

Soldering and other tools

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I don't have a lot to say today. I'm busy on the bench building things. But I have come across a few good tools and soldering helpers, so I thought I'd provide a few links.

Harbor Freight has a couple of good items. Yes. I know it is easy to buy junk there, which is why I thought I'd mention these two items.

This [magnifier strap with headlights](#) [1] is an excellent buy at \$3.99. At its normal price of \$4.99, it isn't bad either. The lenses are good, and you have a choice of magnifications. Plus, you can push the magnifier up easily to get it out of the way and pull it down when you need to do close-in work. The headband has a hook- and loop-type adjustment strap so it will fit exactly. I didn't try the lights that come with the magnifier. They are incandescents that use two AA batteries on each side. Switches included. The magnifier makes a nice visual inspection tool for surface mount. I used it for hand soldering surface mount.

I also bought this [vacuum vise](#) [2], which has a vacuum bottom for holding it on the bench. The regular price is \$19.99. On sale currently for \$17.49. I haven't tried it out except at the store, but the construction is good and the operation is smooth. It has a rubber covering on steel-faced jaws. The rubber covering can be removed or easily re-installed. I plan to use it for "crimping" IDC connectors. Not quite as good as a tool made for the job, but it is cheaper and has other uses. If you are making small quantities and only on occasion, the price is right.

I just found the most marvelous [solder for tinning soldering irons](#) [3] at Mouser. It is a silver bearing solder and makes the tips better than new. It also seems to make wetting the tip with the solder you plan to use much easier. Just the thing for putting dabs of solder from a roll on to those tiny surface-mount components. The solder has a low initial melting point and a high subsequent melting point. Just the thing for tinning an iron tip. Not so handy for mounting components, which is what I originally bought it for.

And finally some [surface-mount solder flux](#) [4]. I used this flux on the bottom pad of

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some surface-mount chips that use the bottom pad for ground and cooling. I will have to do some more extensive testing to see how well the flux helped the solder flow, but I did check the grounding and that reads zero ohms on the lowest scale of my ohm meter which goes up in .1 ohm increments.

I'll have more next week once I get some boards finished and tested.

M. Simon's e-mail can be found on the sidebar at [Space-Time Productions](#) [5].

Engineering is the art of making what you want from what you can get at a profit.

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<http://www.ecnmag.com/blogs/2013/03/soldering-and-other-tools>

Links:

[1] <http://www.harborfreight.com/magnifier-head-strap-with-lights-38896.html>

[2] <http://www.harborfreight.com/2-3-4-quarter-inch-articulated-vacuum-vise-3311.html>

[3] <http://www.mouser.com/Search/ProductDetail.aspx?R=7459virtualkey55710000virtualkey557-7459>

[4] <http://www.mouser.com/Search/ProductDetail.aspx?R=SMD291NLvirtualkey63560000virtualkey910-SMD291NL>

[5] <http://spacetimepro.blogspot.com/>