

# Directional Antenna Alignment Control System (D.A.A.C.S)

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## Objective

- Create a Control System to Align a Directional Antenna to an Omnidirectional Antenna

## Background

- Navy researchers have a testing barge
- They transmit their test data to an onshore omnidirectional antenna with a directional antenna on the barge
- The directional antenna is manually oriented

## Value Proposition

Building a Control System to align the antenna will:

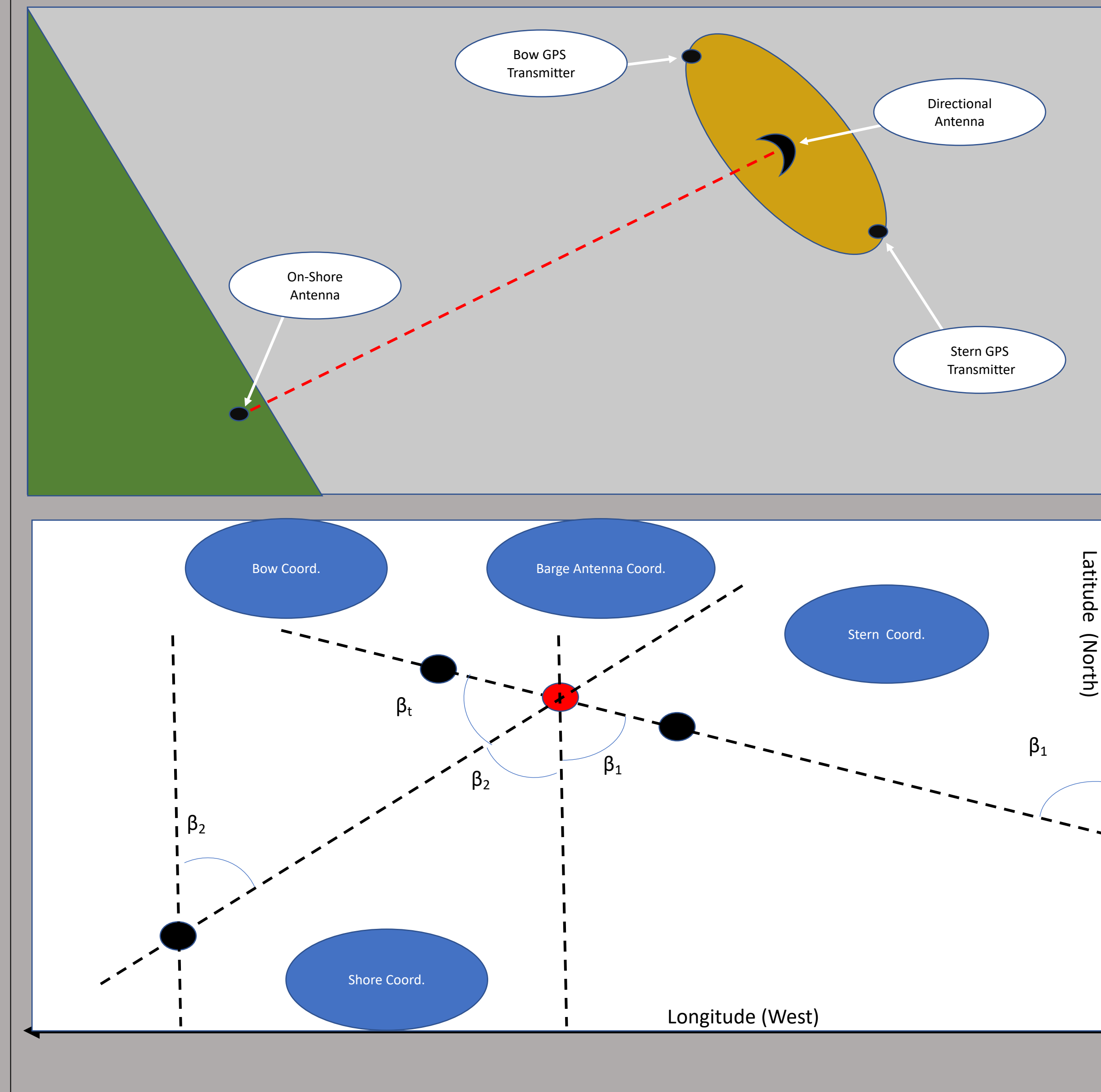
- Save time to align antenna
- Save researchers' energy
- Provide a more precise alignment

## Key Requirements

- Able to function in different weather conditions (rain, snow, wind especially)
- System fits within 189x189x125mm
- Supply voltage: ~9V
- Operating Temp.: -25-46 °C

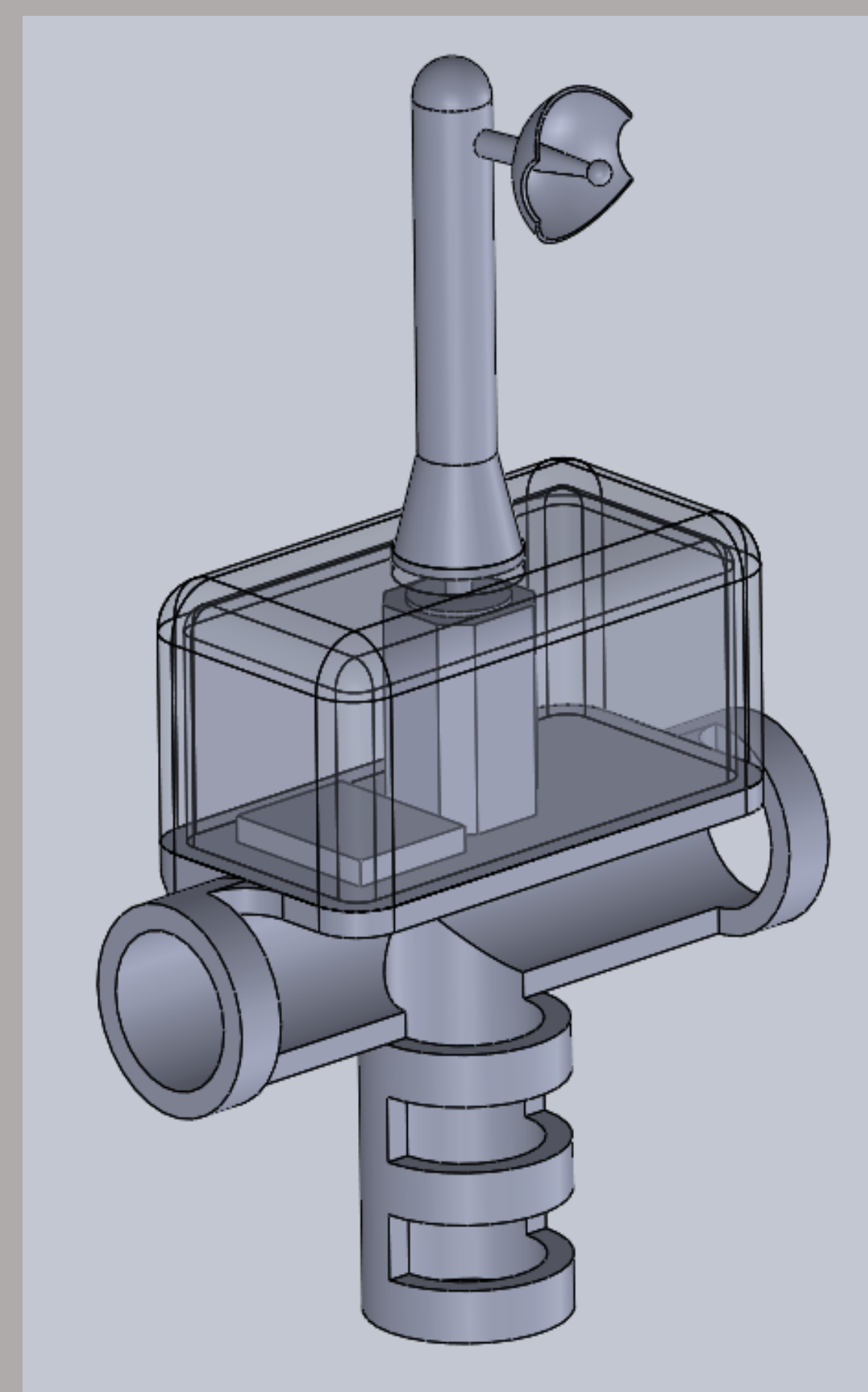
Budget: \$1000

## Concept Development



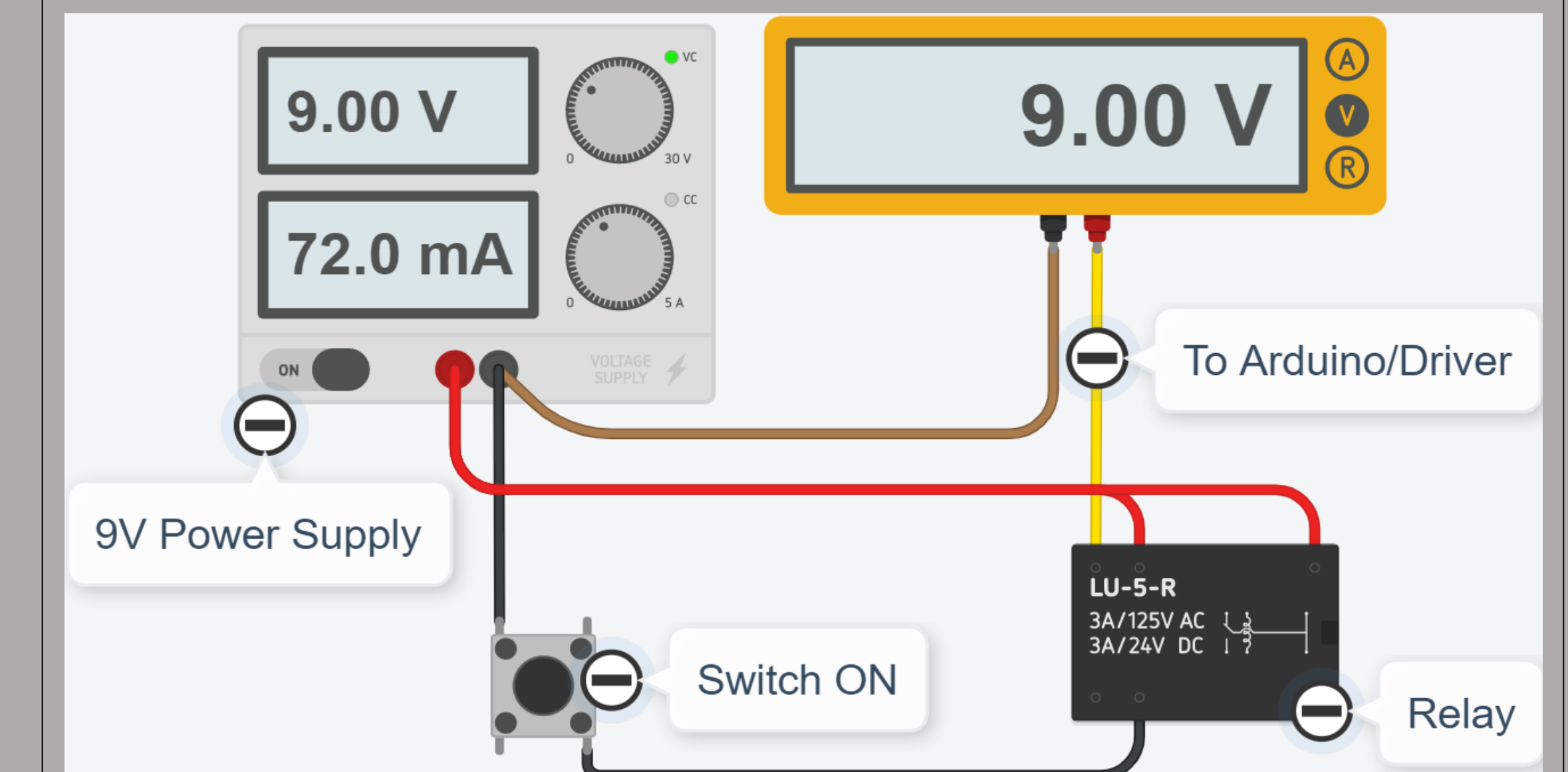
## The Design

### Housing:

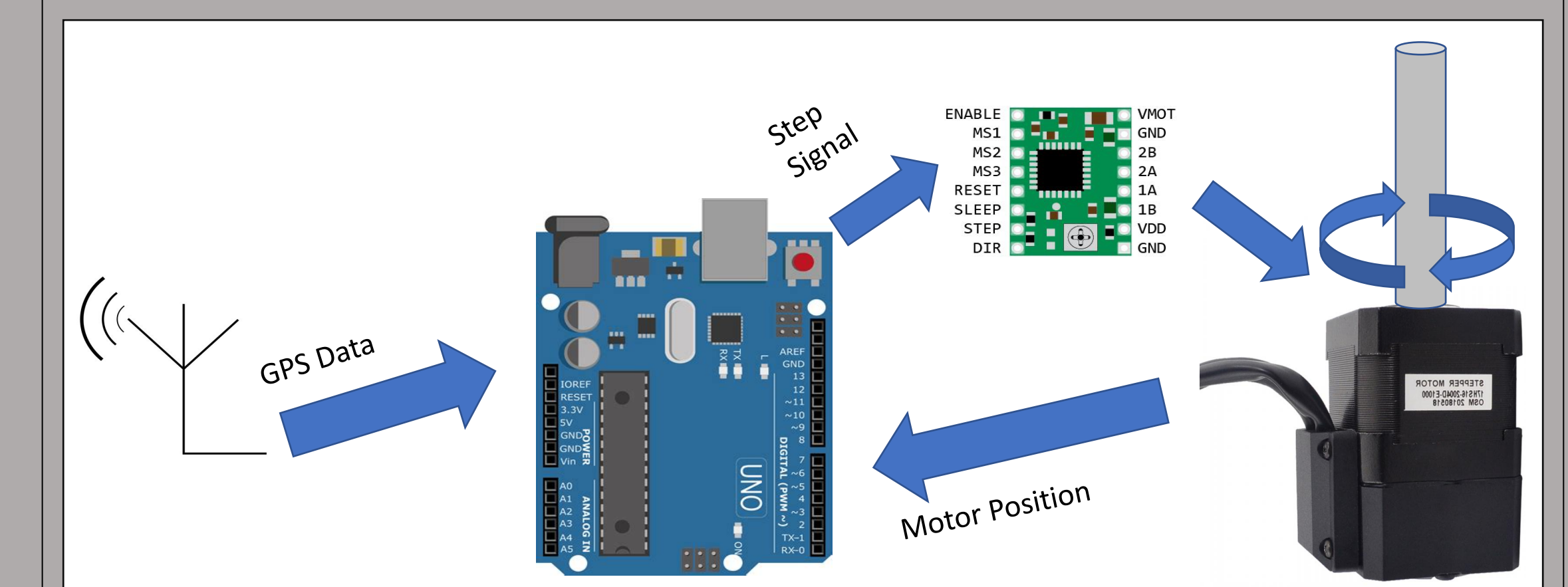


## The Design (con.)

### Power System:



### Control System:



## Gameplan

- Complete coding for the control system
- Have the whole control system put together (without GPS receiver)
- Develop/Create locking mechanism
- Build length variable power system
- Construct plug and play prototype