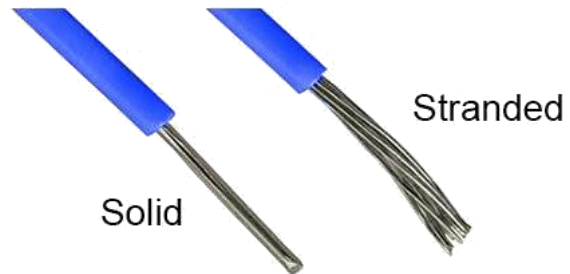


Circuit Building Notes

Wire Current Limits:

Wire Gauge	Approximate Current Limit (A)
28 (Very thin)	1.4
26 (Jumper wires)	2.2
24	3.5
22 (Recommended)	7.0
20	11
18	16
16 (Very thick)	22
14	32

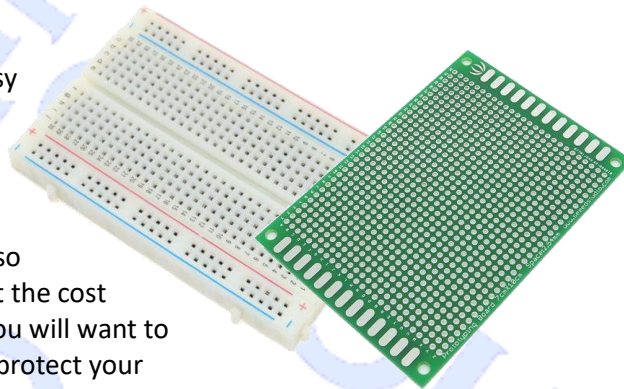


Solid core/Stranded wire:

Solid core wire is great for thru-hole soldering. Stranded wire can be soldered, but it is much more difficult. Stranded wire is easier to splice. If your wire is going to be bent frequently, stranded wire will last much longer without breaking.

Breadboard/Protoboard:

When first building your circuit, use a breadboard. With a breadboard, it is easy to change, repair, and troubleshoot your circuit. Once you are finished designing and testing your circuit, consider rebuilding it on a protoboard. Protoboards use soldered connections, so they are much more tidy and durable, at the cost of decreased ability to make changes. You will want to use protoboard on your final project to protect your circuit from bumping, vibrating, and so forth.



Connectors:

You should seriously consider using connectors between different sections of your circuit. If you put everything on one board, or use permanent connectors between boards, it will be very difficult to troubleshoot your circuit. Connectors (such as DuPont, JST, or others) allow you to remove sections of your circuit and work on them individually.

Glue/tape:

In some cases, you may want to use hot glue or tape to protect delicate parts of your circuit. While typically not necessary, this can be an effective technique. However, think twice before covering your circuit with tape or glue. You will have great difficulty if you need to go back and fix something.

