

## Good Value in "Controlled Impedance" Speaker

**Scott Model S-186** loudspeaker system, in wood cabinet. Dimensions: 12½ by 23 inches (front), 10½ inches deep (plus ½-inch grille). Price: \$169.95. Warranty: "limited," five years parts and labor. Manufacturer: H. H. Scott, Inc., 20 Commerce Way, Woburn, Mass. 01801.

Scott's speaker line pivots about the S-186, with several less expensive models and several more expensive models. If the entire line can acquit itself as eloquently as the S-186 does—for its price class—in the anechoic chamber, it is impressive indeed. This "middle model" is a three-way acoustic-suspension system with a 10-inch woofer, 5-inch cone midrange, and 1-inch Mylar-dome tweeter. The crossover points are at 800 Hz and 4 kHz.

Scott's "controlled impedance" loudspeakers are designed to minimize the variation, with frequency, in the load imposed on the driving amplifier and hence elicit best performance from it. The company rates this model at 6 to 8 ohms, and the lab data bear out the claim. The maximum impedance—in this case 22.5 ohms—occurs at the system's resonant frequency (56 Hz). The minimum impedance is 6.32 ohms (at 125 Hz), and the average over most of the band is a bit over 8. Paralleling pairs of S-186s should be safe for most amplifiers.

The three frequency-response curves taken in the CBS anechoic chamber track each other quite well, indicating good dispersion characteristics for the speaker. They are also exemplary in their smoothness:  $\pm 3$  dB from below 63 Hz to 16 kHz, measured omnidirectionally. The only anomalies of any note are a slight prominence at just above 1 kHz and a slight depression around 6.3 kHz. Tone bursts are very well reproduced at both 300 and 3,000 Hz.

At the 0-dBW (1-watt) level, the distortion is very low for such a small system—generally less than 0.75% at frequencies above 60 Hz, 1.5% at 50 Hz, and 3.75% at 30 Hz. Over much of the band the distortion hovers around a mere 0.25%. The efficiency is in the average range for sealed systems, meaning that it is lower than that of most vented ones and that its output in the 0-dBW test therefore is lower.

At substantially higher power levels (100 dB SPL at 300 Hz), the distortion rises but, in general, doesn't exceed the 1% mark at frequencies above 500 Hz. It averages 3.5% between 70 and 200 Hz and climbs to 6.5% at 50 Hz. The 10% THD mark is not exceeded until 30 Hz. The woofer of the S-186 accepts the continuous 20-dBW (100-watt) input—about 2 dB above Scott's 60-watt maximum power rating—at 300 Hz, and produces 110½-dB SPL, with less than 10% distortion. On pulses, it accepts the maximum peak output of the lab amp without misbehavior.

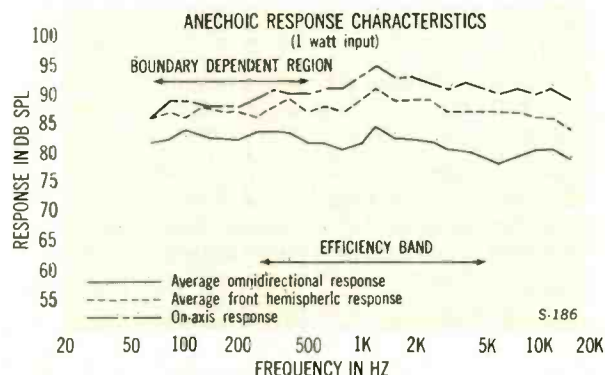


WOOFER-MIDRANGE:  
+2 DB (200 HZ—1.5 KHZ)/FLAT/  
-3 DB (1 KHZ—3KHZ)

TWEETER  
(3 KHZ—18 KHZ):  
+3 DB/FLAT/-3 DB

Many room placement options are open, with a relatively small system such as this, to tailor the bass response. We like the system best with its back against the wall and approximately at ear level. This position provides the smoothest, tightest bass and the most transparent midrange and treble. With the S-186 standing on the floor against the wall, bass response is more powerful but less smooth and tight. Although placement out into the room elicits bass characteristics similar to those at midwall, the upper drivers may not clear furniture level with the speaker on the floor. In our listening room, the tonal balance is best with both controls at FLAT. The WOOFER-MIDRANGE switch has only a subtle effect on the sound; the TWEETER is much more forceful.

The S-186 is basically an honest speaker. The low-frequency response is adequate to give a plausible rendition of



organ works even if it is not capable of reproducing their fundamental underpinnings. Drums are tight; brass tends to be sweet rather than biting. The same is true of cymbal reproduction, which is smooth and not edgy. Transient response and definition are fair but not the S-186's forte. The higher setting of the tweeter's level control sharpens the brass and cymbal reproduction but makes the sound on more melodious instruments somewhat clanky. In our listening room, the bass register of piano is somewhat irregular and the instrument's attack slightly blurred. String reproduction is very good, however—solo violin exceptionally so. The stereo image also is quite good, in both depth and width.

This speaker does not grab you by the lapels. It is a smooth system without the often irritating qualities that draw attention to one element or another of the ensemble. The music appears to emerge through a light gauze curtain that makes rounded contours of rough edges. Viewed in the light of its very attractive price, the Scott S-186 offers a noteworthy level of technical performance.

CIRCLE 133 ON READER-SERVICE CARD

## Scott S-186 Loudspeaker System

Average omnidirectional output, 250 Hz to 6 kHz  
81 ¼ dB SPL for 0 dBW (1 watt) input

Continuous on-axis output at 300 Hz  
110 ½ dB for 20 dBW (100 watts) input

Pulsed output at 300 Hz  
118 dB SPL for 27 ½ dBW (570 watts) peak

"Nominal" impedance            6.32 ohms at 125 Hz

Approximate MIDRANGE-WOOFER control range (re "flat")  
+ 1 ½ dB, 200 Hz to 1 kHz;  
- 1 ½ dB, 1 to 3 kHz

Approximate TWEETER control range (re "flat")  
± 3 dB, 8 to 20 kHz