CSI 950+
SMD HOT TWEEZER
INSTRUCTION MANUAL

Thank you for purchasing out products-SMD Hot Tweezers CSI 950+. Please read this manual before operating the 950+. Store the manual in a safe, easily accessible place for future reference.

! CAUTION

The Hot Tweezers can’t function by itself. It must connected to a soldering station specific information can be found in the instruction manual for your particular soldering station. Before operating the CSI 950+ for the first times, be sure to calibrate the station. Don’t set the tip temperature to over 450°C.
Packing list
Please check the contents of the 950 package and confirm that all the items listed below are included

- Tweezers: 1
- Heat Resistance Pad: 1
- Instruction Manual: 1

Specifications

<table>
<thead>
<tr>
<th>Name</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Consumption</td>
<td>62W</td>
</tr>
<tr>
<td>Temperature Range</td>
<td>300°C - 450°C</td>
</tr>
<tr>
<td>Tip To Potential</td>
<td>Under 2mA</td>
</tr>
<tr>
<td>Tip To Ground Resistance</td>
<td>Under 2Ω</td>
</tr>
<tr>
<td>Heating Element</td>
<td>Ceramic Heater</td>
</tr>
<tr>
<td>Cord Assembly</td>
<td>1.2m (4ft)</td>
</tr>
<tr>
<td>Total length (w/o Cord)</td>
<td>84mm (3.3in)</td>
</tr>
<tr>
<td>Weight (w/o Cord)</td>
<td>93g (0.2 lbs)</td>
</tr>
</tbody>
</table>

Specifications and design subject to change without notice
In this instruction manual "warning" and "caution" are defined as follows.

**WARNING**

Miss use may potentially cause death of, or serious injury to, the user.

**CAUTION** Miss use may potentially cause injury to the user or physical damage to the objects involved. For your own safety, be sure to comply with these precautions.

**CAUTION**

When the power is on, the tip temperature is between 300°C - 450°C.

Since mishandling may lead to burns or fire, be sure to comply with the following precautions:

- Do not touch the metallic parts near the tip.
- Do not use the product near flammable items.
- Advise other people in the work area that the unit can reach a very high temperature. And should be consider potentially dangerous.
- Turn off the power while taking breaks and when finished using the unit.
- Before replacing parts or storing the unit, off the power and allow the unit to cool to room temperature.

To prevent damage to the unit and ensure a safe working environment, be sure to comply with the following precautions:

- Do not use the unit for applications other than those specifically described in the Instruction manual.
- Before using the 950 for the first time, calibrate the tip temperature.
- Do not rap the 950 for the first time, calibrate the tip temperature.
- Do not use the tip temperature to over 450°C.
- Do not rap the 950 against the work bench to shake off residual solder, or otherwise subject the iron to severe shocks.
- Do not modify the unit.
- Use only genuine original replacement parts.
- Do not wet the unit or use the unit when your hands are wet.
- The operating process will produce smoke. Make sure the area is well ventilated.
- Pull on the plug to disconnect the 950 from the station outlet. Do not pull the cord.
- While using the unit, do not do anything which may cause bodily harm or physical damage.
1. Dampen the small cleaning sponge with water and squeeze it dry. Place it in one of the 4 openings in the iron holder base.
2. Add water to approximately the level shown in illustration. The small sponge will absorb water to keep the larger sponge above its wet at all times. Note: the large sponge may be used separately (without the small sponge and water).
3. Dampen the large cleaning sponge and place it on the iron holder base.
   Connections:
   1. Connect the plug to receptacle.
   2. Place the 750 in the iron holder.
   3. Plug the power cord into the power supply. Be sure to ground the unit.

CAUTION!
The sponge is compressed and will swell when moistened with water. Before using the unit, dampen the sponge with water and squeeze it dry. Always use a damp sponge to clean the tip. Never wipe the tip clean on a dry sponge as this can damage the tip.
Replacing the Tip/Tip Selection

Replacing the Tip

**CAUTION**
Be sure to turn off the power switch before replacing the tip.

1. Loosen the nipple by turning it counterclockwise.

   It is not necessary to pull it out completely.

2. When the tip is heated, grasp the pipe part using the heat resistance pad of the tip and pull.

3. Insert the new tip as far as it will go, and align it so that it is parallel to the other tip.

4. Tighten nipple to fix the tip in place.

**CAUTION:** the tip is very hot. If handled improperly it can cause serious burns.

Do not hold onto the heat resistance pad for a long period.

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**Operating instructions**

1. Set the Temperature

   **CAUTION**

   Never set the temperature to any value over 450°C, doing so may damage the station.

   Set the temperature according to the type of work to be done.

2. Apply solder or flux

   If there is insufficient solder on the PWB, or the soldered area is too small, apply solder or flux to the PWB. Solder may also be applied to the tip.

   **CAUTION**

   Very high tip temperatures may damage the pointed contact hard, possibly causing the printed patter to become detached.

   Recommends setting the tip temperature to 300°C-450°C for all normal work and raising it only when a specific job requires a higher temperature. Using the lowna! Possible effective temperature not only helps protect parts that are sensitive to heat, it also helps protect parts that are sensitive to heat, it also helps protect the tip from degeneration caused by rust.
3. Melt the solder
Place the tip on the soldered part and melt the solder. Confirm that the solder is fully melted. See sketch 'A'.

4. Remove the component
After confirming that the solder is fully Melted, lightly squeeze the tweezer to grasp the component and lift to remove the component. See sketch 'B'.

The 950 contains a sensor attached to the Heating element in handle B-to detect the tip temperature the soldering station’s heater error function will not operate if the heating element in handle A is broken.

Troubleshooting Guide

<table>
<thead>
<tr>
<th>Problem 1</th>
<th>Check 1. Is the cord assembly broken?</th>
</tr>
</thead>
<tbody>
<tr>
<td>The tip does not heat up</td>
<td>Refer to checking for breakage in the Cord assembly</td>
</tr>
<tr>
<td></td>
<td>Check 2. Is the heating element broken</td>
</tr>
<tr>
<td></td>
<td>Refer to checking for breakage in the Heating element</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Problem 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>The tip heats up intermittently</td>
</tr>
</tbody>
</table>
### Problem 3
The tip is not wet
- Check 3 is the tip temperature too high?
  - Set an appropriate temperature.
- Check 4 Is the tip clean?
  - Refer to tip care and use.

### Problem 4
The tip temperature is too low
- Check 5 Is the tip coated with oxide?
  - Refer to "inspect and clean the tip."
- Check 6 Is the iron calibrated correctly?

### Problem 5
The tip can not be pulled off.
- Check 7 Is the tip seized?
  - Is the tip swollen because of deterioration?
  - Replace the tip and the heating element.

### Problem 6
The tip doesn't hold the desired temperature
- Check 6 above

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### Checking for breakage of the heating element, cord assembly, and tip to ground resistance.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a</td>
<td>b</td>
</tr>
<tr>
<td></td>
<td>Between pins 5 &amp; 5</td>
<td>Between pins 1 &amp; 2</td>
</tr>
<tr>
<td></td>
<td>120</td>
<td>20-310</td>
</tr>
<tr>
<td></td>
<td>(Heating element)</td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>Between pins 3 &amp; tip</td>
<td>Under 2.0</td>
</tr>
</tbody>
</table>

In the chart, replace the heating element (sensor) and/or cord assembly.
Broken heating element

**CAUTION:**

Be sure to measure the resistance of the heating element in both handles A and B. If one of the heating elements is found to be broken, replace both heating elements.

1. Loosen the nipple by turning it counter clockwise.
2. Pull out the tip.
3. Remove the screw.
4. Remove the strut pin, and detach handles A and B.

**CAUTION:**

Do not lose the tension spring.

5. Remove the self-tapping screw and the handle cover.
6. Pull out the PWB and the heating element.

*Broken Cord*

There are two methods of testing the cord:

1. Measure when the heating element is at room temperature.
   - Resistance value of heating element (red): 2 Ω
   - Resistance value of sensor (blue): 2.0 - 2.3 Ω
   If the resistance value is not normal, replace the heating element.
   Refer to the instruction included with the replay cement part.

Turn the unit ON and set the temperature to 400°C. Then wiggle and kink the iron cord at various locations along its length including the strain relief area. If the LED heater lamp flickers then the cord needs to be replaced.
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Part No.</th>
<th>Part name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Tip</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>B2289</td>
<td>Nipple</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>B2200</td>
<td>Heating Element</td>
<td>24V-50W</td>
</tr>
<tr>
<td>4</td>
<td>B2295</td>
<td>Tension Spring</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>B2292</td>
<td>Handle A</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>B2294</td>
<td>Handle B</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>B2291</td>
<td>Hander Cover A</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>B2293</td>
<td>Hander Cover B</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>B2266</td>
<td>Stret Pin</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>B2297</td>
<td>Card Assembly</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>B2292</td>
<td>Grounding Spring</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>B2200</td>
<td>Cleaning Sponge</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>A1206</td>
<td>Cleaning Sponge</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>B2200</td>
<td>Heating Resistance Pad</td>
<td></td>
</tr>
</tbody>
</table>

Note: spare or repair do include mounting screws must be ordered separately.