HowlHaunter's Workshop

Soldering Bench Set Up

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Years of experience as a electronic hobbyist has taught me which tools really get the job done.

My soldering bench is nothing great to look at, but performs very well. I started with my old little pine desk that my parents gave me when I was a kid. I screwed on a 2 foot by 4 foot plywood top to give more room.

As you can see in the picture, it is marked up with solder marks and paint smears. This is a working bench -- "it ain't no fine furniture". You can also see a fan, powerstrip, 20W halogen gooseneck lamp, soldering/wire spool holder, small vise for holding components while soldering.

The little desk makes a fine bench because it is stable, has three big drawers (I keep my Dremel bits in the top drawer). I keep my tools like precision screwdrivers, wire

cutters, snippers, etc. in a piece of plywood with holes drilled in it to hold the tools upright where you can grab them quickly (and put them back neatly.)

Soldering generates fumes that are not good to breathe. So, you need some ventilation. I just added a little fan that is controlled by my powerstrip on the left side of the bench. It blows away all those nasty vapors. Also, the powerstrip controls the little 20w halogen table lamp that put light on your projects.I found having the powerstrip on the left side of the bench works best for me (I'm right handed).When I turn on the powerstrip, the fan and light come on...and well as making the outlets available for plugging in 120VAC to DC power supplies as needed.

Recently, I built this little wood setup that holds a metal rod to hold my solder spools and wire spools.

I set this up so you can remove the rod quickly to change spools. With these spools on the left side of the bench you can pull exactly the amount of solder you want to your project, and snip off wire to length as you need it.

Radio Shack sells a nice set of 3 black, red, and green insulated solid copper 20 AWG wire spools. Use this insulated copper wire for most low voltage (+5 Volt to +15 Volt) hobby circuits.

Stranded copper wire is just too much of a hassle when connecting up to joints that are very close to one another. Yes, it's a good idea to use red wire for your positive voltage and black for your ground wires. Color coding can help you later if you want to debug an old circuit you made a long time ago.

Speaker wire is cheap and can be purchased in spools of 100'. I use this for connecting low voltage/low current wiring for long runs of wire from power supplies to LED lighting effects. It already comes paired for positive and negative which is a big plus.

I found a nice padded secondhand office chair on wheels that is comfortable for soldering sessions.

I use my Dremel tool a lot for shaping perf boards, project boxes, etc. Soldering can also generate solder bits flying up...so eye protection is important!

Comfortable safety glasses are just a must (comfortable so you'll keep them on). I found these Pyramex V2 Reader Safety Glasses that are just great.

They are comfortable and as a bonus, they have reader glasses built into the bottom of them. These are very unique and you won't find them at the big box hardware stores. For those of us over 40 years of age, they are fantastic! You can actually see the fine details of your little electronics projects! Cheap too--they are only about $9.

You'll save a lot of time if you buy a good soldering iron. You only need a 75W or 100W gun.
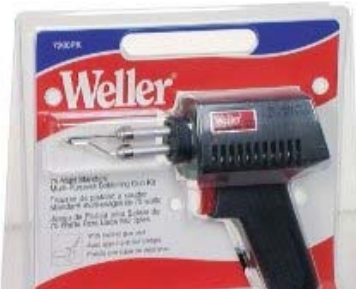
Higher wattage guns will just fry your components as you solder them. Stay away from the "pencil type" soldering irons.

These pencil type irons typically have no on/off switch and stay hot all the time. Even with a stand to hold them in...that's a bit dangerous. You could walk away and forgot you left them on.

The more heavy duty soldering guns have a trigger switch so that when you are done, you release the trigger and the tip will cool off. When you pull on the trigger, the iron tip will heat up rapidly. If you simply must use a pencil type soldering iron, at least purchase a quality thin tip one like this Weller model WM120. It's too bad you can't get a tip that small in a soldering gun model, it would really make electronics soldering much easier.

A soldering gun will last many years if properly cared for. You can also replace the tips easily. One downside to these is you have to constantly keep the tip cleaned and tinned. Another downside is the tips themselves tend to be very big in comparison to the small solder joints you want to solder (easy to get solder where you don't want it). You

may also want to purchase a small bit of desoldering braid when you get solder where you don't want it...and some tip tinner paste. Using a wet sponge/cloth to clean the tip is not recommended as it "shocks" the hot tip with the cold water and reduces its life. Instead, you can purchase this metal mesh setup that keeps the tip clean.

You may be tempted to buy one of these little portable soldering irons. The new "ColdHeat" portable irons have small tips and are battery operated, but this article doesn't recommend them for the electronics hobbyist. They are apparently too fragile and don't do a good job on soldering joints.

I suppose if you must have a portable soldering iron (perhaps to do a quick fix on an outdoor prop), you might want to try **this Weller portable iron,** although it seems like it would go through alkaline batteries very quickly.