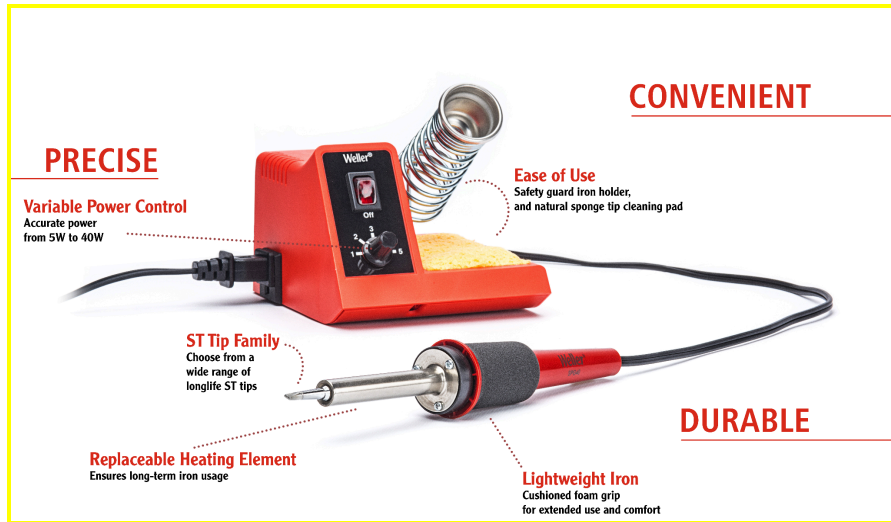




Electronics and Soldering Irons

Basic Overview

Soldering is the process of joining two pieces of metal (usually wires or the prongs of a microchip) using solder and a soldering iron. Solder is a metal alloy usually in the form of a thin wire. A soldering iron is a pen-like device that gets hot enough to melt the metal solder. Due to surface tension (and other really cool physics) the melted solder is drawn to hot metal and will cool down quickly once heat is removed.



Safety Precautions

- Safety goggles are encouraged but not necessary
- Be mindful of solder fumes, don't hunch over your project and solder in well ventilated areas
- Don't touch the iron tip unless you are certain it has cooled off
- When using hot air to solder, never point the nozzle at yourself or anyone else
- Depending on the voltage, components like resistors and LEDs may get hot
- Make sure you put your capacitors in the correct orientation (explode)

Step by Step

1. Plug in the soldering iron
2. Use the temperature dial to 650-700 degrees fahrenheit or 343-371 degrees celsius. (This is roughly between the 4-5 setting on our soldering irons)
3. Use the clamps to secure what you're soldering together, the metal of the wires should be overlapping or intertwined.
4. Hold the hot soldering iron to the overlapping area for a few seconds to heat it up.
5. Bring your solder into contact with the iron, you can use the iron to distribute the solder as needed.



Idea Realization Lab - User Reference Sheet

FAQ/advice/things to be aware of that patrons usually mess up

List of most commonly asked questions. For staff to quickly reference when questions arise regarding something they are not proficient in. Important to keep updating this list as questions arise. Section below to write in.

- Applying solder to small joints requires some precision, if the connection is imperfect, refer to the sign we have up that details common soldering mistakes (such as cold or hot joints)