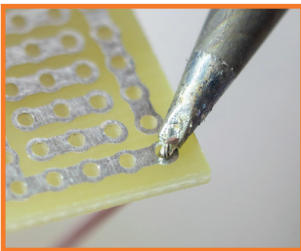


TechTips | Soldering Nickel Plated Copper

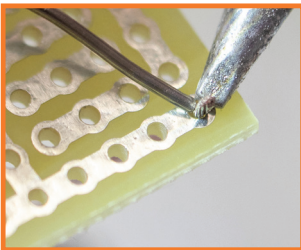
Soldering nickel plated copper with a highly active solder/flux can be challenging without using the correct technique. While nickel plated conductors offer excellent resistance to high temperatures, it can be more difficult to solder than copper, silver and tin. Nickel is commonly used at operating temperatures over 250 °C and provide excellent corrosion resistance, but it requires a fully activated flux to limit oxidation at the high temperatures used during soldering.

The correct technique is outlined below:



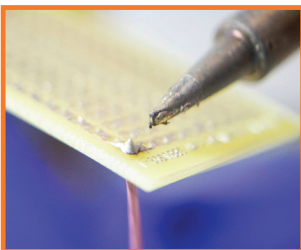
Step One.

Apply the tip of the soldering iron to the junction of the land and the wire to be soldered. This starts the transfer of heat to the connection area.



Step Two.

Create a heat bridge by touching the end of the solder to the connection area, near but not directly in the soldering iron.



Step Three.

As the solder begins to flow, move the solder to the opposite side of the connection area causing the molten solder to move toward the heat source and complete the solder joint. Remove the solder first, and then the soldering iron.

Lab Tested!

In an effort to validate the effectiveness of this process, we decided to solder ThermoThin, a nickel plated copper wire, to a 9V battery terminal. We were quickly able to form a good connection between the wire and the battery. Strong enough, in fact, that we were able to pick the battery up by the wire and shake side to side without breaking the connection. Applying the correct technique makes soldering nickel plated copper easy as 1-2-3.

