



TCSS Temperature Controlled Soldering Station

Warranty Information

This product is warranted free from defects in material and workmanship for one year from date of purchase. Warranty does not apply to misuse, abuse, neglect, accident, improper use, etc. Contact your reseller for a Return Merchandise Authorization.



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User Manual

Introduction:

The Stahl Tools Electronic Controlled Soldering Station is designed for production soldering to meet the daily demands of the electronics professional. The TCSS offers electronic control of the unit's heat from 300 to 840 °F at 48 Watts through the ceramic heating element and is easily controlled by the front panel temperature control knob. With a super-slim ESD safe pencil iron you can confidently work on or around sensitive components. Work with the ceramic ringed stand attached to the base or detached when space is limited. Heat output is controlled by the dial marked out in °F and an LED indicator shows when the heating element is active.

SAFETY PRECAUTIONS



Your Stahl Soldering Station is a very safe tool, however, like all electrically operated devices, care should be exercised in the operation. Please follow the below guidelines:

1. Keep your soldering iron away from ALL flammable material.
2. Protect yourself from burns, ALWAYS assume the tip is hot.
3. Never allow the HOT soldering iron or tip to come into contact with the power cord or any other materials around your work area.
4. NEVER leave your soldering station unattended or plugged in when not in use.
5. Make sure the station is unplugged and cool before moving your station, replacing the tip, or any other adjustment,
6. Never allow your soldering unit to be dipped into any liquids.
7. Use safety goggles to eliminate the potential for any hot solder or materials to come into contact with your eyes.
8. Always solder in a well-ventilated space.
9. Make sure you use a GFI (Ground Fault Interrupter) receptacle with your soldering station and that it is not being used for any other devices or controlled from a light switch.

Set-Up:

- Unpack the soldering station and insert the ceramic ring into the tightly coiled end of the iron holder
- Insert the holder into the holder base
- Place the cleaning sponge into the base; wet the sponge prior to using the iron to keep the tip clean
- Place the iron into the iron holder and connect the cable to the controller base
- Plug the three prong grounded power cord into a grounded electrical outlet and turn the controller base on
- Set the temperature dial to the desired temperature; the LED above the temperature dial will illuminate while the iron is heating and turn off when the set temperature is reached

Note: The iron holder can be attached to the right or left side of the controller base or left unattached as desired.

Working Temperature:

Soldering at the correct temperature is very important to ensure a perfect solder connection. If the temperature is too low the solder will not flow properly causing cold solder joints. If the temperature is too high the flux will burn and not allow the solder to flow properly. High temperature can also cause damage to the PC Board and other sensitive components. When the working temperature is set within the correct parameters suited to the particular solder being used a good joint is assured. Never touch the solder directly to tip as this will burn the flux from within the solder.

The most common solder alloys used in the electronics industry is 60% tin, 40% lead (60/40). A common tip working temperature of 60/40 solder is detailed below (this may vary from manufacturer to manufacturer).

Melting point	419°F (215°C)
Normal operation	419°F-572°F (215°C-300°C)
Production line operation	608°F-716°F (320°C-380°C)
Desoldering for small joint	599°F (315°C)
Desoldering for large joint	752°F (400°C)

General Cleaning:

The outer case of the iron or station may be cleaned with a damp cloth using a small amount of liquid detergent. Never submerge the unit in liquid or allow any liquid to enter the case of the station. Never use solvent to clean the case.

Maintenance:

The iron must be placed in its stand when not in use. If the supply cord becomes damaged, it must be replaced by a qualified service technician.

Tip Replacement and Dressing:

CAUTION: THE TIP IS PROTECTED IN SHIPMENT BY A VINYL TUBE. REMOVE THIS TUBE PRIOR TO USE TO PREVENT PERMANENT DAMAGE TO THE TIP!

The tip supplied is iron plated copper; if treated properly it will provide years of reliable service. Always tin tips prior to switching off or storing the iron for any period of time, wipe only before use.

Tip replacement or cleaning should be done only when the iron is at room temperature. The tip can be changed or replaced simply by unscrewing the knurled nut from the barrel assembly. The station must be switched off and allowed to cool before and during this operation, as damage may result if the system is left on without the tip installed. After removing the tip, blow out any oxide dust that may have formed in the tip retaining area of the barrel. Replace the tip and screw the retaining knurled nut onto the barrel assembly; tighten only finger-tight. Pliers should only be used to tighten the nut if it becomes loose when the iron is hot to avoid burning your fingers. Do not keep the iron set to high temperatures for a long period of time as this will break down the surface of the tip. Do not use fluxes containing chloride or acid; use only rosin or activated resin fluxes. Do not use any compound or anti-seize materials on the tip surface.