

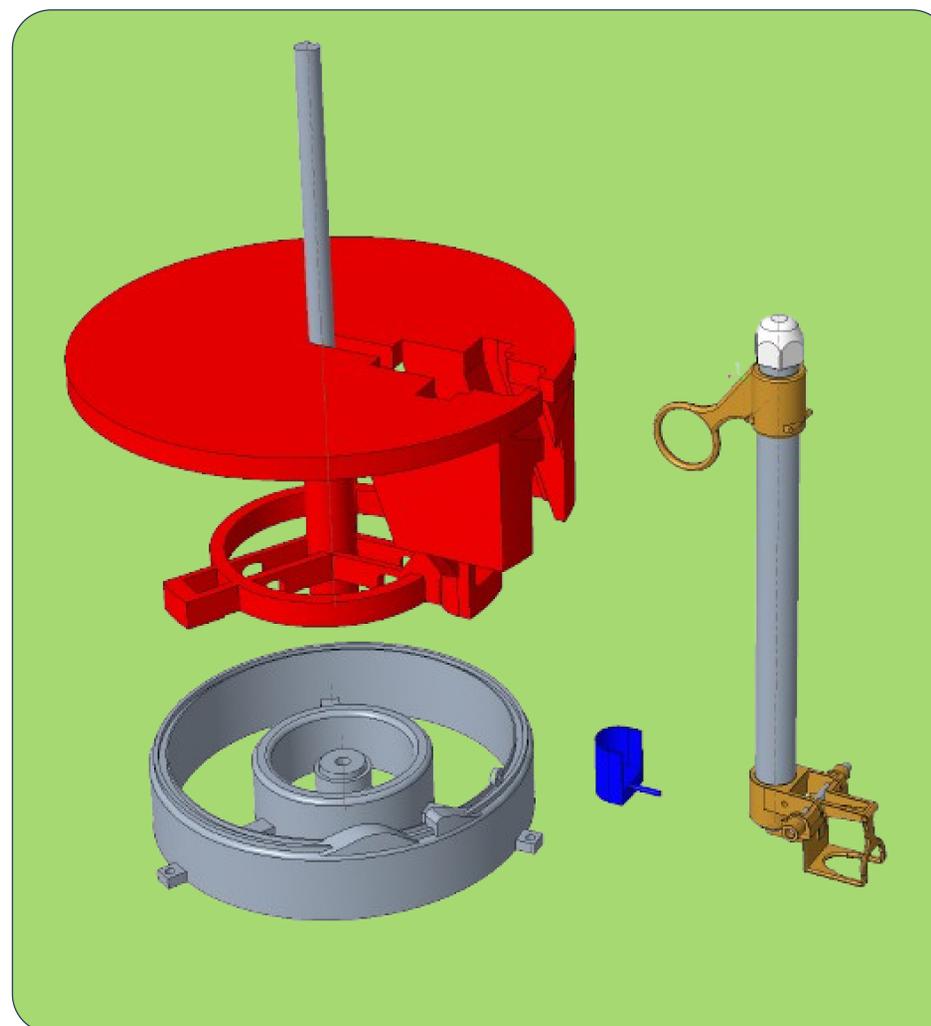
# Team 304 Remote Switching Device

**Nicholas Grant, Nicholas Haynes, SirDarius Lomack,  
Andrew Lois, Christian Perez, Jacob Ray**

The objective of this project is to design a system that can be used to close a cutout fuse switch from the ground.

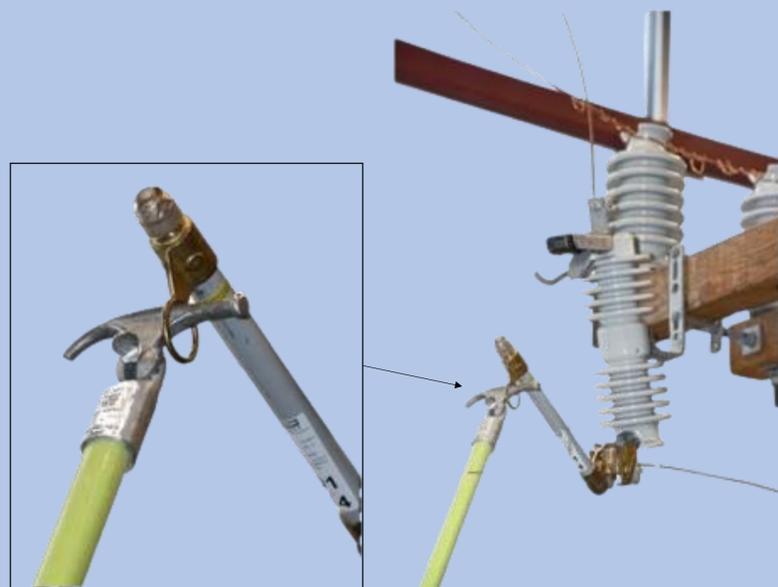
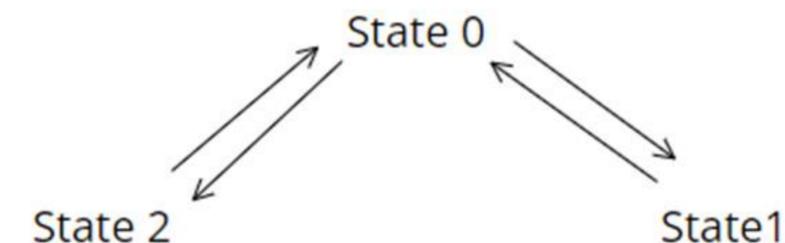
## Purpose:

Florida Power and Light uses cutout fuse switches to stop the flow of electricity and protect the equipment in dangerous conditions. Fuses must be closed after conditions are deemed safe for power to be restored. The current method used to close the switches is very strenuous and difficult.



## Control System:

In order to move a new fuse into place, a stepper motor is used. This motor must rotate 360 degrees in three activations of the system. It will do this by transitioning between three states. State 0 makes the system ready to accept an input. State 1 is a standard rotation. State 2 is an auto corrective state that will ensure that an even rotation is completed. This will occur once for every two occurrences of State 1. This will accomplish consistent operation of our system.



## Key goals:

1. The device is portable
2. User can swap the fuse remotely
3. Is easier to use than the current method
4. Holds multiple fuses

## Design:

This prototype uses a track design to place the fuse into the contact points. Once the fuse is overloaded through a fault on the line, the filament, keeping the hinge fully open, will trigger dropping the fuse a few inches out of the contact points.

## Outcomes:

This prototype proves that a fuse can be engaged and disengaged for the next fuse to replace it.

The final iteration of the design would have a housing that holds three fuses and a casing that protects the motor and Arduino devices.