

# Driving Servo Motors

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Code Start Simulation Send To

Text 1 (Arduino Uno R3)

```
#include <Servo.h>
const int SERVO=9;
const int POT=0;
Servo myServo;
int val = 0;
void setup() {
  myServo.attach(SERVO);
  Serial.begin(9600);
}
void loop() {
  val = analogRead(POT);
  Serial.print("Potentiometer: ");
  Serial.print(val);
  val = map(val, 0, 1023, 0, 179);
  Serial.print(" ") <-> Servo: (" );
  Serial.print(val);
  Serial.println(" ");
  myServo.write(val);
  delay(15);
}
```

Serial Monitor

Potentiometer: (675) <-> Servo: (118)  
Potentiometer: (675) <-> Servo: (118)

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The circuit diagram shows the following components and connections:

- Power:** A 9V battery is connected to the Arduino's power pins (5V, GND, and VIN).
- Arduino:** An Arduino Uno R3 is used as the control board.
- Servo Motor:** A servo is connected to digital pin 9 and ground.
- Potentiometer:** A potentiometer is connected to analog pin A0 and ground.
- Capacitors:** Two 10uF capacitors (C1 and C2) are connected between the 9V battery and ground.
- Op-Amp:** An operational amplifier (U2) is used as a voltage follower, with its output (V0) connected to the Arduino's A0 pin.
- Resistor:** A 250k resistor (RPOT1) is connected between the Arduino's A0 pin and ground.

The circuit is labeled with letters A through E along the top and bottom edges, and numbers 1 through 6 along the left and right edges.

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