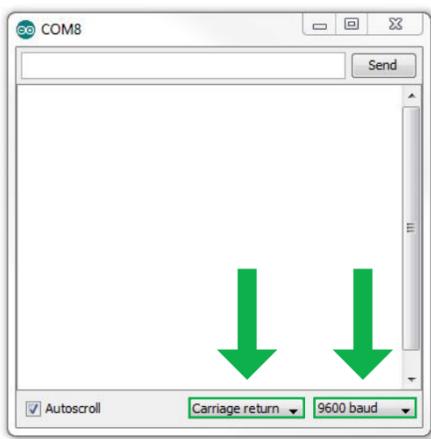
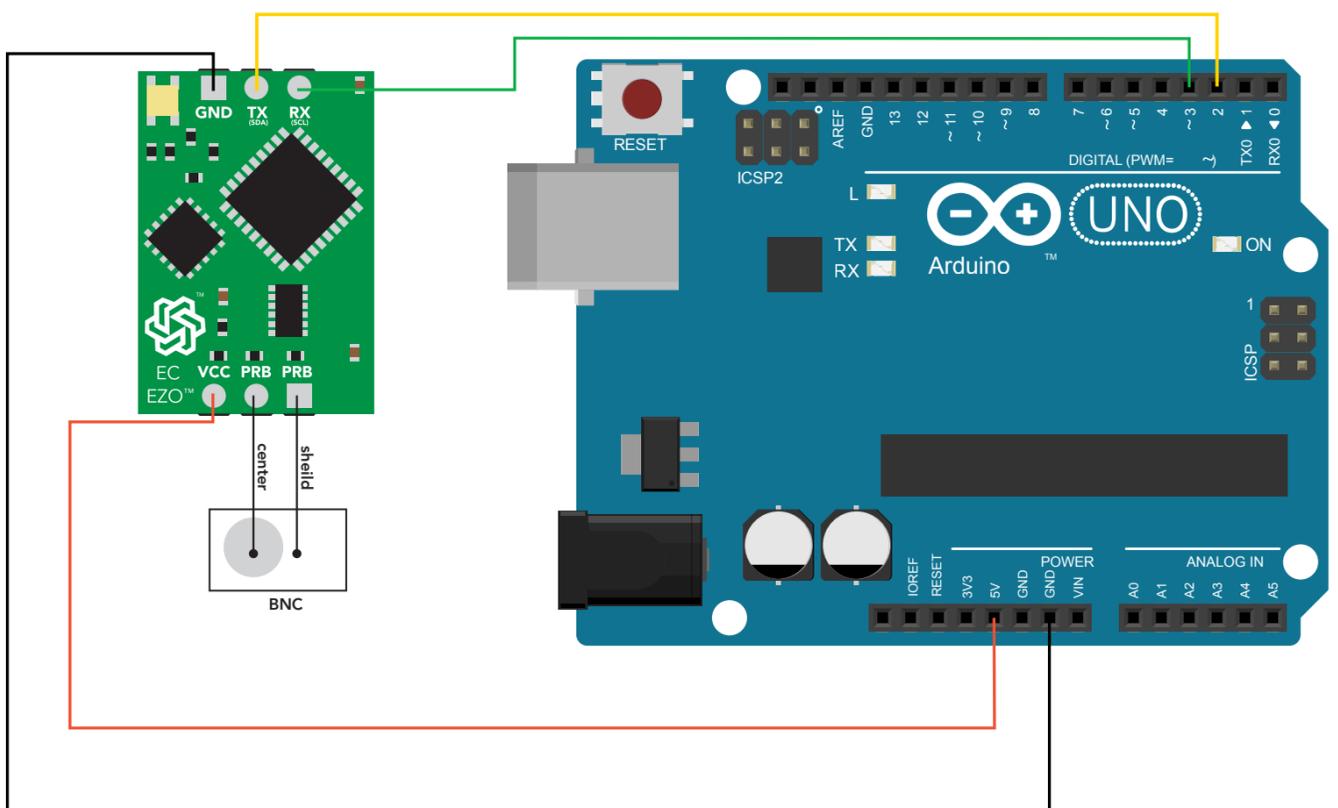




Arduino Uno Conductivity Sample Code



//This code was written to be easy to understand.
//Code efficiency was not considered.
//Modify this code as you see fit.
//This code will output data to the Arduino serial monitor.
//Type commands into the Arduino serial monitor to control the EC circuit.
//This code was written in the Arduino 1.6.5 IDE
//An Arduino UNO was used to test this code.



```
#include <SoftwareSerial.h>
#define rx 2
#define tx 3

SoftwareSerial myserial(rx, tx);

String inputstring = "";
String sensorstring = "";
boolean input_string_complete = false;
boolean sensor_string_complete = false;

void setup() {
  Serial.begin(9600);
  myserial.begin(9600);
  inputstring.reserve(10);
  sensorstring.reserve(30);
}

void serialEvent() {
  inputstring = Serial.readStringUntil(13);
  input_string_complete = true;
}

void loop() {
  if (input_string_complete) {
    myserial.print(inputstring);
    myserial.print('\r');
    inputstring = "";
    input_string_complete = false;
  }

  if (myserial.available() > 0) {
    char inchar = (char)myserial.read();
    sensorstring += inchar;
    if (inchar == '\r') {
      sensor_string_complete = true;
    }
  }

  if (sensor_string_complete == true) {
    if (isdigit(sensorstring[0]) == false) {
      Serial.println(sensorstring);
    }
    else {
      print_EC_data();
    }
    sensorstring = "";
    sensor_string_complete = false;
  }
}

void print_EC_data(void) {
  char sensorstring_array[30];
  char *EC;
  char *TDS;
  char *SAL;
  char *GRAV;
  float f_ec;

  sensorstring.toCharArray(sensorstring_array, 30);
  EC = strtok(sensorstring_array, ",");
  TDS = strtok(NULL, ",");
  SAL = strtok(NULL, ",");
  GRAV = strtok(NULL, ",");

  Serial.print("EC:");
  Serial.println(EC);

  Serial.print("TDS:");
  Serial.println(TDS);

  Serial.print("SAL:");
  Serial.println(SAL);

  Serial.print("GRAV:");
  Serial.println(GRAV);
  Serial.println();

  //f_ec= atof(EC);
}
```

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