

# SOUND & VISION®

from test report on the Klipsch Cinema 10 home theater speaker system in the December 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.....	96 Hz to 18.2 kHz $\pm 5.6$ dB
center.....	99 Hz to 15.9 kHz $\pm 4.3$ dB
surround.....	96 Hz to 20 kHz $\pm 4.2$ dB
subwoofer.....	39 Hz to 95 Hz $\pm 2.2$ dB

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

front L/R and surround.....	.87 dB
center.....	.89 dB

### Impedance (minimum/nominal)

front L/R and surround.....	4.3/18 ohms
center.....	3.5/7 ohms

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

front L/R and surround.....	62 Hz at 64 dB SPL
center.....	80 Hz at 84 dB SPL
subwoofer.....	25 Hz at 89 dB SPL

94 dB average SPL from 25 to 62 Hz  
102 dB maximum SPL at 32 Hz  
Bandwidth uniformity 96%

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 curve for the RSX-5 when used as a left/right front speaker reflects response averaged over a  $\pm 30^\circ$  window. When it's used as a surround, the curve is averaged over a  $\pm 60^\circ$  window. The RCX-4 center speaker's curve is averaged over  $\pm 45^\circ$ . The RSX-5's response was quite flat up to 1 kHz, but the notch at 3

kHz and the roughness above that was noticeable at all radiating angles. The RCX-4 had significant roughness between 5 and 10 kHz but only moderate lobing at listening angles of  $22.5^\circ$  and greater compared with typical horizontally arrayed center speakers.

The bass limits for the RW-10 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 subwoofer had good extension and excellent dynamic uniformity but only moderate output capability. True acoustic turnover frequencies were 10 to 20 Hz lower than markings on the crossover-control knob, and the overall level fell by 6 dB from top to bottom as the control was rotated through its full range. — *Tom Nousaine*

