8586D/8786D

THERMO-CONTROL DIGITAL-DISPLAY & ANTI-STATIC SOLDER STATION & SMD REWORK

USER MANUAL

⚠ Important:

In order to ensure personal safety, machine work is completed, unplug the power cord!!!

CE

Thank you for purchasing this product.
It is important to read the manual before using the unit.
Please keep manual in accessible place for future reference.

⚠ CAUTION

The temperature of the soldering iron, hot air gun and the nozzle ranges from 200°C~ 480°C (400° ~ 850°F) when the unit is switched ON. Injury to personnel or damage to items in the workplace may result if not carefully used. Please read the contents on how to use the equipment and observe the following in order to maximize usage:

1 After opening the package, check if each component is in good working condition. If there are any suspected damages, do not use the item and report this to the vendor.

2 To ensure safety and quality, use only genuine parts for replacement.

3 DO NOT use this device near paper, plastic, and flammable gases and materials.

4 DO NOT use this device if you are not qualified.

5 DO NOT modify the three-Pin Plug for this device MUST be grounded. Always connect power to a grounded receptacle.

6 DO NOT leave the device untended when it's on.

7 Any installation or removing operation SHOULD before the unit cooling down and powered OFF.

8 Keep the vent of the air gun clean and ensure efficient exhaust ventilation in the working area.

9 Turn OFF the power switch and unplug the unit from the main power source when moving the equipment to another location.

10 DO NOT strike or subject the unit to any physical shock, including the hot air gun, soldering iron or any parts of the system. Use carefully to avoid damage in any parts.

11 More operation tips could be found in the following text.

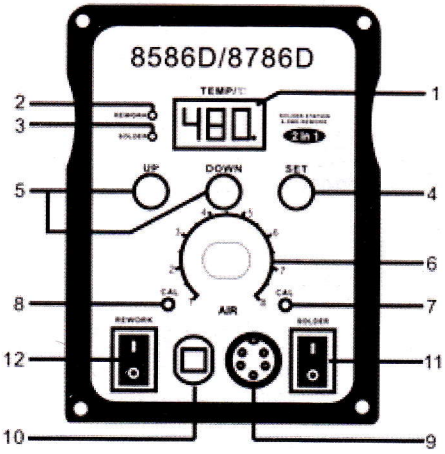
CONTENTS

PRODUCT FEATURES

- Perfect 2in1 rework & soldering station with extremely space saving design.
- Closed sensor loop, and Micro-process-controlled PID technology to enhance temperature accuracy and stability.
- Easy-to-use control panel with LED digital display.
- Powerful hot air gun ensures rapid warming-up and large but gentle airflow (adjustable) ideal for lead-free soldering and de-soldering.
- Low voltage supply of the tip can effectively protect sensitive components.
- Intelligent self-detection function features safe personal operation.
- Micro-processor-controlled electro-static discharge (ESD) safe unit.
- Temperature controllable for simple yet efficient working situations.
- Intelligent error-reporting system. Keep this device under your supervision all the time.
- Auto-cooling function. Blows air to cool down the system to a safe temperature before turning OFF.
- Compatible with various types of air nozzles.
- Compatible with different kinds of soldering iron tips.

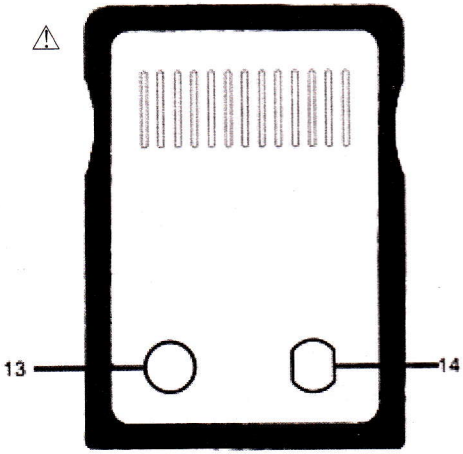
PANEL CONTROL EXPLANATION

FRONT PANEL



1. Temperature display
2. Hot air gun status indicator
3. Welding station status indicator
4. Display status switch button
5. Temperature adjustment button
6. Hot air gun volume controls button
7. Welding station temperature correction
8. Hot air gun temperature correction
9. Welding station output
10. Hot air gun output
11. Welding station heating switch
12. Hot air gun heating switch

REAR BOARD



13. Fuse pipe
14. Power supply socket

PRODUCT SPECIFICATION

SMD REWORK STATION

Voltage	220V/110V
Power Consumption	750W±10% (Max)
Work Environment	0-40°C
Relative Temperature	< 80%
Relative Humidity	< 80%
Storage Environment	-20-80°C

HOT AIR GUN

Voltage	220V/110V
Power Consumption	700W±10%
Gun Temperature Range	100-450°C
Gun Type	Brushless Fan
Air Flow	120L/min (Max)
Temperature Stability	±2°C (static)
Gun Heater Resistance	74Ω
Gun Heater Material	Ferro-Alloys

SOLDERING IRON

Voltage	26V
Power Consumption	50W±10%
Gun Temperature Range	200-450°C
Temperature Stability	±2°C (static)
Gun Heater Resistance	45 Ω
Gun Heater Material	Common Heater

CARE AND SAFETY PRECAUTIONS

⚠ **CAUTION:**
Misuse can cause injury and other physical damage.
For your own safety, be sure to observe the following precautions.

- Temperature may reach as high as 480°C when unit is turned ON.
  DO NOT use near paper, plastic, and flammable gases and materials.
  DO NOT touch heated parts.
  DO NOT touch metallic parts near the tip.
- Handle with Care
  Never drop or sharply jolt the unit.
  Contains delicate parts that may break if unit is dropped.
- Unplug the unit from the main power source if it will not be used for a long period.
  Turn off power during breaks, if possible.
- Use only genuine replacement parts.
  Turn-off power and let until cool down before replacing any parts.
- Soldering process produces smoke, please use the equipment on well-ventilated place.
- DO NOT modify or alter the unit in any manner, particularly the internal circuitry.

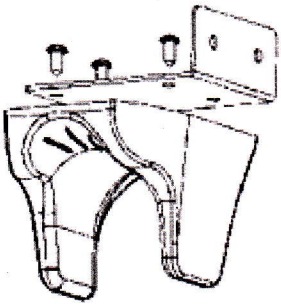
USING GUIDE

INSTALLATION

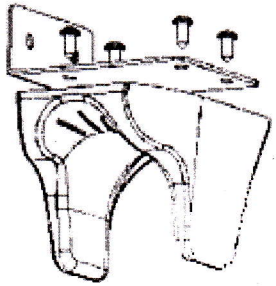
Before using the device, you should install the hot air gun handle bracket as following picture:

According to personal using habits, as per the figure, choose one location and tighten screws.

Please check the stability of the bracket after finishing your installation.



Install on the left



Install on the right

OPERATIION

1. With the unit plugged to the main power source and all switches "OFF", the screen will display nothing. Either hot air gun or soldering iron is ON, the panel will display.

2. Circuit switching function (it means: you can switch one working circuit into another one within one press on the condition that both circuits are activated/standby.

3. Air gun/iron work status indicators

When the blue indicator is on, means air gun is working; if the red indicator is on, means the iron is working now.

4. Working

Turn the heating switch on, a preset temperature pops out immediately; the hot air gun/ soldering iron will be ready in seconds and the actual temperature will be displayed.

5. Stop working

Close current heating switch, this circuit will stop heating. And the unit will automatically change into another live working circuit, or enter into hibernation state when no circuit activated.

6. Turn off the machine

After using the hot air gun, please put the gun handle on the holder bracket correctly; when hot air cool down, close the hot air gun heating switch. This will greatly extend the life of hot air gun.

7. Digital display state transition

You can view the temperature state of each circuit by press button "SET" when the unit is powered on. And the indicators will be lit accordingly.

8. Temperature settings

When the unit is powered on, press the UP or DOWN key directly to adjust the temperature setting of the current heating circuit; if you need to set the other circuit, please press "SET" before adjust the preset temperature. When temperature setting completed, the result will be displayed with in 3seconds, and then it will changed to actual working temperature of the hot air gun or soldering iron.

9. Hot air gun hibernation state

When the hot air gun not in use temporarily, please put handle on the holder, the station will stop heating automatically. When its temperature is below 100 °C, the hot air gun enters into hibernation status. If the soldering iron is activated, the digital display will automatically converted to the temperature of soldering iron, otherwise the digital display of hot air gun will be standby symbol"---".

10. Wake up the hot air gun

When the air gun is in hibernation, it can be woke up as long as you re-pick up the hot air gun handle; at the same time, the digital display will be converted to display the state of hot air gun , restoring previous work.

11. Display symbols explanation

"---": the hot air gun is in hibernation state.

"S-E": current circuit's sensor or other parts' failure, then the machine stops outputting the signal of heating.

* Decimal point at the end of the LED:

Lighted: Circuit is heating up;

Extinct: Stop heating;

Flashing: Current circuit is in the constant temperature state.

12. Temperature correction

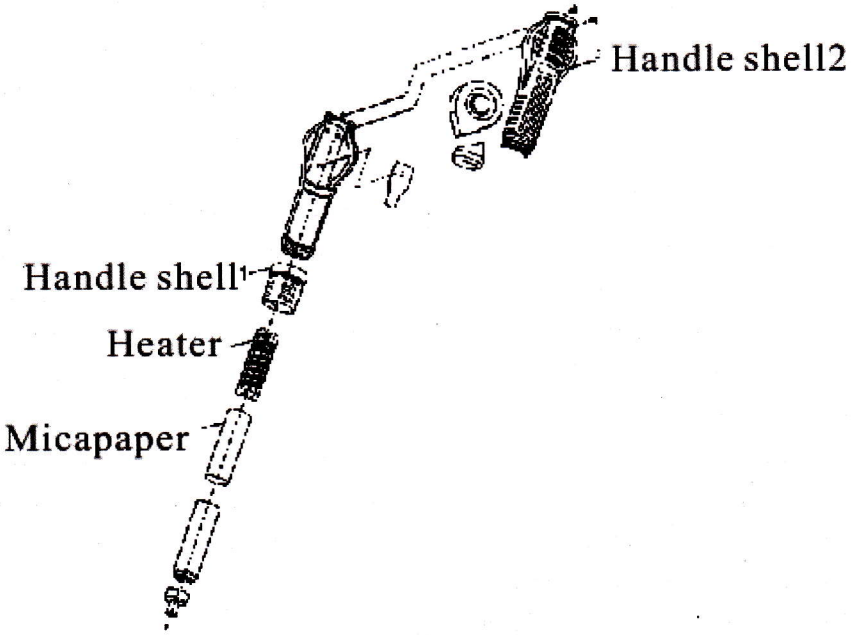
After replacing heating core or iron heads, you need to calibration temperature, please insert a appropriate no induction screwdriver into the corresponding panel "CAL" holes, fine tune the hole left or right.

REPLACE THE HEATING ELEMENT OF THE AIR GUN

IMPORTANT:

Any procedure should be very careful.

Carry out these procedures with the power switched OFF, the power cord UNPLUGGED and the heating element is cooling down.



1. Loosen the 2 screws that secure the hot air gun handle. The heating element is located in the middle part of the hot air gun.
2. Slide off the handle shell 1, and then release the handle shell 2.
3. Disconnect the ground wire sleeve.
4. The quartz glass and heat insulation are installed inside the pipe. Loosen the cable and remove the heating element.
5. Insert the new heating element and reconnect the terminal. Be careful not to rub or touch together the heating element wire.
6. Re-assemble the handle.

NOTE:

Replacement heating element, be careful do not to damage the grounding line; not to damage the blower cable; back to install the handle, the handle on the fixed column should be fixed on the hole in the steel tube.

MAINTAINANCE

⚠ Important: Unless otherwise directed, carry out these procedures with the power switch OFF and the power cord Unplugged.

Cleaning the TIP

⚠ Important: Performing this procedure extends life of the soldering tip.

1. Set the temperature to 250 °C
2. When the temperature has stabilized, clean the tip and check its condition. Replace the tip if it is badly worn or appears to be deformed.
3. If the solder plated part of the tip is covered with black oxide, apply fresh solder containing flux and clean the tip again. Repeat until all the oxide is removed. Coat the tip with fresh solder afterwards.
4. Remaining oxide such as the yellow discoloration on the tip shaft can be removed with isopropyl alcohol.

⚠ CAUTION: Never use file to remove residue from the tip.

INSTRUCTIONS FOR REFERENCE

QFP tin remove process

1. Plug the power cord
2. Turn the switch on
3. Adjust the air blow and set the temperature
   Wait a little while for stability of the temperature between 250°C -300 °C.
   Install the puller under the integrated circuit unit
   If the width of the unit is not compliant with the dimension of the wire, you can depress the wire for installation.
4. Melt the soldering material
   Hold the soldering head, aim at the soldering material. The hot air will

melt the soldering material. Do not touch the line of the integrated unit with the nozzle.

5. Remove the integrated unit

When the soldering material melted, remove the integrated unit away.

6. Switch off the power

After you switch off the power, the auto air blow function will be stopped. But do not unplug the plug during immediately. If you do not use the machine for a long time later, unplug the cord.

7. Remove the superabundant soldering material.

After removal of the integrated unit, the superabundant soldering material could be taken away by the cleaner. You can lift the integrated Unit with a clip.

QFP Soldering

1. coat with some soldering paste

Coat with some soldering paste, and put the SMD on the circuit unit.

2. Pre-heat SMD
3. Soldering

Spray hot air to the line frame.

4. Cleaning

After welding, clean the superabundant soldering material.

NOTE:

To weld with hot air is effective. But it may cause soldering material ball or cause connection of the material. We suggest you to check the soldering unit.

The use of the soldering iron

1. Tip temperature--- High temperature shortens tip life and may cause thermal hock to other components. Always use the most appropriate temperature When soldering.
2. Cleaning--- Always clean the soldering tip before using. Remove any residual solder or flux that is still adhering. Use a cleaning sponge to remove unwanted residues. Contaminants on the tip have many detrimental effects which may impact soldering performance---one being reduced heat conductivity.

3. After use---Always clean the tip. Coat it with fresh solder after use. This protects the tip against oxidation.
4. Never allow the unit to stay idle at high temperature for long periods. This makes the tip prone to oxidation. Turn OFF the power switch if it will not be used for several hours. Unplug the main unit from the power source.

BASIC TROUBLE SHOOTING GUIDE

Problem 1: the unit has no power

- Check if the unit is switched on.
- Check the fuse. Replace with the same type if fuse is blown.
- Verify that the unit is properly connected to the main source.

Problem 2: wrong temperature display

Solution: The thermal sensor may be broken and needs to be replaced.

Problem 3: Actual temperature reading is not increasing or decreasing based on desired level (set temperature).

Solution: the heating element may be broken and needs to be replaced.

Problem 4: the unit is not usable

Solution: Try to restart the unit. If the problem still exists, contact the vendor.

Problem 5: Air pressure level is significantly low, no matter how high the air flow level is calibrated

Case one: check the mains voltage (AC power source). If the voltage level falls significantly low, about 15-20% lower than standard, there will be a noticeable drop in the air pressure level.

Solution: please refer to your local power service provider.

Case two: The microcontroller might have detected the operating frequency incorrectly. The air flow level is noticeable weaker.

Solution: Try to restart the unit and let the device re-detect the proper operation frequency. Problem 6: the unit is vibrating too much

Make sure all parts in place and are properly and tightly connected. If need, Unplug the unit from the main power source before opening the case to check the internal settings.

Other problems not mentioned:

Contact the vendor directly.

Shall there be any modification or updating of this product, customer will