

Desoldering Station 2-IN-1 & ESD-Safe

Statement: The company reserves the right to improve & upgrade products, product specifications and design are subject to change without notice.

OPERATION INSTRUCTION

English



Made in China

Thank you for purchasing this product. Please read the manual carefully before operating and keep this manual for future reference.

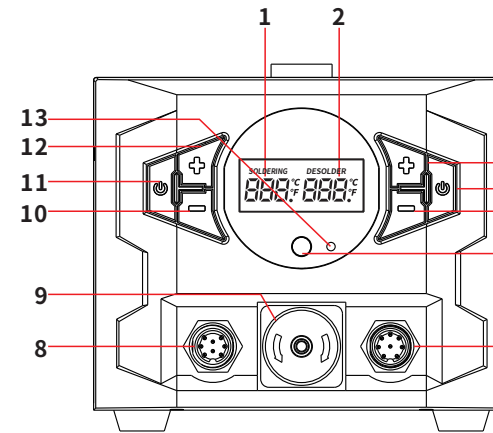
SPECIFICATION

Model number	948 III	948D III
Rated voltage range	220V~240V/AC,50Hz	
Maximum Power	250W	290W
Rated power	74W	74W
Main Unit Dimensions	L248xW150xH126mm ±5mm	
Operating ambient temperature	0°C~40°C/32°F~104°F	
Desoldering Station		
Temperature range	380°C~480°C/716°F~896°F	
Display	LCD	
Tip to ground resistance	<2 Ohms	
Vacuum Pressure	0.05MPa	
Soldering Station		
Temperature range	200°C~480°C/392°F~896°F	
Display	LCD	
Tip to ground resistance	<2 Ohms	

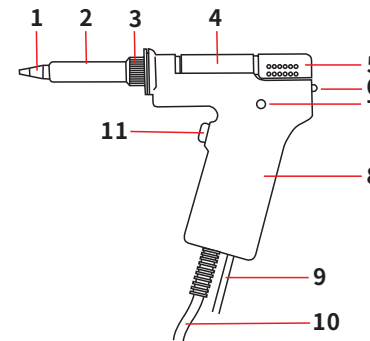
I. APPLICATIONS

This unit is suitable for specialty desoldering applications on a broad-range of through-hole and other components. The station is especially great for desoldering operations on through-hole components with multiple pins or leads. (E.g., Transformer, LCD screen, LED, IC chips, In-Line pins and more)

II. REFERENCE: CONTROL PANEL



1. Temperature Display (Soldering Station)
2. Temperature Display (Desoldering Station)
3. Temperature Increase Button (Desoldering Station)
4. Power Button (Desoldering Station)
5. Temperature Decrease Button (Desoldering Station)
6. 948-III
- Version A: Fahrenheit / Celsius Conversion Button (110V~127V)
- Version B: Function Button (220V~240V)
- Note: Refer to the rated voltage on the label to determine the version.
- 948D-III: Function Button
7. Receptacle (Desoldering Gun)
8. Receptacle (Soldering Station)
9. Receptacle (Vacuum Tube)
10. Temperature Decrease Button (Soldering Station)
11. Power Switch (Soldering Station)
12. Temperature Increase Button (Soldering Station)
13. Desoldering Preheat Indicator (Red - vacuum pump deactivated during preheating. Green - vacuum pump is activated and ready for use)



1. Desoldering Nozzles (Consumable)
2. Steel Enclosure
3. Fastener
4. Filter Chamber (The spring inside is consumable)
5. Chamber Release
6. Release Button
7. Indicator
8. Casing (Desoldering Gun)
9. Vacuum Tube
10. Cord (Desoldering Gun)
11. Desoldering Trigger

III. OPERATION

Desoldering Station

"Pht" - This is an indication that the desoldering station is pre-heating. The vacuum pump will not be activated when this code is active.

1. Connect the desoldering gun to station.
2. Connect the desoldering station's power cord to an electrical outlet.
3. Turn ON the master power switch, then the desoldering station's power button, and the desoldering station's heating element will begin heating. CAUTION: When using the desoldering nozzle for the first time, coat the nozzle with a layer of solder (we recommend using rosin core solder) when the nozzle is just hot enough to melt solder. This is to prevent the oxidization of the desoldering nozzle.
4. Press the temperature increase or decrease button to set the desired temperature. After switching ON the desoldering station's power switch, the station requires time to pre-heat to operating temperature before performing desoldering operations. To desolder: cover the component's pin/lead with the desoldering nozzle, and melt completely the solder on the pin/lead. Then press the desoldering gun's trigger to suck the solder completely.
5. When the operation is complete, place the desoldering gun back to its holder and turn OFF the power switch. DISCONNECT the power cord when the station is not in use for an extended period.

Soldering Station

1. Connect the soldering iron to the station correctly, and put the soldering iron in the holder.
2. Turn ON the power switch then the soldering station's power button. The soldering station's element will begin heating. The soldering station's operation indicator light (the dot located at the bottom-right corner of the soldering station display) will turn ON. The operation indicator light will stay constantly ON when the soldering iron is heating up, blink rapidly when the temperature is stabilized, and be turned OFF when the soldering iron is cooling. Begin your operation once the soldering station's indicator is blinking rapidly to indicate the temperature's stabilization.

CAUTION: Upon the first use of the soldering iron, set the temperature to 250°C/482°F. When the iron is just hot enough to melt solder, coat the soldering iron tip with a layer of solder (the use of rosin core solder is recommended), then set the temperature to your desired value.

300

Indicator for PID program real-time temperature tracking & compensation

3. When the operation is complete, use a damp sponge or metal wool ball to clean the soldering iron tip. Tin the soldering iron tip with a new layer of solder, then put the soldering iron back to the holder and turn OFF the soldering station's power switch. The station's master power switch MUST be turned OFF, and the power plug MUST be DISCONNECTED when the station is not in use for an extended period.

CAUTION

Take note of the tips below when using the desoldering station:

- A. The solder joint must be fully melted before you can press on the desoldering trigger.
- B. If the PCB's hole has residual / left-over solder, you need to resolder, and then repeat the desoldering procedures.
- C. If the component's pin/lead is stuck on the side of the hole, and the solder is unable to be extracted completely, apply more solder to resolder, and then use the nozzle to melt the solder joint, move back-and-forth gently to get the component's pin/lead moving. When the pin/lead is no longer in contact with the hole, press down on the desoldering trigger and extract the solder completely.
- D. Press down on the desoldering trigger, if the indicator exhibit a full red, or more than 1/2 red in color, you need to clean the nozzle, heating element, and filter tube. If the indicator is blue or slightly red, no cleaning is required.
- E. Desoldering nozzles comes in different sizes and desoldering diameters. The larger nozzles are suitable for desoldering components with large pins/leads, and the smaller nozzles are suitable for small pins/leads. Select the nozzles in appropriate sizes for your work.

°F/°C display mode

This function allows the station to comply with different user preferences for users in different regions.

Version A: Press the °F/°C Conversion Button to select either the Fahrenheit or the Celsius Display Mode.

Version B: Press and hold the function button for approximately 2 seconds, then release the button. Then, press the function button 2 times, and the display will show value "°C" or "°F". Press the desoldering/soldering station temperature increase or decrease button to select either the Fahrenheit or the Celsius display mode. Once done selecting, press the function button again to confirm selection, the system saves the data and exits the setting interface.

Sleep Mode Timer Duration

This function extends the lifespan of the heating element, conserves energy, and protects the environment.

1. Turn ON the Desoldering Station or the Soldering Station's power switch, then, press and hold the Fahrenheit / Celsius conversion button or the function button for approximately 2 seconds. The display will show value "L10 L10" to indicate that the sleep mode timer is set to 10 minutes.
2. Press the desoldering station temperature increase or decrease button to set the sleep mode timer value for the desoldering station. Vice versa, press the soldering station temperature increase or decrease button to set the timer value for the soldering station. The sleep mode timer can be set to 0 or 10 minutes, or set the value to 0 to turn OFF sleep mode. Once done setting, stop operating for approximately 6 seconds, the system saves the data and exits the setting interface.



To start-up the station from sleep mode:

- A. Pick up the soldering iron and shake lightly to wake the soldering station or, press the desoldering trigger to wake the desoldering station.**
- B. Press any button on the respective stations.**
- or C. Turn OFF the power switch, then, turn ON the power switch.**

Buzzer Prompt

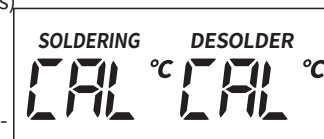
1. Turn ON the desoldering station's power switch, or turn ON the soldering station's power switch. Press and hold the °F/°C conversion button or the function button for approximately 2 seconds. The display shows value "L10 L10" or "L00 L00".
2. Press the °F/°C conversion button or the function button, and the display will show "BEL ON".
3. Press the desoldering station/soldering station's temperature increase or decrease button to turn ON or turn OFF the buzzer. Once done setting, stop operating for approximately 6 seconds, the system automatically saves the data and exits the setting interface.



Digital Temperature Calibration

Temperature discrepancies may occur due to the change in the environment's temperature or due to the replacement of the heating element, soldering iron tips and other components. You can correct the discrepancies with this function. The temperature calibration function can help improve work efficiency and prolong the lifespan of the soldering iron.

1. Once the soldering station's (or the desoldering station's) temperature is stabilized, press and hold both the soldering station's (or the desoldering station's) temperature increase and decrease buttons for approximately 2 seconds. The display will blink with CAL and the set temperature value.
2. Press the soldering station's (or the desoldering station's) temperature increase or decrease button to enter the measured temperature value.
3. Once done entering, press both the soldering station's (or the desoldering station's) temperature increase and decrease button to confirm entry. The system will automatically calibrate, correct and save the temperature, and exit the setting interface – setting complete. If minor temperature discrepancies remain, repeat the calibration procedure.



Automatic Shutdown

When the soldering station enters the sleep mode, its CPU will start counting down. If the station is not woken within approximately 30 minutes, the soldering station will automatically shut off. To restart the soldering station, please turn ON the power switch.

Note: The automatic shut-down function is **ONLY** activated when the sleep mode is turned ON.

IV. MAINTENANCE AND PRECAUTIONS

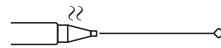
Soldering Station

1. If a layer of oxidization forms on the surface of the soldering iron tip, a misconception can be created that the soldering tip cannot heat up properly to melt the solder and do the tinning. However, the actual temperatures of both the heating element and soldering tip are high. In such an instance, please do not increase the temperature value confusedly but use a metal wool ball to remove the oxidization following the steps below:
 - A. Set the temperature to 300°C (572°F).**
 - B. Once the temperature has stabilized, gently rub the soldering iron tip inside the metal wool ball.**
 - C. When the oxidization is partially removed, continue applying solder onto the tip while rubbing it until the solder completely adheres to soldering iron tip. If the tip is too severely oxidized beyond cleaning, replace the tip with a new one.**

2. DO NOT use metal files to remove the oxidization on the soldering iron tip. If the soldering iron tip deforms or rusts, replace it with a new tip.
3. DO NOT apply excessive force on the soldering tip when soldering. Doing so will not only damage the iron tip but also not improve the heat transfer.
4. When placing the soldering iron back in its holder to idle after a high-temperature operation, adjust the temperature to 250°C (482°F) or below for idling. Failure to do so, and leaving the soldering iron tip to idle on a high-temperature setting will cause the accelerated aging of the heating element, and shorten the lifespan of the heating element and soldering iron tip.
5. After every operation, always clean the soldering iron tip, then coat it with a layer of solder to prevent its oxidization.

Desoldering Station

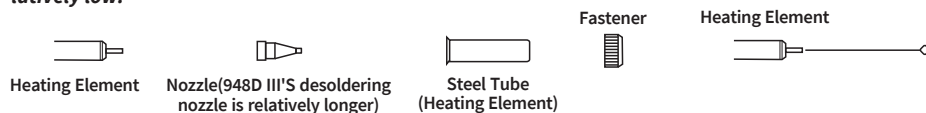
1. The cleaning and maintenance procedures of the desoldering nozzle are identical to that of the soldering iron tip.
2. Cleaning methods of the nozzle, heating element, and filter tube.
 - A. Nozzle Cleaning
 - *Plug the power plug into the power socket, and turn ON the power switch. Then set the temperature to 450°C/842°F.
 - *Once the temperature has stabilized, select the appropriate cleaning pin to clean the nozzle.



B. Heating Element Cleaning

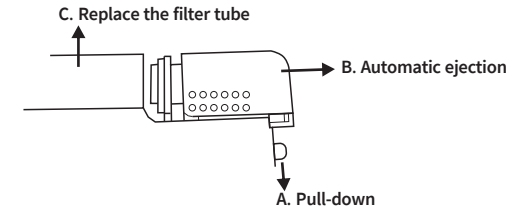
- *Once the heating element has cooled, remove the fastener, steel tube, and nozzle.
- *Turn ON the power switch, and set the temperature to 450 °C/842 °F. Once the temperature has stabilized, use an appropriate cleaning pin to clean the inner hole of the heating element.
- *The power MUST BE turned OFF after cleaning

CAUTION: The solder in the heating element's inner hole must ONLY be cleaned when completely melted. If the cleaning pin cannot be put through the heating element's inner hole, change into a new heating element. When installing, tighten the fastener properly, or the nozzle temperature will be relatively low.



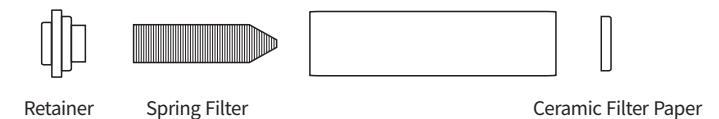
C. Filter Tube Cleaning

- 1) Turn OFF the power switch, and wait for the filter tube to cool before removing the tube as instructed by the below graph.



- 2) Disassemble the filter tube as per the illustration in the graph, and then remove the spring filter. Clean the solder off the spring filter.

CAUTION: The filter tube is extremely HOT, beware of burn injuries when cleaning.

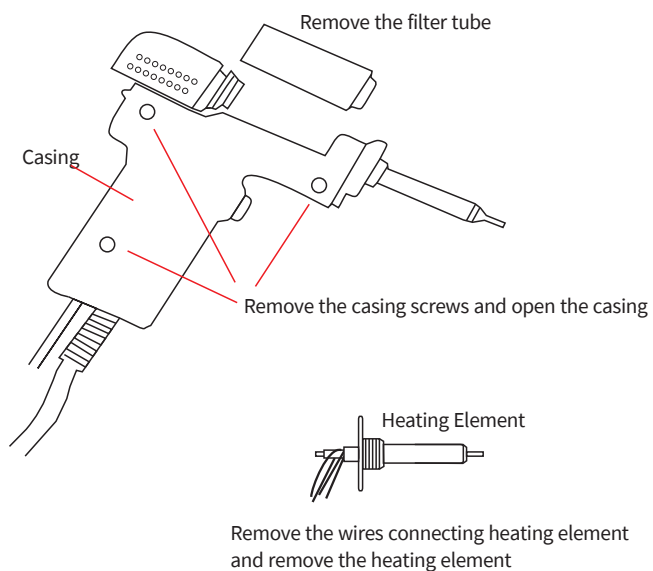
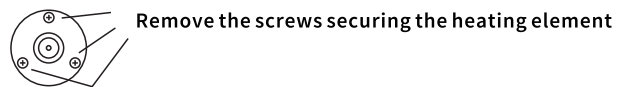
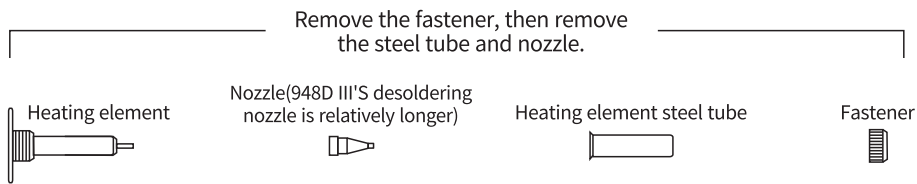


Replace the filter tube if any of the following conditions occur:

- *Unable to remove the solder from the spring filter, or the filter has collected more than 2/3 of solder of its capacity – Replace the spring filter.
- *The retainer has hardened and cracked – Replace the retainer.
- *The ceramic filter paper is hardened due to the over-accumulation of solder and flux – Replace the ceramic filter paper.

3. Heating Element Replacement

- ① DISCONNECT the power cord, and wait for the heating element to cool.
- ② Remove the fastener, steel tube and nozzle.
- ③ Remove the locking screw securing the heating element.
- ④ Remove the filter tube.
- ⑤ Remove the casing screw and open the casing.
- ⑥ Disconnect the wires connecting the heating element and remove the heating element.
- ⑦ Install the new heating element.
- ⑧ Connect the wires as per the original (factory) wiring order.
- ⑨ Assemble the desoldering gun in the reverse order of the disassembly, and calibrate the temperature.



V. TROUBLESHOOTING

1. "S-E" – This is an indication that the either the soldering station's or desoldering station's sensor module is faulty. You need to replace the heating element (the heating element and the sensor modules). Or, the either the desoldering iron or the soldering iron is not connected (Turn OFF the station, connect the respective handle and turn ON the station).
2. "SLEP" – This is an indication that the station is in sleep mode.

Tip style (specifications and sizes)

902 Series Tip Out Diam ϕ 6.5mm

902-B		ϕ 1.2mm 17mm
0°C		
902-I		ϕ 1.2mm 17mm
-10°C/-18°F		
902-K		5.0mm 15mm
30°C/54°F		
902-3.2D		ϕ 3.2mm 17mm
0°C		
902-3C		ϕ 3.0mm 17mm
0°C		

IMPORTANT SAFEGUARDS

When using electrical appliances, basic safety precautions should always be followed including the following:

CAUTION!!! WARNING!!!

Read instruction manual before using.

1. To provide continued protection against risk of electric shock, connect to properly grounded outlets only.
2. Do not immerse in water.
3. Hot Surface. Avoid Contact.
4. Shock Hazard. To provide continued protection against electric shock disconnect from the power supply when not in use.
5. Heat gun, soldering iron, desoldering iron must be placed on its stand when not in use.
6. HOUSEHOLD AND INDOOR USE ONLY.
7. To prevent electric shock, unplug before replace the fuse and other service.
8. Replace only with same type and rating of fuse.
9. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
10. Children should be supervised to ensure that they do not play with the appliance.
11. The soldering iron and desoldering iron is only to be used with the power supply unit provided with the appliance.
12. If the SUPPLY CORD is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
13. Any servicing should be performed by an authorized service representative AND that the product has no user serviceable parts.
14. To reduce the risk of fire or electric shock, do not expose this product to rain or moisture. Store indoors. Read instruction manual before using.
15. A fire may result if the appliance is not used with care, therefore
 - be careful when using the appliance in places where there are combustible materials;
 - do not apply to the same place for a long time;
 - do not use in presence of an explosive atmosphere;
 - be aware that heat may be conducted to combustible materials that are out of sight;
 - place the appliance on its stand after use and allow it to cool down before storage;
 - do not leave the appliance unattended when it is switched on.
16. Hidden areas such as behind walls, ceilings, floors, soffit boards and other panels may contain flammable materials that could be ignited by the heat gun 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 heat gun moving in a back-and-forth motion. Lingering or pausing in one spot could ignite the panel or the material behind it.
17. **WARNING:** Extreme care should be taken when stripping paint. The peelings, residue and vapors of paint may contain lead, which is poisonous. Any pre-1977 paint may contain lead and paint applied to homes prior to 1950 is likely to contain lead. Once deposited on surfaces, hand to mouth contact can result in the ingestion of lead. Exposure to even low levels of lead can cause irreversible brain and nervous system damage; young and unborn children are particularly vulnerable.
18. Before beginning any paint removal process you should determine whether the paint you are removing contains lead. This can be done by your local health department or by a professional who uses a paint analyzer to check the lead content of the paint to be removed.
19. **LEAD-BASED PAINT SHOULD ONLY BE REMOVED BY A PROFESSIONAL AND SHOULD NOT BE REMOVED USING A HEAT GUN.**
20. Persons removing paint should follow these guidelines:
 - 1) Move the work piece outdoors. If this is not possible, keep the work area well ventilated. Open the windows and put an exhaust fan in one of them. Be sure the fan is moving the air from inside to outside.
 - 2) Remove or cover any carpets, rugs, furniture, clothing, cooking utensils and air ducts.
 - 3) Place drop cloths in the work area to catch any paint chips or peelings. Wear protective clothing such as extra work shirts, overalls and hats.
 - 4) Work in one room at a time. Furnishings should be removed or placed in the center of the room and covered. Work areas should be sealed off from the rest of the dwelling by sealing doorways with drop cloths.
 - 5) Children, pregnant or potentially pregnant women and nursing mothers should not be present in the work area until the work is done and all clean up is complete.
 - 6) Wear a dust respirator mask or a dual filter (dust and fume) respirator mask which has been approved by the Occupational Safety and Health Administration (OSHA), the National Institute of Safety and Health (NIOSH), or the United States Bureau of Mines. These masks and replaceable filters are readily available at major hardware stores. Be sure the mask fits. Beards and facial hair may keep masks from sealing properly. Change filters often. DISPOSABLE PAPER MASKS ARE NOT ADEQUATE.
 - 7) Use caution when operating the heat gun. Keep the heat gun moving as excessive heat will generate fumes which can be inhaled by the operator.
 - 8) Keep food and drink out of the work area. Wash hands, arms and face and rinse mouth before eating or drinking. Do not smoke or chew gum or tobacco in the work area.
 - 9) Clean up all removed paint and dust by wet mopping the floors. Use a wet cloth to clean all walls, sills and any other surface where paint or dust is clinging. DO NOT SWEEP, DRY DUST OR VACUUM. Use a high phosphate detergent or trisodium phosphate (TSP) to wash and mop areas.
 - 10) At the end of each work session put the paint chips and debris in a double plastic bag, close it with tape or twist ties and dispose of properly.
 - 11) Remove protective clothing and work shoes in the work area to avoid carrying dust into the rest of the dwelling. Wash work clothes separately. Wipe shoes off with a wet rag that is then washed with the work clothes. Wash hair and body thoroughly with soap and water.
21. To ensure personal safety, please turn off the power switch after work is completed; When not in use for an extended period, please unplug the power cord!!!
22. Do not install nozzle when the hot air gun is turned on, the heat pipe when the nozzle must be cooling. Then installed the other nozzle.
23. The soldering iron should only be used for soldering. Do not hit the soldering iron against the work surface to remove flux residues(Can be cleaned by the cleaning device of the product), as doing so may seriously damage the soldering iron.
24. Soldering produces fumes, ensure there is adequate ventilation.
25. After used, remember that cooling the unit, the handle should be placed on the handle holder.
26. Longer detachable power-supply cords are available and may be used if care is exercised in their use.
27. If a long detachable power-supply cord is used:
 - 1) The marked electrical rating of the detachable power-supply cord or extension cord should be at least as great as the electrical rating of the appliance;
 - 2) The extension cord should be a grounding type 3-wire cord;
 - 3) The longer cord should be arranged so that it will not drape over the countertop or tabletop where it can be tripped over, snagged, or pulled on unintentionally (especially by children).
28. A short power-supply cord(or short detachable power-supply cord)is provided to reduce the risks resulting from becoming entangled in or tripping over a longer cord.
29. If the bottom of the brass wool tip cleaner contains solid-state rosin, the below warning applies: This product contains rosin (colophony), and the substance may cause an allergic skin reaction. When using the tip cleaner (rosin-inside), DO NOT inhale the fume generated or consume the solid-state rosin, DO NOT allow your skin and eyes to get in direct contact with the rosin.

SAVE THESE INSTRUCTIONS

Please read Operation Instruction in Part Two.