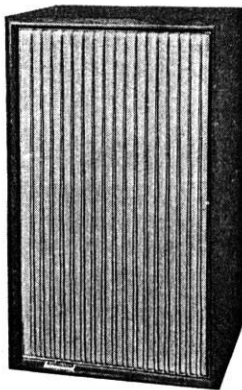


EQUIPMENT TEST REPORTS

By Hirsch-Houck Laboratories

Sylvania AS125W Speaker System



● SYLVANIA's new AS125W is a three-way acoustic-suspension system in a moderately large walnut cabinet suitable for floor or shelf mounting. The overall dimensions of the enclosure are $26\frac{1}{8}$ inches wide, $15\frac{5}{8}$ inches high, and $12\frac{3}{4}$ inches deep; the system weighs 45 pounds. The woofer is a 12-inch driver with a heavy cone that gives it a free-air resonance of 17 Hz. In the sealed box, the system resonance is 42 Hz. The one-pound magnet is mounted in an iron structure with a total weight of 5 pounds. The system has a nominal impedance of 8 ohms.

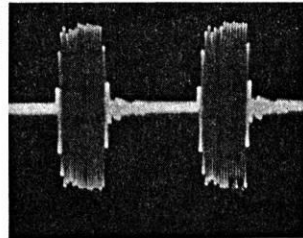
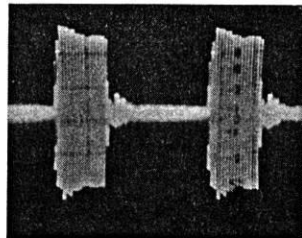
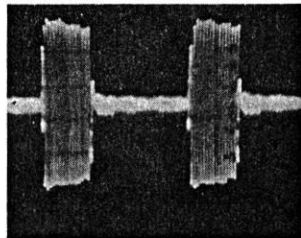
At 600 Hz there is a crossover to a $1\frac{1}{2}$ -inch dome

mid-range, designed for wide dispersion over its three-octave operating range. Another crossover, to a 1-inch Mylar dome tweeter, takes place at 6,000 Hz. In the rear of the enclosure are two three-position toggle switches, controlling the levels of the mid-range and high-frequency drivers. Each has a NORMAL position, as well as HI and LO positions that provide 3-dB shifts from the normal levels. Unlike most speakers, the AS125W does not use binding posts for connections; instead there is a standard phono jack for this purpose and a special cable is supplied for connection to the amplifier's terminals. Price: \$149.95.

● **Laboratory Measurements.** The AS125W's averaged frequency response, from eight microphone positions, was within ± 5 dB from 34 to 15,000 Hz. The low-frequency response, between 40 and 100 Hz, was substantial, with an output from 5 to 6 dB above the mid-range level. The output from 100 to 9,000 Hz was quite uniform, with only a rise of 5 dB in the 600- to 800-Hz region keeping it from being one of the flattest we have seen. We suspect that the rise is related to the crossover action, which takes place at about the same frequency. Another rise of about the same amount, in the 10,000- to 13,000-Hz region, was also observed.

A response curve made by Sylvania in an anechoic
(Continued on page 38)

Tone-burst response of the Sylvania AS125W was quite good at all frequencies. Shown here are bursts at (left to right) 500, 2,000, and 10,000 Hz.





With the textured grille-cloth frame removed, the three drivers of the Sylvania AS125W are revealed. The tweeter dome is at upper left. The grille-protected mid-range is below it, with the 12-inch woofer at the bottom.

chamber was, as would be expected, smoother overall than our curve. It did not show the low-frequency rise (their chamber's cutoff frequency masked this effect), and there was no trace of the high-frequency peak. Although it is often difficult to correlate our live room measurements with others made in an anechoic environment, a possible explanation could be the excellent polar dispersion of the AS125W's high-frequency drivers. If the on-axis response is flat, and the same response characteristic exists over a very wide angle, the total integrated output must show an increase with frequency. Our measurements evaluate (approximately) the total output of a speaker, and therefore are not necessarily inconsistent with Sylvania's data. Although the flattest frequency response in our test room was obtained with the mid-range and tweeter levels set at HI, other settings would no doubt be preferable in other listening rooms.

The low-frequency harmonic-distortion characteristic was somewhat unusual. The distortion was at a minimum between 50 and 70 Hz, and rose somewhat at higher frequencies as well as at lower frequencies. The distortion-vs.-frequency curves were almost identical at the widely different power levels of 1 watt and 10 watts.

The 5 per cent distortion point was reached at 40 Hz, and 10 per cent was measured at 35 Hz. The efficiency of the AS125W is considerably higher than that of most acoustic-suspension systems of comparable quality, and even a 1-watt signal provides a loud listening level. Tone bursts were reproduced well, with no signs of sustained ringing or other distortion at any frequency.

At the bass-resonance frequency of 45 Hz, the impedance was 20 ohms. It varied between 5 and 15 ohms from 20 to 500 Hz. At higher frequencies, the impedance was quite uniform, but surprisingly low. With the level switches set to NORMAL, the impedance was 4 to 5 ohms from 500 to 20,000 Hz. In HI, however, it ranged from 3 to 4 ohms over that range. The 20-foot cable supplied adds an extra ohm of impedance which some amplifiers may need to keep their overload cutout circuits from being activated at high volume levels. We had no problems, but were able to try only a couple of amplifiers with it. In any case, we would not suggest using this or any other 4-ohm speaker in installations where more than one speaker is driven by each channel of the amplifier—unless, of course, the amplifier manufacturer states explicitly that it is permissible.

● **Comment.** The simulated “live-vs.-recorded” listening test unequivocally placed the Sylvania AS125W among the best acoustic-suspension speaker systems. We usually (but not always) found the LO setting of the tweeter control to be optimum. In any case, except for a slight mid-range coloration, it was a nearly perfect reproducer of our “live” test program, and we would give it an “A” rating. There is no shortage of good acoustic-suspension speakers on the market, but the AS125W's performance ranks it with those selling at higher prices, rather than with speakers at or below its price. Taken solely on its own merits, it is an excellent speaker system. At its price of \$150 it is a really fine value. Sylvania has indeed made a most auspicious entry into the world of quality components.

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