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CRT 320 Zane

Concept Development

Problem statement: Adventurers and rock-climbers often wonder how high they are while exploring, yet do not have a reliable way to easily obtain this information from their current locations.

Proposed idea: To solve this problem, I intend to create a device that incorporates mathematical formulas with the input variable of time to generate the product variable: height. In general, the user will drop a solid (likely small) object and the time it takes to hit the ground will be recorded and then utilized through the device. This will be automated to prevent user error when transferring the time. The main idea for how this would work is the user drops perhaps a rock, and at the same time pushes the timer button on the device, and then pushes the stop button just as the rock hits the ground, giving a time that the device then uses to calculate and display the height of the user. Another addition to this device would allow for users to throw the device and have it tell them how far they threw it, or the vertical height they threw it, depending on what they hope to know.

Influences:

GPS/elevation finder – Mapstar LPS 12 // TruPulse 200

(~$2400)   (~$800)

These tools are designed to calculate vertical distance based off of lasers

http://www.lasertech.com/Laser-Measure-Elevation.aspx

Radar gun (speed) -- Bushnell Velocity Speed Gun

(~$76)

Uses digital signal processing technology to measure the speed of objects from baseballs to

cars, from distances of 90 to 1,500 feet, respectfully.

https://www.amazon.com/Bushnell-101911-Velocity-Speed-Gun/dp/B0002X7V1Q

LaserLynx PRO Distance Measurement

Uses lasers to determine distance between two points.

(~$3300)