

# Audiolab Test:

## JBL L40 Speaker System

Once upon a time there was a recognizable JBL sound. Either you liked it or you didn't. But you couldn't mistake it. Now there is a new generation of speakers from this California manufacturer clearly designed to produce a reasonably flat response curve, and natural, straightforward sound.

The L40, a largish bookshelf speaker, is typical of this new breed. It's a two-way, bass reflex design with 25-cm woofer and 25-mm dome tweeter in a solidly handsome enclosure of high density particle board finished in oiled walnut. A continuously variable control with ten positions allows adjustment of high frequency output. The price? \$331.43 each.

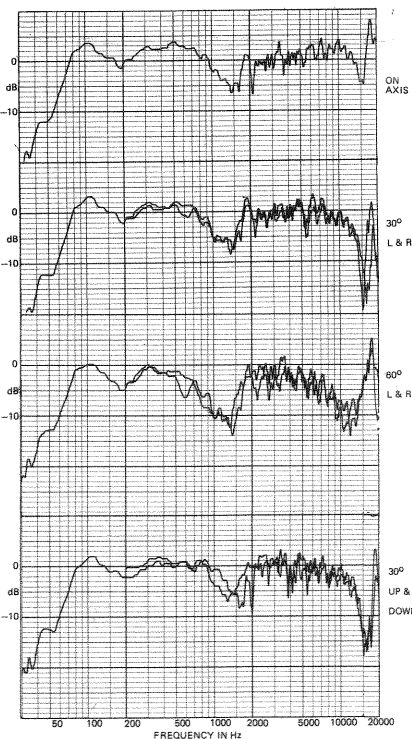
Although that takes it out of the budget class, it's a good buy considering the list of advantages our testing revealed. The reasonable efficiency you would expect from JBL at no sacrifice in power handling, excellent overall dispersion, and well-maintained levels at both ends of the frequency spectrum were among its virtues.

The response curves in Figure 1 show just how creditable its spectral

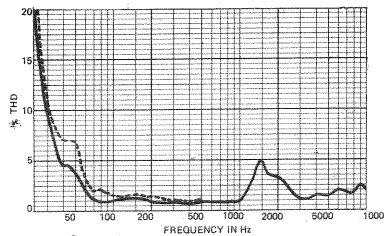


balance proved to be. The only notable flaw is the hole in the midrange, just below the crossover frequency of 1,800 Hz.

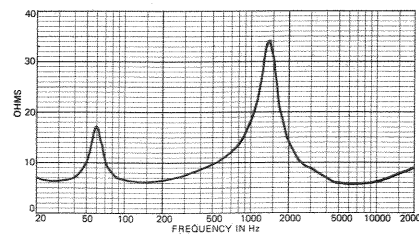
In the listening test, however, this weakness didn't bother our listening panel unduly. Despite its obvious presence on the graph—which our listeners didn't see until after they had auditioned the speaker—they only noted that it seemed to make it sound "a bit boxy" on some material, and that the high frequencies were relatively "perhaps a shade bright".



**Figure 1 - Frequency response.**



**Figure 2 - Total harmonic distortion. Solid curve: THD for 4.8 watts input; dotted curve: THD for 15.2 watts input.**



**Figure 3 - Impedance.**

Other remarks praised its "excellent overall balance and perspective", "crispness", and "lots of low bass"—even a little too much when the speaker was placed in the corner.

The high end shows lots of energy to the limit of audibility. No problems here, except for the glitch up around 17 kHz which corresponds to a resonance observed in tone burst tests. It's so high up though, most listeners will never hear it. Our non-octagenarian panel didn't.

But the really striking thing about the response curves is how similar they all are. There is so little roll-off off axis, no matter where you sit in a room, this speaker's excellent dispersion should give you well-balanced sound reproduction.

All this and power too. As you might have anticipated from a JBL, this unit can really blast it out at quite low distortion levels as shown in Figure 2. The THD curve at the moderately efficient 4.8 watts required to produce 90 dB sound pressure level at 2 metres is reassuringly close to the one resulting from input of 15.2 watts needed to put out 95 dB.

Impedance should pose no problems to a good amp either. The curve in Figure 3 presents the classic bass reflex double-peak pattern, in this case with no dips much below 6 ohms across the whole audio spectrum.

Quite often you have to make compromises in designing a speaker that will reproduce sound accurately at high levels. The L40 shows no signs of compromise. You can drive it to disco levels and still call what it pumps out hi-fi. Audio consumers have come to expect to pay more for JBL—and get value for the premium price. This reputation is based on dependable products like the natural-sounding L40.

This *Audiolab* report was prepared by Kenneth Mews

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