

Speed Control 2

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//This sketch uses the pot to control the motor speed backwards and forwards. There is a "deadzone" in the middle of the pot's travel where both motors are off. The lights indicate forward or backward motion.

```
int fwd = 8;
int rev = 9;
int pot = A1;
int red = 4;
int blue = 5;
int potValue;
int onTime;
int offTime;

void setup() {
  pinMode(fwd,OUTPUT);
  pinMode(rev,OUTPUT);
  pinMode(red,OUTPUT);
  pinMode(blue,OUTPUT);
  pinMode(pot,INPUT);
}

void loop() {
  potValue = analogRead(pot);

  //change the potValue to a smaller
  range eg. 0 - 64.
  potValue = potValue/16;

  // Sets the "deadzone" for both
  motors off. (Inverse logic.)
  if(potValue > 28 && potValue <
  36){
    digitalWrite(fwd,1);
    digitalWrite(rev,1);
    digitalWrite(red,0);
    digitalWrite(blue,0);

  }
```

```
//Sets the motor speed forwards.
if(potValue > 36){
  onTime = potValue - 36;
  offTime = 28 - onTime;
  digitalWrite(fwd,0);
  digitalWrite(blue,1);
  delay(onTime);
  digitalWrite(fwd,1);
  digitalWrite(blue,0);
  delay(offTime);
}

//Sets the motor speed backwards.
if(potValue < 28){
  onTime = 28 - potValue;
  offTime = 28 - onTime;
  digitalWrite(rev,0);
  digitalWrite(red,1);
  delay(onTime);
  digitalWrite(rev,1);
  digitalWrite(red,0);
  delay(offTime);
}
}
```