



Introduction to Soldering

This is a guide for those who are completely new to soldering. We will cover how to use basic soldering tools.

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Introduction

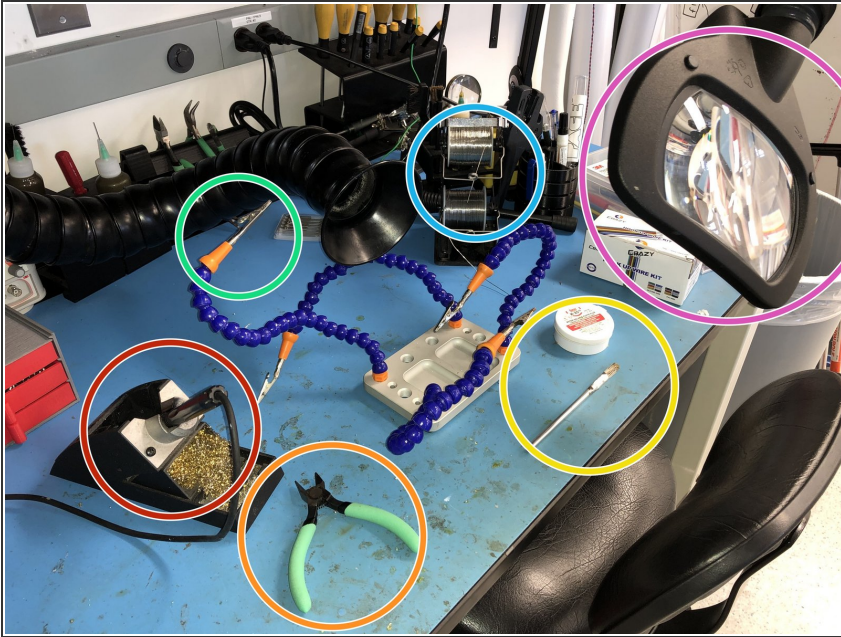
In this introduction to soldering we will be using a soldering iron, helping hands, and soldering flux all while ensuring proper ventilation.



TOOLS:

- [Soldering Iron](#) (1)
 - [Helping Hands](#) (1)
 - [Water Soluble Paste Flux](#) (1)
 - [Soldering Wire](#) (1)
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Step 1 — Getting Started



- Make sure you have the following tools:
- Soldering Iron with sponge
- Tweezers or wire cutters
- Brush and Paste Flux
- Helping Hands
- Soldering Wire
- (optional) Magnifying glass

Step 2 — Turn on Ventilation and Iron



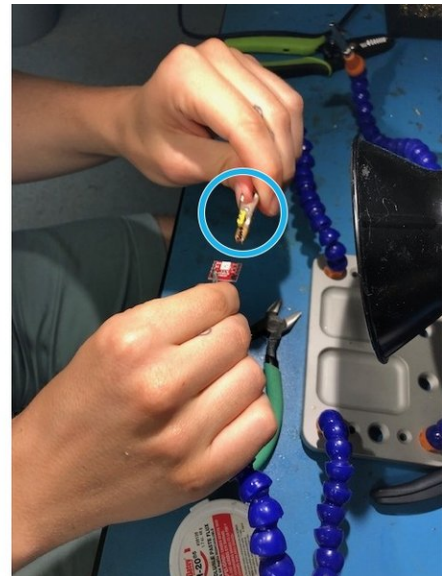
- Always turn ventilation on before you solder!
- Turning on the Soldering Iron is important too :)

Step 3 — Ventilation placement



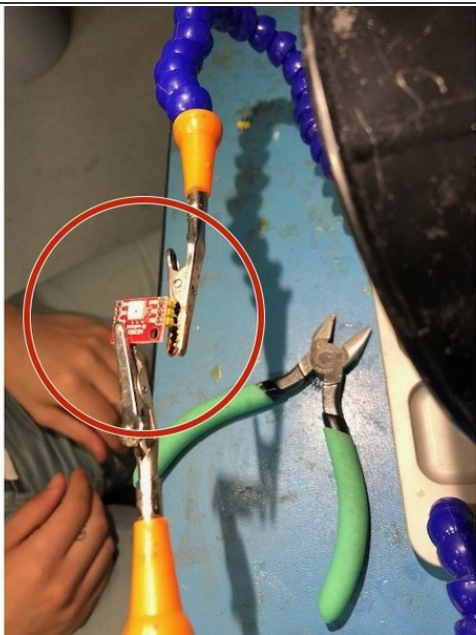
- Before we get started, ensure that the ventilation tube is as close to the helping hands as possible without being in the way

Step 4 — Clamping with the Helping Hands



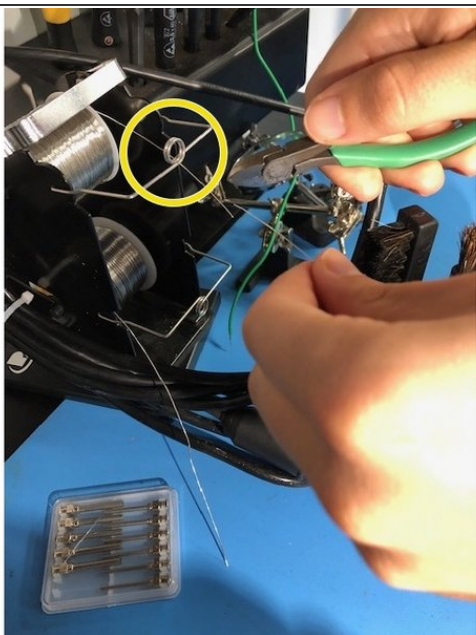
- Attach the RGB LED to one of the helping hands so the sockets you are going to solder are facing away from you
- Clamp the longer pins of the corresponding LED so the short pins are pointing up

Step 5 — Positioning Helping Hands



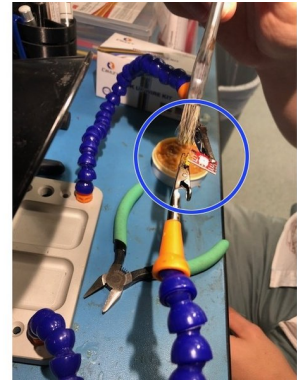
- Once both parts are clamped move the helping hands close enough so that the short pins go all the way through the three holes on the LED
- If you are having trouble with keeping the helping hands still where you want them try "pre-tensioning" the hands so the parts are moving towards each other, and not away

Step 6 — Cutting some Soldering Wire



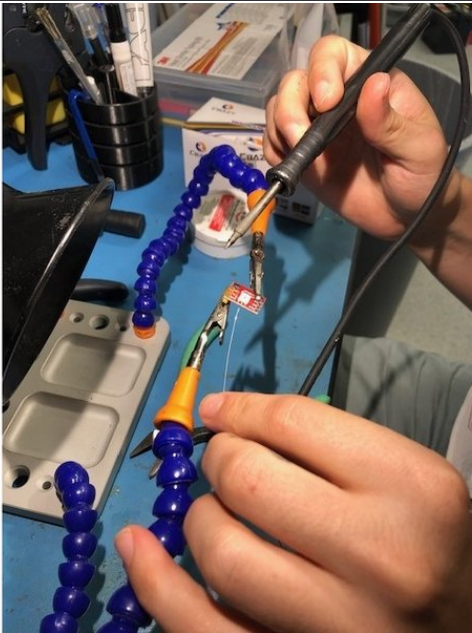
- With a pair of tweezers or wire cutters cut some soldering wire from the spool. You should only need at most 2.5 in of wire.
- Keep the wire going through the guiding hole.

Step 7 — Adding the Flux



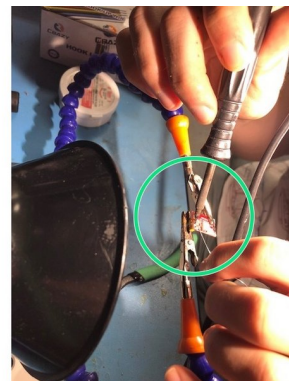
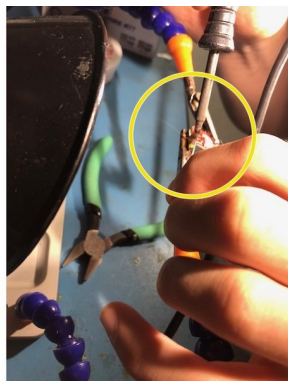
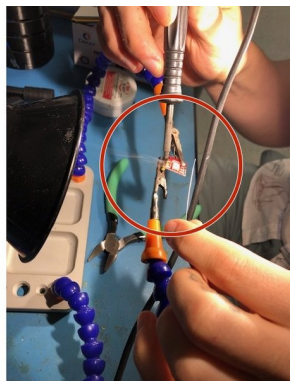
- Use a small brush and gently dab it in some water soluble paste flux.
- You only need enough flux to coat the pins and sockets which in this case is not that much.
- Do not stroke the brush as it makes it more likely to get flux in unnecessary places of the LED,

Step 8 — Proper Soldering Grip



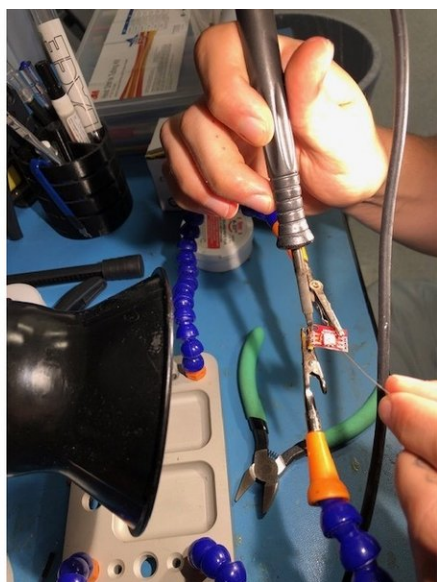
- Now it is time to solder! Grab a soldering iron, preferably with your dominant hand, and the previously cut soldering wire

Step 9 — Adding the Solder



- Begin by placing the soldering iron onto the pin AND the socket.
- While holding the soldering iron on the pin and socket being to push the soldering wire onto the pin.
- Move the wire all around each socket to ensure the pins are completely soldered onto the LED

Step 10 — Checking for Mistakes



- Move the wire all around each socket so there are no open holes in any of them. A magnifying glass can be helpful during this process.

Step 11 — Finished Product



- You're finished! Feel free to take your soldered part off of the helping hands.
- These steps are the same for soldering several types of electronics. As long as you have proper ventilation and the tools available you should be ready to solder!