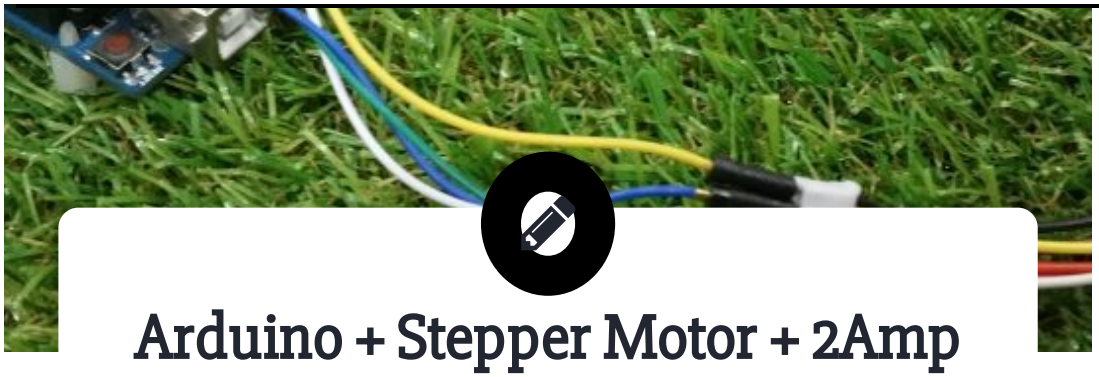
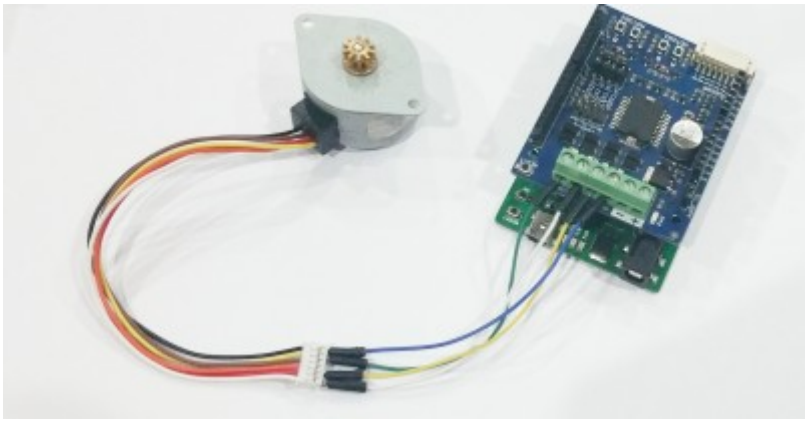


Arduino + Stepper Motor + 2Amp Motor Driver Shield

Arduino Arduino-Uno

Stepper Motor Uncategorized

February 19, 2016 by syasya



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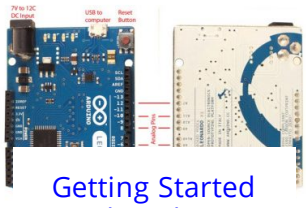
feedback mechanism, as long as the motor is carefully sized to the application. This type of control eliminates the need for expensive sensing and feedback devices such as optical encoders. The position is known simply by keeping track of the input step pulses. It is one of the most versatile forms of positioning systems. They are typically digitally controlled as part of an open loop system and are simpler and more rugged than closed loop servo systems.

DS18B20 Temperature Sensor



Getting Started with Arduino Leonardo

HARDWARE REQUIRED:

1. Arduino Uno
2. USB Mini Cable (2.0)
3. Adapter 12V 2A
4. 2 Amp Motor Driver Shield
5. Bipolar Stepper Motor or Unipolar Stepper Motor

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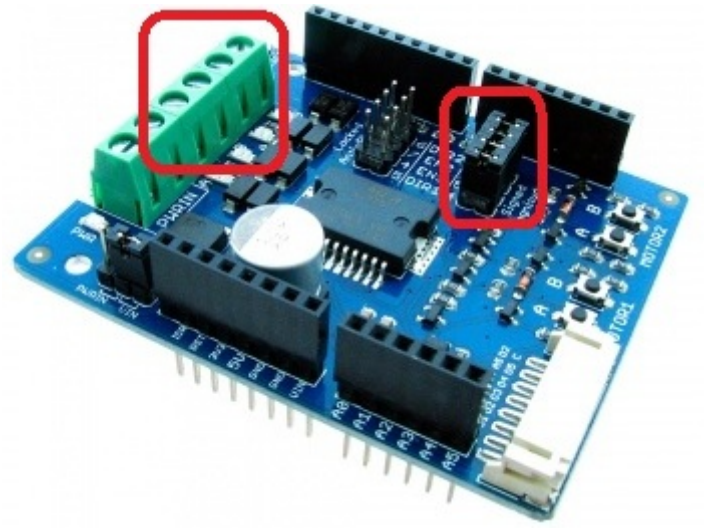
SOFTWARE REQUIRED:

Please refer to “Getting Started with Arduino” tutorial.

SUGGESTED READING

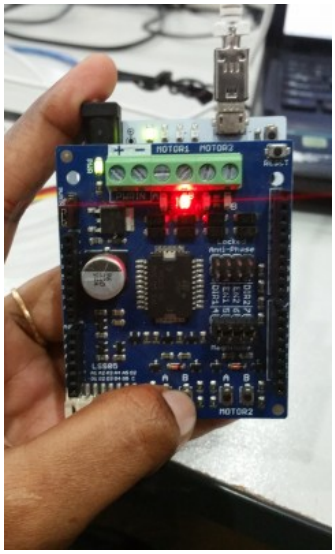
1. How Does Stepper Motor Works – Part 1
2. How Does Stepper Motor Works – Part 2

HARDWARE SETUP:



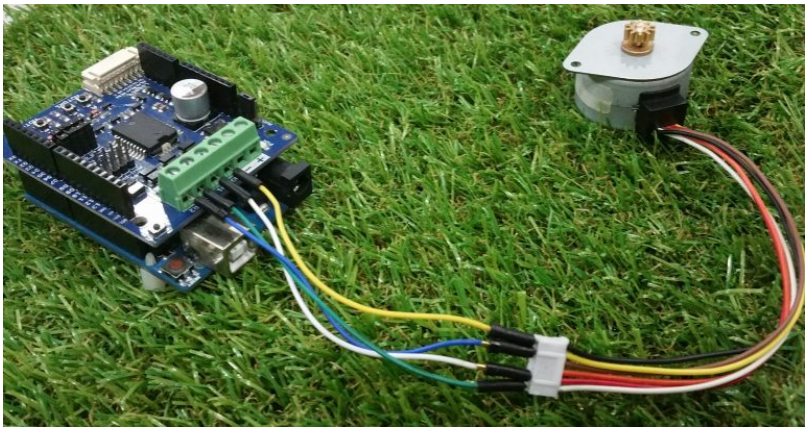
1）

Firstly, check the Motor Driver Shield by pressing the tester button on top of it.If all the motor LEDs blink, you can proceed.

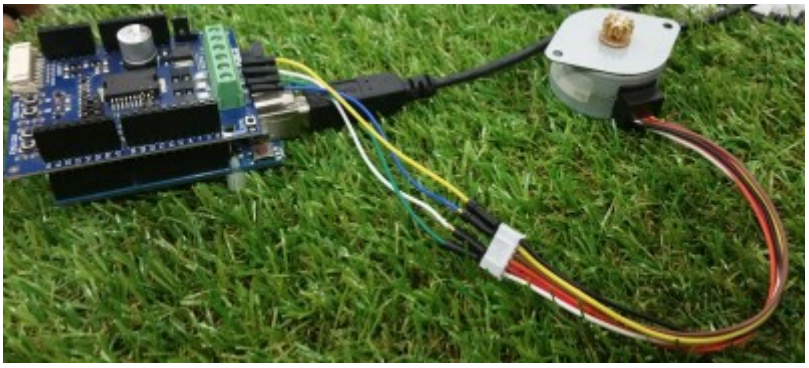


3）

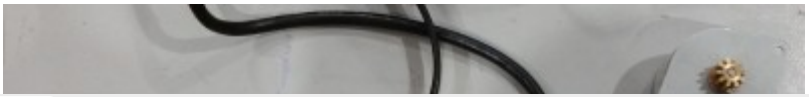
After that, connect the Stepper Motor to the 2Amp Motor Driver Shield using jumper wires by referring to the datasheet. You can refer to Fritzing schematic diagram shown below. (in Schematic diagram section)

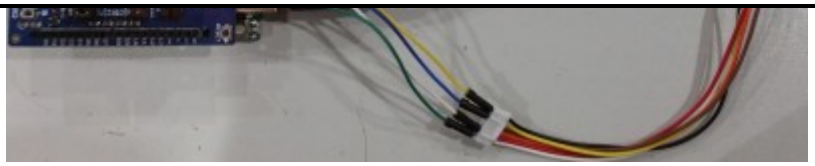


4）Then, plug in the USB B type cable to Arduino Uno.

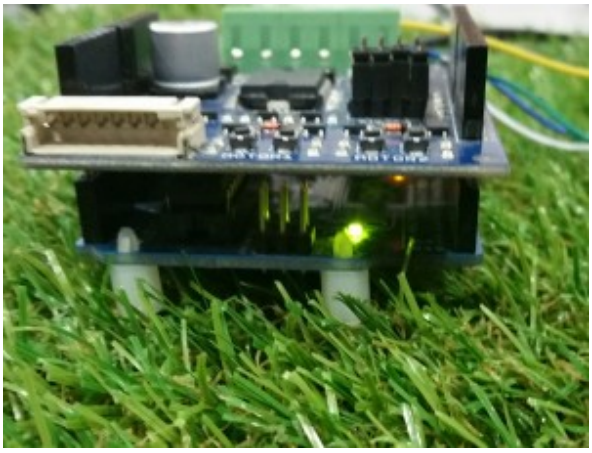


5）Plug in the power supply to the Arduino UNO as well.





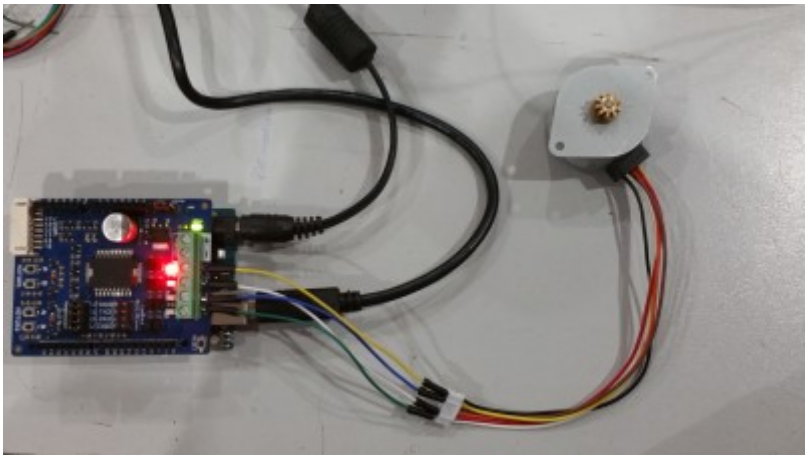
6）Then you will notice the green LED will light up.



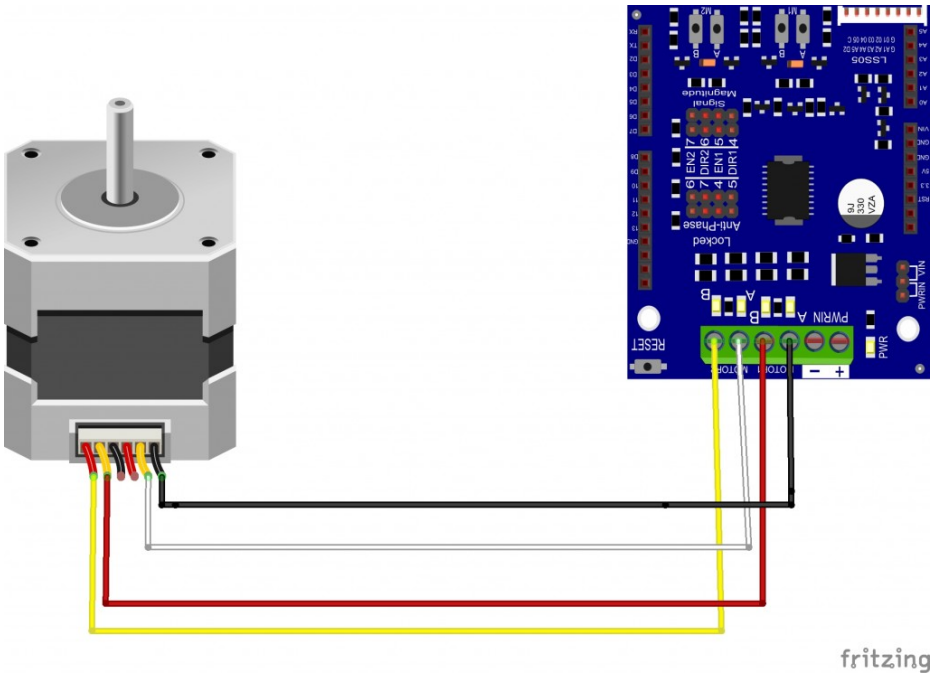
7）Go to the Arduino IDE and create your coding.

8）Then upload your coding.

9）Finally, the Stepper Motor will rotate.



schematic diagram below:



CODE OVERVIEW:

```
#include "Shield2AMotor.h"

// Connect 4 pin on SHIELD-2AMOTOR to "Signed Mag
Shield2AMotor motor(SIGNED_MAGNITUDE);

signed int leftSpeed, rightSpeed;
```

```
7
8  int i;
9
10 void setup()
11 {
12
13 }
14
15 void loop()
16 {
17 // Rotate 360 degree CW
18 for(i = 0; i &amp;amp;lt; 50; i++)
19 {
20 motor.control(100, 0);
21 motor.control(0, 100);
22 delay(10);
23 motor.control(0, 100);
24 motor.control(-100, 0);
```



```
30 motor.control(100, 0);
31 delay(10);
32 }
33 delay(1000);
34
35 // Rotate 360 degree CCW
36 for(i = 0; i &amp;amp;lt; 50; i++)
37 {
38 motor.control(0, -100);
39 motor.control(-100, 0);
40 delay(10);
41 motor.control(-100, 0);
42 motor.control(0, 100);
43 delay(10);
44 motor.control(0, 100);
45 motor.control(100, 0);
46 delay(10);
47 motor.control(100, 0);
48 motor.control(0, -100);
49 delay(10);
50 }
51 delay(1000);
52 }
```