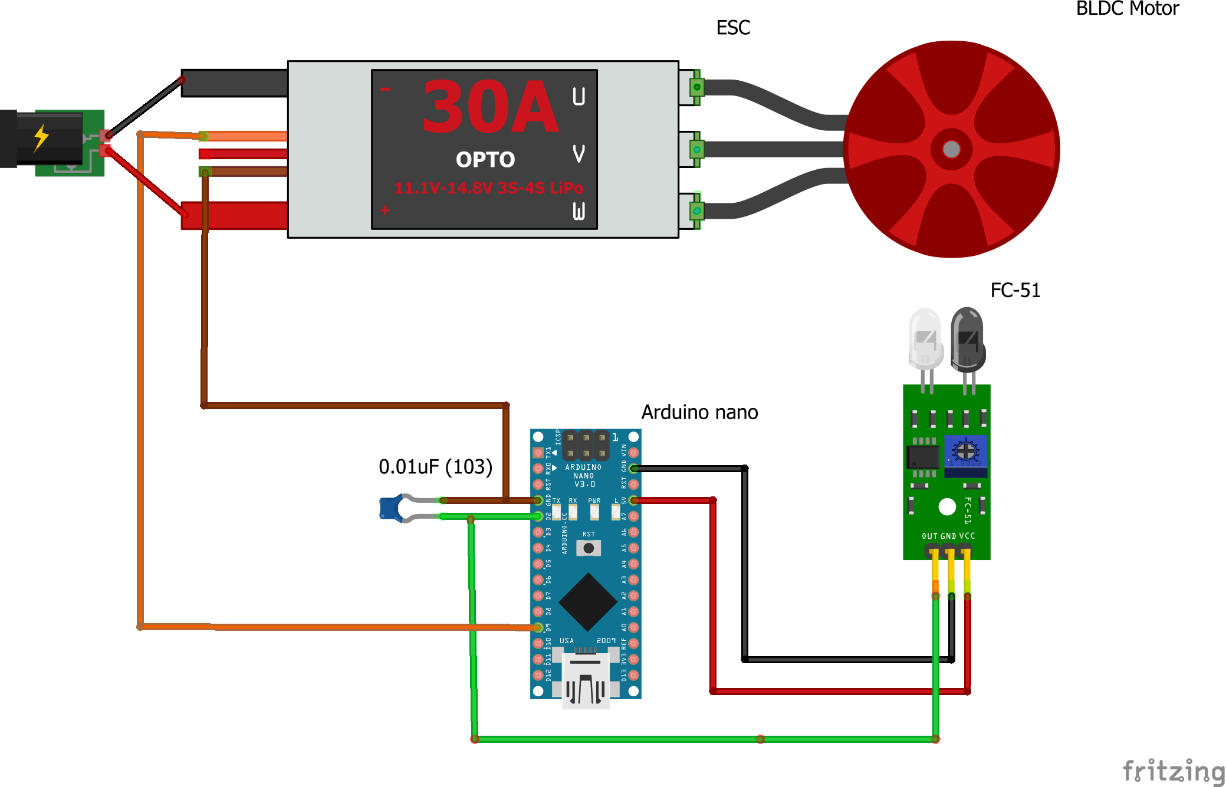
**INSTRUCTIONS**

**OS Tested:** Windows 10 64 bits

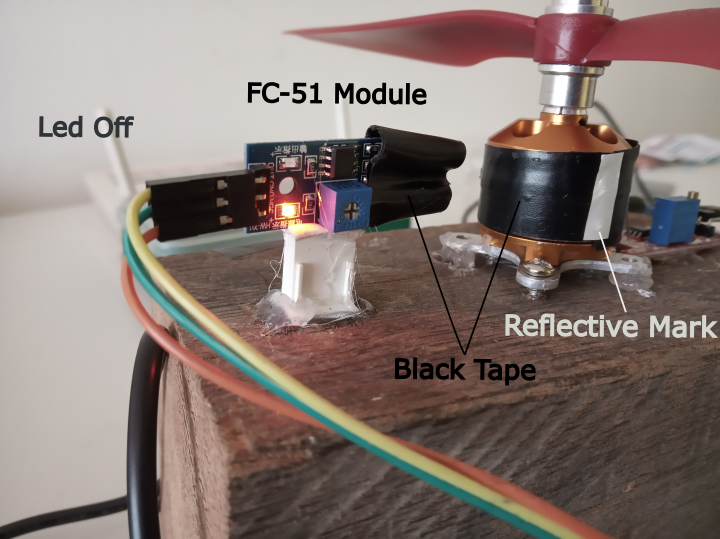
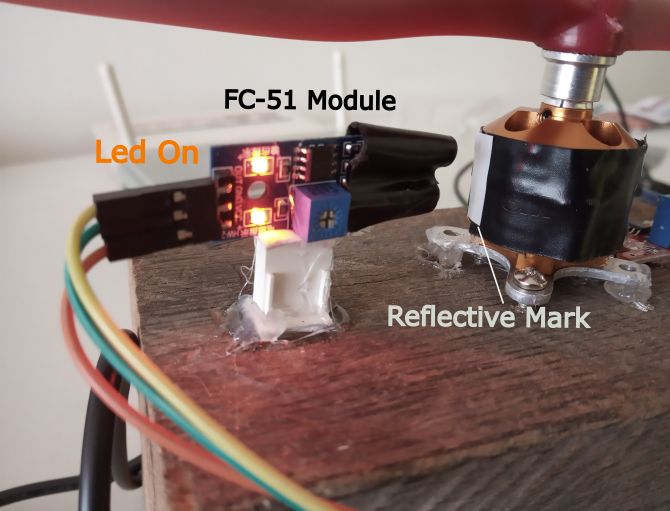
1. **Setup Arduino environment**

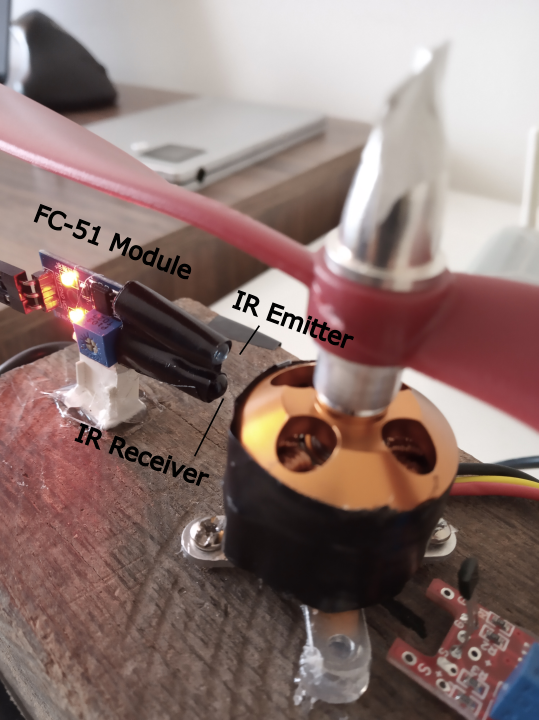
* Install Arduino IDE
* Upload Arduino script to Arduino board

1. **Using IR Sensor**
   1. **Circuit**

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* 1. **Implementation**

** **

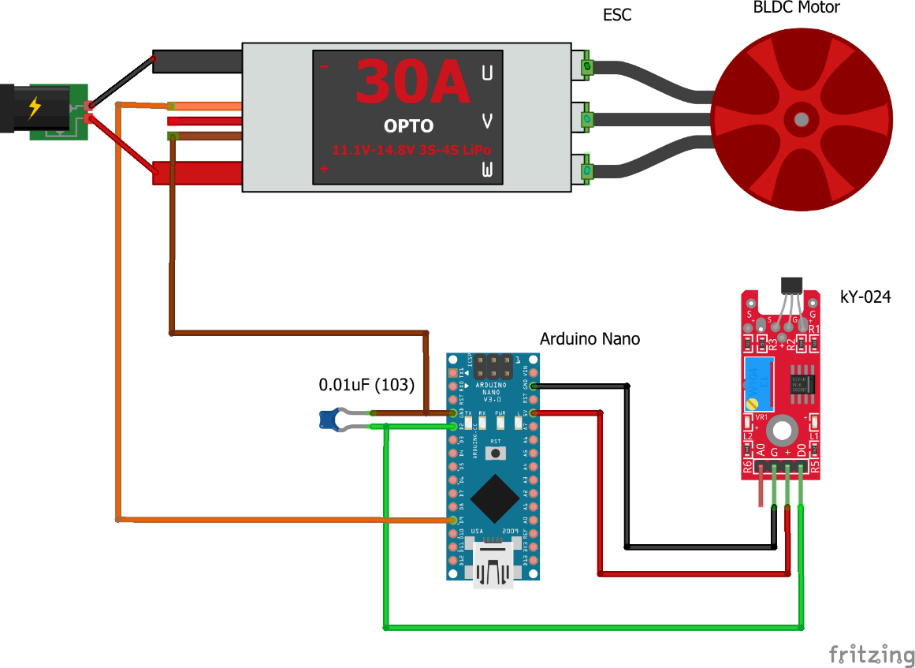
****

* 1. **Upload Arduino Sketch**
* Connect Arduino PC
* Open sketch *IR\_Sensor\_v2.ino* at path\BLDC\_Speed\_Control\IR\_Sensor\_v2
* Upload code to Arduino nano or Arduino Uno
  1. **Start motor**
* Disconnect ESC from energy source
* Connect Arduino PC
* Open Arduino IDE serial monitor
* Follow instructions showed in serial monitor

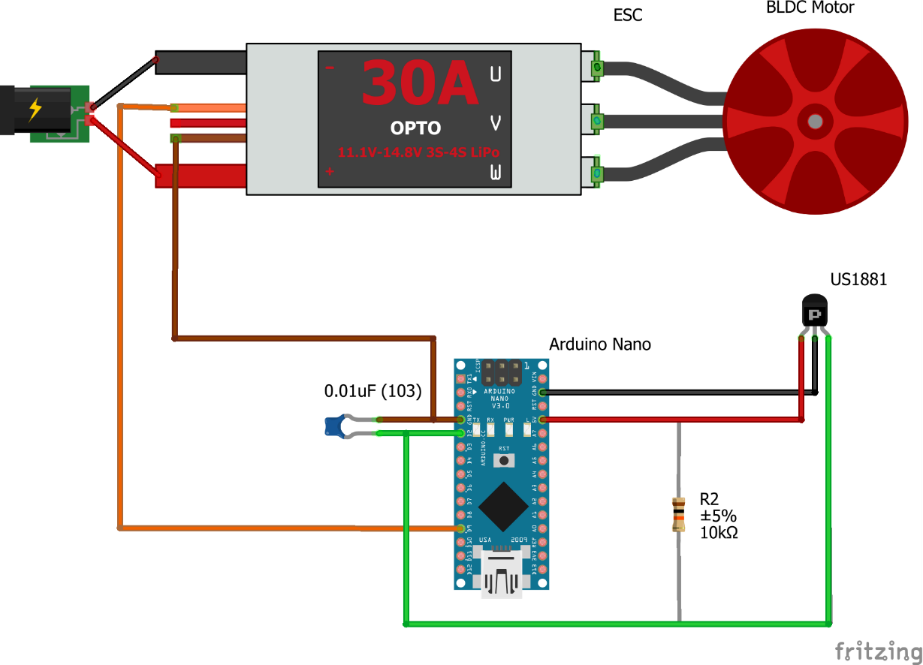
If you calibrated the motor and it does not be disconnected, you can choose normal operation.

Note: if the motor is disconnected from energy source or it shut down, it needs to be calibrated again.

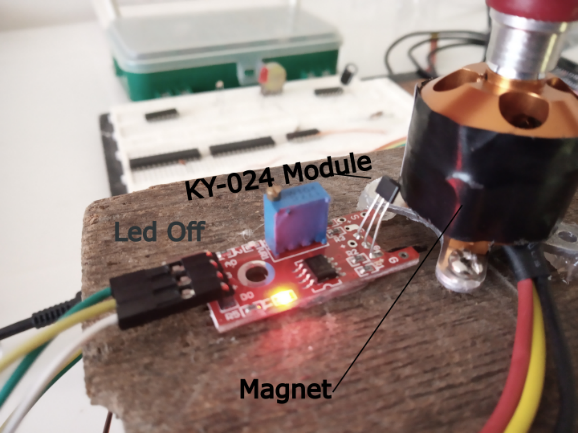
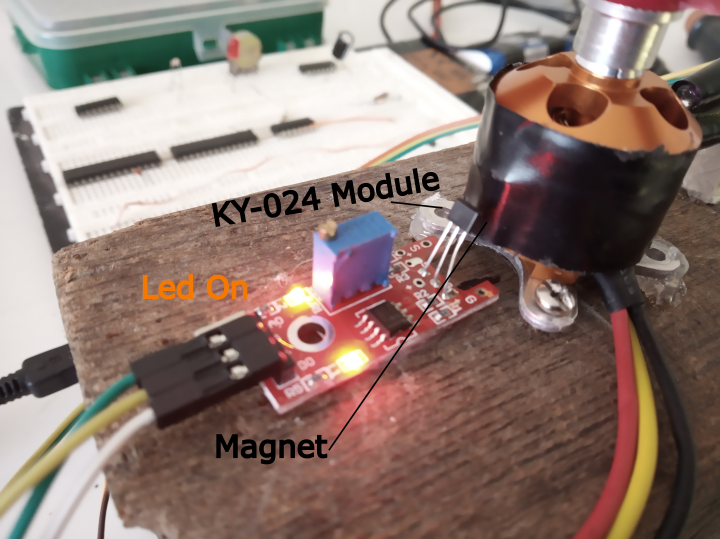
1. **Using Hall Sensor**
   1. **Circuit with KY-024 Module**

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* 1. **Circuit with US1881 Hall sensor**

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* 1. **Implementation**

** **

* 1. **Upload Arduino Sketch**
* Connect Arduino PC
* Open sketch *Hall\_Sensor\_v2.ino* at path\BLDC\_Speed\_Control\Hall\_Sensor\_v2
* Upload code to Arduino nano or Arduino Uno
  1. **Start motor**
* Disconnect ESC from energy source
* Connect Arduino PC
* Open Arduino IDE serial monitor
* Follow instructions showed in serial monitor

If you calibrated the motor and it does not be disconnected, you can choose normal operation.

Note: if the motor is disconnected from energy source or it shut down, it needs to be calibrated again.

1. **Change Setpoint**

Both *Hall\_Sensor\_v2.ino* and *IR\_Sensor\_v2.ino* have the line:



If you change the line a new target speed will be set.

1. **Change Serial signal of “Home position”**

Both *Hall\_Sensor\_v2.ino* and *IR\_Sensor\_v2.ino* have the line:



If you change the value, after that number of rotations a serial signal will print in serial monitor if the motor passes for sensor.