Protoboard and Wiring Details

Protoshield Breadboard
The purpose of the protoshield breadboard is to make your life easier when wiring a circuit for test. The breadboard allows you to connect pins of the Arduino board to pins of a chip to be used during testing without needing to solder wires. Simply plug the circuit to be used with the Arduino board into the breadboard shown in Figure 1. Notice there are two columns of arrays of holes in the breadboard. Holes on the same row are connected via internal wiring in the breadboard but holes in column0 are not connected to holes in column1. Therefore you can connect a wire to a pin of the circuit that you are using in the breadboard by inserting a wire in the same row.
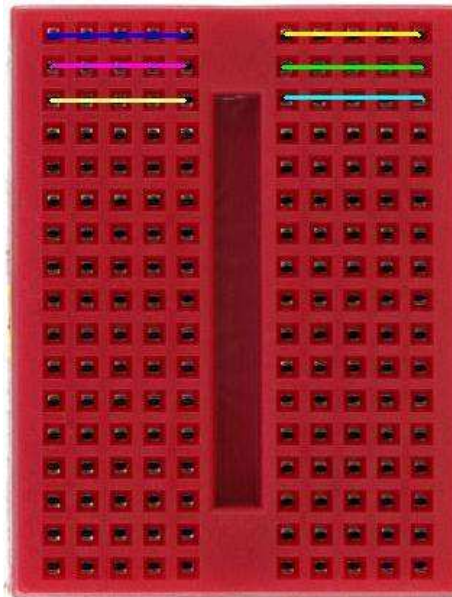

Figure 1: Each row of the protoshield breadboard is connected by internal wiring.
In this image, pins on the same color line are connected.

Wiring
To properly wire your circuit, follow these steps:
1) place all components of the circuit in the breadboard
2) find the locations of the pins that need to be connected
3) cleanly cut one end of bulk wire
4) strip ~1/4" of plastic shielding from the wire, starting with one of the large holes of the wire strippers, descending until the correct size cutting hole is found; be sure to not damage the wire underneath the shielding during the wire stripping process
5) insert the cut and stripped end of the wire into one of the holes on the breadboard that will be connected
6) measure to the other connection point; leave ~1/2" inch extra, which will be inserted into the hole to make the contact
7) cut the measured end of the wire and strip ~1/4" of the plastic shielding as done in step 4