

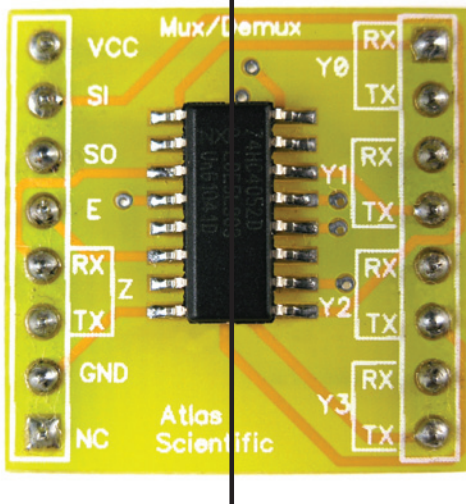


How to connect an Atlas Scientific RS-232 Port Connector to your microcontroller

The Atlas Scientific RS-232 Port Connector is based on the 74HC4052 Mux/Demux IC. This device is designed to specifically connect up to four RS-232 UART devices into one single microcontrollers UART RX/TX pins.

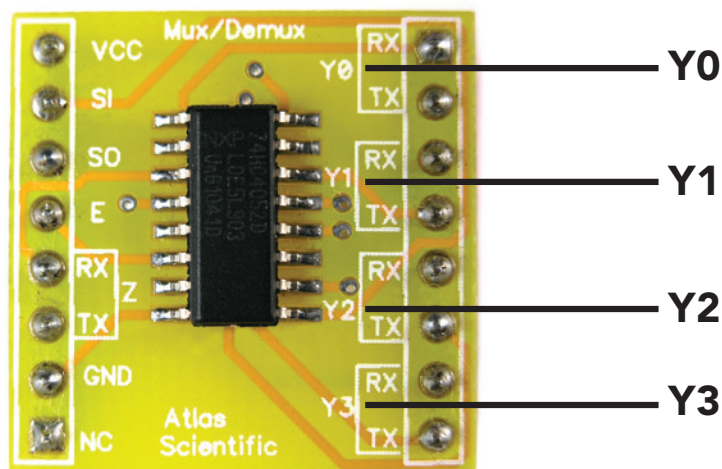
The Atlas Scientific RS-232 Port Connector is broken up into two sections, a control section and an output section.

Control section **Output section**



Output section

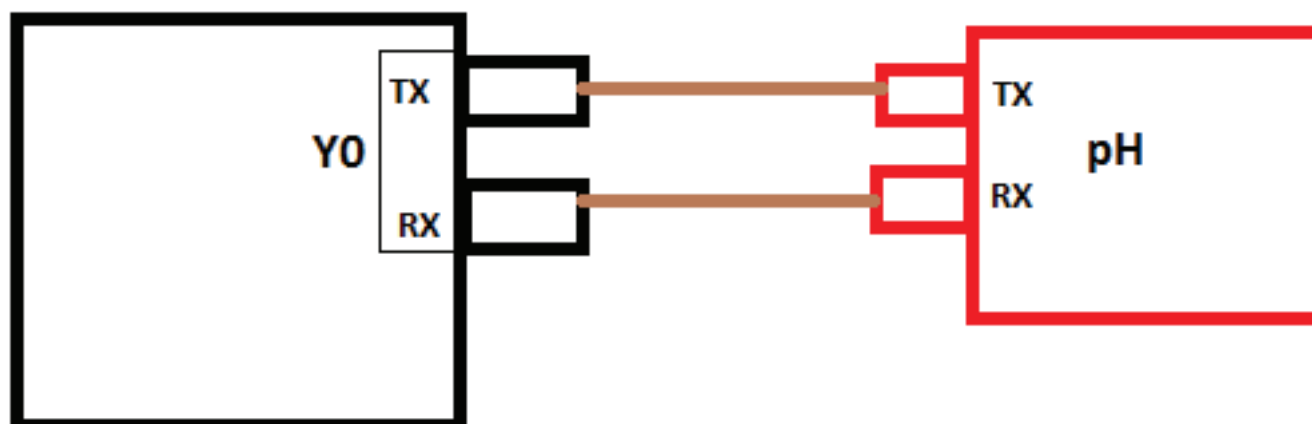
The output section consists of four output blocks.
These blocks are marked **Y0 • Y1 • Y2 • Y3**



Each of these four output blocks consist of an RX and TX pin. Each one of these RX/TX pins connects to your peripheral device.

On this breakout board TX and RX from the output blocks Y0 to Y3 connect to your peripheral devices matching pin. TX is connected to TX and RX is connected to RX.

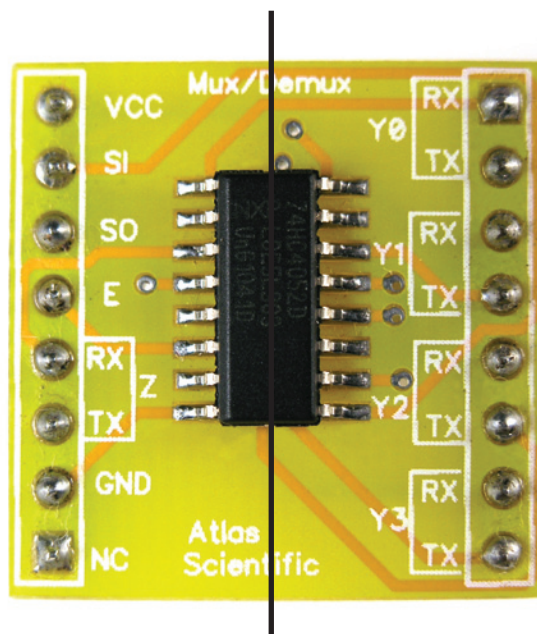
This is correct



RS-232 Port Connector

Control section

PIN NAME	PIN FUNCTION
VCC	supply voltage
S1	Output direction control 1
S0	Output direction control 0
E	Enable
RX	Data in
TX	Data out
GND	Supply ground
NC	Not connect

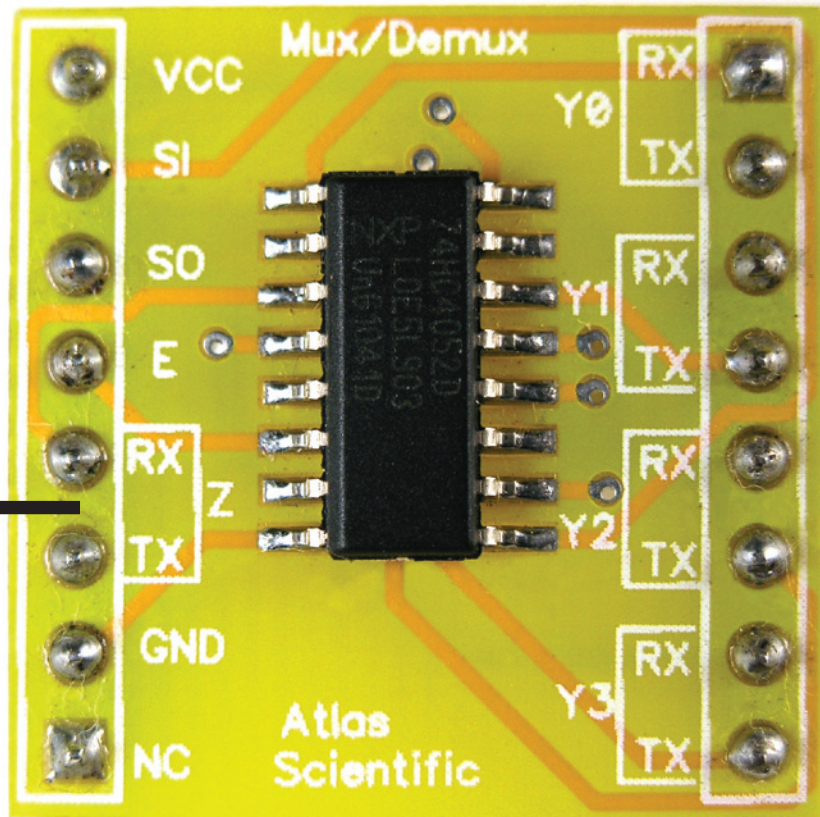


VCC AND GROUND

Vcc can be as high as 5 volts. One should keep VCC and GND tied to the main power bus of your system.

RS-232 Port Connector

Z block —



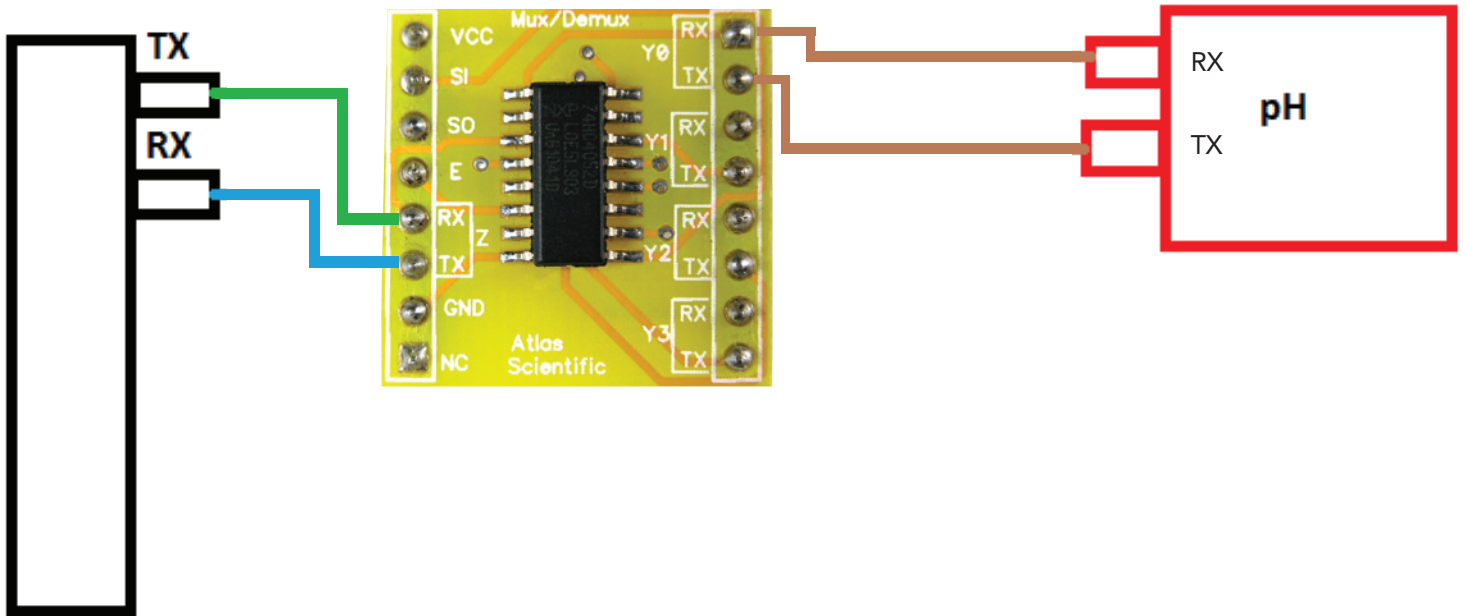
RX / TX

The main RX and TX pins are connected to the microcontrollers TX and RX pins respectively. This main RX / TX block is called the Z block and is identified by a Z on the breakout boards silkscreen.

It is important to remember that on the control side of the RS-232 Port Connector TX is connected to RX and RX is connected to TX.

RS-232 Port Connector

microcontroller



S0 • S1 • E

E is the enable pin. By pulling E low the RS-232 Port Connector is always operational. Setting E high will dissable the RS-232 Port Connector. For simple operation E should be pulled to gnd. **E should never be left floating.**

S0 and S1 are the control pins which guide the RX and TX signals to the correct Y block

E	S0	S1	Y block
low	low	low	Y0
low	high	low	Y1
low	low	high	Y2
low	high	high	Y3

