

# How to solder

The goal is to make little silver Hershey-kiss joints.

First, put a little dab of solder on the tip of the hot iron. This "tins" it and provides molten solder to help transfer heat to the joints. The joints are the wire leads on the parts and the pads on the circuit board. Wipe off any excess solder on the iron onto a damp sponge. The tip should be shiny when soldering. Periodically tin and wipe it to keep it that way.

Touch the tip of the iron to a joint. Apply solder until it flows into the gaps and fills the hole in the pad. It takes about 1/4" of solder to make a joint. Slide the iron up a wire lead to draw the molten solder into a peak as it cools. After the solder starts to flow, it should take 2 to 3 seconds to finish the connection.

You might want to gently blow the fumes away while soldering.

Inspect the joints to make sure they have enough solder. They should be silvery and not white, which indicates that they weren't heated long enough. They should be cone-shaped and not spherical, which indicates that the solder did not soak into the gaps.

The reason the copper-clad circuit board looks silver is that it's coated with solder, which makes soldering parts onto it easier. Also to assist you, there's flux in the solder (which need not be washed off).

Since solder contains lead, you'll want to wash your hands after using it.