Soldering is the process of joining two or more electronic parts together by melting solder around the connection. Solder is a metal alloy and when it cools it creates a strong electrical bond between the parts.

## Anatomy of Good solder joint Tip of soldering iron Solder wire Wetting angle **Bright shiny** Smooth concave 40 to 70 from finish shows menisous shows horizontal good solidification goodwetting Circuit board Copper pad on board Lead from component Single sided Double sided PCB with plated PCR through hole

## Soldering Equipment

**Soldering Iron:** The first thing you will need is a soldering iron, which is the heat source melt solder. Irons of the 15W to 30W range are good for most electronics/printed circuit board work. Anything higher in wattage and you risk damaging either the component or the board.



**Solder:** Solder is a metal alloy material that is melted to create a permanent bond between electrical parts. It comes in both lead and lead-free variations. Inside the solder core is a material known as flux which helps improve electrical contact and its mechanical strength.

For electronics, it is traditionally a mix of tin and lead. in has a lower melting point than Lead, so more Tin means a lower melting point. Most common lead-based solder you'll find at the gadget store will be 60Sn/40Pb (for 60% tin, 40% lead)



Life must continue. And continue towards perfection, through progress, evolution, through self-initiative. Impatience can not lead to do that. Frustration is its enemy.