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Tektronix
861DW SMD
Rework System

Tektronix 861DW SMD Rework System Instruction Manual

Contents

**Tektronix**

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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 may be very hot. Please take great care and not to be burned.
3. After work, the handle must be placed on the holder,r and never place the handle on the workbench or other places. The unit can be turned off only after it cools below 100°C(sleeping mode) automatically.
4. Please keep the air outlet clear and not be blocked.
5. Do not place the sharp object beside the tube.
6. Keep the air outlet at least 2mm from the object.
7. Select the appropriate nozzle according to demands. DiTemperature differences exist when different nozzle is used.
8. Turn off the power switch if not used or period. Disconnect the power cord when not in use for a long time.
9. Handle with care not to shock the unit sharply.
10. Periodic maintenance of the unit is necessary.
11. Don't operate the unit with wa et hand or when the power cord is damp to avoid short circuits or electric shocks.
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 that 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 to protect 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.

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. The automatic cooling system can prolong the heating element's life and protect the handle.
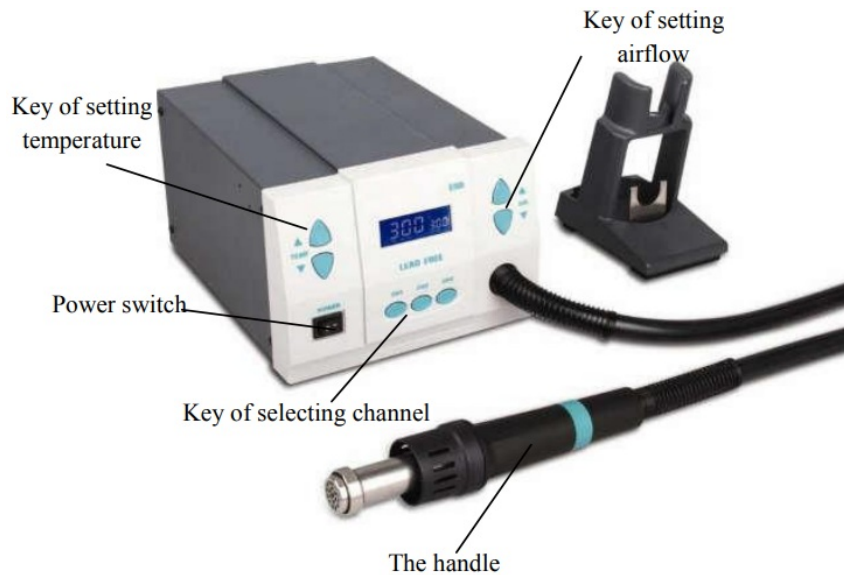
Applicable scene

1. It is suitable for the de-soldering of the SMD components, such as SOIC, CHIP, QFP, PLCC, B, GA, and so on.
2. It is suitable for hot shrinking, drying, removing lacquer and mucosity, preheating, disinfecting, and so on.
3. It is suitable for the situation needing different range airflow, softer or heavier.
4. It is suitable for hot lead-free de-soldering.

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.

Temperature Setting

- **Raise temperature:** Click the "TEMP ▲" key and then the temperature will rise °C, and the LCDs the current setting temperature. If pressing "TEMP ▲" not loosely for at least one second, the setting temperature will rise rapidly. Loose the "TEMP ▲" key until up to the needed temperature.
- **Reduce temperature:** Click the "TEMP ▼" key and then the temperature will drop °C, and the LCDs the current setting temperature. If pressing the "TEMP ▼" key not loosely for at least one second, the setting temperature will drop rapidly. Loose the "TEMP ▼" key until down to the needed temperature.

Airflow Setting

- **Raise Airflow:** Click the "AIR ▲" key and then the airflow grade will rise by 1, and the LCDs the current setting airflow grade. If pressing "AIR ▲" not loosely or 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 the "AIR ▼" key and then the airflow grade will drop 1, and the LCDs the current setting airflow grade. If pressing "AIR ▼" not loosely or at least one second, the setting airflow grade will drop rapidly. Loose the "AIR ▼" key until down to the needed airflow grade.

Operation instruction

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

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

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 a 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. . 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 the sleeping state.
7. If not used for a period, it must turn off the power switch and cut off the power supply.

Caution:

- The initial password is "000". At the initial state, the system is unlocking and it can set the parameters and select the channel.

- To prolong the life of the heater and protect the safety of the chip, use as low a temperature as possible and as big an airflow as possible if it can finish the de-soldering work.

The sound setting

1. Press the "CH1" and "CH2" for 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 LCDs " ", the system has a key sound and an alarm sound. When not displaying " ", the system doesn't have an eye sound or alarm sound.

Password setting
In the initial state (the password is 000) the password setting steps are as follows:

1. Turn off the power switch first, 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 a hundred twinkles. Press the "TEMP" and "AIR" keys to set the password.
    1. Press the "TEMP▲" and "TEMP▼" keys to select password data from 0~9.
    2. Press the "AIR▲" and "AIR▼" keys to move the cursor among the hundred-ten one-digit.
3. Finishing the first password input, click the y "CH2" into the secondary password input, and the cursor of a hundred twinkles.
4. If the next passwords are not identical, the setting of the 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 the password is successful and the unit displays "SAV_ _ _" and has sound (run sound function). After that, the system comes into a working state.

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 first, 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 times, 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" for for 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" 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 the new password and turning on the power switch, the display will show "no" and then come into

the work state or sleep state.

Note:

- In the initial state, it can change the password directly without inputting 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.

Message instruction

1. **Heater error:** If there is some malfunction in the heater or the heater circuit, the temperature parameter of the 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 the sensor circuit, the temperature parameter of the 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 the fan circuit, the LCD will display **"ERR"** and it must test the fan and the correlative parts.

Sleeping
How into the Sleeping State

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

Resume

1. When the handle is put 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.

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

1. In the work state, set the calibration temperature to 300℃ and 500℃ respective calibrate. When the temperature is stable and the window displays "Real Temp", test the outlet temperature of the handle with the 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 7s, and then the LCD will display "cal" for about two seconds and the system will enter into the temperature calibrating mode. Input the testing temperature after the hundreds of digit twinkle.
3. Press "the TEMP▲" or "TEMP▼" key to set the data and press the "AIR▲" or "AIR▼" key to move the cursor. After inputting the testing result, click the "CH2" key.
4. If calibration is successful, the LCD respectively displays "C-L/C-H" if not successful, thLCDsys "no".
5. If the temperature still has some departure, you can repeat calibration according to the above steps.

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

Replacing the parts
Replacing Heating Element

1. Replace the heating element after the handle has cooled down.
2. Unscrew and remove the handle enclosure to prevent burn.
3. Unscrew and remove the three screws on fixing the steel tube, which has the heater element assembly. Then it can pull out the heater element assembly to change to a new one (the heater element assembly and the steel tube are incorporated and are not disassembled).
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 inserted into the end.
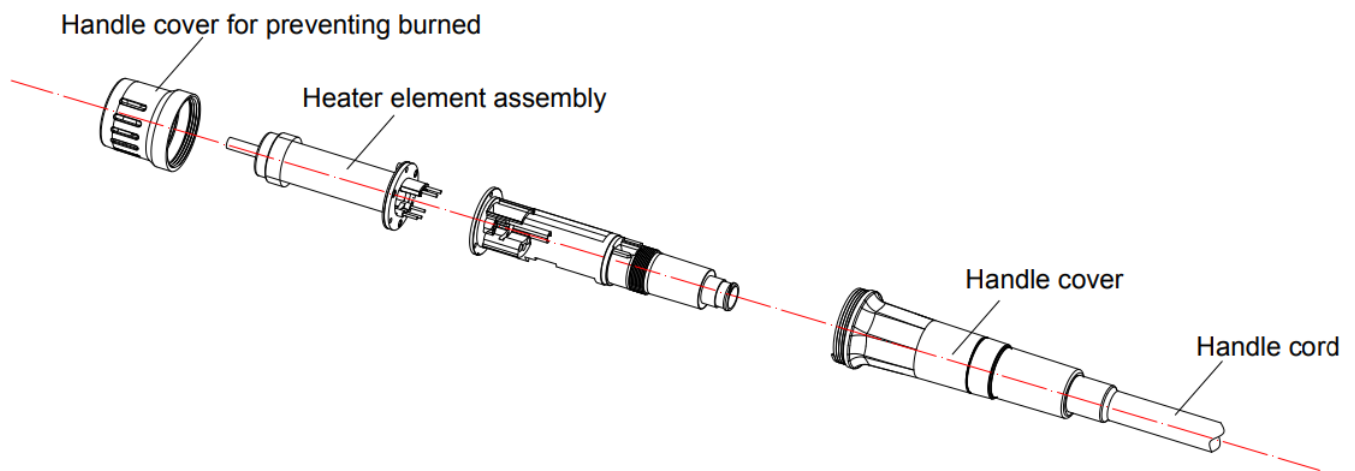
⚠️**Caution:** Avoid invalidating the ground cord when replacing the heater element.

Assembly and change of the nozzle

1. Assembly Select one befitting nozzle and insert it into the outlet's steel pipe. Press it with your 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 cooled 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 customer.
⚠️**Caution:** Change the nozzle after it has cooled down

Notice: After 500°high temperature aging it will have a light yellowing phenomenon,t If the phenomenon is normal please be assured of use!

FAQs

Q: How can I calibrate the temperature of the unit?

A: To calibrate the temperature, press the SET key to enter calibration mode and use the UP or DOWN keys to adjust. Click CH2 to confirm calibration results.

Documents / Resources

SMD REWORK SYSTEM Instruction Manual	**Tektronix 861DW SMD Rework System** [pdf] Instruction Manual 861DW SMD Rework System, 861DW, SMD Rework System, Rework System

References

- **User Manual**