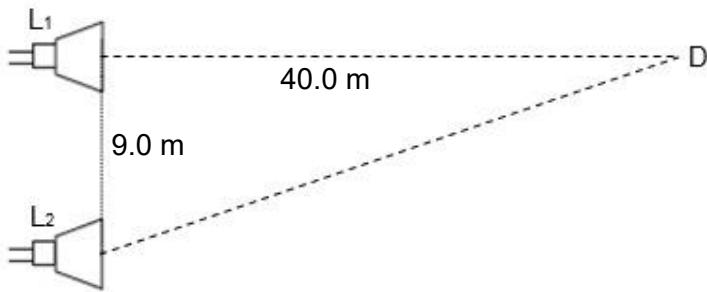


- 16** Two loudspeakers  $L_1$  and  $L_2$ , placed 9.0 m apart, as shown in the diagram, are driven by a common oscillator.

As the frequency of the oscillator increases from zero, the detector at D, placed 40.0 m directly in front of  $L_1$ , recorded a series of maximum and minimum signals.



If the speed of sound is  $330 \text{ m s}^{-1}$ , at what frequency is the first minimum detected?

**A** 165 Hz

**B** 330 Hz

**C** 495 Hz

**D** 660 Hz