

SHEETMETAL FABRICATION TECHNICAL TIPS FOR SOLDERING

Tips for successful Soldering

Manual soldering uses a soldering iron or soldering “gun”, these are some essential tips to good soldering:

- Always use with caution, a soldering iron can burn you or cause a fire. Liquid solder can cause severe burns too, so always be careful when working with hot irons and melting solder.
- Keep your soldering tools clean:
 1. You should perform preventative maintenance and regular cleaning to prolong your soldering iron's life. Don't let your soldering iron tip get dirty. While your soldering iron is hot, clean the tip often with a wire brush. Remember: A dirty soldering iron will make terrible solder joints.
 2. While your soldering iron is hot, you should “*tin the tip*” with solder to get it shiny and clean and to remove any dross or rosin. Tinning also helps prevent oxidation. To tin the tip, get your soldering iron hot and then coat the tip with solder. Your tip should look like chrome or silver.
 3. Express soldering irons are designed to correctly operate at the lowest possible gas setting. This saves fuel.
 4. Always turn off your soldering iron when you're finished using it to help prevent oxidizing and burning up the tip.
- When you solder something, it will remain hot for many minutes. Always grab parts with pliers to avoid getting burned even after the soldering iron is removed.
- Purchase the correct solder type and width, as well as the correct soldering iron and tip.
- Some soldering kits include training materials to help you master the art of soldering. Although people can tell you how to solder, good soldering requires hands-on experience.
- If your solder looks like a clump of wadded-up aluminum foil, you've soldered it incorrectly. The solder should look smooth and shiny and must cling to both joining surfaces to make a good connection. Poor solder joints cause all sorts of problems that can be hard to track down.



<http://www.guilbert-express.com/resources/video-series>

Video Spotlight #2 – Soldering Irons



<http://www.guilbert-express.com/resources/video-series>

Video Spotlight #4 – how to maintain your soldering iron



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- Be careful not to apply your soldering iron for long periods of time. More heat is not usually the correct solution to soldering problems, proper cleaning of the substrate, flux selection and pre-tinning are essential components for good soldering technique
- You should always make a mechanical connection before making a solder connection. For example, check to make sure the overlap pieces actually touch each other before you solder. This will ensure that your soldering goes quickly and smoothly and will help to keep a solder joint from "bridging" and separating.
- For a dirty or older solder joint, where the flux may have dissipated, you may want to mechanically clean the joints (wire brush or sandpaper) to remove the oxidation (patina) and use a more active (aggressive) aggressive flux to help you rework the old solder joints to make them clean and smooth again.
- Only experience will tell you if you have soldered correctly, so ask an experienced soldering friend to check your work. Doing so can save you hours of time chasing leaks later.

For more information go to www.guilbert-express.com

