Basic soldering for beginners in electronics. In this article, a pin header is soldered to a LCD which demonstrates how to solder a component to a PCB (printed circuit board).

This is a support article for the Start Electronics Now series of tutorials where the pin header needs to be soldered to the LCD in order to plug it into a breadboard for connection to an Arduino.

See the article on soldering irons before learning to solder.

**Safety**

Take adequate precautions when soldering – soldering irons get hot and can burn you or your property.

Avoid breathing soldering fumes. The lead in solder is poisonous, so always wash your hands after handling solder or solder wire.

Read all safety instructions that are provided with your soldering iron, solder and other equipment.

**Here are some precautions to take:**

1. To prevent getting burned, only touch or pick up the soldering iron by the handle, never touch the heating element or tip.
2. Use a soldering iron stand to prevent burning your desktop or other property.
3. Work in a well ventilated area. Use a fan to blow the solder fumes away or use a fume extractor.
4. Remove all flammable materials and liquids from the soldering area.
5. Wash your hands after handling solder as it contains lead.
6. Always work in a well lit uncluttered area.
7. Children are to be supervised by a competent adult when soldering.

Starting Electronics and its authors will not accept responsibility for and damage sustained to yourself or others or any loss or damage to property from following these instructions. If at all unsure, do not proceed.

**Preparation**
To start soldering, you will need:

1. A soldering iron and stand with sponge.
2. Solder.
3. The items to solder (e.g. component and wire or connector).
4. A suitable work area with enough light and ventilation.

Wet the soldering iron sponge and then squeeze out the excess water. You will be using the sponge to clean the soldering iron tip.

Switch the soldering iron on or plug it into a power source so that it can start heating up. Place the soldering iron in a soldering iron stand while it is heating. Do not leave the soldering iron unattended while it is heating up or is still hot.

**Soldering**

To solder a component to a circuit board, first insert the component into the circuit board and then turn it over so that the pins of the inserted component can be seen.

Pick up the soldering iron and unwrap some solder from the solder reel. Heat the pin of the component and the circuit board pad for a second and then apply the solder to the pad and pin. Apply enough solder to make a good joint.

Use the damp sponge in the soldering iron stand to clean the tip of the soldering iron often.

The video below shows how to solder a pin header to a LCD display.

In the video, one pin of the header is soldered (or tacked) to the LCD display. The header is then checked that it is 90° to (at right angles to or square to) the LCD circuit board. The solder joint is reheated to melt the solder so that the header is shifted to 90° to the LCD board.

After soldering one pin and squaring up the header, the pin at the opposite end of the header is soldered and then the header is checked one last time that it is square. The remainder of the pins are then soldered.

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