

Speed Control 1      6/11/18

## Pulse Width Modulation (PWM)

//This sketch uses the pot to control the motor speed. The lights indicate the "onTime" and the "offTime". The frequency of the pulses is around 40hz.

```
int fwd = 8;
int rev = 9;
int pot = A1;

int red = 4;
int blue = 5;
int onTime;
int offTime;

void setup() {
  pinMode(fwd,OUTPUT);
  pinMode(rev,OUTPUT);
  pinMode(red,OUTPUT);
  pinMode(blue,OUTPUT);
  pinMode(pot,INPUT);
  digitalWrite(rev,0);
}

void loop() {
  onTime = analogRead(pot);
  onTime = onTime/40;
  offTime = 25 - onTime;
  digitalWrite(fwd,1);
  digitalWrite(red,1);
  digitalWrite(blue,0);
  delay(onTime);
  digitalWrite(fwd,0);
  digitalWrite(red,0);
  digitalWrite(blue,1);
  delay(offTime);
}
```