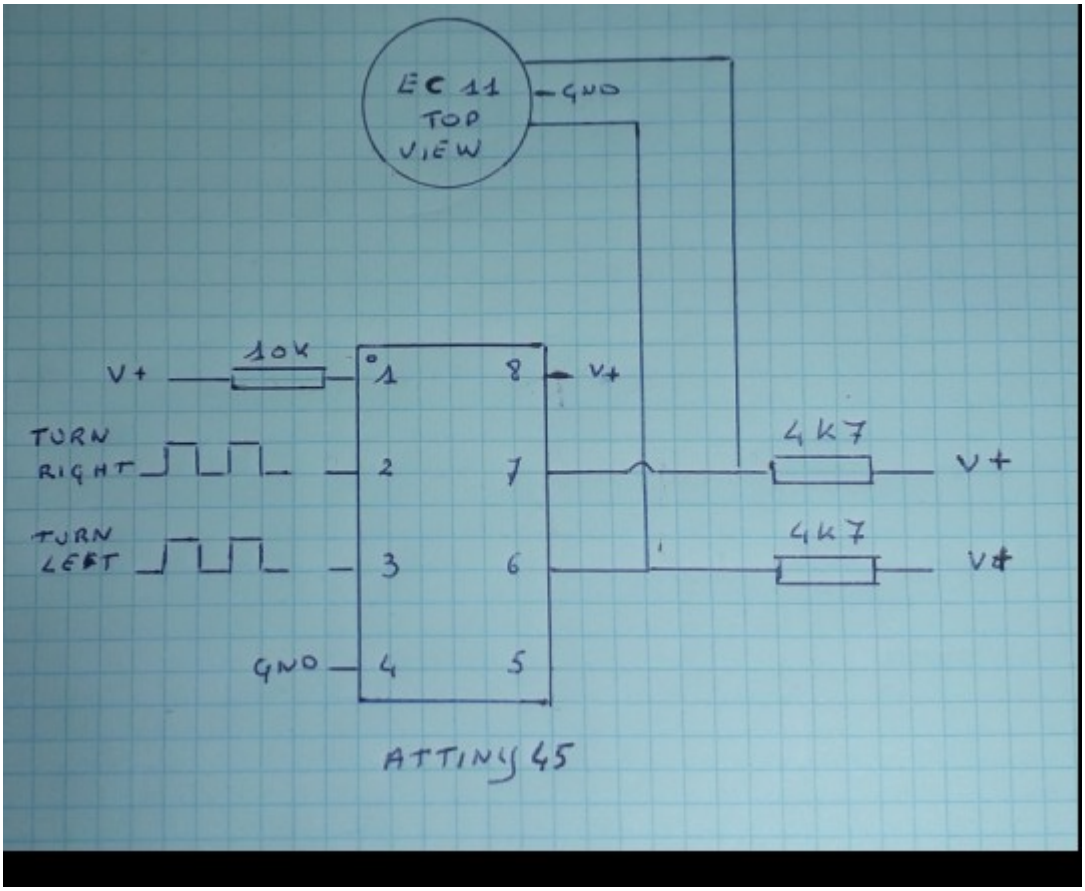
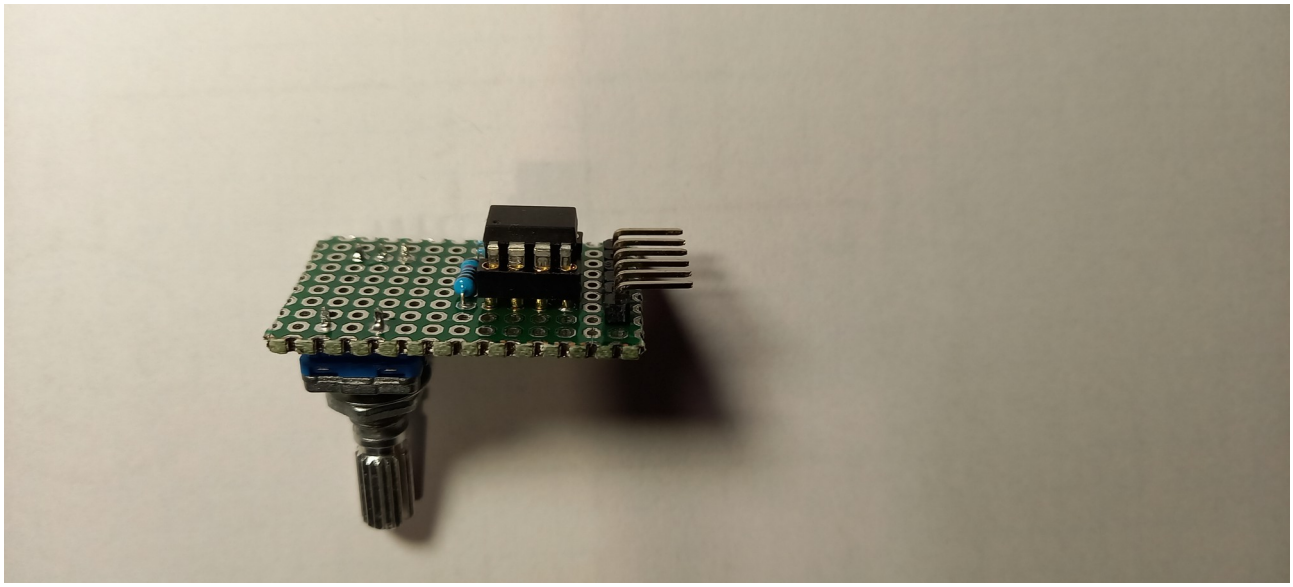
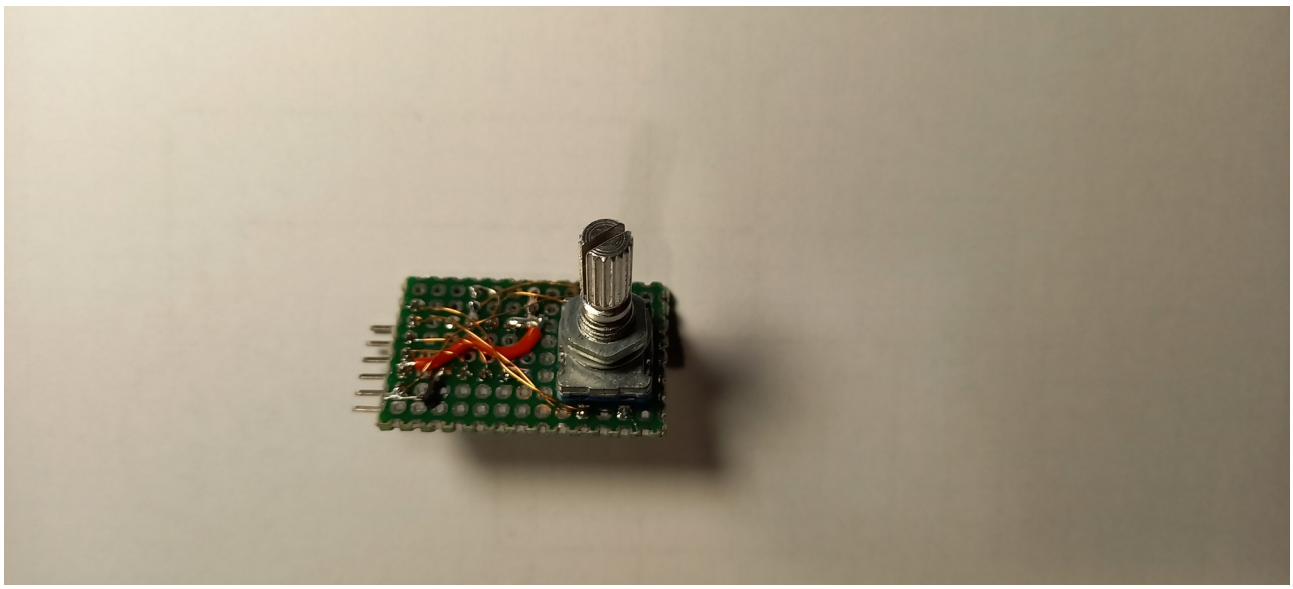
**EC11 rotary encoder the easy way**





**what do we need**
1x ATTINY45
2x 4K7
1x 10K

**what do we get**
1x pulse output when turning right
1x pulse output when turning left
power supply 3.3V or 5V
no extra capacitors or resistors
no libraries
works for slow and fast rotation
cheap about 3€
easy to build

**ATTINY45 program**

```
bool input_1_bool;
bool input_2_bool;
bool input_1_vorig_bool;

void setup() {
  pinMode(1, INPUT);
  pinMode(2, INPUT);
  pinMode(3, OUTPUT);
  pinMode(4, OUTPUT);
}

void loop() {
  input_1_bool = digitalRead(1);
  input_2_bool = digitalRead(2);
  delay(2);
  if(input_1_bool == digitalRead(1)){
    if(input_1_bool != input_1_vorig_bool){
      if((!input_1_bool) && (!input_2_bool)){
        digitalWrite(3, true);
        delay(20);
        digitalWrite(3, false);
        delay(18);
      }
      if((!input_1_bool) && (input_2_bool)){
        digitalWrite(4, true);
        delay(20);
        digitalWrite(4, false);
        delay(18);
      }
      input_1_vorig_bool = input_1_bool;
    }
  }
}
```

connect
ATTINY45 pin 2 with ESP32 GPIO26
ATTINY45 pin 3 with ESP32 GPIO27

**ESP32 test program**

```
int totaal_int = 0;
bool int_bool = false;
```


```
int totaal_int = 0;
bool int_bool = false;
```


```
void setup() {
  Serial.begin(230400);
  pinMode(26, INPUT);
  pinMode(27, INPUT);
  attachInterrupt(26, plus, RISING);
  attachInterrupt(27, min, RISING);
}

void loop() {
  if(int_bool){
    Serial.println(totaal_int);
    int_bool = false;
  }
}

void plus(){
  totaal_int ++;
  int_bool = true;
}

void min(){
  totaal_int --;
  int_bool = true;
}
```

github
https://github.com/thieu-b55/EC11-rotary-encoder-the-easy-way

have fun,
thieu