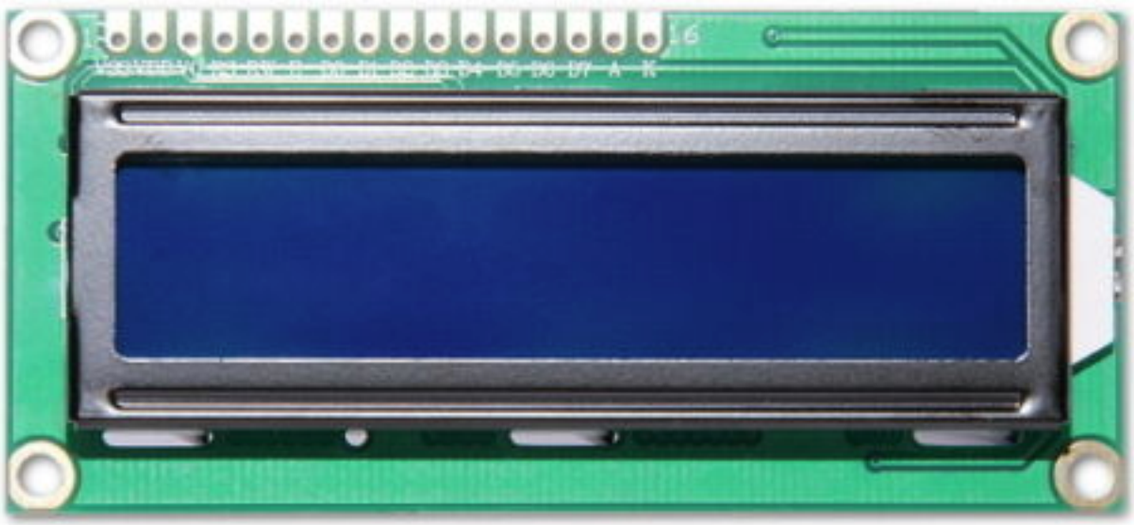
Dramaläb

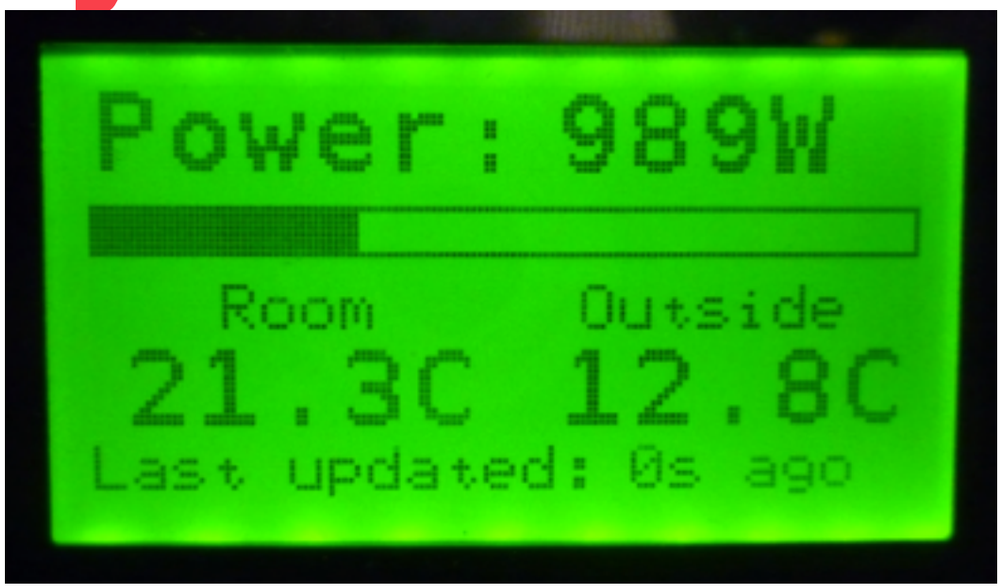
#4
Dramaläb
Session

18.04.15 - SER F1.FREIRAUM
14:00 - 19:00

CONTROL IS IN THE AIR:
CONNECT AND CONTROL REMOTELY A SERVO

Display

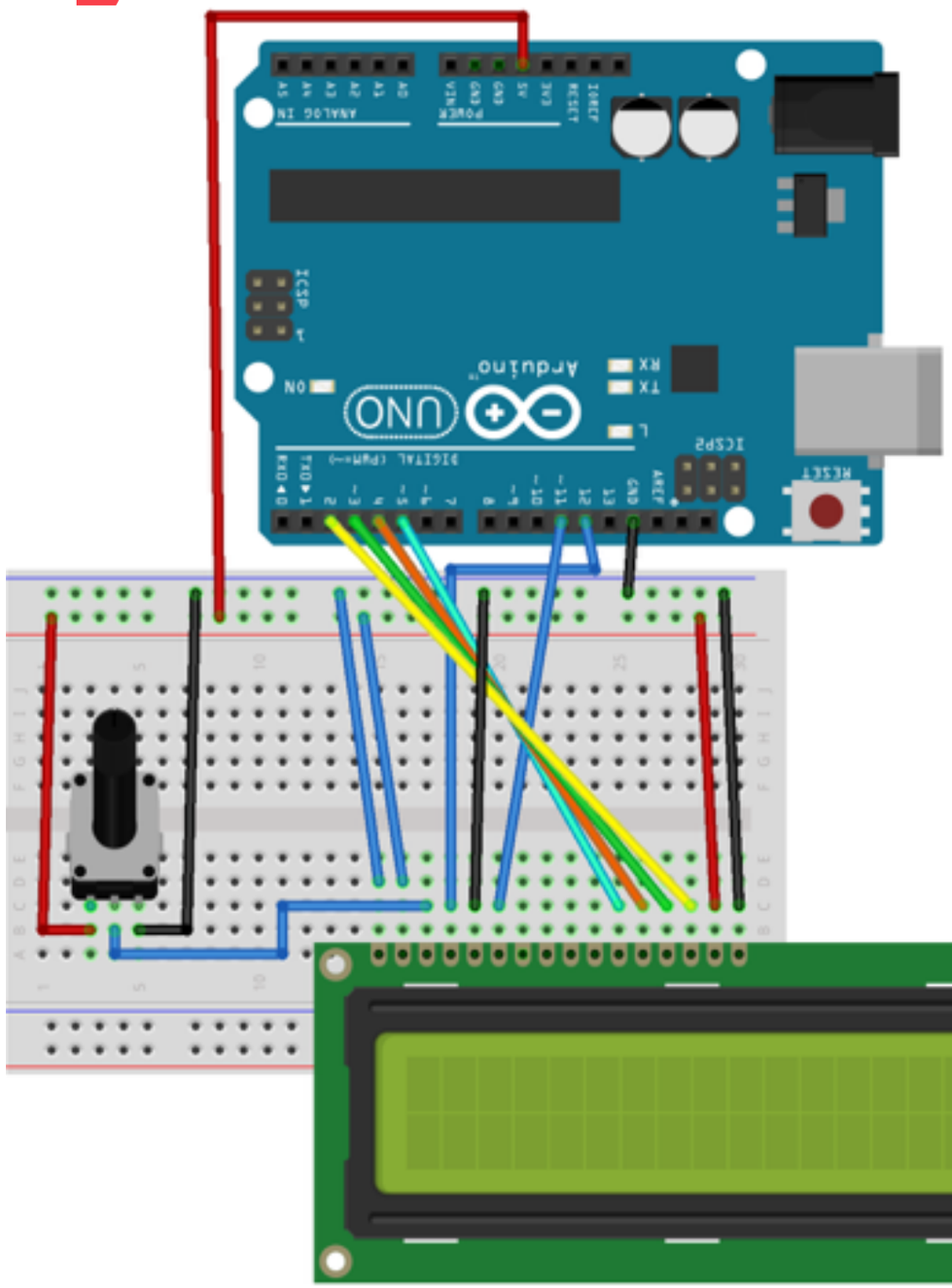



Power: 989W
Room
Outside
21.3C
12.8C
Last updated: 0s ago


OpenEnergyMonitor
Power: 985W
Room Temp:22.0C
Last update: 5s ago

Display

RS --> 12
E --> 11
D4 --> 5
D5 --> 4
D6 --> 3
D7 --> 2
RW --> GND
V0 --> 10K Poti
K --> GND
A --> 5V
VSS --> GND
VDD --> 5V



Display

```
#include <LiquidCrystal.h>

LiquidCrystal lcd(12, 11, 5, 4, 3, 2);

void setup() {
  lcd.begin(16, 2);
  lcd.print("Hello, DramaLab!");
}

void loop() {
  //first col, second row, count starts at 0!
  lcd.setCursor(0, 1);
  // print the number of seconds since reset
  lcd.print(millis()/1000);
}
```

Display

Experiment with:

lcd.leftToRight();

lcd.clear();

lcd.rightToLeft();

lcd.cursor();

lcd.noAutoscroll();

lcd.noBlink();

lcd.noCursor();

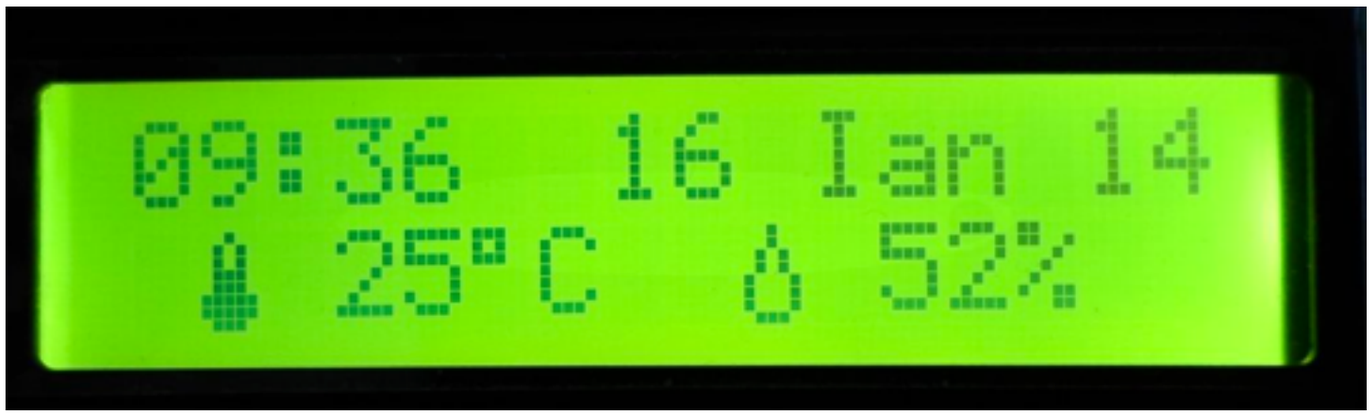
lcd.scrollDisplayLeft();

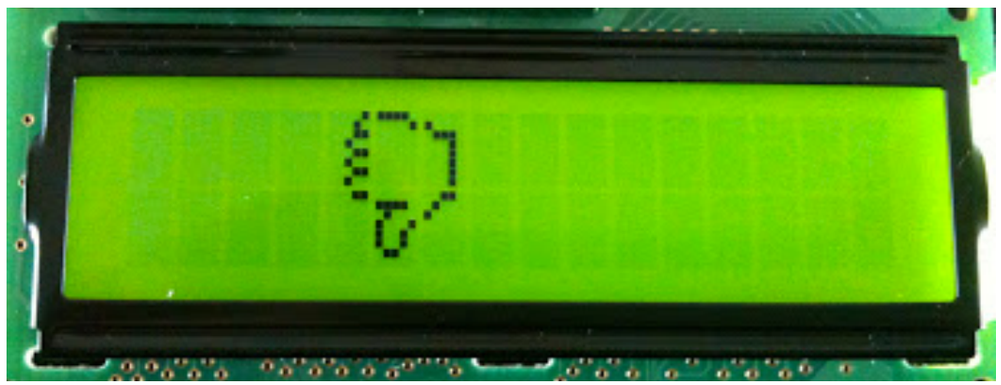
lcd.blink();

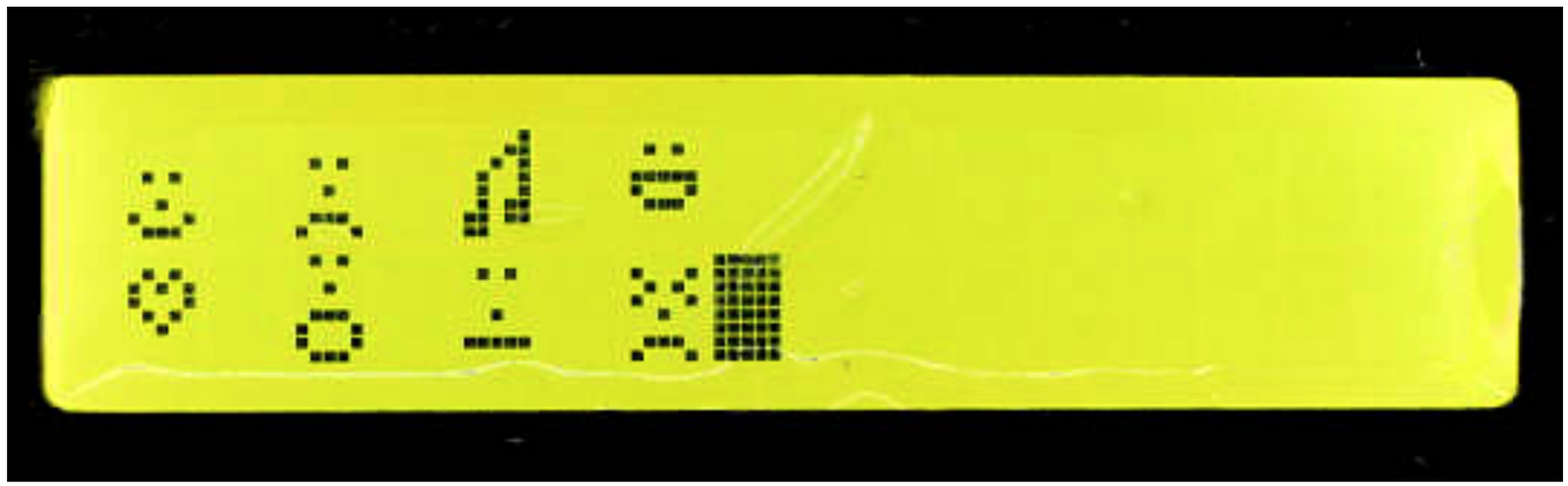
lcd.autoscroll();

lcd.scrollDisplayRight();

Custom Characters







Custom Characters

lcd.createChar(0, customChar);

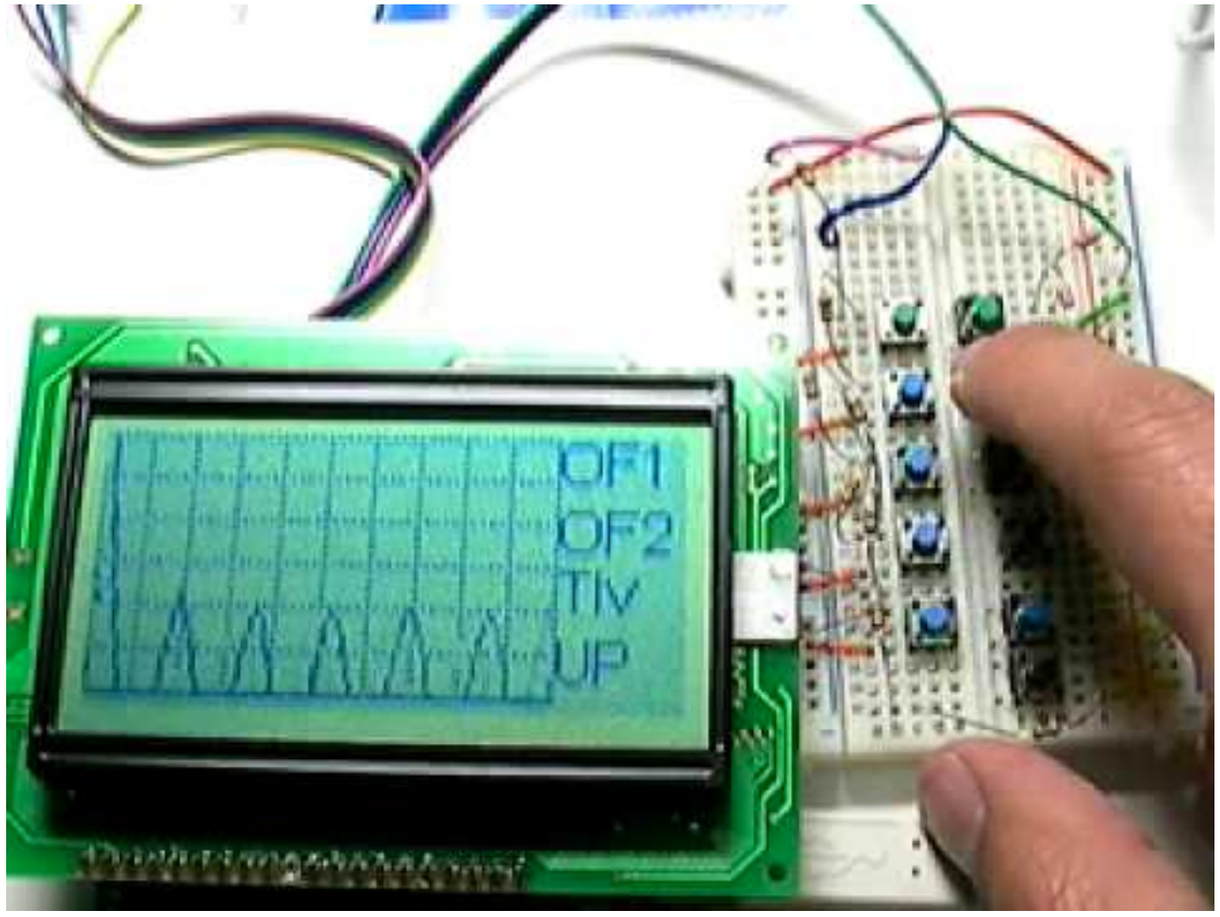
Pixels

Output

```
byte customChar[8] = {
        0b00100,
        0b01110,
        0b11111,
        0b01110,
        0b01110,
        0b01110,
        0b01110,
        0b01110
};
```

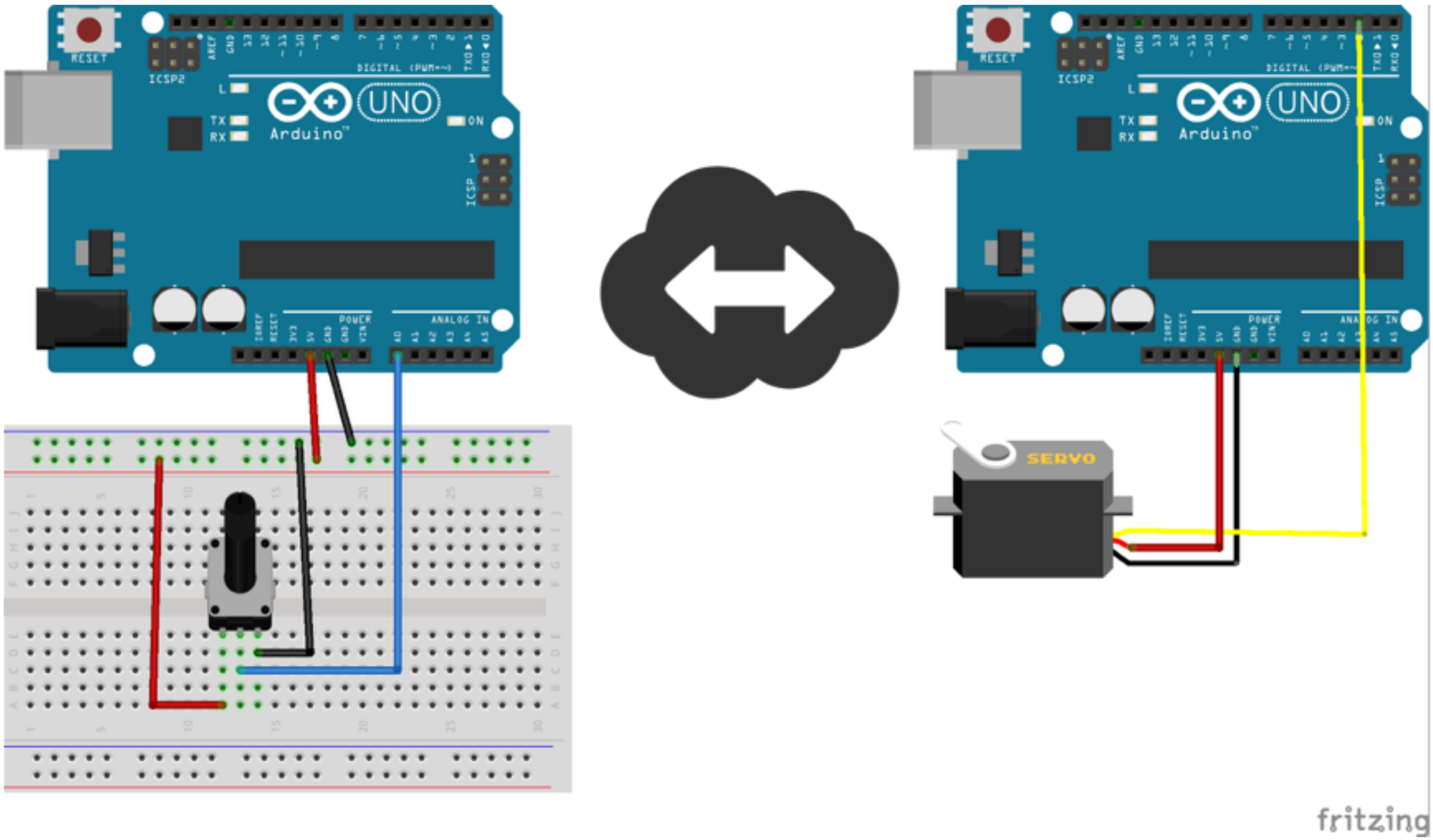
http://omerk.github.io/lcdchargen/

GLCD

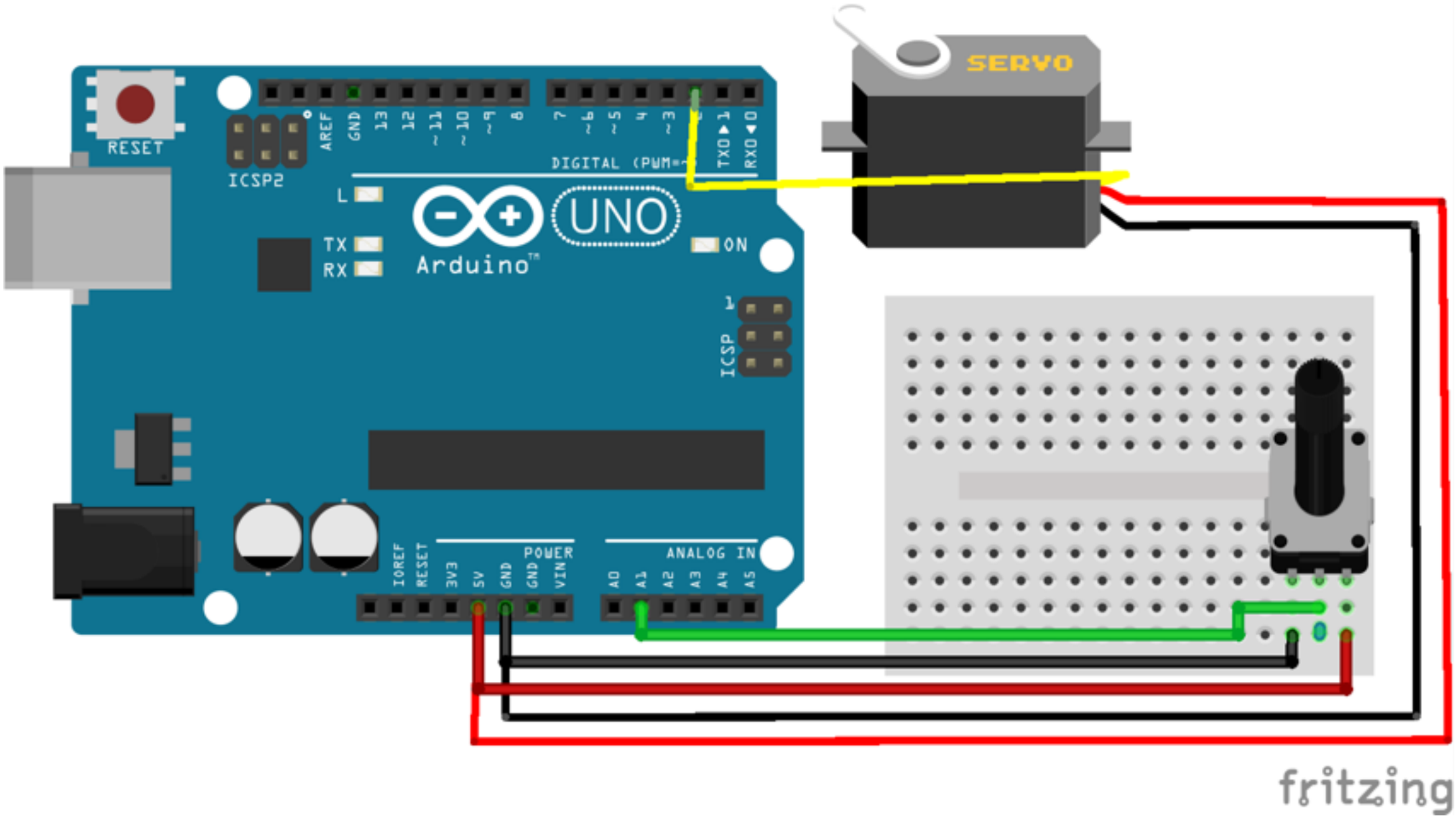

DF1
DF2
TIv
UP


This Life ~ In Flames
Track 1/13
0:57/3:35/-2:38
In Flames - Leeches
In Flames - Reflect The Storm
In Flames - Dead End

Remote Servo



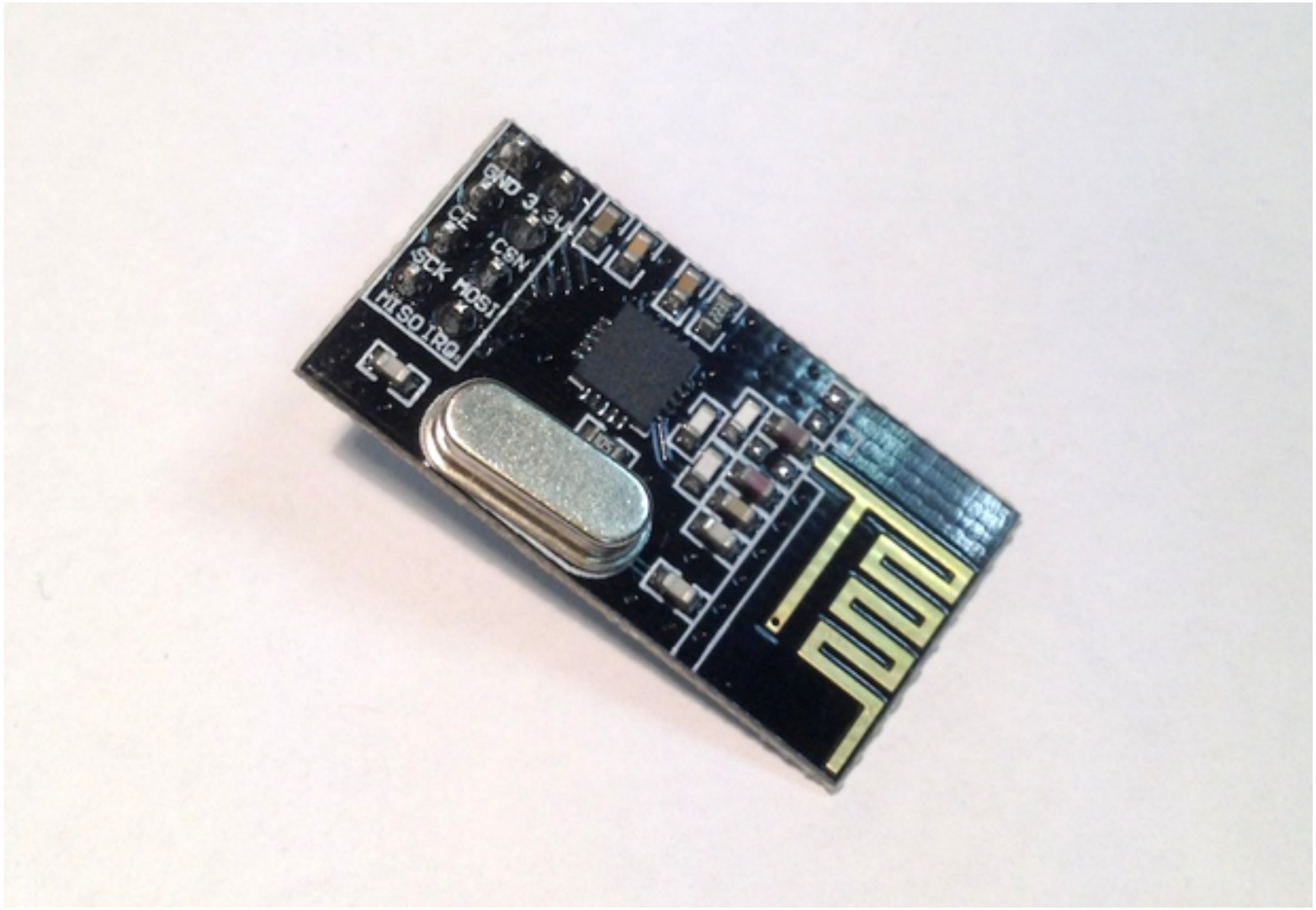
Getting Started



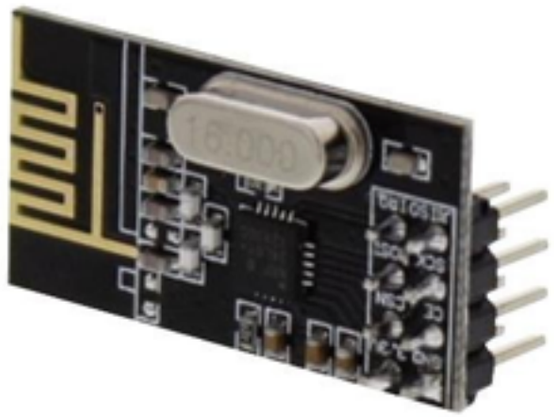
Getting Started

```
#include <Servo.h>

Servo myservo;
int servoPin = 9;
int potiPin = A1;

void setup()
{
  Serial.begin(9600);
  Serial.println("DramaLab_ServoPoti ready!");
  myservo.attach(servoPin);
}

void loop()
{
  int analogValue = analogRead(potiPin);
  Serial.print("Poti value ");
  Serial.println(analogValue);
  int servoDegrees = map(analogValue,0,1023,0,90);
  Serial.print("Servo value ");
  Serial.println(servoDegrees);
  myservo.write(servoDegrees);
  delay(500);
}
```

Wireless with 2.4GHz



Wireless with 2.4GHz



1	GND
2	VCC
3	CE
4	CSN
5	SCK
6	MOSI
7	MISO
8	IRQ

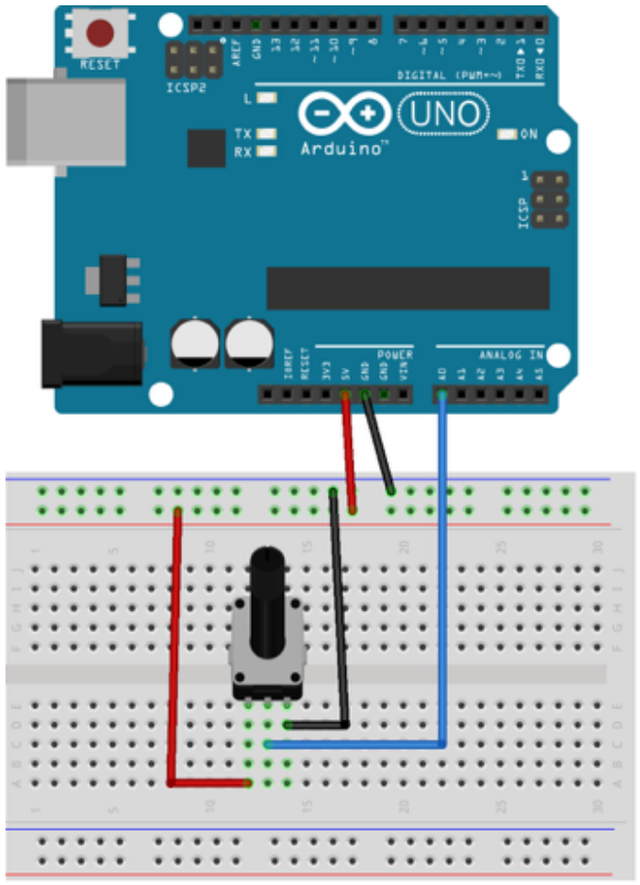
Arduino Pin 11 to RF Module Pin 6 (MOSI)
Arduino Pin 12 to RF Module Pin 7 (MISO)
Arduino Pin 13 to RF Module Pin 5 (SCK)
Arduino Pin 7 to RF Module Pin 4 (CSN)
Arduino Pin 8 to RF Module Pin 3 (CE)
Arduino 3.3V to RF Module Pin 2 (VCC / 3.3V)
Arduino GND to RF Module Pin 1 (GND)

Wireless with 2.4GHz

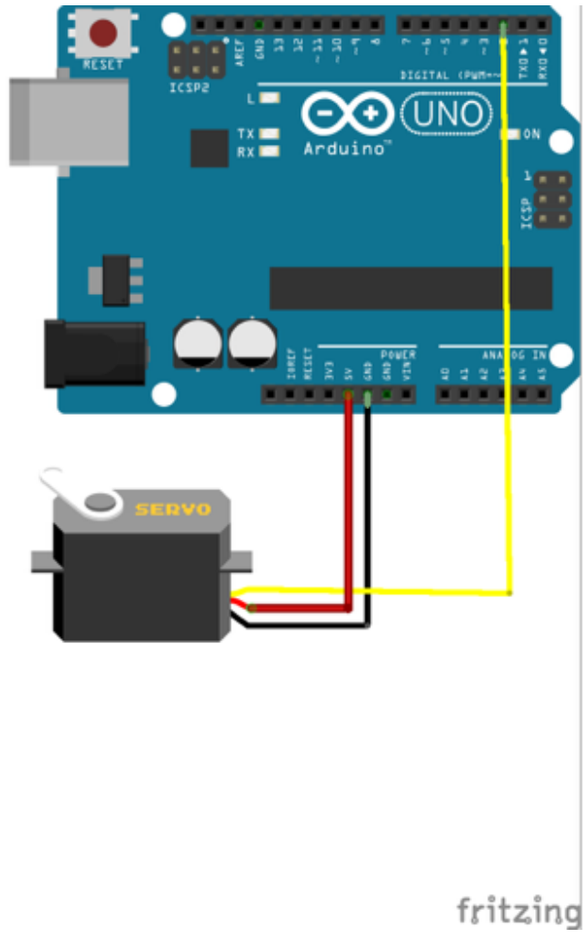
Demo: Wireless Chat

Wireless with 2.4GHz

DramaLab_RF24_RemoteSender



DramaLab_RF24_RemoteReceiver



Wireless with 2.4GHz

DramaLab_RF24_RemoteSender

DramaLab_RF24_RemoteReceiver

Modify to send Poti value and control Servo!