Tips on Soldering

Here is a summary sheet in PDF form: How to solder

Other on-line help: The Basic Soldering and De-soldering Guide
(How to solder; types of irons; de-soldering; troubleshooting. by Alan Winstanley)

ECE Department

Good soldering results depend on a few but important steps to follow as outlined below:

1. Pre-heat the soldering iron for approximately five minutes, tin the tip with solder and rub on a moistened sponge until it appears bright and shiny. Always brush the soldering iron tip on the moistened sponge prior to each use to remove burnt rosin and to ensure proper heat transfer.

2. Add component to PC board. For through-hole components, bend leads to hold component in place, and trim excess. For surface-mount components, use a drop of epoxy to hold the part in place.

    Bend leads slightly to hold component in place
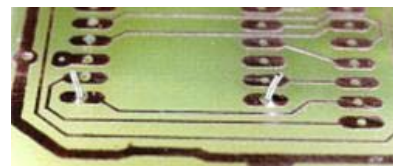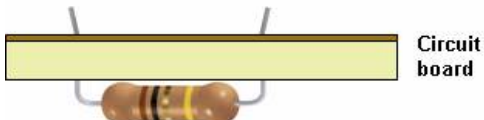
    Circuit board

3. Place the pre-heated, tinned, soldering iron tip, simultaneously, against the printed circuit board foil and the component lead for approximately three to five seconds.

    Heat leads and copper traces with iron
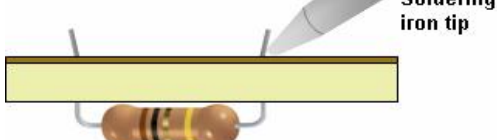
    Soldering iron tip

4. Apply solder to the component lead opposite the soldering iron and permit the solder to melt and flow evenly around the connection. **Do not** apply solder directly to the soldering iron tip..

    Touch solder to heated lead and trace
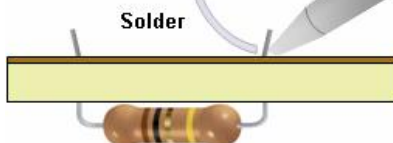
    Solder

5. Next remove the solder and then remove the soldering iron, and permit the joint to cool before attempting to move the part or otherwise stressing the joint. When properly soldered the joint should appear bright and uniform with an even meniscus.

    Solder joint

6. If you make a mistake, don't worry! You can use solder braid (available in the ECE shop) to absorb the solder from the joint and start over. Just apply the braid over the joint, and press the hot iron against the braid and the solder. As the solder melts, it will flow onto the copper braid.