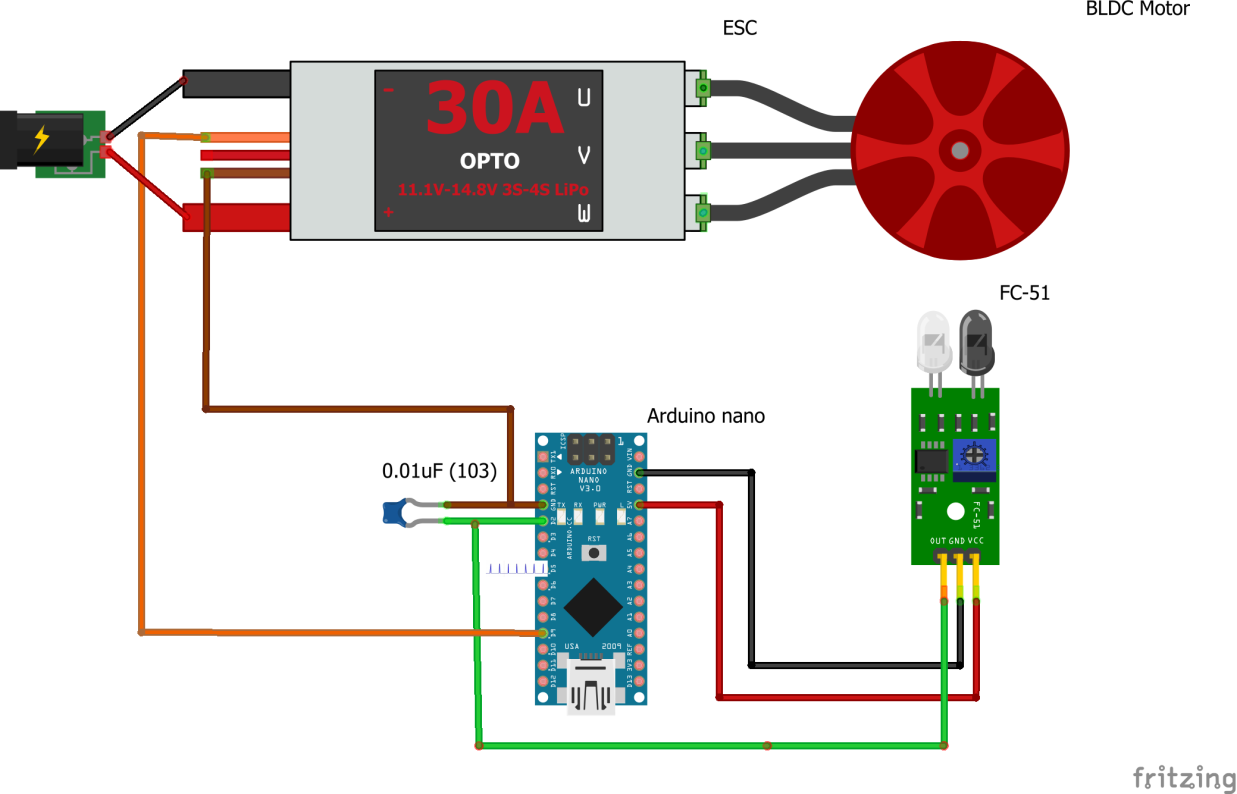
**INSTRUCTIONS**

**OS Tested:** Windows 10 64 bits

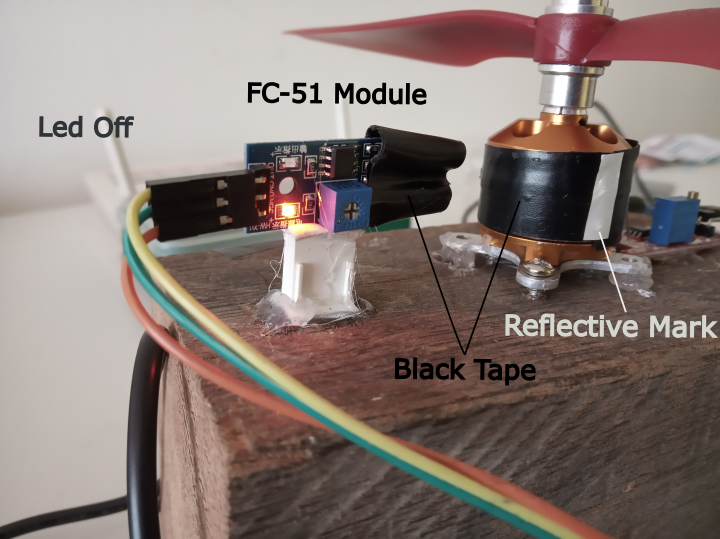
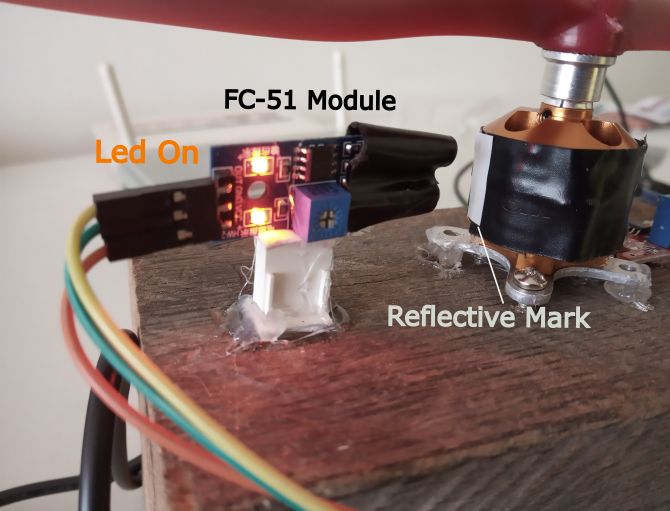
1. **Setup Arduino environment**

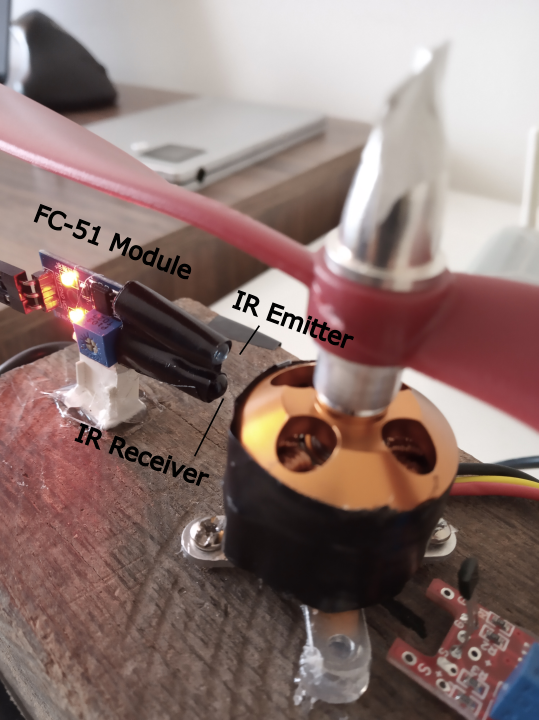
* Install Arduino IDE
* Upload Arduino script to Arduino board

1. **Using IR Sensor (“Home position” signal at D5)**
   1. **Circuit**

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* 1. **Implementation**

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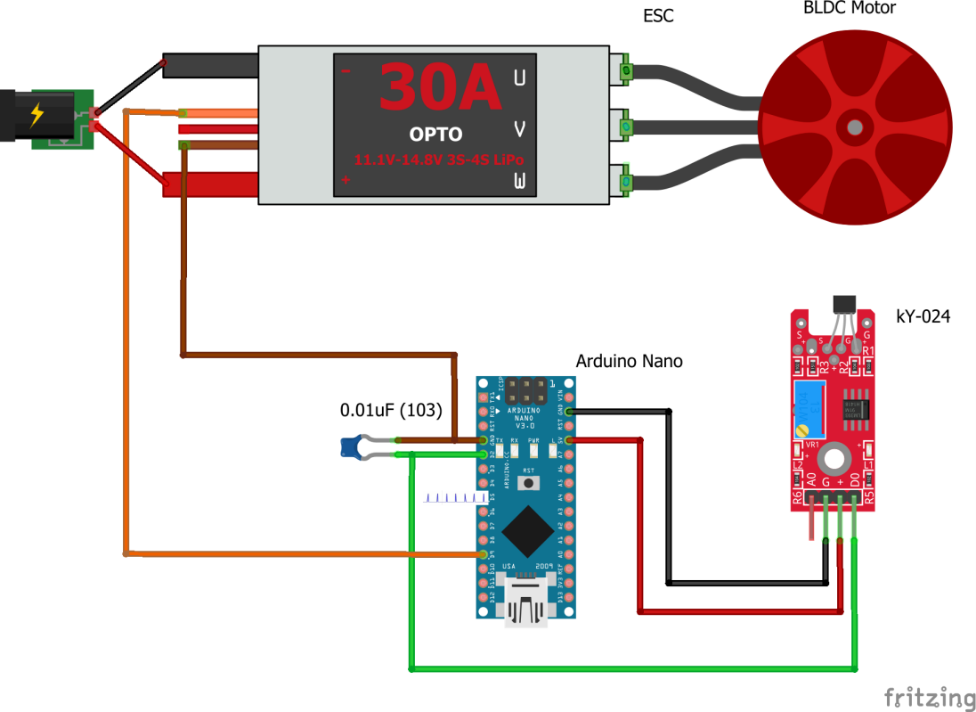
****

* 1. **Upload Arduino Sketch**
* Connect Arduino PC
* Open sketch *IR\_Sensor\_v3.ino* at path\BLDC\_Speed\_Control\IR\_Sensor\_v3
* 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
* Arduino will print “0” and “1”. “1” is printed when the motor is at home position and “0” when it is not.
* At D5 pin there is also an external signal for detect home position.

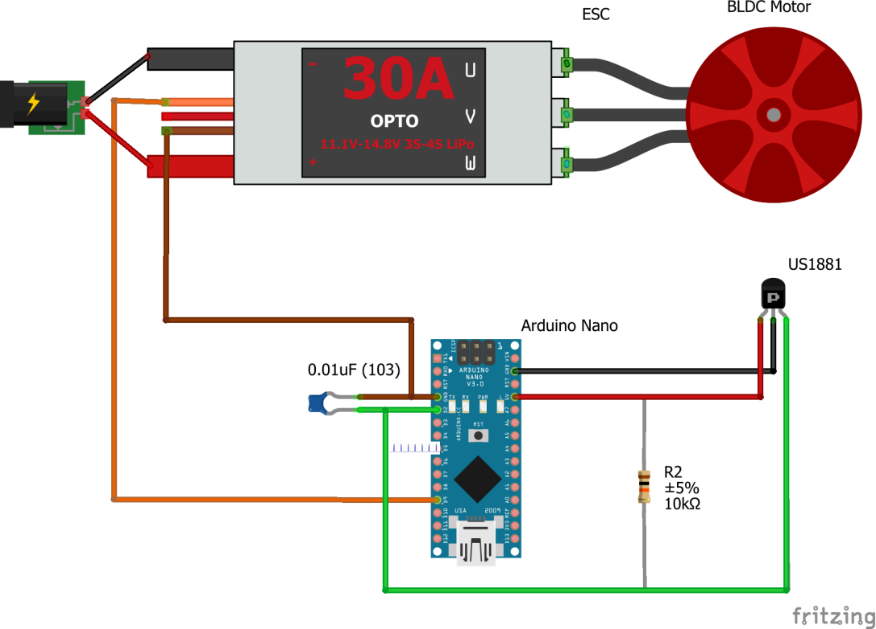
If you calibrated the motor and it does not be disconnected, you can choose normal operation.

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

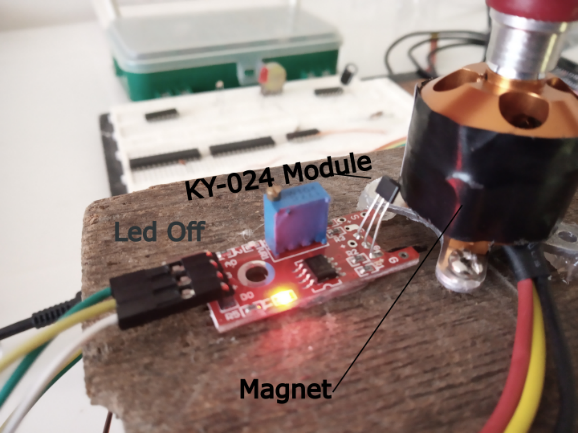
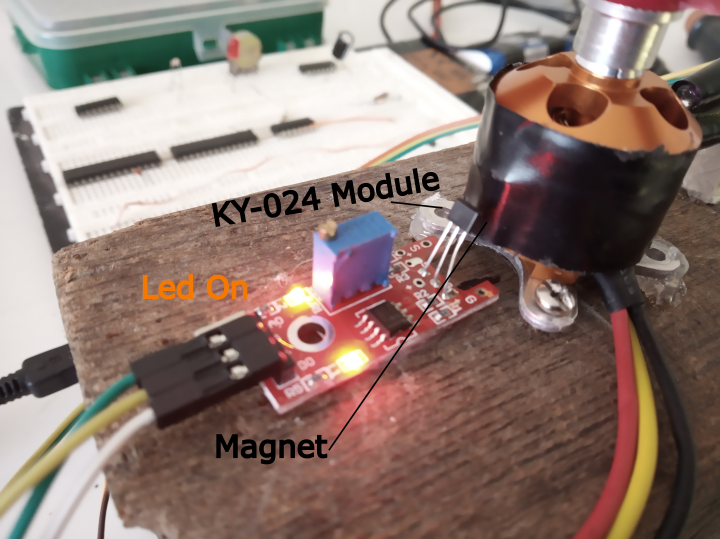
1. **Using Hall Sensor**
   1. **Circuit with KY-024 Module (“Home position” signal at D5)**

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* 1. **Circuit with US1881 Hall sensor (“Home position” signal at D5)**

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* 1. **Implementation**

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* 1. **Upload Arduino Sketch**
* Connect Arduino PC
* Open sketch *Hall\_Sensor\_v3.ino* at path\BLDC\_Speed\_Control\Hall\_Sensor\_v3
* 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
* Arduino will print “0” and “1”. “1” is printed when the motor is at home position and “0” when it is not.
* At D5 pin there is also an external signal for detect home position.

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\_v3.ino* and *IR\_Sensor\_v3.ino* have the line:



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