



ML-851K

SMD REWORK STATION

INSTRUCTION

MANUAL

Packing List

Please check the packing of the ML-851K to confirm if the contents in the packing list are right:

ML-851K Main Unit.....	1
Removable Handle Holder.....	1
Instruction Manual.....	1
Power Supply Wire.....	1
Wind Nozzles with Several Kinds of Specification.....	6

CAUTION

Do not dismantle this unit. To do so may cause danger!

This unit must use ML-851K special heater. Fail to do so may result in accident.

Misuse this unit may cause the user be injured.

For safety, please obey strictly the "precautions".

NOTE

After connecting the power supply, the temperature of the wind nozzle is high at 100-420 °C.

Misuse this unit may cause fire. So please obey strictly the follows:

1. Do not touch the metal part, which is at the foreside of the handle.
2. Do not use this unit near inflammables.
3. Inform the other person who are in workshop that the wind nozzle is very hot and may cause danger. Turn off the power supply when you are not operating or when you leave the workshop.
4. When replacing the nozzle, be sure to turn off the power supply and after the wind nozzle is cool to room temperature.

To avoid damaging this station and for safety, please obey the following items:

1. Do not use this station to do other things except soldering.
2. Do not knock at the handle. To do so may damage this part.
3. Do not change this station by yourself.
4. Do not wet this station. It cannot be used when your hands are wet.
5. There should be good ventilation system in workshop.

Product Details:

1. Whole Unit

Power Consumption	180W (Mas)
Power of the Heater	AC 110V 80W
Temperature of Hot Air	100—420 °C
Power of Pump	AC 110V 20W
Air Pump	Diaphragm
Air Volume	0.3-24L/min, Stepless
Length of Handle	180mm
Length of Tube	1m
Size of Whole Unit (mm)	245 (L) × 187 (W) × 135 (H)
Weight	About 3Kg

2. Function

- * Electrostatic proof design to avoid damaging the PCB board.
- * The heating element is adopted imported heat-resisting material and it is made with advanced technology. Low power consumption and long life.
- * Non-touch soldering style can avoid the parts being removed.

* The handle is very light and handy. It can be used for a long time without tired-ness.

* Installed automatic cooling system.

* Adopted heat-resisting anti-static silicon pipe and control station. The function is very reliable.

3. Uses

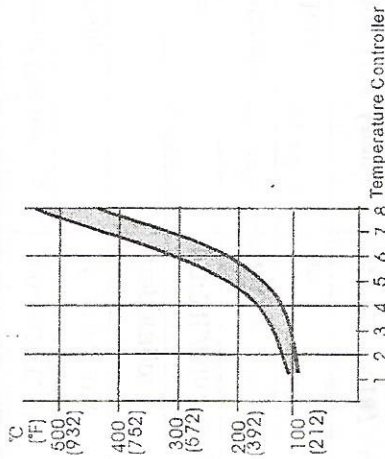
* Apply to surface parts de-soldering, such as SOIC, CHIP, Mid-mini sized BGA, etc.

* Apply to shrink soft pipe, test heating energy and other heating process.

4. Temperature Distribution Chart

Test criteria: Measure at the point 3mm from the nozzle.

Standard Nozzle ϕ 2mm (0.08 in)



Operating

1. Instructions

* Take the soldering station from the accessories and fix it to the main unit by using M4 screwdriver attached.

* Set the temperature control knob in the proper position.

* Set the wind volume control knob in the proper position.

* When you connect the power supply and turn on the power switch, you

can see the red LED lamp glistening. Meanwhile, you can hear the airflow sound from the operating pump. It proves that the machine works smoothly.

2. De-soldering properly

SOIC, CHIP, PLCC, QFP and BGA are five common kinds of SMT IC elements. Different IC element has different repairing process. Be sure to treat them in different ways.

* CHIP IC Element

Set the temperature on the point where all the welds can melt at the same time. Too high temperature may cause IC go bad and cause circuit board be out of shape. Select proper wind volume according to different IC. Use the nozzle to heat the IC legs, which are painted with soldering paste. Then use tweezers or vacuum pens to take it.

* SOIC IC Element

First, paint soldering paste on the IC legs and soldering plate. Then, move the nozzle around IC. After the soldering paste boil and give off lots of smoke for three or five seconds, use tweezers or vacuum pens to take it.

Use alcohol to clean soldering plate. Then, paint soldering paste on it again and put IC to the proper position with SMT tweezers or vacuum pens. Move the nozzle around IC. After the IC legs connect the soldering plate correspondingly, heat IC with hot wind, then you can adjust it to the best position.

* Mid-mini Sized PLCC IC Element

Pre-paint soldering paste on IC legs, adjust the wind volume and temperature, heat it around IC evenly. The soldering paste begin to give off smoke. Continue heating and take it from the legs of IC gently with SMT tweezers.

Use original ways of soldering to solder PLCC IC. Paint soldering paste on the internal side of every line of soldering plate. Heat PLCC IC

evenly. After the soldering tin melt, shock the IC board gently. Then the IC will be in the proper position.

*** QFP IC Element**

The de-soldering of QFP is the same as PLCC. The space between each IC legs is very small, so the soldering point can absorb less tin. You can use sharper tips to de-soldering IC.

*** Mini-sized BGA**

Mini-BGA IC legs lie between BGA IC and PCB main-board. The more the legs are, the greater the space between each IC legs is. ML-851K can only be used to de-soldering mini-BGA, such as PCB board of BP and mobile phone. When de-soldering the mini-BGA, please set the wind volume at the middle grade and the temperature at 7-8. Heat IC with the nozzle evenly for 20-30 seconds. Then IC can be moved gently. You can use a tweezers to take it. When de-soldering, heat the IC evenly. When soldering tins melt, BGA IC can be put in the right place.

Maintenance and Repair

If the function of this unit runs in abnormal state for some reasons, please contact with the nearest service office or manufacturer to get the best service. After turning off this unit, you needn't blow the heater with extra time because this unit was adopted high quality heater. If you do not use this unit frequently, please remember to turn it off for saving energy and keeping it be used for a long time.

Replace the Nozzle

How to replace the nozzle

Turn off the power switch. Only after the nozzle is cool can you take it off. Replace the nozzle and lock the socket. You can use a tweezers to avoid your hands being scalded.

*If different nozzles are requested, please contact with the manufacturer.