



WORKS of GLASS

114 Duff Ave • Ames, IA 50010

Phone: (515) 232-8525

Email: Monicia@WorksofGlass.com

Soldering Iron Care and Maintenance

Before You Use that Brand New Iron

It is very important to "tin" your soldering iron's tip properly before the first use, and periodically afterward so that it will be shiny clean and heat conductive over the entire tip. If the tip is not shiny, then its heat transfer will be poor, and you will have difficulty making good soldering joints. It's sort of like "seasoning" an iron skillet if you will.

To tin your iron for the first time and to care for it in the future you will need the following items:

- **Sal- ammoniac block** (sometimes called a tinner's block)
- **Roll of solder**
- **Fume trap (recommended) or good ventilation**
- The iron tip needs to be fully heated before you use the sal-ammoniac block so plug in your iron and turn up the heat to about 8 or 9.
- Once the iron is hot, rub some clean solder on the entire tip. Wait about 30 seconds and wipe it off on a clean sponge. Then put some flux on the block and rub the entire tip on the block on all sides of the tip. Do this 3-4 times.
- The block will produce white smoke...don't despair this means you are doing it right, the sal-ammoniac is changing to a gas as it is heated, thus the need for a fume trap or adequate ventilation. The smoke will smell like ammonia or chlorine or a combination of the two. This smoke is probably no more dangerous than sniffing a bottle of washing ammonia but try to avoid the fumes by using some type of ventilation.
- When all the surfaces are silver and shiny the tip should hold solder. Touch it to the end of your solder roll, the tip should pick up the solder and hold it. If not continue to rub and add solder until it will hold.
- Once the tip is tinned quickly turn down the temperature, you don't want to burn off the tinning you just did.

General Care and Maintenance

- If a rheostat is not used with a soldering iron, over-heating can cause the tip of the iron to burn out. A tip changes color as it heats from silver to yellow to purple. It should be regulated so as to never turn purple. Solder sticks to a properly maintained iron and will transfer to your work when it is silver in color.

- Keep the tip of the iron clean while you work. Have a very wet to sponge **(use only [sulfur-free] pure cellulose sponges)** handy to occasionally wipe your tip on while soldering .Properly cleaned tips are bright and shiny.
- Keeping it clean ensures you receive the maximum heat at the tip surface. Keeping the tip clean is important but constantly wiping it on a wet sponge can cause early tip failure. Excessive wiping causes the tip temperature to drastically rise and fall and the different metal layers in the tip to repeatedly expand and contract. This cycling leads to metal fatigue and ultimately tip collapse. The more frequently you wipe the tip, the more you stress it.
- If you notice your iron tip getting scaly or dirty and wiping on the sponge does not clean it repeat the tinning. The best way to use a sal-ammoniac block is as a routine maintenance treatment of soldering iron tips rather than let them get completely de-tinned and have to restore them.
- When you have finished soldering, clean your tip, melt as much solder as it will hold, and turn off the iron. This will keep your iron in good shape for the next use.

Monicia