

Rudder Servo

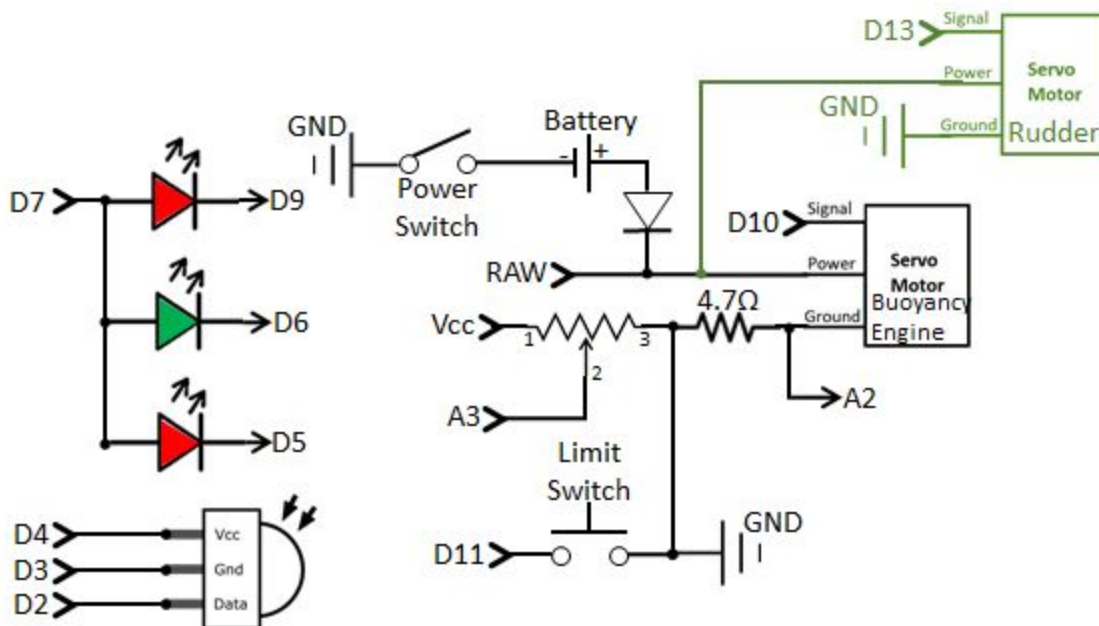
Why do this?

Because you want to steer!

Parts list

- 1) Servo ([HS-5086WP](#))
- 2) [Loctite Marine epoxy](#) to seal wire penetration
- 3) (optional) 3D print servo adapter

Schematic

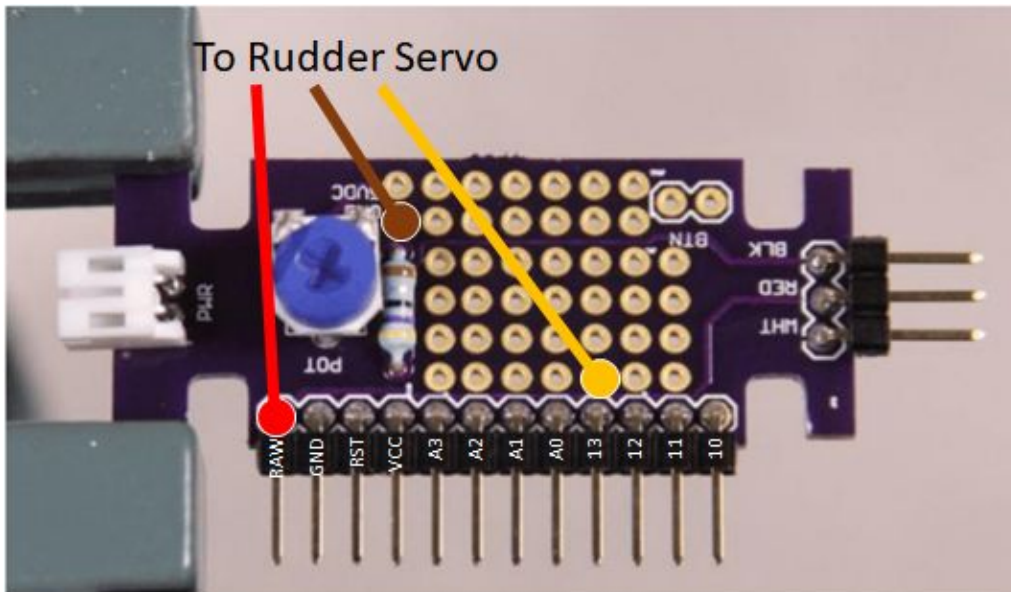


Code example

Here are some key commands you can use. **WARNING** this code is not intended to run on its own! These are just important fragments.

```
#include <Servo.h>
static byte rudderServoPin = 13; // set up static reference for the pin number
Servo rudder_servo; // create instance of a servo object
void setup(){ // in the setup loop
    rudder_servo.attach(rudderServoPin); // associate servo signal pin with servo object
}
// in the code when you want to use the servo
rudder_servo.write(angle); // command to an angle 0-180 (90 will be about rudder center)
```

Assembly Photos



One way to attach a wire to RAW battery power is to wrap and solder a wire around the exposed RAW pin. The other option is to cut and split the red side of the power supply harness. This branch can be made by cutting the red wire before the JST connector and then re-attaching those two wires while including the power line to the servo. The servo needs the raw power because it draws more amps than the voltage regulator on the Arduino Pro Mini can supply properly.

The servo can be physically mounted to the tail with epoxy and some creativity. A new hole can be drilled through the bottle cap to route the servo wires to the board, then use the marine epoxy to thoroughly seal the wire in place.

Here is the first version of the servo adaptor which is available on the Forum. The rudder-horn adaptor will be coming soon.

