

SOLDERING

Cheat Sheet

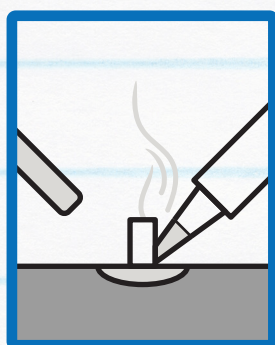


PROPER TECHNIQUE



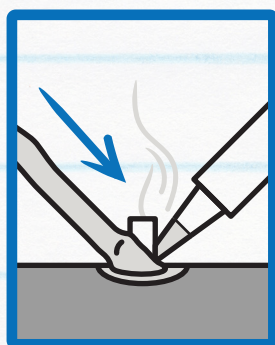
BEFORE YOU START

Always ensure adequate ventilation while soldering. Eye protection and a clean dry workspace free of flammable substances can help you avoid accidents.



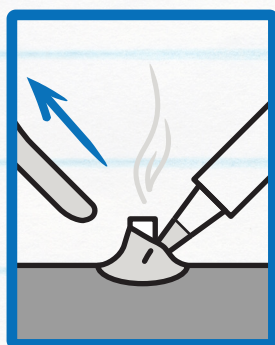
1 PREHEAT SURFACE

Preheat the surface with your soldering iron for a few seconds before applying solder. This ensures proper bonding and absorption of the solder.



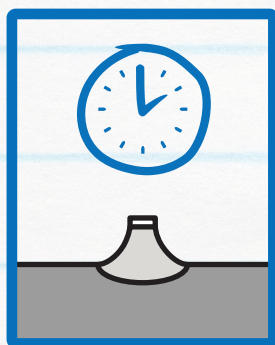
2 APPLY SOLDER

Hold the tip of the iron to the surface and feed solder to the heated joint. Use enough solder to cover the contact area.



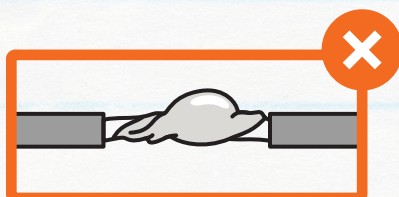
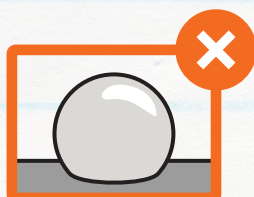
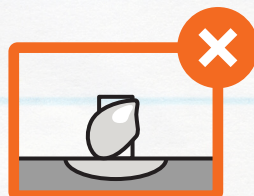
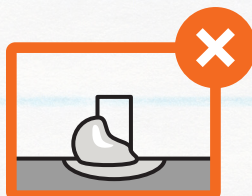
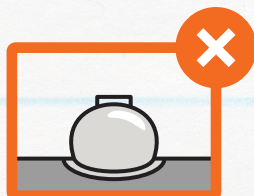
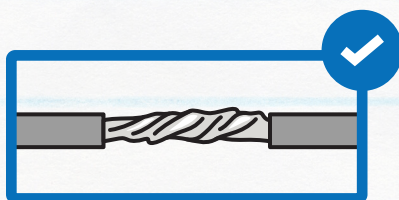
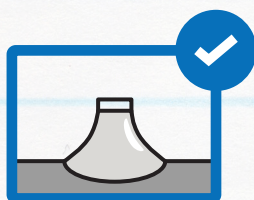
3 MELT SOLDER

Let the solder flow into the joint and fill the contact area. Wires, through-holes, and surface mounts all need solder to flow and absorb into the joints.

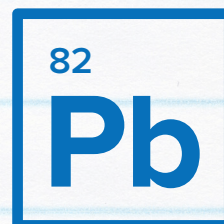


4 COOL & INSPECT

Allow the joint to cool naturally to prevent cold joints, which are weaker. Then, inspect the joint to ensure it is well-formed, strong, and reliable. Redo any bad joints.



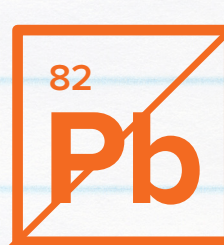
PRO TIPS



LEAD-BASED
500°–650° F
(260°–340° C)



Joints look shiny when cooled



LEAD-FREE
650°–700° F
(350°–370° C)

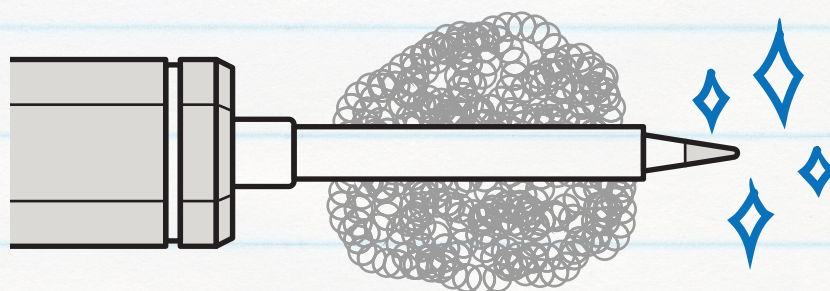


Joints appear duller when cooled

High heat for short amounts of time is better than low heat for long amounts of time.

BEFORE SOLDERING, CLEAN THE IRON'S TIP.

Heat the iron, apply solder to the tip, and wipe it on brass wool or a wet sponge to remove oxidation and contaminants.

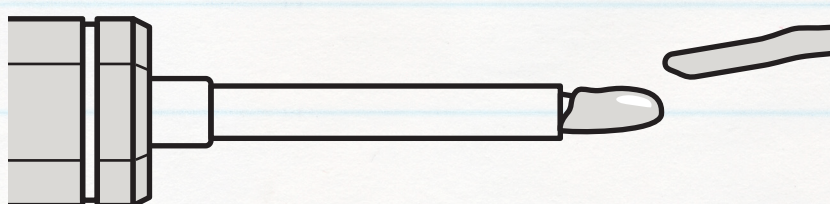


APPLY FLUX GENEROUSLY TO CONTACT AREAS.

Flux aids in the smooth flow of molten solder and increases the likelihood of successful solder joints. For rosin or water-based flux, clean off residue after soldering.

TIN THE IRON'S TIP BEFORE YOU STORE IT.

Tinning is the process of placing a glob of solder on the iron's tip and allowing it to cool. This protects the tip surface from oxidization and contamination during storage. If you're doing this with flux-core solder, allow the flux to fully burn off (stop smoking) before you store the soldering iron.





**NEVER TAKE
BROKEN FOR
AN ANSWER**

