

## **Arduino Sample Code**

## EZ COM









This software was made to demonstrate how to quickly get your Atlas Scientific product running on the Arduino platform.

An Arduino Duemilanove board was used to test this code.

This code was written in the Arudino 1.0 IDE

Modify the code to fit your system.

Code efficacy was NOT considered, this is a demo only.

The soft serial port TX line goes to the RX pin.

The soft serial port RX line goes to the TX pin.

Make sure you also connect to power and GND pins to power and a common ground.

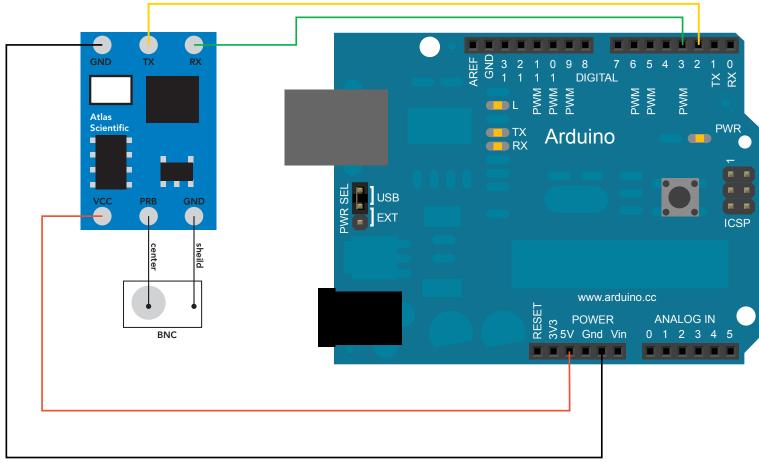
Data is received and re-sent through the Arduinos hardware UART TX line.

Open TOOLS > serial monitor, set the serial monitor to the correct serial port and set the baud

Remember, select carriage return from the drop down menu next to the baud rate selection; not

"both NL & CR". The data from the Atlas Scientific product will come out on the serial monitor.

Type in a command in the serial monitor and the Atlas Scientific product will respond.



```
#include <SoftwareSerial.h>
                                           //add the soft serial library
#define rxpin 2
                                           //set the RX pin to pin 2
                                           //set the TX pin to pin 3
#define txpin 3
                                           //enable the soft serial port
SoftwareSerial myserial(rxpin, txpin);
String inputstring = "";
                                           //a string to hold incoming data from the PC
String sensorstring = "";
                                           //a string to hold the data from the Atlas Scientific product
boolean input_stringcomplete = false;
                                           //have we received all the data from the PC
boolean sensor_stringcomplete = false;
                                           //have we received all the data from the Atlas Scientific
                                           //product
void setup(){
                                       //set up the hardware
                                       //set baud rate for the hardware serial port to 38400
   Serial.begin(38400);
                                       //set baud rate for software serial port to 38400
   myserial.begin(38400);
                                       //set aside some bytes for receiving data from the PC
   inputstring.reserve(5);
   sensorstring.reserve(30);
                                       //set aside some bytes for receiving data from Atlas Scientific
                                       //product
```

```
//if the hardware serial port receives a char
void serialEvent() {
         char inchar = (char)Serial.read();
                                                             //get the char we just received
                                                             //add it to the inputString
         inputstring += inchar;
         if(inchar == '\r') {input_stringcomplete = true;}
                                                             //if the incoming character is a <CR>,
                                                             //set the flag
         }
```

```
void loop(){
                                              //here we go...
                                              //if a string from the PC has been received in its entierty
 if (input_stringcomplete){
                                              //send that string to the Atlas Scientific product
   myserial.print(inputstring);
   inputstring = "";
                                              //clear the string:
   input_stringcomplete = false;
                                              //reset the flag used to tell if we have received
                                              //a completed string from the PC
   }
```

```
while (myserial.available()) {
                                                             //while a char is holding in the serial buffer
     char inchar = (char)myserial.read();
                                                             //get the new char
     sensorstring += inchar;
                                                             //add it to the sensorString
     if (inchar == '\r') {sensor_stringcomplete = true;}
                                                             //if the incoming character is a <CR>,
                                                             //set the flag
if (sensor_stringcomplete){
                                          //if a string from the Atlas Scientific product has been
                                          //received in its entirety
    Serial.print(sensorstring);
                                          //use the hardware serial port to send that data to the PC
    sensorstring = "";
```

//clear the string:

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sensor\_stringcomplete = false;

}

//reset the flag used to tell if we have received a completed

//string from the Atlas Scientific product