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The Speed of Sound in Air of Pipe Acoustic Resonance via the Arduino with LabVIEW Interface

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The purpose of this study was to develop a modern experiment apparatus using Arduino with LabVIEW to instead of the classical experiment. The sound frequency is generated from application on smart phone. The sound intensity and ultrasonic sensors are used to measure the sound intensity and displacement which is connected to the Arduino with LabVIEW. The resonance frequency for each harmonic series in pipe (closed at one end) is shown on the computer. The speed of sound in air is determined and the result show is in a good agreement between theory and experiment.

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