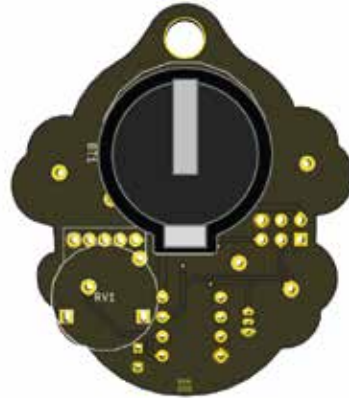


DEF CON "Jack" Assembly Tips

ASSEMBLED FRONT

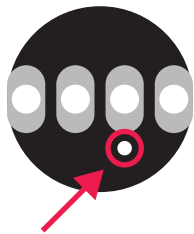
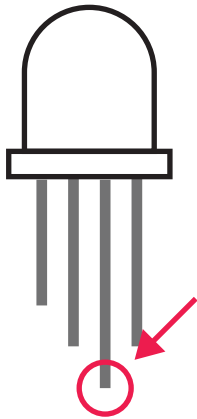


ASSEMBLED BACK



Before you start!

Make sure your soldering iron tip is clean and tinned. To do this, apply solder to the tip of the iron and then wipe it off on the sponge a couple times. The shinier the tip, the better it will transfer heat and make you more successful soldering!



Tips for assembling eye LEDs

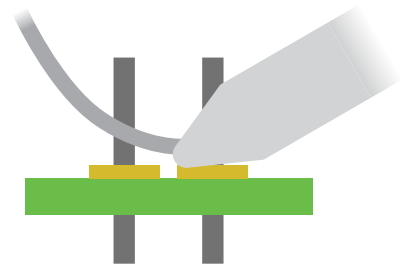
Not all LED leads (aka wires coming from a part) are the same length. One of the leads is usually longer than the others to indicate direction. In the case of the "Jack" badge, make sure the longest lead matches up with the white dot on the front of the board (note: the eye LEDs do not face the same direction).

Tips for soldering eye LEDs

The pitch (or distance between leads) of the LEDs is much tighter than the other badge parts. Take care to apply solder sparingly in an effort to avoid bridging (connecting multiple leads together with solder). If you do end up bridging multiple leads, see the back side of this sheet.

If solder is not flowing easily to the pad and lead, try the following:

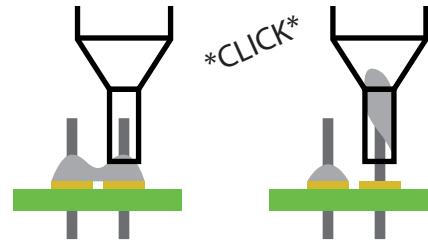
- Clean and tin the soldering iron tip
- Make sure the tip is touching both the lead and pad. Using the side of the tip is more effective than the very end of the tip.
- Add a dab of flux to the pad
- Try applying heat for an extra second



Tips for removing solder

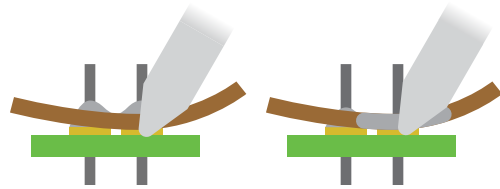
Solder Sucker

Use the soldering iron to heat the area of excess solder so that the solder is liquified. While the solder is liquified, position the solder sucker over the solder and push the button to suck the solder up!



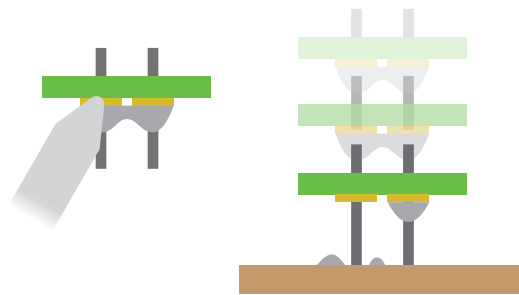
Desolder Wick/braid

Place the wick between the soldering iron tip and the area of excess solder. As the solder liquifies, it will be attracted to the wick instead of the pad.



Tap It on the Table

While securely holding the PCB in your non-dominant hand, heat the area of excess solder until it becomes liquidy. Next, in one quick motion, pull the iron away as you swing the board down, smacking it onto the table. You can also do this over the side of the table, but make sure nobody's legs or feet are in the way! (Note: it's helpful to practice this motion with a pen/pencil or an off soldering iron to get down the motion)



"Jack" Badge Schematic

