

Investigate the Speed of Sound in Air

Aim: You are investigating how to measure the speed of sound in air



Method:

1. Move the microphone to a fixed distance from the speaker and record the distance
2. Press the 'play' button on the speaker and it will produce a sound pulse while triggering the timer to start.
3. When the microphone picks up the sound pulse it will trigger the timer to stop.
4. Record the time in your results table and repeat two more times.
5. Change the distance at least 5 more time and repeat the experiment
6. Take an average of your times
7. Plot a graph of distance against time

Results:

Distance (m)	Time (ms)			Average Time (ms)
	Trial 1	Trial 2	Trial 3	

Analysis:

Plot a graph to show your results. Plot the **Average Time** on the horizontal axis and the **Distance** on the vertical axis.

The gradient of this graph will be distance/time which is the speed of sound

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