

Criterion E: Evaluation

Evaluation of the Product

Success Criteria:

- Must be able to retrieve raw data from the device
 - ✗ Not Met. The product displayed the period in real time, not storing it to be looked at later.
- Must be portable, i.e. not tethered by a power cable
 - ✓ Met. The Arduino MEGA can be battery power using a 9-volt battery. The Arduino is independent.
- Must be able to detect objects
 - ✓ Met. The Ultrasonic sensor was able to detect a difference when an object was placed within its detection zone.
- Must be able to record and not record
 - ✓ Met. The recording button allowed the user to turn on and off the recording of the device so that the device was not always recording.
- Must be able to calibrate
 - ✓ Met. The calibrate button allowed the user to set a calibration within a certain range.

Overall the product is successful. It is nearly impossible to read the periods before they disappear, but there is a value that is being created I just need to store that somehow.

Recommendations for Further Development

There are several things that I want to change and improve about this device. Firstly, I want to solve the problem of being able to store data on the device being used. The Arduino is not set up to store data and is much better at performing calculations and interacting with the environment. I may investigate using a Raspberry Pi instead of an Arduino for that would give me more storage and the same ability to calculate and interact with the environment. Secondly, I would want to make the device more user-friendly. I want to make a case for the device so that it is enclosed with just the user interface components showing. I want to also add more buttons and switches. I want to have an on/off switch for the power, a restart button, and more ways to navigate around. In order to do this, I may also need to get a larger LCD display so that I can display more information in one screen. It also may be helpful to add a couple LEDs to help indicate the calibration and recording states of the device.

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