# A New Generation, Energy Saving, Environmental Protection

## S3100 Automatic Soldering Station

## User Manual

# User Manual

This product adopts international advanced technology and is independently developed and produced by our factory. As a revolutionary breakthrough in soldering operations, it can not only improve work efficiency by more than 50%, but also improve product quality and reduce the so-called waste in many soldering operations. The work, previously requiring two people to finish, now only needs one person. It is the first choice for soldering operations.

**Product specifications:**

| | |
|---|---|
| Brand: SINRAD | Name: Automatic Soldering Station |
| Model: S3100 | Type:desktop |
| Voltage Supply: AC220V/Hz | Power: 60w |
| Temperature Range: 200℃-480℃ | Suitable Diameter of the Solder Wire: 0.8-1.6mm |

**Listing of Parts:**

Main machine*1, Soldering iron*1, Panel*1, Power cord*1, Tin tube*1, Manual*1.

**Function Introduction:**

Universal arm device: Three-dimensional space adjusting, so that the soldering iron and tin wire do not need the operator's hands, it completely replaces your hands. The arm can be adjusted to any welding position you want.

Foot switch design: completely liberates your hands, then your hands can take the welded objects, which improves work efficiency and precision of welding.

Automatic tin feeding system: As long as you gently step on the pedal switch, the tin wire will automatically, fixedly and quantitatively reach the tip.

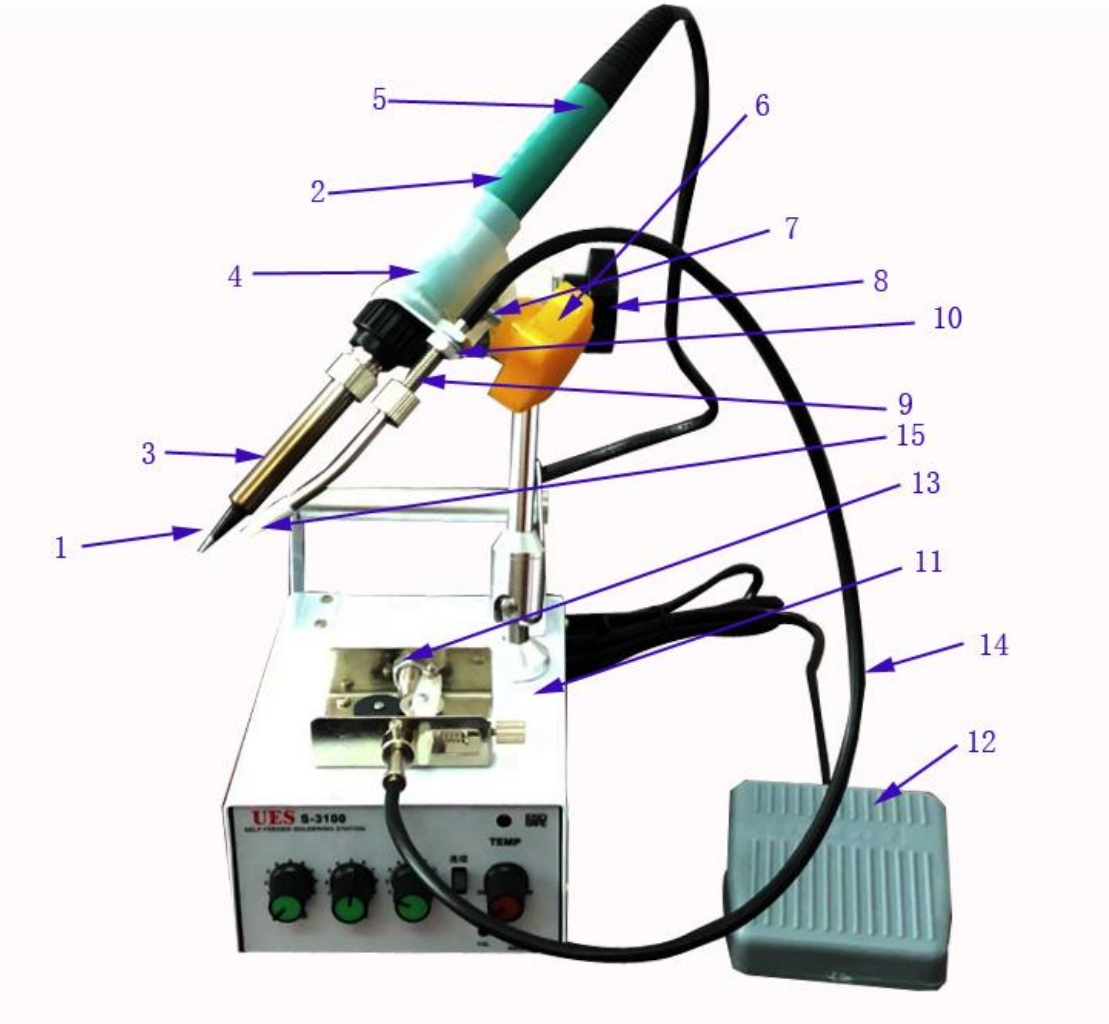
Sending tin design: single point and continuous tin feeding mode, special set back tin function, smoother operation.

Adjustable thermostat control: The working temperature can be adjusted between 200 °C and 480 °C according to the work requirements.

Sending tin speed control: The tinning speed can be adjusted according to the working temperature.

Tin feeding quantity control: The amount of tin can be adjusted according to the size of the solder joints.

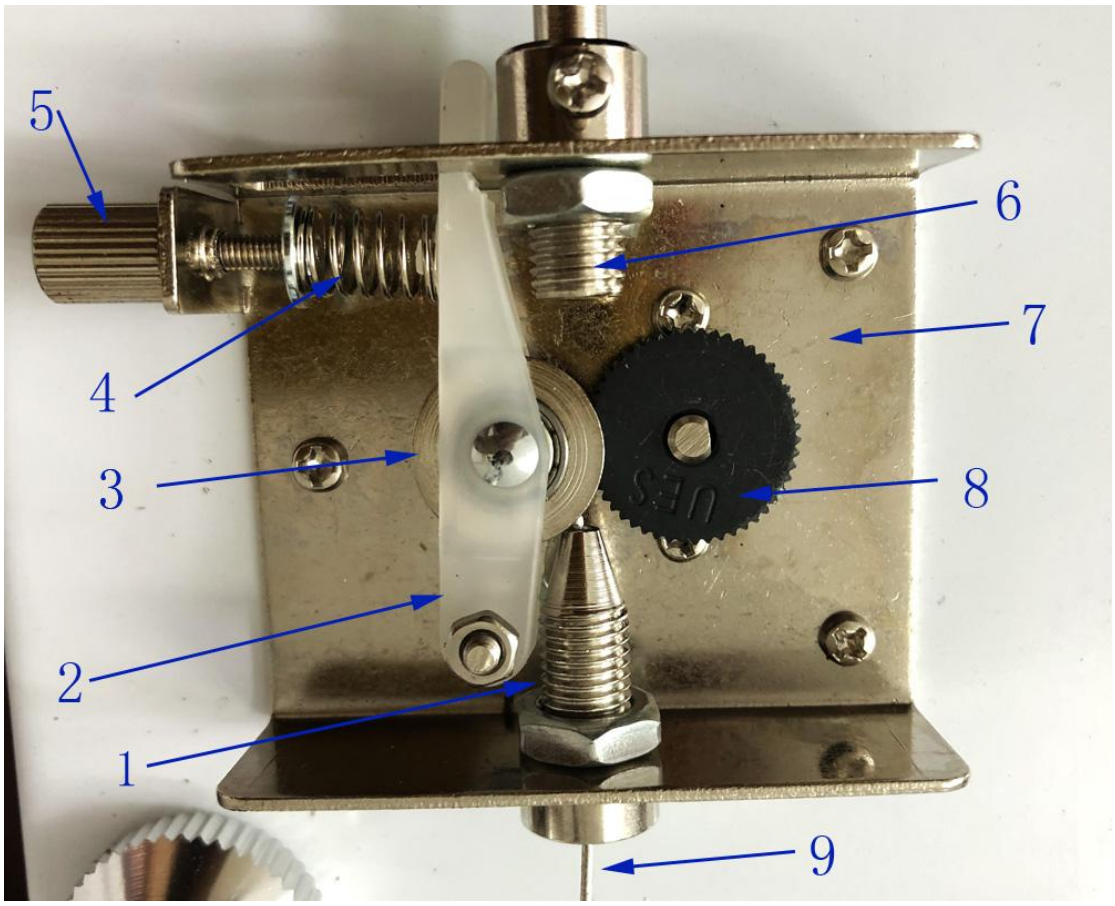
Environmentally friendly design: For your health, please use environmentally friendly lead-free solder wire.




**Components Description:**

1. Soldering Iron
2. Heating Wire
3. Steel Sleeve
4. Clamping Block
5. Soldering Iron Handle
6. Soldering iron locking knob
7. Universal Arm
8. Arm Knob
9. Solder Wire
10. Solder Wire Holder
11. Main Machine
12. Foot Panel
13. Tinning Asembly
14. Tin Tube
15. Tin Hose

**S3100 Automatic Soldering Station Instructions**




1. Tin Input Guide
2. Tin Channel
3. Internal Tooth of the Gear (passive wheel)
4. Spring for Guding Tin Input
5. Tin Adjustment Knob
6. Tin Output Tube
7. Motor Seat
8. Gear(Main Gear)
9. Solder Wire

**Ⅰ. Functioning Steps**

a. Install the soldering iron into the Clamping Block first, tighten the soldering iron locking knob, and then adjust the universal arm to the position suitable for your welding (adjusting the arm's black five-corner knob, the arm can be adjusted freely).

b. Plug in the power plug and foot switch, then turn on the power switch.

c. Install solder wire (diameter of which is 0.8 to 1.6mm), as shown in the above drawing. First insert the solder wire from the hole in the tapered tin-introducing tin, insert the black tin channel by hand, separate the two meshing gears, and then thread the tin wire from the middle of the two meshing teeth. In the front hole of the tin-plated tin guide, after releasing the tin-plating groove, adjust the metal knob on the back to adjust the tightness between the gears. If it is too loose, the

tin can not be driven smoothly, and the motor can not drive the tin wire. The line thickness is moderately adjusted. (Note: Be sure to place the solder wire in the inner groove of the passive tooth.)

d. Adjust the temperature control switch.

e. Adjust the tinning speed and solder joint size button to the desired tin length. The solder joint size is determined by the desired tin length adjusted from zero to above, which ensures smooth motor operation. Adjust the working distance between the tin tube and the tip, keep at least 3mm, and adjust the back speed adjustment knob to a distance of up to 6mm to avoid the tube being blocked due to too close to the tip.

f. The soldering iron is heated to the temperature of the fusible tin wire and ready to use.

g. For tin supply, you can choose a single point or send tin continuously.

**Ⅱ. Notice：**

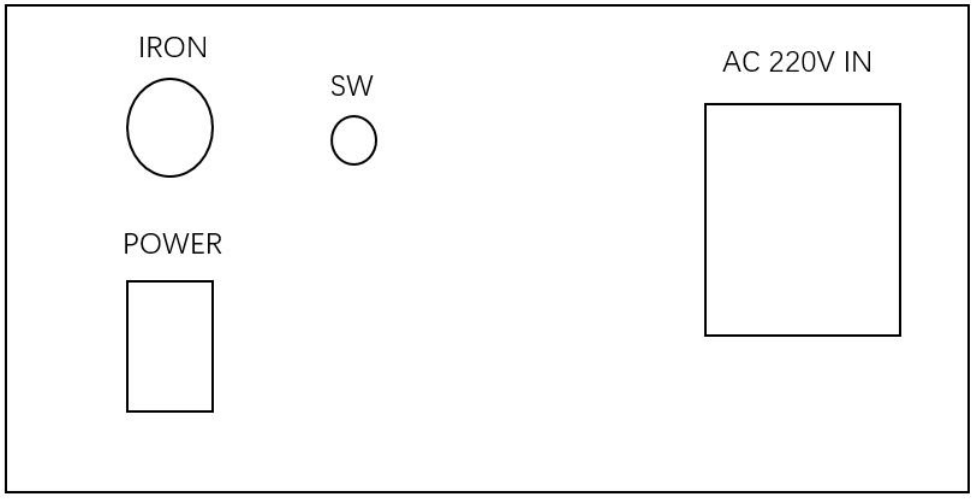
a. Before plugging in the power cord, please determine the voltage of the socket.

b. At the end of the work, please turn off the power and take off the power plug.

**III. Surface function**

## Front Panel

## Back Panel




**Malfunction Examining List**

**Warning**: Turn off the power before performing maintenance, otherwise an electric shock may occur. If the wire is damaged, the manufacturer and its maintenance department or similar qualified personnel should be repaired to avoid injury to the body or damage to the soldering machine.

| Malfunction | To do list |
|---|---|
| Soldering station doesn't work | 1. Check if the fuse is blown. Replace a new fuse after determining the cause of the blown fuse |
| | 2. Check if the inside of the soldering iron is shorted |
| | 3. Check if the heating element leads are shorted |
| | 4. Check if the wire is broken |
| | 5. Check if the switch is damaged |
| Welding head does not heat up | 1. Check if the power cord or soldering iron connector plug is loose? Please reconnect |
| | 2. Check if the soldering iron wire is broken? |
| | 3. Check if the heating element is broken? |
| The welding iron head is intermittently heated | 1. Check if the wire of the soldering iron is damaged? |
| Soldering iron head does not touch solder | 1. Check if the temperature of the soldering iron is too high? Re-adjust to proper temperature |
| | 2. Check if the soldering iron head has been cleaned up |
| Soldering iron tip temperature is too low | 1. Check if the soldering iron tip is derived from oxide |
| | 2. Check if the soldering iron is suitable for the appropriate power |

| | |
|---|---|
| Heater error often shows | Check if the welding head too small compared to the object to be welded? Replace the larger soldering iron head |

**Maintenace Guide**

**Warning!**

Turn off the power and unplug the power cord before performing maintenance. And professional staff should be in charge to avoid the risk of electric shock.

| Malfunction | Checking | Results | Solution |
|---|---|---|---|
| Work status indicator is not lit | Is the connection plug loose? | Yes | Reconnect |
| | If the fuse is blown | Yes | Make sure the cause of the blow is repaired, and replace the fuse (2A). |
| | In case of: power switch or transformer damage, heating core or internal short circuit of the machine, etc. | | Be sent for repair |
| Tip does not heat up | Is the heater damaged? | Yes | Replace heater |
| | Temperature control circuit is damaged | | Be sent for repair |
| | Whether the tin adjustment knob is correctly adjusted | No | Please adjust correctly |
| | If the motor is damaged? | Yes | Replace a new motor |
| Tin sending system malfunction | Adjustable motor power (DC0-12V) | | Be sent for repair |
| | Internal circuit damage | | Be sent for repair |

**Iron Tip Maintenance**

1. When the iron tip is used for the first time, pay attention to monitoring the temperature rise of the soldering iron. When the temperature can just melt the tin wire, put a layer of tin on the iron head, and then raise the temperature to the required temperature. Remember that the tip should be covered by a layer of tin for a long time at work, protecting the soldering iron from oxidation, in order to achieve the best soldering function.

2. Such as the appearance of a layer of oxide on the surface of the iron tip, causing the low temperature illusion of the soldering iron head, unable to melt tin, in fact, the heating core and the soldering iron tip are both at a high temperature. When it happens, don’t blindly raise the temperature again. Use clean cotton to remove oxides. If it can't be removed, please turn off the power. After the special soldering iron is cooled to room temperature, use No. 0 sandpaper. Carefully remove the oxide and repeat the first use of the first soldering iron.

3. Turn the temperature to a low one when it is not in use. Turn off the power after the standby time exceeds 20 minutes. Otherwise long-term high temperature accelerates the ageing of the heating core. The oxide on the soldering iron directly weakens the welding function.