Manufacturer:
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AOYUE® Int968

DE LUXE REPAIRING SYSTEM

INSTRUCTION MANUAL

Thank you for purchasing Aoyue Int968 Repairing System.
It is important to read the manual before using the unit.
Please keep manual in accessible place for future reference.

CE

⚠ CAUTION

The temperature of the soldering iron, hot air gun and the nozzle ranges from 200° ~ 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:

- 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 dealer.
- Turn OFF the power switch and unplug the unit from the main power source when moving the equipment to another location.
- Do not strike or subject the main 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.
- Make sure the unit is grounded. Always connect power to a grounded receptacle.

BASIC TROUBLESHOOTING GUIDE

PROBLEM 4: BANNER OR PRODUCT NAME IS ALWAYS SCROLLING - THE UNIT IS NOT USABLE

Description: The product name is just always scrolling from the digital panel, rendering the device unusable.

SOLUTION: Try to press "Reset" from the panel. Note that resetting the device will also reset all previously defined configurations. If the problem persists, contact the vendor.

PROBLEM 5: AIR PRESSURE LEVEL IS SIGNIFICANTLY LOW NO MATTER HOW HIGH THE AIRFLOW LEVEL IS ADJUSTED

Case 1: Check the mains voltage (AC power source). If the voltage level falls significantly low, about 15-20% lower than the standard, there will also be a noticeable drop in the air pressure level.

SOLUTION: Please refer to your local power service provider.

Case 2: The microcontroller might have detected the operating frequency incorrectly. The airflow level is noticeably weaker.

SOLUTION: Try to press the "Reset" button on the panel and let the device re-detect the proper operating frequency. Note that resetting the device will also reset all previously defined configurations.

PROBLEM 6: THE UNIT IS VIBRATING TOO MUCH

Check if the 4 screws that hold the pump in place are properly and tightly connected. Unplug the system from the main power source before opening the case to check the internal settings.

PROBLEM 7: DISPLAY & OTHER DEVICE OPERATION ISSUES

SOLUTION: Try to press the "Reset" button on the device. Note that resetting the device will also reset all previously defined configurations.

OTHER PROBLEMS NOT MENTIONED:

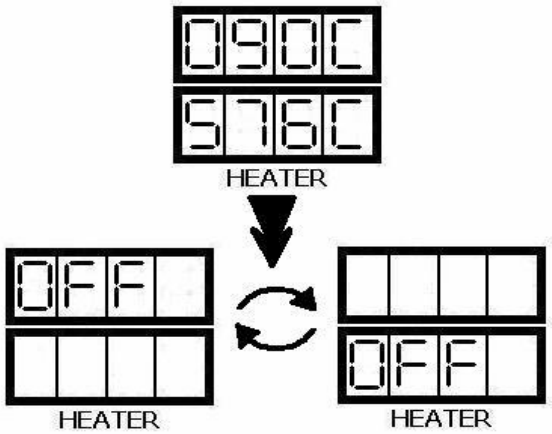
BASIC TROUBLESHOOTING GUIDE

PROBLEM 1: THE UNIT HAS NO POWER

1. Check if the unit is switched ON.
2. Check the fuse. Replace with the same type if fuse is blown.
3. Check the power cord and make sure there are no disconnections.
4. Verify that the unit is properly connected to the power source.

PROBLEM 2: TEMPERATURE DISPLAY IS ALWAYS ABOVE 500°C

Description: Constant display of above 500°C temperature from the panel C3 then displays a blinking "OFF" on display panels C2 and C3 after a few minutes.



SOLUTION:

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

PROBLEM 3: ACTUAL AIR TEMPERATURE IS NOT INCREASING

Description: Actual temperature reading is not increasing or decreasing based on desired level. The panel will then display a blinking "OFF" on display panels C2 and C3 afterwards.

SOLUTION:

The heating element may be broken and needs to be replaced.

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PACKAGE INCLUSION

Aoyue Int968 Main Station with Hot Air Gun
Air Nozzles（1124，1130，1197，1313）
B003 Soldering Iron with Tip
2630 Soldering Iron Holder with Solder Wire Stand
Z003 Hot Air Gun Holder
G001 IC Popper
2 pcs. Filter Pads
Power Cord

FUNCTIONS and FEATURES

- Micro-processor-controlled electro-static discharge (ESD) safe unit.
- Easy-to-use touch type panel controls with digital display.
- Environment-friendly repairing system that integrates hot air gun, soldering iron, and smoke absorber in one package.
- Built-in smoke extractor that absorbs fumes created at the source.
- Knob type soldering iron temperature control for simple yet efficient working temperature selection.
- Intelligent error-reporting mechanism. Detects and informs the personnel for problems with the sensor and heating element.
- Auto-cooling functionality. Blows air to cool down the system to a safe temperature before turning OFF.
- Compatibility with various types of air nozzles.
- Compatibility with different kinds of soldering tips.

MAINTENANCE

SPARE PARTS LIST

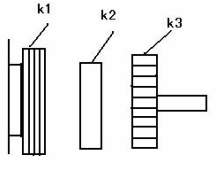
NUMBER	NAME & SPECIFICATION
10094	Hot air gun heating element
30105S	Plastic handle of hot air gun
S005	Hot air gun complete handle
20962	Hot air gun metal pipe
P003	Diaphragm pump
C001	Soldering iron heating element
3098S	Plastic handle of soldering iron
B003	Soldering iron complete handle
20170-1	Tip enclosure
30181X	Filter pads

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

MAINTENANCE

⚠ **IMPORTANT:** Unless otherwise directed, carry out these procedures with the power switched OFF and the power cord UNPLUGGED.

CARBON FILTER



K1 — filter drawer
K2 — active carbon filter pads (30181X)
K3 — smoke absorption nozzle

- An active carbon filter device is installed at the outlet of the smoke absorbing system. The active carbon filter pad should be cleaned and replaced regularly, depending on the frequency of use.

REPLACING THE HEATING ELEMENT

1. Loosen the 3 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 plastic tube.
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 heating element wire.
6. Reconnect the ground wire after replacing the heating element.
7. Re-assemble the handle.

NOTE: The life expectancy of a heating element is 1 year under normal operating conditions.

PRODUCT SPECIFICATION

Power Input :	available in 110V & 220V
Main Station Dimensions:	188(w) x 126(h) x 250(d) mm
Weight:	5.25Kg
SOLDERING IRON	
Power Consumption:	35W
Temperature Range:	200°C - 480°C
Heating Element with Tip:	Ceramic Heater
Output Voltage:	24V
Tip to Ground Resistance:	Below 2 Ω
Tip to Ground Potential:	Below 2mV
HOT AIR	
Power Consumption:	550W
Temperature Range:	100°C - 480°C
Heating Element	Metal Heating Core
Nozzle to Ground Resistance:	Below 2 Ω
Pump/Motor Type:	Diaphragm Pump
Air Capacity:	23 l /min (max)
SMOKE ABSORBER	
Vacuum Pressure:	600mm Hg

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 switched 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.
- Thermal Protector
  - The unit is equipped with auto shut-off ability when temperature gets too high. This will automatically switch ON when the temperature has dropped to a safe level.
- 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 unit cool down before replacing any parts.
- Soldering process produces smoke; use the equipment on well-ventilated place.
- Do not modify or alter the unit in any manner, particularly the internal circuitry.

CARE AND USE OF THE TIP

1. Tip Temperature — High temperature shortens tip life and may cause thermal shock 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 are still adhering. Use a clean and moist 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 if possible.

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. Turn OFF the power and remove the tip using heat resistant pad. Set the tip aside to cool.
5. Remaining oxides 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.

OPERATING GUIDELINES

5. Set the desired air temperature using buttons A3 and A5.
6. You may start reworking as soon as the desired temperature is reached. Refer to display panel C3 to verify.
7. When reworking is completed, turn off the **"SMD Rework"** power switch. The auto-cooling functionality will commence if the system detects a temperature higher than 95°C. Air at room temperature will blow at full speed to accelerate the cooling down of the hot air gun. The auto-cooling functionality will stop when the temperature of the hot air gun reaches about 95°C or below, as shown from the actual temperature display panel, C3. The system will then switch off and display an "OFF" message from user-defined temperature display panel, C2.

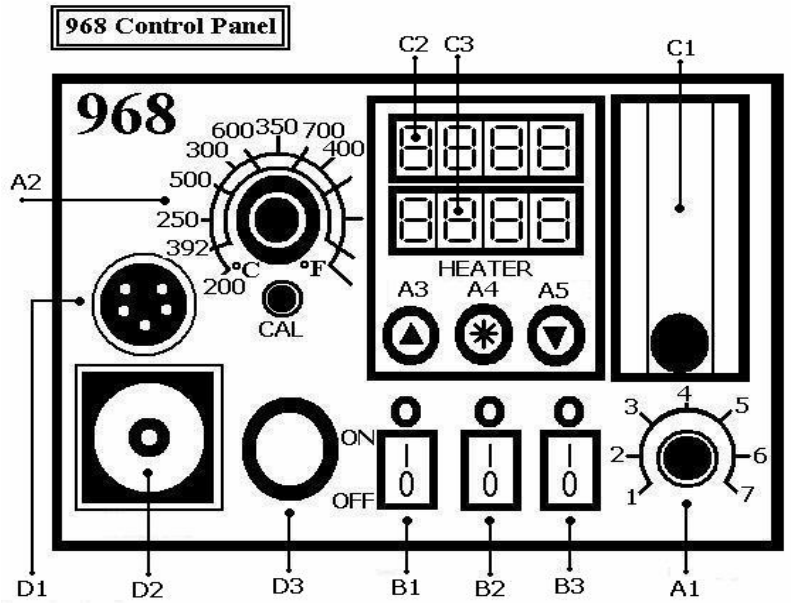
NOTE: Make sure the smoke absorption functionality is switched OFF when using the equipment for SMD Rework.

SOLDERING

1. With the unit plugged to the main power source, turn ON the **"Soldering"** power switch, B1.
2. Use regulating knob, A2, to set the desired solder temperature.
3. Start soldering when the indicator light above the **"Soldering"** power switch starts blinking. This means the temperature of the solder iron has reached the desired temperature.
4. Switch the **"Smoke Absorber"** power, B2, ON to activate the smoke absorption functionality.

NOTE: Turn the "Smoke Absorber" ON after the soldering iron reached the desired temperature. This is to avoid affecting the temperature increase of the soldering iron in terms of heating time.

PANEL CONTROLS



A1	Air pressure regulator
A2	Soldering iron temperature regulator
A3	Increase hot air gun temperature
A4	Reset hot air gun temperature
A5	Decrease hot air gun temperature
B1	Soldering iron power switch
B2	Smoke absorber power switch
B3	SMD rework power switch
C1	Air pressure indicator
C2	Set temperature display (Hot air gun)
C3	Actual temperature display (Hot air gun)
D1	Soldering iron terminal
D2	Vacuum outlet
D3	Hot air gun output

PREPARATION

A. Soldering Iron

1. Install solder wire to the solder iron holder (see Figure 1).

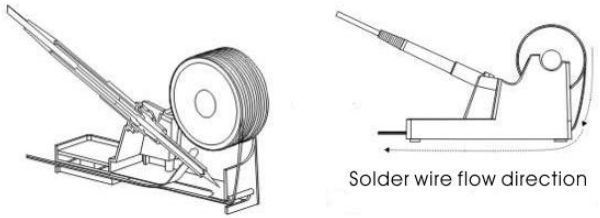


Figure 1. Soldering Iron stand with solder wire holder

2. Attach the soldering iron to the main unit via the 5-pin output terminal, D1, found at the left side of the control panel.
3. Place the soldering iron to the soldering iron stand as shown in Figure 1.

B. Smoke Absorber

Attach the smoke absorbing pen to the smoke absorber output terminal, D2, on the control panel. Make sure that the cord connections are free from any tangles.

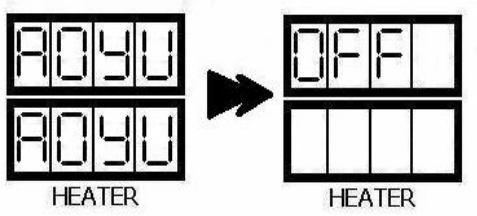
C. Hot Air Gun

Place the hot air gun in the stand to prepare for usage.

OPERATING GUIDELINES

SMD REWORKING

1. With the unit plugged to the main power source and all unit switches OFF, the panel should initially display the product name in a scrolling manner and display off on panel C2 after.



NOTE: The product name may scroll more than once upon plugging the system to the power source. The system is trying to determine the appropriate operating frequency based on the user location. This is normal and should not have any impact to the device. If the product name keeps on displaying for more than thrice, please refer to the Basic Troubleshooting Guide at the back of this manual for resolution (see page 14-15).

2. Turn ON the **"SMD Rework"** power switch, B3.
3. The system will start to blow hot air and increase the temperature to 90°C, by default. Display panel, C2, shows the user-defined (set) temperature while display panel, C3, shows the actual temperature of the system.
4. Adjust air pressure by turning knob A1. It is recommended to keep the knob setting at 3 or above. It is also advised to adjust the airflow level first before increasing the air temperature to avoid thermal shock on the components.

   NOTE: If air pressure knob is set to minimum upon switching the SMD Rework ON, the system will automatically run at average airflow to protect the device from excessive heat. The user will gain full control once the knob has been adjusted to the desired airflow level.