

Controlling Servo Motor with Pot (Knob)

<http://arduino.cc/en/Tutorial/Knob>

Control the position of a RC (hobby) servo motor with your Arduino and a potentiometer. This example makes use of the Arduino servo library, by Michal Rinott <<http://people.interaction-ivrea.it/m.rinott>>

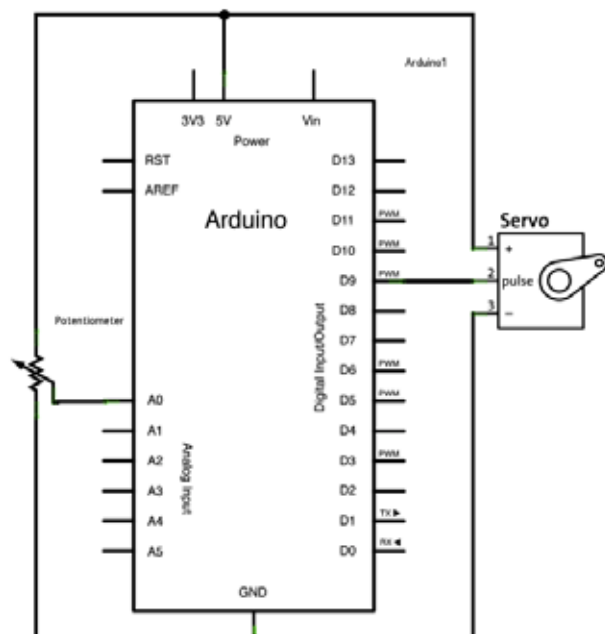
HARDWARE REQUIRED

Arduino Board
(1) Servo Motor 0-180°
(1) 10K Potentiometer

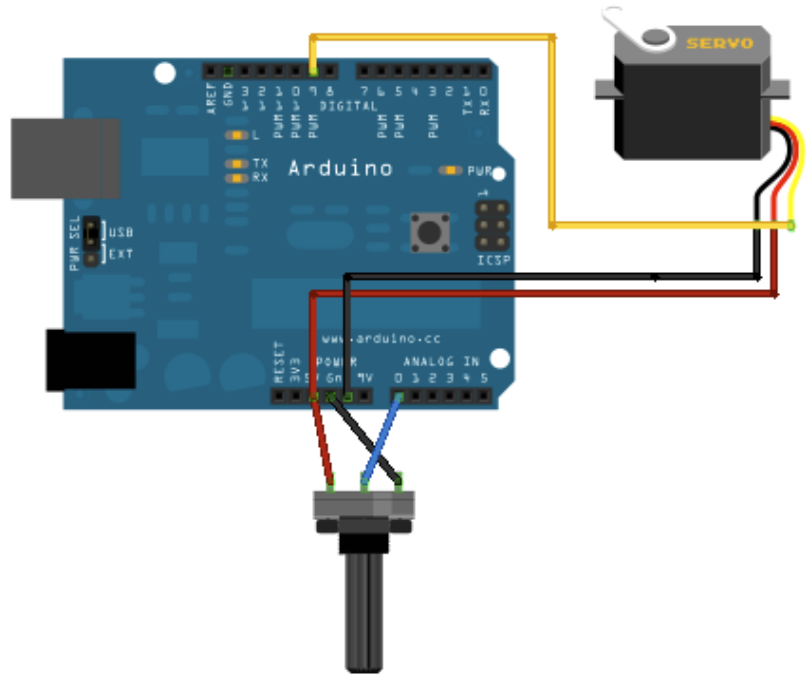
CIRCUIT

Servo motors have three wires: power, ground, and signal. The power wire is typically red, and should be connected to the 5V pin on the Arduino board. The ground wire is typically black or brown and should be connected to a ground pin on the Arduino board. The signal pin is typically yellow or orange and should be connected to pin 9 on the Arduino board. The potentiometer should be wired so that its two outer pins are connected to power (+5V) and ground, and its middle pin is connected to analog input 0 on the Arduino.

SCHEMATIC



IMAGE



CODE

```
// Controlling a servo position using a potentiometer (variable resistor)
// by Michal Rinott <http://people.interaction-ivrea.it/m.rinott>

#include <Servo.h>

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

int potpin = 0; // analog pin used to connect the potentiometer
int val; // variable to read the value from the analog pin
int servoPin=9; // Servo connected on PWM pin 9

void setup()
{
  myservo.attach(servoPin); // attaches the servo on pin 9 to the servo object
}

void loop()
{
  val = analogRead(potpin); // reads the value of the potentiometer
                             // (value between 0 and 1023)
  val = map(val, 0, 1023, 0, 179); // scale it to use it with the servo (value
  // between 0 and 180)
  myservo.write(val); // sets the servo position according to the
  // scaled value
  delay(15); // waits for the servo to get there
}
```