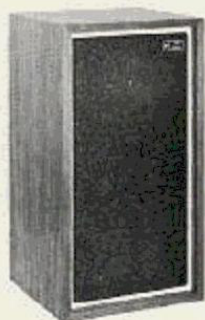


# a Rave Report!

## ADC 303A BRENTWOOD SPEAKER SYSTEM



● THE ADC Model 303A Brentwood is a compact, two-way speaker system, suitable for floor or bookshelf installation. Its simple, oiled walnut cabinet measures  $23\frac{3}{4} \times 13 \times 11\frac{3}{4}$  inches. The system's impedance is 8 ohms, and it is rated for use with amplifiers delivering between 6 and 60 watts.

The preceding description, with minor changes, could cover the specifications of a dozen bookshelf speakers. But on first hearing the Brentwood, I knew it was not "just another bookshelf speaker." After the lab measurements had been made, and I had a chance to analyze the data, I began to appreciate how unusual this speaker system really is. For one thing, my tests confirmed the manufacturer's claimed frequency response of "35 to 20,000 cps  $\pm 3$  db measured in an average listening room." My microphone is calibrated only up to 15,000 cps, and my listening room may or may not be "average," but when I averaged the curves of the six sets of measurements taken at different points in the room, the response curve was a remarkable  $\pm 3$  db from 33 cps to well over 15,000 cps.

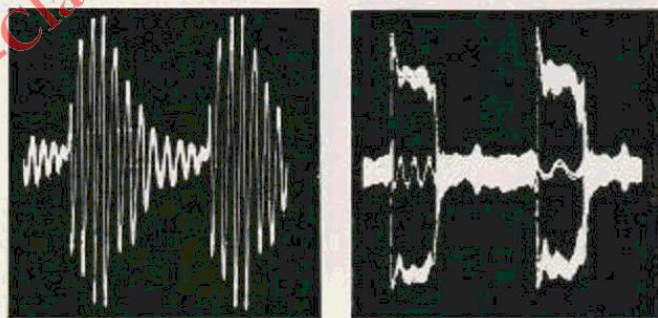
The low-frequency harmonic distortion, measured with a 1-watt electrical input to the speaker, was less than 5 per cent down to 33 cps, and rose smoothly below that frequency. Listening tests (using a sine-wave signal) confirmed that the Brentwood has a true, effective response down to at least 33 cps, with lower distortion than I have measured on many larger and more costly speaker systems, under similar conditions. The tone-burst response was reasonably good, but not as outstanding as the sine-wave response.

The Brentwood's 8-inch woofer has a high-compliance suspension, and its cone is capable of extended linear travel. ADC claims that the Brentwood's novel crossover system is largely responsible for its excellent performance. Inserted in the woofer cone near the voice coil is a compliant section that decouples the bulk of the cone from the voice coil at higher frequencies. This avoids both cone breakup and the phase-shift problems associated with an inductor-type crossover. The Mylar-dome tweeter (which has a series capacitor to keep out the

bass frequencies) and the inner section of the woofer function as mid-range radiators up to about 6,000 cps, where the tweeter alone continues to operate out to the limits of its response.

The sealed cabinet is rigidly made of  $\frac{3}{4}$ -inch and 1-inch stock and is fully packed with sound-absorbing material. The system's resonance is 48 cps, and ADC states that it delivers true bass response to at least 38 cps. This it certainly does, with ease. The Model 303A is a very successful application of the acoustic-suspension principle, achieved without excessive loss of efficiency. Two rear-panel slide switches permit adjustment of the mid- and high-frequency range performance. My measurements were made with both switches up (maximum level). The mid-range switch affects the level in the 500 cps to 3,000 cps range by several decibels, while the high-frequency switch similarly affects the range above 3,000 cps.

As for its sound, the ADC Model 303A is very live and open. It has presence, but without the peaked unnatural response usually associated with that term. The highs tend to stand out—even to the point of sizzling at times—but are easily tamed with the level switch. I found that the unit sounded best (to my ears) with both switches down. The bass is unobtrusive, and might be thought



The ADC 303A 2.5-kc tone-burst response at left shows a gradual buildup of about 3 cycles and a decay period of 8 cycles. However, all the ringing is at the burst frequency, with no spurious tones generated. The 9-kc tone burst at right is well defined, with a slight low-frequency ringing visible inside the waveform. The "fuzz" between bursts is mostly room noise.

lacking until a bass drum or organ pedal passage proves that it is really there. This is a quality of any speaker with true, flat bass response. At any rate, this speaker brings the music right into your listening room, a few feet in front of the grille cloth, as contrasted to some in which the sound never seems to get out of the speaker enclosure.

By all means listen to this \$95 speaker if you are in the market for a compact system. Even if you don't fully share my enthusiasm, your time won't be wasted. This is *not* "just another box."