SMD REWORK SYSTEM

Instruction Manual

Thank you for purchasing our SMD Rework unit. The unit is exclusively designed for reworking and soldering SMD component. Please carefully read this manual before operating the unit. Store this manual in a safe, easily accessible place for future reference.
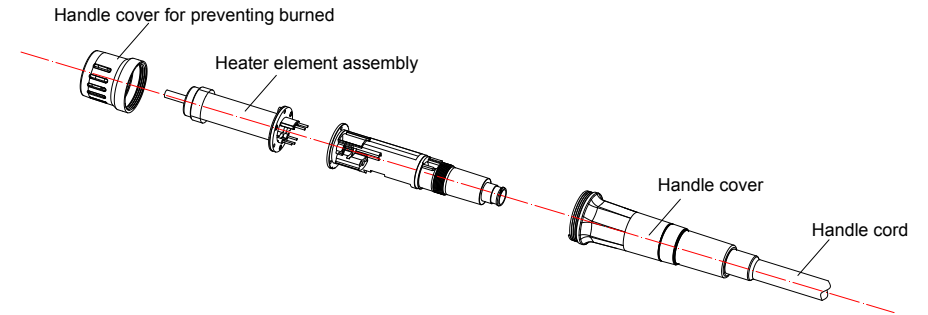
⚠ Safety Instruction

To prevent accidents, be sure to observe the following precautions:

1. Use the unit only in the described manners as the manual.
2. The air outlet and its surrounding area maybe very hot. Please take great care and not to be burned.
3. After work, the handle must be placed on the holder and never place the handle on the workbench or other places. The unit can be turned off only after it cools below 100℃(sleeping mode) automatically.
4. Please keep the air outlet clear and not be blocked.
5. Do not place the sharp object besides or on the tube.
6. Keep the air outlet at least 2mm from the object.
7. Select the appropriate nozzle according to demands. Differences in temperature may exist when different nozzle is used.
8. Turn off the power switch if not using in a period of time. Disconnect the power cord when not in use for a long time.
9. Handle with care not to shock the unit sharply.
10. A periodically maintenance of the unit is necessary.
11. Don't operate the unit with wet hand or when the power cord is damp to avoid short circuit or electric shock.
12. Never use this unit in flammable gases or near other flammable materials. After using, don't put it near the flammable gases or materials.
13. Some areas such as behind walls, ceilings, floors, and other panels may contain flammable materials which may not be found. The ignition of these materials could result in property damage and injury to persons. When working in these locations, move the handle back and forth and not pause at one point for protecting the flammable materials from ignition and other things from damage.
14. Children can't recognize the danger of the electrical appliance and keep the unit out of reach from children.

1. Characteristic

1. There are three regular channels "CH1", "CH2" and "CH3"and each channel's parameters including temperature and airflow can be set.
2. With password protection function and key-lock function.
3. Real time operation by the magnetic switch and it comes to sleep when putting the handle on the holder.
4. It can automatically sleep and set parameters in the sleeping state.
5. Closed loop sensor, temperature can be controlled by zero voltage triggering mode. Large power and rapid heating. Temperature can be conveniently adjusted and the temperature is accurate and stable, and not affected by airflow.
6. It is with a brushless whirlpool motor and the airflow is adjustable with a wide range but no level. It is a multipurpose unit.
7. Automatic cooling system can prolong the heating element's life and protect the handle.

Key of setting temperature
Key of setting airflow
Power switch
Key of selecting channel
The handle

Handle cover for preventing burned
Heater element assembly
Handle cover
Handle cord

⚠Caution: Avoid invalidate the ground cord when replacing the heater element.

9.2 Assembly and change of the nozzle

1. Assembly：Select one befitting nozzle and insert it into the outlet's steel pipe.

   Press it with hand until the nozzle has been locked. It can be used after the nozzle has been fixed reliably.
2. Change: Take the handle down from the holder after the nozzle has cool down. There is a slot between the nozzle and the outlet's steel pipe. By the slot, put the handle on the disassembly plate of the nozzle that is fixed at the holder. After that, fix the holder with one hand and pull out the nozzle. Change another nozzle.

   Note: The nozzle can be ordered by the custom.

   ⚠Caution: Change the nozzle after it has cool down.

▲"or "AIR▼" key to move the cursor. After inputting the testing result, click the "CH2" key.

3. If calibration is successful, the LCD respectively displays "C-L/C-H" , if not

    successful, the LCD displays "no".
4. If the temperature still has some departure, you can repeat calibration according with the above steps.

*Note: * Suggest using 191 or 192 thermometer to measure the temperature.*

9. Replacing the parts

9.1 Replacing Heating Element

1. Replace the heating element after the handle has cooled down.
2. Unscrew and remove the handle enclosure for preventing burned.
3. Unscrew and remove the three screws on fixing the steel tube, in which has the heater element assembly. And then it can pull out the heater element assembly to change a new one (the heater element assembly and the steel tube are incorporate and don't need disassemble).
4. When installing the new heater element assembly, it must insert the pins of the heater element assembly to the corresponding sockets, and insert the sensor pins to the sensors sockets.
5. Reassemble the handle according to the opposite order of disassembling. The heater element must be insert into the end.

2. Specification

Power	1000W
Voltage	200V 50HZ/60HZ
Temperature range	100℃~500℃
Airflow range	1~120 Level
Size (L*D*H)	188（L）*245（D）*135（H）mm
Weight	3.65kg

3. Applicable scene

1. It is suitable to the de-soldering of the SMD components, such as SOIC, CHIP, QFP, PLCC, BGA and so on.
2. It is suitable to hot shrink, drying, remove lacquer and mucosity, thaw, preheating, disinfect and so on.
3. It is suitable for the situation needing different range airflow, softer or heavier.
4. It is suitable for the hot air lead free de-soldering.

4. Setting of the Temperature and the Airflow

Firstly, place the SMD rework system on the workbench. And then connect well the power cord and other connection lines. Place the handle on the handle holder before switching on the power supply.

4.1 Temperature Setting

Raise temperature: Click **"TEMP ▲"** key and then the temperature will rise 1 ℃, and the LCD displays the current setting temperature. If pressing"TEMP ▲"not loosely at least one second, the setting temperature will rise rapidly. Loose the "TEMP ▲" key until up to the needed temperature.

Reduce temperature: Click **"TEMP ▼"** key and then the temperature will drop 1 ℃, and the LCD displays the current setting temperature. If pressing "TEMP▼" key not loosely at least one second, the setting temperature will drop rapidly. Loose the "TEMP ▼" key until down to the needed temperature.

4.2 Airflow Setting

Raise Airflow: Click **"AIR ▲" key** and then the airflow grade will rise 1, and the LCD displays the current setting airflow grade. If pressing "AIR ▲"not loosely at least one second, the setting airflow grade will rise rapidly. Loose the "AIR ▲"key until up to the needed airflow grade.

Reduce Airflow: Click **"AIR▼"** key and then the airflow grade will drop 1, and the LCD displays the current setting airflow grade. If pressing "AIR▼"not loosely at least one second, the setting airflow grade will drop rapidly. Loose the "AIR▼"key until down to the needed airflow grade.

5. Operation instruction

5.1 key instruction

POWER key	Power supply switch
CH1 key	Click it and work in the CH1 channel
CH2 key	Click it and work in the CH2 channel
CH3 key	Click it and work in the CH3 channel

7. Sleeping

7.1 How into the Sleeping State

1. Put the handle on the handle holder, the system will to the sleeping state come automatically.
2. During the system from work state to sleeping state, the window will display "Off". and then when the temperature cooling down to 100℃, the unit comes into the sleeping state. In the sleeping state, the LCD will display "Sleep".

7.2 Resume

1. When the handle is putting on the handle, it cannot be resumed from sleeping.
2. Take down the handle from the holder. At the time, the unit will work at once.

8. Calibration

It is better to calibrate the temperature after changing the heater element. Adopt two point temperature calibrate, The method of calibrating the temperature is as following:

1. In work state, set the calibration temperature 300℃ and 500℃ respective calibrate.
   When the temperature is stable and the window displays "Real Temp", test the outlet temperature of the handle with thermometer and write down it.
2. **Into the calibration mode:** When the temperature is stable, press the keys "CH1" and "CH3" keys at the same time about 15seconds, and then the LCD will display "cal" about two seconds and the system will enter into the temperature calibrating mode.
   Input the testing temperature after the hundreds digit twinkling.
3. Press "TEMP▲"or "TEMP▼" key to setting the data and press "AIR to exit the password setting and come to the work state.

③ **If don't do any operation during the 20s of displaying "SET":**
   The system comes into the work state.

(4) After setting new password and turn on the power switch, the display will show "no" and then comes into the work state or sleep state.

Note:

● In the initial state, it can change the password directly and without input the correct password "000" first.

● After setting a new password in the initial state, it must turn off the power switch and then turn on it, and then the locking function of the parameter setting comes to run. Or else, it can change the parameter after changing the password.

6. Message instruction

1. **Heater error:** If there is some malfunction in the heater or in the heater circuit, the temperature parameter of LCD will display **"H-E"**. It must test the heater and the correlative parts.

2. **Sensor error:** If there is some malfunction in the sensor or in the sensor circuit, the temperature parameter of LCD will display **"S-E"** and the power supply to the handle will be cut off.

3. **ERR:** If there is some malfunction in the fan or in the fan circuit, the LCD will display **"ERR"** and it must test the fan and the correlative parts.

| TEMP▲/▼key	Adjust the temperature
AIR ▲/▼key	Adjust the airflow
CH1&CH2	Set the sound function
CH1&CH3	Into the calibration function

5.2 Operation

Note: check the parts in the package as the packing list. Some option parts may be not in the package if do not order.

1. Put the unit on the flat workbench and select suitable nozzle to install (refer to 9.2). After that, put the handle on the holder.

2. Insert the power plug into the power socket and then press the "POWER" key. Switch on the power supply to the SMD rework system.

3. Take down the handle from the holder and the system comes into the work state. When the temperature is stable, the temperature window displays "Real Temp".

4. If **in the unlocking state**, it can set the temperature and the airflow.
   (1) Click "TEMP▲" or "TEMP▼" key to set the temperature and click "AIR ▲" or "AIR ▼" key to set the airflow (refer to the "temperature setting & airflow setting")
   (2) *Select the working channel:* After setting the temperature and airflow, click CH1 (or CH2 or CH3) to save the setting data into channel CH1 (or CH2 or CH3).

5. If **in the locking state**, it cannot set the temperature and the airflow and after getting the power supply, the display shows "no" before into working.

6. After working, put back the handle on the holder. After that, the unit comes into the cooling state and when cooling down to 100℃, the unit comes into sleeping state.

7. If not use in a period of time, it must turn off the power switch and cut off power supply.

⚠ Caution:

- The initial password is "000". At the initial state, the system is in the unlocking state and it can set the parameters and select the channel.
- For prolong the life of the heater and protect the safety of the chip, use as low temperature as possible and as big airflow as possible if it can finish the de-soldering work.

5.3 The sound setting

1. Press the "CH1" and "CH2" about three seconds at the same time in the working state or in the sleeping state. It can switch on or off the sound.
2. When the LCD displays " (•) ", the system has key sound and alarm sound. When not displaying " (•) ", the system hasn't key sound and alarm sound.

5.4 Password setting

1. In the initial state (the password is 000) and the password setting steps as followings:
    (1) Turn off the power switch firstly, and then press the key "CH2" and turn on the power switch. Not loosely the "CH2" key until the window displays "C". After that, the window displays "**password**" and "**SET**", which means the system comes **into the password setting state**.
    (2) In the password setting interface first time, the cursor of hundred twinkles. Press "TEMP" and "AIR" keys to set the password.

    ① Press "TEMP▲" and "TEMP▼" keys to select password data from 0~9.

    ② Press "AIR▲" and "AIR▼" keys to move the cursor among the hundred, ten , one-digit.

    (3) Finishing the first password input, click key "CH2" into the secondary password input, the cursor of hundred twinkles.
    (4) If the next passwords are not identical, the setting of password is not successful and the window displays "no". After that, the system comes into work state and the password is still the former one.
    (5) If the next passwords are identical, the setting of password is successful and the unit displays "SAV_ _ _" and has sound (run sound function). After that, the system comes into work state.
2. If the password is not the initial password 000, it must input the correct password before into the password setting interface.

    （1）*Input the password:* Turn off the power switch firstly, and then press the key "CH2" and turn on the power switch. Not loosely the "CH2" key until the window displays "C". After that, the window displays "**password**" and the cursor of hundred twinkles. Which means the system comes **into the password-inputting interface**. There are three times to input the password. After three time, it will exit the password-inputting interface and into the work state.

    (2) *If the password is not correct:* the display shows "no" and then comes into the work state.

    (3) *If the password is correct:* the display shows "SET" about 20 seconds.

    ① **During the 20s of displaying "SET":** click "CH2" into the password setting(refer to the password setting at the initial state)。 If input the initial password "000", the system comes into the unlocking state. Or else, it can set a new password.

    ② **During the 20s of displaying "SET":** click "CH1" or "CH3"