

MADELL QK857D

DOUBLE VORTEX SOFT BLOWER HOT AIR REWORK STATION OPERATION and MAINTENANCE MANUAL



1, Summary of product

1-1, Specifications

| | |
|---------------------------|--|
| MODEL | 857D |
| ITEM \ TYPE | Digital display CPU controlled temperature |
| Power consumption | 580W |
| Air pump | DC Motor, double vortex blower |
| Air volume | 100 l/min(Max) |
| Temperature range | 100°C--450°C |
| Display | Digital display (resolution 1°C) |
| Length of handle assembly | 110cm |
| Noise | <78dB |

1-2. Features

1. Closed loop sensor feedback, temperature is controlled by zero voltage triggering mode and is not affected by air volume. Powerful, rapid heating up, accurate and stable.
2. Wide range of hot air volume adjustment.
3. Electromagnetic inductor switch inside the handle starts the hot air when the handle is picked up. The rework station is set to an idle mode when the handle is placed back to the holder.
4. Increased heating element life and safety with built in automatic cooling feature.
5. Compact design, occupy less space.

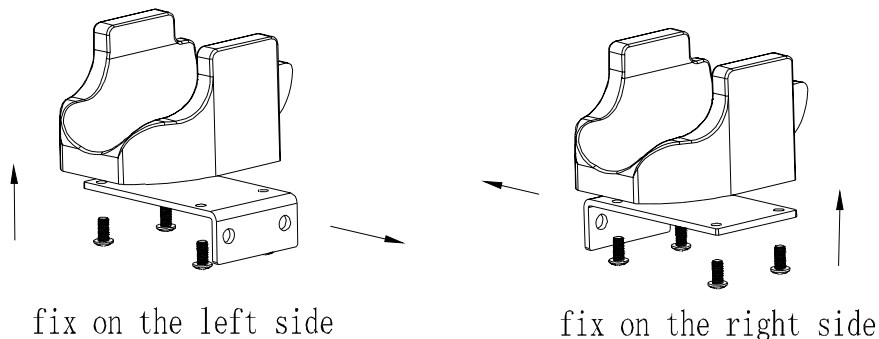
1-3. Applications

1. Suitable for soldering and desoldering various SMD components, such as SOIC, QFP, PLCC, BGA chips.
2. Can also be used for heat shrinkage, paint and sticker removal, preheating, sterilizing, glue connecting etc.

2. Installation and Operation

2-1. Handle holder assembling

1. Install and tighten the four screws as shown in the diagram as per your personal habits.
2. Remove the two screws which fix the handle holder on the left or right side of the unit.
3. Align the two holes of handle holder to the two corresponding holes on the unit, tighten the removed two screws.
4. Place the handle assembly on the handle holder and check the condition carefully.



2-2. Operational guide

1. Place the handle on the holder.
2. Plug the power cord into the power socket of the unit.
3. Supply power to the rework station.
4. Select and mount appropriate nozzle.
5. Set power switch to " I " position, the unit will start working.
6. Set temperature as needed.
7. Pick up the handle, the unit should start working immediately. Set appropriate air volume and start your work when temperature remains stable.
8. Hot air gun must be put back on the holder whenever not used. Meanwhile, the hot air will be cut off and cold air starts to cool the heating element automatically. The unit will be in idle status with temperature below 100 °C.
9. Disconnect the power cord when not in use for a long time.
* Try to use lower temperature and large hot air volume. Doing so will increase heating element life and ensure the safety of IC' s.

3. Temperature Setting

1. The set temperature will be displayed while the temperature knob is turned.
2. Clockwise turn of the temperature knob will raise the temperature while counterclockwise lowers it. Actual temperature or " --- " will be displayed and the unit enters standby mode after the set temperature displays for two seconds.

Note:

1. " --- " implies temperature at air outlet is below 100°C. When the handle is on the holder, the unit is in standby mode.
2. " S-E " implies there is something wrong with the sensor.
The sensor needs to be replaced (heating element and sensor assembly).
3. If the displayed temperature is less than 50°C and can be raised anymore, it means the heating element is probably damaged and replacement is needed (heating material and sensor assembly).

4. Safety Considerations

Please read this manual carefully before operating the device. This rework station is equipped with a 3-wires grounding plug and must be plugged into a 3-terminal power outlet. Do not

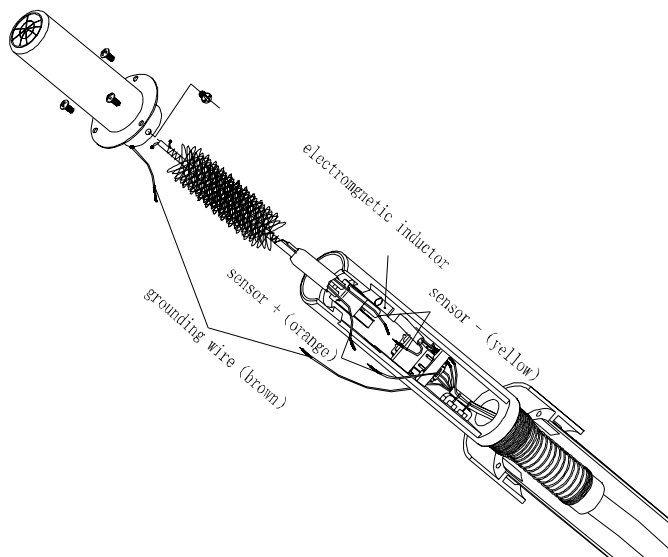
modify the power plug or use an ungrounded power socket. If an extension cord is necessary, use only a 3-wire extension cord that provides grounding.

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

1. The air outlet and surrounding maybe very hot. Please take great care against being hurt.
2. The hot air gun must be put on the holder. Never place it on table or other places.
3. Make sure air outlet is clear without any objection.
4. The unit can be turned off only when it cools below 100°C.
5. Keep the nozzle at least 2mm from the part being heated.
6. Disconnect power when not in use for a long time.
7. Keep the unit out of reach of children.
8. Never use and keep away the unit with flammable gases or near other flammable materials.
9. Handle with care, do not to shack the unit.
10. Don' t operate the unit with wet hand to avoid short-circuited or electric shock.
11. Differences in temperature may exist when different nozzles are used.
12. Hidden areas such as behind walls, ceilings, floors and other panels may contain flammable materials that could be ignited by the unit when working in these locations. The ignition of these materials may not be readily apparent and could result in property damage and injury to persons. When working in these locations, keep the unit moving in a back-and forth motion. Lingering or pausing in one spot could ignite the panel or the material behind it.

5. Replacement of Heating Element

1. Remove the anti-folding spring on the handle assembly.
2. As shown in the diagram, remove the three screws used to secure the steel tube. Pull the steel tube out from the handle housing.
3. Loosen screws on the steel tube and also inside the frame of the handle, get out the tube assembly. Make sure not to drop or lose the quartz-glass and heat-insulator.
4. Disconnect the grounding wire, sensor connector and heater connector, get out the heater assembly (including heating element and sensor)
5. Insert a new heater, then connect the heater connector. As sensor wires have slopes, it is necessary to connect wires with the same colors.
6. Reassemble the handle.



6. Replaceable Parts

| No | Part Number | Part Name | Description |
|----|-------------|--|--|
| 1 | 47131 | Air Pump | 24 VDC |
| 2 | 47149 | Heater (Heating element and sensor assembly) | 560W 220V/230V |
| 3 | 47150 | Heater (Heating element and sensor assembly) | 560W 110V |
| 4 | 18050. 220 | Transformer | 220VAC |
| 5 | 18050. 110 | Transformer | 110VAC |
| 6 | 47151 | Handle Holder | Assembly |
| 7 | 47152 | Handle Assembly | Heater, Plastic Handle, Tube Assembly, Hose etc. |
| 8 | 47153 | Plastic Handle | Inner and outer housing 1 pcs each |
| 9 | 25043 | Hose | Silicon Gel |
| 10 | 47154 | Steel tube Assembly | Steel tube, Insulator etc. |
| 11 | 47157 | Electromagnetic Inductor switch | |
| 12 | 47158 | PCB | Digital display CPU controlled temperature |
| 12 | 47168 | PCB | LED display normal controlled temperature |
| 13 | 24058 | Nozzle | Φ 8mm Single |
| 14 | 24057 | Nozzle | Φ 12mm Single |
| 15 | 24059 | Nozzle | Φ 6mm Single |

*Specifications and design subject to change without notice.