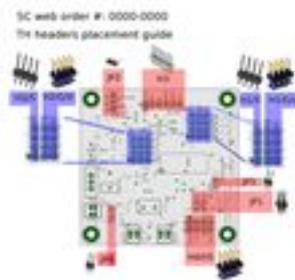


## Thru-Hole Parts

Screaming Circuits Screaming Circuits

Screaming Circuits uses machines to place surface mount parts; even if it's just one board. Thru-hole are a different story though. Way back in the cobweby section of the building, we do have a thru-hole part sequencing and insertion machine. Our volume manufacturing division still uses it on occasion, but it's just not efficient for small quantities, which is why thru-hole parts get hand inserted at Screaming Circuits. We have three options for soldering the parts into your prototype. We can hand solder all of the parts, we can send the board through our selective solder machine or we can send it through the wave solder machine. We'll pick whichever route makes the most sense based on quantity and configuration.

It's good that we can solder the thru-hole parts, but how, you might wonder, do we know where to put the thru-hole parts? The SMT has the [centroid](#) [1] file to tell our machines where to put them. Thru-hole



[2]being more of a manual process, we rely on visual data. If your silk screen markings are readable, we can use that as a reference. If the parts will only fit one way into one footprint on the board, then it's not much of a challenge. Regardless, make sure that [the polarity](#) [3] is clear for any [polarized components](#) [4].

Sometimes, though, there isn't enough room on the PCB for clear silk screen and parts will fit in a number of different places. That's where the assembly drawing comes in. This illustrates an example of a suitable assembly drawing. It's got your web order number in the image and all of the parts are clearly pictured and their locations clearly identified. If any of the parts are polarized, make sure you include that information as well. Send the assembly drawing as a .JPG or PDF file format in your ZIP file with the BOM, Gerbers and Centroid.

Duane Benson

It just goes to the back side of the board. It's not a wormhole going to another galaxy.  
Or is it?

[SOURCE](#) [5]

## Thru-Hole Parts

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### Links:

[1] <http://screamingcircuits.typepad.com/files/understanding-the-centroid-file-r2-1.pdf>

[2] <http://screamingcircuits.typepad.com/.a/6a00d8341c008a53ef015437469050970c-popup>

[3] <http://blog.screamingcircuits.com/2011/01/whats-missing.html>

[4] <http://i.screamingcircuits.com/docs/LED%20markation%20at%20Screaming%20Circuits.pdf>

[5] <http://blog.screamingcircuits.com/2011/11/thru-hole-parts.html>