38 Hz to 19 kHz \pm 4.7 dB
center.....	.84 Hz to 20 kHz \pm 4.5 dB
surround.....	.94 Hz to 18 kHz \pm 3.2 dB
subwoofer.....	.29 Hz to 94 Hz \pm 2.2 dB

Sensitivity (SPL at 1 meter with 2.8 volts of pink-noise input)

front left/right.....	.89 dB
center.....	.89 dB
surround.....	.90 dB

Impedance (minimum/nominal)

front left/right.....	.5.0/7 ohms
center.....	.5.6/9 ohms
surround.....	.5.8/12 ohms

Bass limits (lowest frequency and maximum SPL with limit of 10% distortion at 2 meters in a large room)

front left/right.....	.32 Hz at 80 dB SPL
center.....	.50 Hz at 76 dB SPL
surround.....	.80 Hz at 81 dB SPL
subwoofer.....	.25 Hz at 78 dB SPL
102 dB average SPL from 25 to 62 Hz	
110 dB maximum SPL at 62 Hz	
Bandwidth uniformity 93%	

All of the response curves in the graph are weighted to reflect how sound arrives at a listener's ears with normal speaker placement. The AS-F2 tower showed a wide 300-Hz floor-bounce depression, a curious 4-dB peak at 2 kHz, and general roughness at higher frequencies. Directivity was well controlled. Our averaging techniques obscure the heavy lobing of

the AS-C1 center speaker at listening angles wider than 15°. The AS-R1 surround speaker's response varied significantly by listening angle, becoming much smoother farther off-axis. This is a good quality in a surround speaker.

Bass limits for the AS-P400 subwoofer were measured with it set to maximum bandwidth and placed in the optimal corner of a 7,500-cubic-foot room. In a smaller room users can expect 2 to 3 Hz deeper extension and up to 3 dB higher sound-pressure level (SPL). The sub could produce an average 102 dB SPL with less than 10% distortion at frequencies above 25 Hz, and its low-frequency extension is unusual for its size. Its acoustical turnover frequency matched the dial markings closely at 80 Hz and below, but it had limited upper bandwidth. With the crossover control set to the F2 position, the actual crossover was 44 Hz, and the overall level was +3 dB compared with the full-bandwidth setting. — Tom Noursaine

