

# OFFICIALLY LICENSED CIRCUITS

Quality Kits For The DIYer

## How to solder wire to pots (and others) in your OLCircuits kit

There are two basic types of connections on pots and jacks: "Solder lug" and "PCB pin" (a.k.a. PCB Mount).

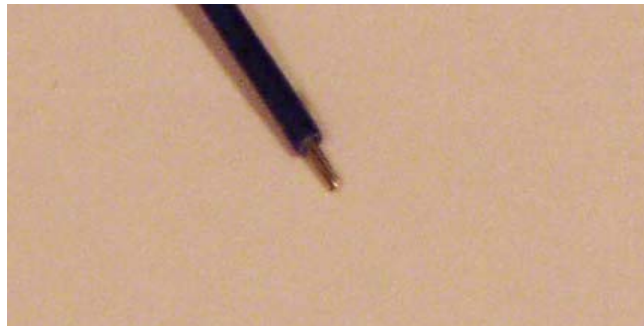
*Solder Lug* is an eyelet through which you can twist wire to make a connection.

*PCB Pin* is a thin extension that makes soldering to a PCB possible. Though we're not soldering pots and jacks directly to the PCB, OLC uses this type - especially on pots. If you've built a project with crowded guts, you may have cut the lugs/pins off to make efficient use of space. Solder pins make this much easier.

There is a misconception that solder lugs are required to solder wire to objects. The lugs are there to hold untinned/bare wire still while you solder (or to make a quick/temporary connection without solder), but they aren't to provide any sort of strain relief (consider metal>metal fusion [solder] vs. twisting things together). Another drawback to wrapping wire and soldering is that if you need to unsolder that wire, you're out of luck (you'll have to cut it off). If you have a good solder technique, have had shorting problems with lugs, or you've worked with smaller components, it's unlikely you wrap wire around lugs to solder anymore.

**So, on to the technique. This guide is demonstrated with a pot, but the same applies to jacks, 3PDT switches, toggles, etc...**

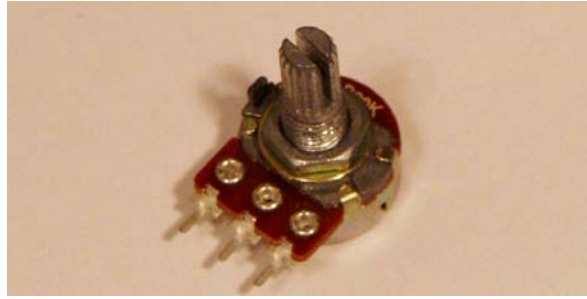
Strip 1/8" or so (much less than if you were to wrap it around a lug) of insulation from the end of your wire:



Now, "tin" (apply solder to) the end. The stranded copper will soak it up like a sponge. Be quick to avoid melting a bunch of the insulation.



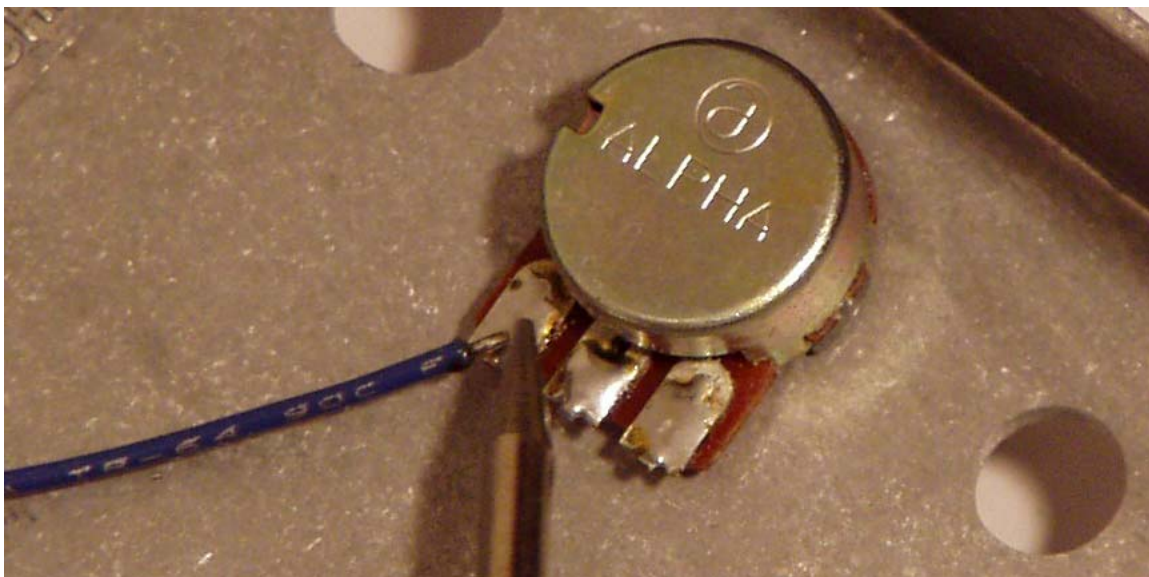
I suggest cutting the pins off of the pot. They're not needed for wire and it's a quick way to save space and another way to protect against shorting. Twist that tab on the left off, too (as shown in OLC build guides):



Now, tin the back of the pot in all three places (I've cut the pins off below):



Final Step... hold the wire to the pot with one hand, and your iron with the other. Touch the iron to the two pieces. You will *not* need to add solder. They will fuse together quickly and securely.



Now you have a tidy, strong connection. Done!



**But what about the holes between the pins and the pot casing?**

Those are rivets. They secure the pins to the fiberglass material. I recommend against using them, unless you're aware of the potential problem.



Here's why:



I've seen this a few times when troubleshooting customers' builds. The wire is going all the way through and touching the enclosure. The signal present at that wire is no longer ☹️ .

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