

## WARNING!

- When using the single iron rod, take note that the air control knob cannot exceed position "6", otherwise, air will come out from the nozzle connector and can melt the plastic handle.
- When attaching the nozzle to the pipe, make sure that they are matching and connected tightly. If backward flowing of air is apparent, change the nozzle immediately or put a heat-resistant slide between the nozzle and pipe.
- When other models of nozzle are used, airflow and temperature control should be adjusted accordingly.
- At the start of using the soldering iron, pay attention to the rise in temperature. Wait until the soldering iron melts a portion of the flux then increase the temperature to the desired level. Always put a coat of solder around the iron to protect the tip. This will ensure best results in jointing.
- If the tip is coated with oxide, melting of flux is not possible. This can mislead you to having a low temperature but in fact a high temperature is being set. The tip should be cleaned with cleaning sponge.
- Decrease temperature to 250°C when the solder iron is put on the handle holder. Turn off the unit if it exceeds 20 minutes since remaining in high temperature for a long time can accelerate the aging and weakening of soldering function. Worst is that it can melt the handle or cause a short circuit.

Manufacturer:

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# AOYUE®

## 906

### SMD REWORK STATION INSTRUCTION MANUAL

Thank you for purchasing the 906 Repairing System.  
Please read the manual before operation. Keep the manual  
In a safe and accessible place for future reference.

#### Caution!

- Please remove the pump securing screw ( M5×16 marked red ) at the bottom of the station before operating. Failure to do so may result in serious problems.
- Lock the pump screw located at the bottom of 906 station before transporting. Otherwise, serious problems may happen.

## INTRODUCTION

### FEATURES

- This product is designed to repair BP , mobile phones and other communication apparatus.
- Its multi - functional static - free design prevents damages due to leaking electricity.
- The ceramic heating element and advanced RTD sensor accurately controls the temperature. It adjusts its temperature to a high level in a short time.
- The iron and heating element specification are standard to all brands therefore replacement can easily be done.
- An automatic blowing function switches on after usage, thus keeping cool air around to prolong the life of the handle and pipe.

### INSTALLATION AND OPERATION

- Install the hot air gun and soldering rod holder in a suitable angle.
- Properly connect the soldering pen to the 5-pin socket located on the left side of the machine.

### CONTROL STATION

On the top middle section of the station is the power switch for hot air. Two control knobs can be seen on the right, the air regulator (top) and the heater (bottom). On the lower middle section is the power switch for the soldering iron. The temperature control knob for the soldering iron is on the left.

## SPECIFICATION

	Heating Station	Iron Station
Power Consumption	250 W	35 W
Air pump	diaphragm pump	
Capacity		
Pump Power	25W	
Temperature Range	100°C ~ 500°C	100°C ~ 500°C

### PRECAUTIONS

- Thermal Protector
  - ▲ For safety purpose, power is automatically shut off should the unit exceed a certain temperature. Once the temperature drops to a safe level, power is automatically turned on.
  - ▲ Before continuing operation, let the iron rod cool down first. You can turn off the unit, reduce the temperature setting or increase the airflow in cooling the iron rod.
  - ▲ Be sure to turn off the power switch when leaving your workstation.
  
- Be careful with the high temperature operation
  - ▲ Do not use the soldering station unit near ignitable gases or inflammable items. Both the nozzle and the heated air are extremely hot and can cause fire.
  - ▲ Never let the heater pipe or heated air come in contact to your skin since this can cause serious burns.
  - ▲ The iron may emit white smoke initially but will soon disappear.

- Be sure to cool the unit after use.
  - ▲ The air blower will automatically turn on for a short period of time to cool down the unit. Do not disconnect the plug during this process.
  
- Never drop or jolt the unit.
  - ▲ The pipe contains quartz glass that can easily break if the unit is dropped.
  
- Do not disassemble the pump.
  
- Disconnect the plug when the unit is not going to be used for a long time.
  - ▲ Electricity flows as long as the plug is connected, (even if the power switch is turned off) therefore it is necessary to unplug the station when not in use.

## OPERATING GUIDE

### QFP DESOLDERING

1. Plug the power cord into the power supply.
 

After connection, the automatic blowing function will start sending air through the pipe but the heating element remains cool. Turn on the power switch.

The power switch may be turned on anytime while the automatic blowing function is operating. Once the power switch is turned on, the heating element will begin to warm up.
  
2. Adjust air flow and temperature
 

After adjusting the airflow and temperature control, wait for the temperature to stabilize. It is recommended that the temperature be adjusted around 300 to 350<sup>o</sup>C.

For the airflow, set the control knob from 1 to 3 in case of single nozzle. For other nozzles, set the knob from 4 to 6. Never set the control knob higher than 6 when using a single nozzle, otherwise, air will come out from the nozzle connector and can melt the plastic handle.
  
3. Place the FP pick-up under the IC lead
 

Slip the FP pick-up wire under the IC lead. If the width of the IC does not match the size of the FP pick-up, adjust the width of the wire by suppressing it.

4. Melt the solder.

Hold the iron so that the Nozzle is located directly over, but not touching the IC, and allow the hot air to melt the solder. Be careful not to touch the leads of the IC with the nozzle.

5. Remove the IC

Once the solder has melted, remove the IC by lifting the FP pick-up.

6. Turn the power switch off

After the power switch is turned off, the automatic blowing function begins sending cool air through the pipe in order to cool both the heating element and the handle. Therefore, do not disconnect the plug during this cooling process.

7. Remove remaining solder

After removing the IC, remove remaining solder with a wick or disordering tool

\*Note: For SOP and PLCC, desolder it by using tweezers

### QFP SOLDERING

1. Apply the solder paste

Apply the enough quantity of solder paste and install the SMD on the PCB.

2. Preheat SMD

3. Soldering

Heat the lead frame evenly.

4. Cleaning

Wash away the flux when soldering is completed.

\*Note: While there are merits in soldering by hot air, it is also possible to cause defects such as solder balls, solder bridges. It is recommended that conditions of soldering be examined sufficiently.

### REPLACING THE HEATING ELEMENT

1. Remove the screws then slide the tube

Remove the three screws which secure the handle and slide the cord tube.

2. Open the handle

Disconnect the ground wire sleeve and remove the pipe. The quartz glass and heat insulation is installed inside the pipe, do not drop or miss it.

3. Remove the heating element

Disconnect the terminal and then remove the heating element.

4. Insert a new heating element

Handle the heating element with care. Never rub its wire. Insert a new heating element and reconnect the terminal. Reconnect the ground wire after replacing the element.

5. Assemble the handle in the reverse order of disassembly.

Replacement Parts:

No.	Description / Specification
A1143	100V / 250W Heating Element
A1144	100V / 250W Heating Element
A1145	120V / 250W Heating Element
A1146	220V-240V / 250W Heating Element

## TIP CARE AND USE

### USAGE

Turn on the power switch. The heater lamp blinks on and off when the tip temperature reaches the set temperature. During this time, the unit is now ready to perform soldering work.

### MAINTENANCE

Inspection and cleaning the welding tip

1. Set the temperature to 250°C (482°F)
2. When the temperature stabilizes, clean the tip with a cleaning sponge.
3. If there is black oxide on the solder-plated portion of the tip, apply new solder (containing flux) and wipe the tip with a cleaning sponge. Repeat until the oxide is completely removed. Coat with new solder.
4. If the tip is deformed or heavily eroded, replace it with a new one.

Caution: Never file the tip to remove oxide.

### CALIBRATING THE IRON TEMPERATURE

The soldering iron should be recalibrated after changing the iron or replacing the heating element or tip.

1. Connect the cord assembly plug to the receptacle of the calibrating station.
2. Set the temperature control knob to 400°C (750°F).

3. Turn on the power switch and wait until the temperature stabilizes. Remove the CAL pot plug.
4. When the temperature stabilizes, use a straight-edge(-) screwdriver or small plus(+) screwdriver to adjust the screw (marked CAL at the station) until the tip thermometer indicates a temperature of 400°C (750°F). Turn the screw clockwise to increase the temperature and counterclockwise to reduce the temperature. Replace the CAL pot plug.

**Note:** The 191/192 thermometer is recommended for measuring the tip temperature

### SOLDER TIPS

The tip temperature will vary according to its shape. The preferred method of adjustment uses a tip thermometer (See Calibrating the Iron Temperature). A less accurate method involves adjusting the temperature control knob according to the adjustment value of each tip.

**Example:** The difference between 900M-T-H tip and a 900M-T-B tip is -20°C (36°F). So when using a 900M-T-H tip at 400°C (750°F), set the temperature control knob to 420°C (786°F) for 900M-T-B tip.

### TROUBLESHOOTING GUIDE

**WARNING:** Disconnect the power plug before examining. Failure to do so may result in electric shock. If the power cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified person in order to avoid personal injury or damage to the unit.

#### **PROBLEM 1: The heater lamp does not light up**

- ▲ Is the power cord and/or connecting plug disconnected? Reconnect!
- ▲ Is the fuse blown?  
Determine why the fuse blew and resolve the cause. Replace the fuse.
  - a. Is the inside of the solder iron short-circuited?
  - b. Is the grounding spring touching the heating element?
  - c. Is the heating element end twisted or short-circuited?

#### **PROBLEM 2: The heater lamp lights up but the tip does not heat up**

- ▲ Check if the cord assembly is broken.
- ▲ Check if the heating element is broken

#### **PROBLEM 3: The tip heats up intermittently**

- ▲ Check if the cord assembly is broken.

#### **PROBLEM 4: The soldering tip cannot melt the flux**

- ▲ Is the tip temperature too low? Set an appropriate temperature
- ▲ Is the tip clean? Clean it!

#### **PROBLEM 5: The tip temperature is too low**

- ▲ Is the tip coated with oxide? Refer to "Maintenance"
- ▲ Is the iron calibrated correctly? Recalibrate

#### **PROBLEM 6: The tip cannot be pulled off**

- ▲ Is the tip seized?
- ▲ Is the tip swollen because of deterioration?  
Replace the tip and the heating element.

#### **PROBLEM 7: The tip doesn't hold the desired temperature**

- ▲ Is the iron calibrated correctly? Recalibrate.