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| Team 6 |
| Requirements |
| Mini-Oscilloscope |

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# Needs

Oscilloscopes are wonderfully useful devices with many applications. A drawback is that many of the ones offered at our school are bulky, possess a complex user interface—and given their short supply—are often being used by somebody else. The student does not want to be stuck in the electronics lab where the scope resides; does not want to muck about with an interface providing him distracting options; does not want to wait to use it.

# Objective

With the above in mind, it is of obvious benefit that an easily portable, simplified, and personal oscilloscope should be available. The goal of this project is to create a miniature oscilloscope that the average engineering student can utilize to quickly inspect electronic equipment.

It must:

* Be portable
* Have a simple[[1]](#footnote-1) interface
* Be affordable to college students
* Measure frequency (i.e. actually function as an oscilloscope)

# Background

* On average, how often do engineering students need an oscilloscope and one is not readily available?
* How much would students be willing to pay for a personal oscilloscope?
* How much would it cost to manufacture our Mini-Oscilloscopes?
* Are there already Mini-Oscilloscopes on the market? (And what are their price?)

# Requirements

## Marketing

Affordable to engineering students.

## Functionality

The user must be able to input a waveform.

The Mini-Oscilloscope needs to display the measured waveform.

Should work within a useful margin of frequencies to the average engineering student.

## Energy

Should be able to run on easily replaceable batteries.

## Usability

Should be easy to use for an Engineering student already familiar with Oscilloscopes.

1. Simple as far as the engineering student is herein concerned, not simple as regards the average Joe who knows nothing of oscilloscopes. [↑](#footnote-ref-1)