

# 焊臺 熱風槍 電源 三合一

## Series 3 in 1 tool

(soldering station, hot air rework station and DC power supply to work together )

**使用說明書 INSTRUCTION MANUAL**

853D/909D

**中文(繁)/English**



感謝您購買此款熱風拆焊臺,本產品是專門為無鉛拆焊而設計的,使用前請仔細閱讀本說明書,閱讀後請妥善保管,以供日後參考。

Thank you for choosing this type of Unsoldering Equipment with Hot Air. The product is designed for soldering and unsoldering without lead. Please read the User Guide thoroughly before use, and keep it in a safe place for future reference.



## WARNING:

In view of could cause serious injuries or fire accidents, please strictly observe the following:

1. MUST unplug the power cord when the machine is not in use or no people operate it .
2. All components disassembly must ensure to turn off the power.(High pressure risk)
3. When the power is turned on, the temperature of air gun outlet or iron tips is  $100^{\circ}\text{C}\sim 480^{\circ}\text{C}$ , don't touch metal part of the air gun and solder iron, when replace nozzle or iron tips,you should turn off the power and cooling to the room temperature.(High temperature risk)
4. DO NOT use the machine near flammable substance(fire hazard!).
5. DO NOT use the machine In explosive atmospheres.
6. After use the machine ,must be cooling down and then be storage.
7. During operation, the temperature of air gun outlet or iron tips is  $100^{\circ}\text{C} \sim 480^{\circ}\text{C}$ ,Must be in the user's line of sight, you know, heat can be conducted combustibile materials.

## I. Features

1. This products is designed based on market research needs of three in one tool, it combines together in one common tool (soldering station, hot air rework, and power supply for repairing mobile phones ), there kind of function can be used independent switch or simultaneously,it occupies less area,practical and saves energy, and the product's performance still on going to further improvement.
2. The product uses double-sided fiberglass circuit board material,the components installation processes are performed orderly to ensure the clarity of electric signal flow.
3. Soldering iron, Hot air rework station and DC power supply are using independent dual-core micro-controller,which means they can work independently, when the problem occurs on one tool it does not affect the others. Dual-core CPU is used to avoid failures.
4. Soldering iron Hot air rework used for sensor closed loop circuit, micro-computer zero trigger-controlled temperature, LED display. Larger power, temperature heating goes up quickly, temperature accuracy and stability, avoid to airflow impact, its really come true lead-free soldering and desoldering. Machine's parts has self-detection devices, full-intelligent's over -temperature, short circuit, open circuit, overload etc. Failure of display and protection function.

5. The soldering station, Hot air rework's temperature are using Intelligent Fuzzy PID control, the exact LED digital display temperature of hot air rework and soldering iron. The program keep tracking of the actual temperature of hot air rework and soldering iron, temperature compensation very quickly, this will further enhanced temperature stability. Therefore the temperature steady-state error is relatively small, temperature compensations quickly and can adapt to all kinds of harsh environment..
6. Hot air rework with sensor switch, as long as hand grip the handle, the system can enter into working mode quickly; handle released into the handle frame, the system will enter into standby mode, operating convenience, it can prolong heating elements life and protect the hot air gun.
7. Hot air gun use for high-quality heating elements, in the same power, its efficiency can be arrive doubled, which can effectively extend the service life of heating elements and power savings. Outlet way is brushless fan gentle wind and diaphragm pump spiral wind, two type for your choose. It has long life, minimal noise and air volume can be adjusted continuously.
8. Soldering iron with anti-static design, to prevent electrostatic damage to the delicate SMD components.
9. Power supply part of the recovery with continuous protection and RF protection, to avoid various unexpected burning mobile the phenomenon of interference.
10. USB type is equipped with USB output port, it is convenient for mobile phone's connection. The current indication is changed into LED display, output current accuracy to 1mA, to satisfy high level users.
11. This products not only using for repair mobile phone, it is can be testing the voltage and mobile RF signal. Through LED to shows the mobile RF signal information.
12. It is easy to operate, you do not need any switch button to operate the machine.

## II. Specification

Model	853D/909D Series	853DA/909DA Series
Power Consumption	≤800W	≤800W
Measurement	25x185x175mm	25x185x175mm
Weight	3.95kg	4.18kg
Working environment	0~50°C	0~50°C
Storage environment	-20~80°C	-20~80°C
Hot Air Reworks		
Airflow type	Brushless fan gentle wind	Diaphragm pump spiral wind
Air Flow	≤120L/min	≤24L/min
Temperature Range	100°C~480°C	100°C~480°C
Temperature Stability	±1°C	±1°C
Display Type	LED Digital Display	LED Digital Display
Soldering Iron		
Temperature Range	200°C~480°C	200°C~480°C
Temperature Stability	±2°C	±2°C
Tip of ground voltage	<2mV	<2mV
Tip ground impedance	<2ohm	<2ohm
DC Power Supply		
Output Voltage	DC 0V~15V	DC 0V~15V
Load stability	<0.01±2mv	<0.01±2mv
Temperature coefficient	<300ppm/°C	<300ppm/°C
Ripple dB	<1mvrms(virtual value)	<1mvrms(virtual value)
Protection current	1A~3A (optional)	1A~3A (optional)

## III. General Usage

1. Suitable for a various kind of soldering or desoldering ( removals ) purposes of the electronic components such as: SOIC, CHIP, QFP, PLCC, BGA, SMD, etc.
2. Shrinking, Paint drying, adhesive removal, thawing, warming, Plastic welding.
3. Mobile phones repair: it provides power supply, circuit board voltage testing, and detects mobile radio signal's strength, etc.

## IV. Operating instructions

### Energy Saving Tip:

This machine with Soldering station, Hot Air Rework, DC power supply of three functions, when a function is not used, turn off the corresponding power switch, when all function are not use, turn off the power switch (rear machine).

### (A) Hot air rework operation

1. Desoldering station will be a good place, connected air gun handle, the handle must be set in the handle racks, otherwise air gun will not work (it has the unique security features, effective prevention of air gun in unknown circumstances on hold in other parts of fire or other accidents).
2. Connected power supply, install the air nozzle of required (to make use of large-diameter nozzle).
3. Open the air gun power switch, display window displays "---" at this time desoldering station for standby.
4. Press button "▲" or Press button "▼" to set the temperature drop up or drop down to the desired value then release it. Once the temperature setup is complete, the Digital LED continues to display the set value 2s minutes later, and then the display is maintained to real temperature value, the desoldering station will heating normally. Adjusted air volume knob to the right wind, when the temperature stable, it will be able to work normally.
5. Work is completed, must be put the handle on the holder, at this time desoldering will automatic cut off the heating current into the body to send cold air cooling heating mode. When the temperature is below. 100°C shows "---" desoldering station, that means the machine will enter into standby mode. When the heater temperature below 70°C, the machine enter into standby (when there are intermittent breeze; it means heater temperature higher than 70°C. Only the temperature is actually lower than 70°C, the air supply will stop working).

### (B) Soldering iron operation

1. The soldering iron handle connected, and put the handle on the iron frame.
2. Open soldering iron power switch, Press button "▲" or Press button "▼" to set the temperature drop up or drop down to the desired value then release it. Once the temperature setup is complete, the Digital LED continues to display the set value 2s minutes later, and then the display is maintained to real temperature value, the desoldering station will heating normally. Adjusted air volume knob to the right wind, when the temperature stable, it will be able to work normally.

### (C) DC Power supply operation

1. Locate the adjustable voltage switch at the front's panel on the bottom right, turn the knob to the desired value ( voltage ), the can work normally. When using the power supply load current exceeds rated current ( according to models 1A-3A ) machine will be automatically protected, when the power load current return of rated current for the machines automatically in 100us recovery.

2. Located output / test wave switch at the front's panel on the bottom right, then turn the test side, it can be used to test the external test things' voltage.

## V. Replacement parts instruction

### (A) Replacement of Hot Air rework heating element (Figure 1)

1. Ensure the Hot Air Rework is fully cooled down before replacing the element.
2. As figure, loosen the two screws on the handle.
3. Turns the handle component until it comes off and then remove the handle shell cover.
4. Gently takes out the fan, loosen the three screws to remove the fixed wiring board.
5. The wiring board in turn, apart from the heater wiring board connection cable, pay attention to the connection location.
6. From the steel tube removed the heating element and cover with mica poler, careful not broken ground wire of the steel.
7. Wraps well with the new heater mica, inserted into the tube, the attention heater to install in place.
8. According to the original, location of the connection to connect heater.
9. When the reverse process by open bottles and handle back.

### (B) Replacement of the soldering iron's tip and soldering iron heating core's element (Figure 2)

1. Unscrews the nut No.1, and then removes the steel tube No.2, followed by removing the tip which is going to be replaced.
2. For the replacement of heating core's element can be performed by unscrewing the plastic cap No.4; pulls out gently the iron heating element No.6 along with the circuit board No.7, please carefully and remember the connection of spring No.5.
3. The iron core from the circuit board welding, the replacement of the iron heating elements, can be install well. Note that the order of the iron heater wire connection.

## VI. Terms of Use

1. When turning on the main unit's power, the Hot Air rework's handle must be placed properly on the handle's rack.
2. Please ensure the Hot air's outlet is clear, must free from any blockages or obstruction.
3. After usage, the handle must be placed back on the handle's rack, let the unit cooling down (temperature gradually decreasing) until it "---" (Air flow Stop). The turn off the Hot Air power switch.
4. The unit comes with three standard nozzle sizes: large, medium, small. When using the smaller nozzle, the Hot air volume must be adjusted to the maximum rate or set the temperature low and maintain it in a short time, to avoid prolonged use which could damage the Hot air gun.

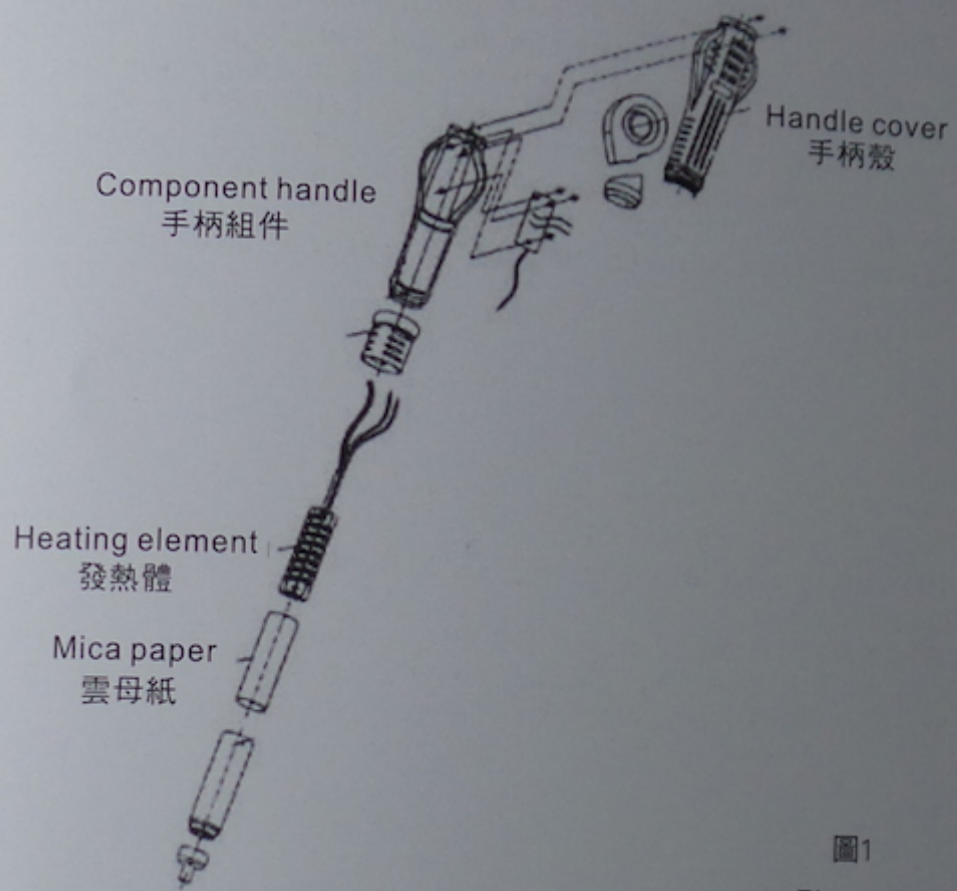


圖1

Figure 1

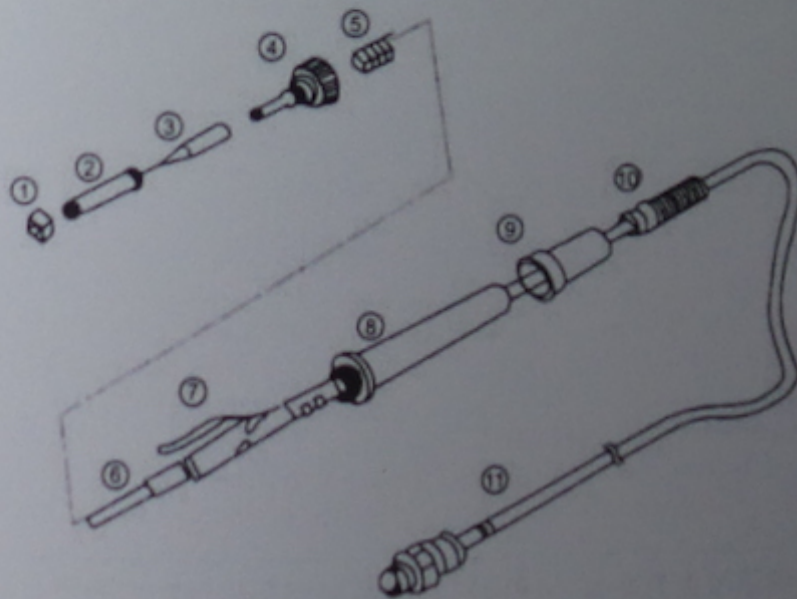


圖2

Figure 2

5. In regards to the usage requirements, choose the appropriate Hot air tip, different hot air tip will cause the temperature to be slightly different, and please maintain the distance between the outlet and the object must be at least 2mm.
6. When the soldering iron used for the first time, pay attention to check the iron tip warming situation, let its temperature just be able to deepen the tin wire, then the iron tip layer deposited on the tin, then set to the desired temperature value.
7. Iron Tips temperature is not too high, high temperature will weaken tip function. Interval not in use, should be adjusted low temperature.
8. Should clean up iron tip by use of clean sponge periodically, after using it, please keep it clean, a new tin-plated layer to prevent tip oxidation.

## VII. Display Notes

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- A. When the LED digital displays "---", it means the outlet temperature is below 100°C, the hot air rework station is in standby mode, and the handle is placed on the handle's rack.
- B. When the LED digital displays "S-E", it means the soldering iron, Hot air rework's sensor is having a problem or handle is un-plugged, if this the case it needs to replace the heating element (heating core's element and sensor components).

## VIII. Usage Notes

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### (A) Use parts note:

1. Only install nozzles when the unit is cool (room temperature).
2. When the first use the unit might start initially with white smoke, but this soon will go away.

### WARNING!

1. DO NOT install/Deinstall Nozzles with excessive force.
2. DO NOT use pliers to pull the nozzle edge out, DO NOT tight the nozzle's bolt excessively.
3. DO NOT use unit near flammable gas or liquid or any combustible material WHATSOEVER especially when using the unit in high-temperature operation.
4. DO NOT face the hot air outlet or touch the soldering Iron to the human body WHATSOEVER because it is very hot and can instantly burn the skin/body.

### (B) Replacement Element Attention:

1. Replacement heater, be careful not to damage the grounding line!!
2. Replace the cable should pay attention to the order and color, can not take a wrong!!
3. Replace the same type of heater or heating elements!!

The machine are through standard testing and aging testing before shipping, so some of gun outlet have yellowish are normal.