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#define BTN_DIR 13
#define POT 0
#define EN1 3
#define M1A 4
#define M1B 7
#define LED_GREEN 2
#define LED_RED 5
#define LED_YELLOW 1

int pos, veloc, oldpos=-1, Speed;

void setup() {
  pinMode(M1A, OUTPUT);
  pinMode(M1B, OUTPUT);
  pinMode(LED_GREEN, OUTPUT);
  pinMode(LED_RED, OUTPUT);
  pinMode(LED_YELLOW, OUTPUT);
  pinMode(BTN_DIR, INPUT);
}

void loop() {

  pos = analogRead(POT);
  Speed= analogRead(POT);
  if (pos != oldpos){
    veloc = map(pos, 0, 1023, 0, 255);
    Speed = map(pos, 0, 1023, 0, 255);
    analogWrite(EN1, veloc);
    analogWrite(LED_RED, Speed);

    oldpos = pos;
  }
  if (digitalRead(BTN_DIR)==LOW){
    digitalWrite(M1A, HIGH);
    digitalWrite(M1B, LOW);
    digitalWrite(LED_GREEN, HIGH);
    digitalWrite(LED_YELLOW, LOW);
  }
  else {
    digitalWrite(M1A, LOW);
    digitalWrite(M1B, HIGH);
    digitalWrite(LED_YELLOW, HIGH);
    digitalWrite(LED_GREEN, LOW);
  }
  delay(200);
}

```

