

Knob

Overview



Control the position of a RC (hobby) servo motor with your Arduino and a potentiometer.

This example makes use of the Arduino servo library.

Specification

9G servo: please view SG90Servo-datasheet.pdf.

Path: \Public_materials\Datasheet\ SG90Servo-datasheet.pdf

Potentiometer:

Resistance Value: 10K ohm;

Adjustment Type: Top Adjustment

Pin definition

9G servo:

PWM=Orange (┐┐)
Vcc = Red (+)
Ground=Brown (-)

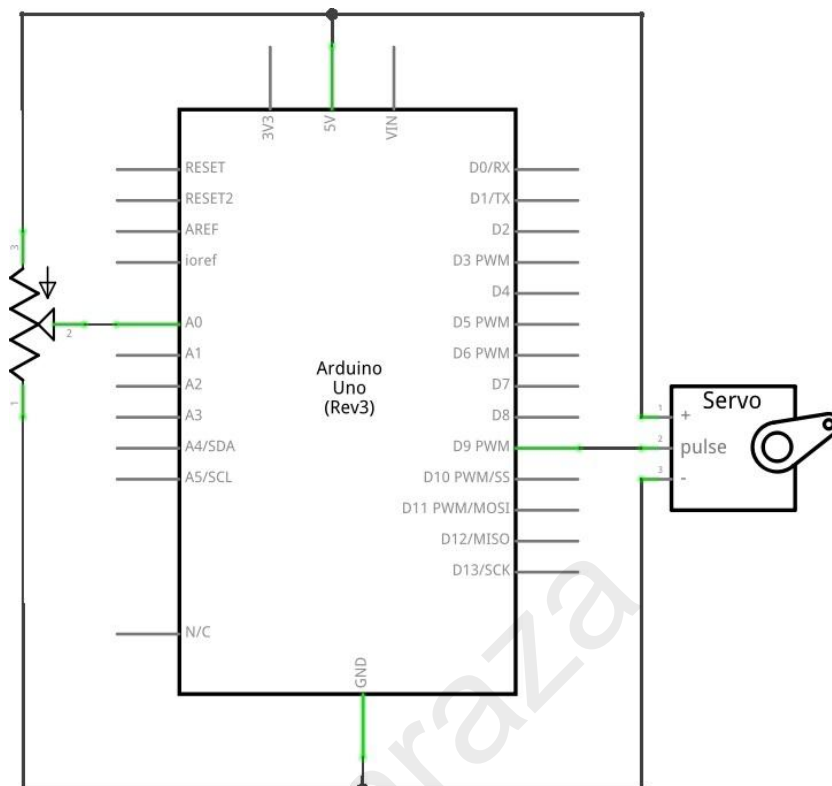
A diagram of a servo motor pinout showing three pins: a square pin for PWM, a round pin for Vcc, and a round pin for Ground.

Hardware required

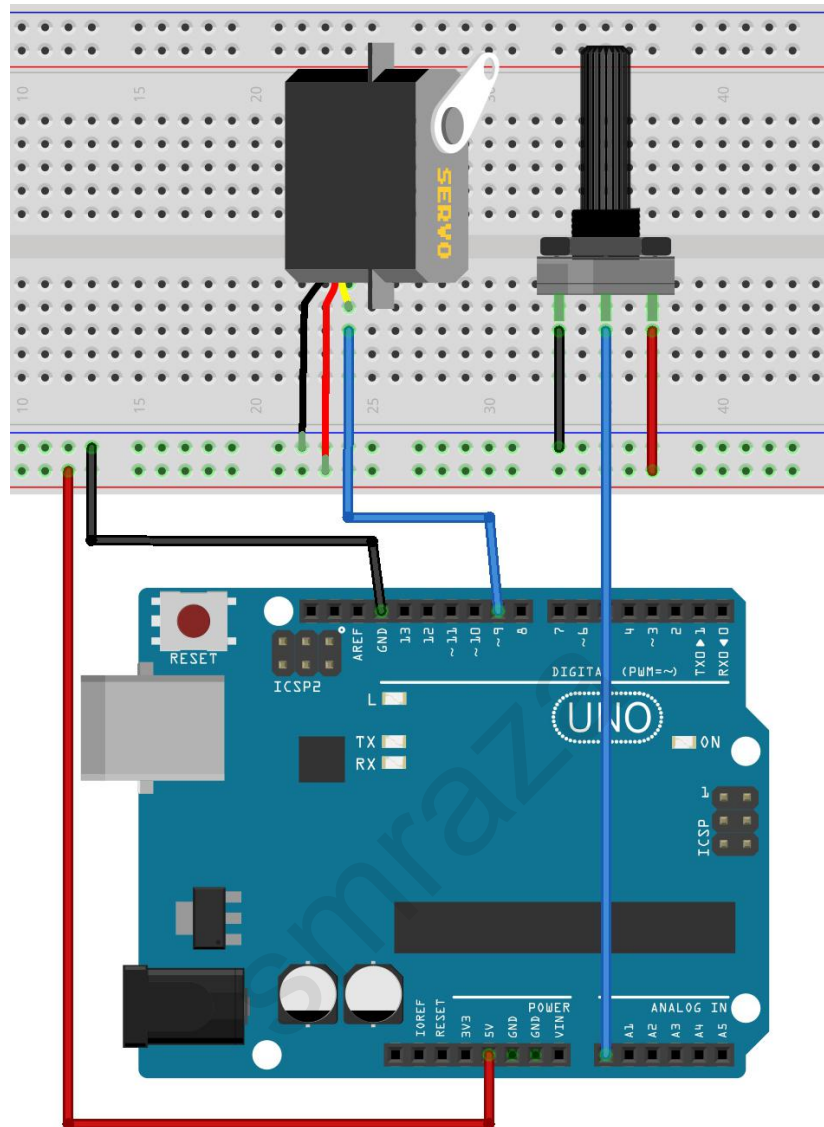
| Material diagram | Material name | Number |
|------------------|--------------------|---------|
| | 9g Servo | 1 |
| | 10KΩ potentiometer | 1 |
| | USB Cable | 1 |
| | UNO R3 | 1 |
| | Breadboard | 1 |
| | Jumper wires | Several |

Connection

Schematic



Connection diagram



Note: The middle pin of the potentiometer is connected to the analog port 0(A0).

Sample code

Note: sample code under the **Sample code** folder

```
#include <Servo.h>
```

```
Servo myservo; // create servo object to control a servo
```

```
int potpin = 0; // analog pin used to connect the potentiometer
```

```
int val;
```

```
void setup() {
```

```
    myservo.attach(9); // attaches the servo on pin 9 to the servo object
```

```
}
```

```
void loop() {
```

```
    val = analogRead(potpin);
```

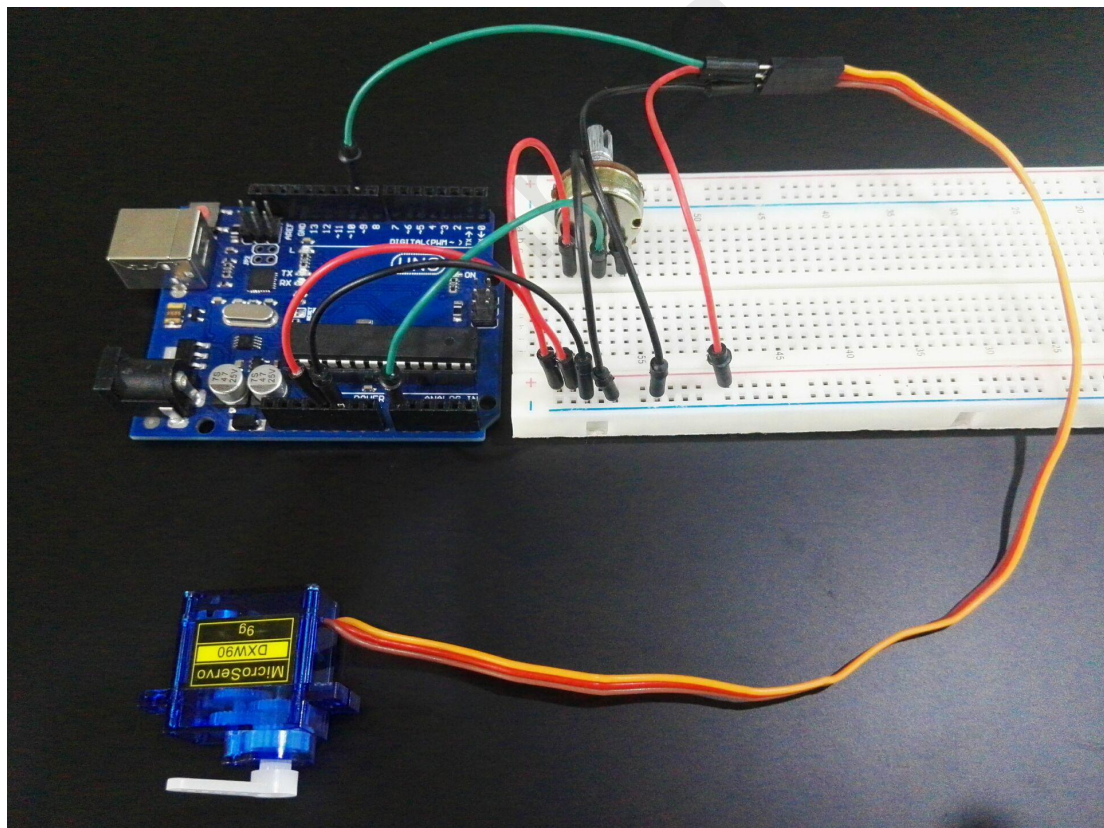
```
    val = map(val, 0, 1023, 0, 180);
```

```
    myservo.write(val);
```

```
    delay(15);
```

```
}
```

Example picture



Language reference

Tips : click on the following name to jump to the web page.

If you fail to open, use the Adobe reader to open this document.

[Map\(\)](#)

Application effect

When the rotary potentiometer, the servo motor also with the rotation.

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