ESD-Safe 2-in-1 Desoldering Station

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

| Dimensions	L234xW202xH134mm ±5mm
Operating ambient temperature	0～40℃/32°F～104°F
Temperature range	350℃～480℃/662°F～896°F（Desoldering Station） 200℃～480℃/392°F～896°F(Soldering Station)
Display	LED
Soldering tip to ground resistance	< 2 ohms
Suction Pressure	0.05MPa

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. CONTROL PANEL GUIDE
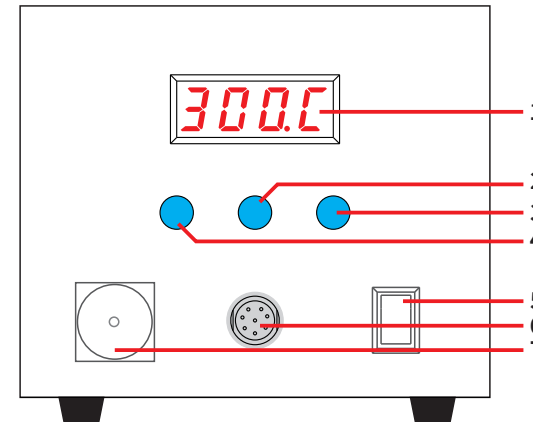
1. Temperature Display (Desoldering Station /Soldering Station)
2. Function Button (Desoldering Station /Soldering Station)
3. Temperature Increase Button (Desoldering Station/Soldering Station)
4. Temperature Decrease Button (Desoldering Station/Soldering Station)
5. Power Switch
6. Receptacle (Desoldering Gun /Soldering Iron)
7. Receptacle (Vacuum Tube)
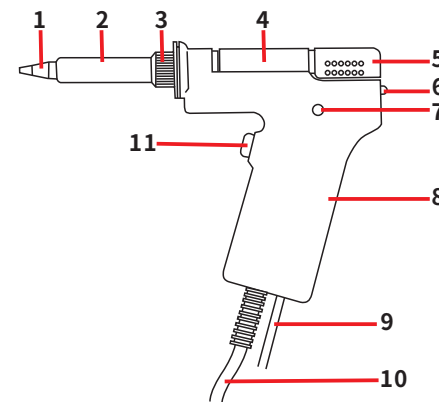
1. Nozzle (Consumable Part)
2. Steel Tube
3. Fastener
4. Filter Tube (The spring filter inside is a consumable part)
5. Tube Release
6. Release Button
7. Indicator
8. Casing
9. Vacuum Tube
10. Cord (Desoldering Gun)
11. Trigger (Desoldering)

III. OPERATION

Desoldering Station

1. Connect the desoldering gun to station.

2. Connect the desoldering station's power cord to an electrical outlet.

3. Turn ON the power switch, 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 (ONLY Compatible with the 948A Soldering Iron)

1. Connect the soldering iron correctly, and put the soldering iron in the holder.

2. Turn ON the power switch and the soldering station's heating 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 station is heating up, blink rapidly when the temperature stabilizes, and be turned OFF when the station is cooling. Begin your operation once the soldering station's indicator is blinking rapidly to indicate the temperature's stabilization.

300. → *Indicator for Real-Time Temperature Tracking & Temperature Compensation*

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

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 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:
1. The same receptacle powers both the desoldering gun and the soldering iron, and only one of them can be connected to the receptacle at one time. When using the desoldering gun, connect the gun's cord to the 8-pin receptacle, and connect the vacuum tube to the vacuum pump. When using the soldering iron, disconnect the desoldering gun and have the soldering iron attached instead.

2. Take note of the tips below when using the desoldering station:
   A. Fully melt the solder joint before pressing 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. The desoldering nozzles come in different sizes. 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.

Sleep Mode (Soldering Iron)

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

1. Turn ON the power switch, and press the ✳ button once, the display will show "L01" with the "01" value blinking to indicate the sleep timer set to 1 minute.

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L   01
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2. Press the temperature increase or decrease button to set the desired sleep timer, each press changes the value by 1 minute, press and hold to fast forward the change.

3. When you need to access other function menus after completing the setting procedure, press the ✳ button to access other functions. When no other functions are needed, stop operation for approximately 6 seconds, the system will automatically save and exit the function setting interface – sleep mode configuration complete.

   To wake the station from sleep mode:
   a. Pick up the soldering iron and shake lightly to start-up from sleep mode.
   b. Press any button.
   c. Turn OFF, then turn ON the power switch.

Automatic Shutdown Timer

1. Turn ON the power switch, and press the ✳ button twice, the display will show "P01" with the "01" value blinking to indicate the shut down timer set to 1 minute.

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P   01
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2. Press the temperature increase or decrease button to set the desired timer value, each press changes the value by 1 minute, press and hold to fast forward the change.

3. When you need to access other function menus after completing the setting procedure, press the ✳ button to access other functions. When no other functions are needed, stop operation for approximately 6 seconds, the system will automatically save and exit the function setting interface – automatic shutdown timer configuration complete.

°F/°C temperature display mode

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

1. Turn ON the power switch, and press the ✳ button 3 times, the display will show "C" with "C" blinking (as shown in the graph) to indicate the station in the Celsius display mode.

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C
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2. Press the temperature increase or decrease button to select the required display mode.

3. Once the setting is complete, press the ✳ button to save, and exit the setting interface – setting complete.

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. Turn ON the power switch. Once the temperature has stabilized, press and hold both the temperature increase and decrease buttons for approximately 2 seconds. Th display will show 4 digit dots while showing the set temperature.

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3.5.0.C.
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Decrease Button   Increase Button

2. Press the temperature increase or decrease button to enter the measured temperature value.

3. Press and hold both the temperature increase and decrease buttons for approximately 2 seconds to confirm the entry. The system will automatically calibrate, save temperature value, and exit the setting interface – temperature calibration complete. If temperature discrepancies remain, repeat the calibration procedures.
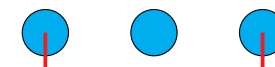
IV. MAINTENANCE AND PRECAUTIONS

Soldering Station

1. If a layer of oxidization forms on the surface of the soldering iron tip, a misconception can be created that the tip cannot heat up properly to melt the solder and do the tinning. However, the actual temperatures of both the heating element and 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 stabilizes, gently rub the soldering iron tip inside the metal wool ball.*
   C. *When the oxidization is partially removed, continue applying solder onto the soldering iron tip while rubbing it until the tip is completely coated with solder. If the tip is too severely oxidized beyond cleaning, replace it 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 the soldering iron tip with a new tip.

3. DO NOT apply excessive force on the soldering iron tip when soldering. Doing this will NOT IMPROVE the heat transfer but damage the soldering iron tip instead.

4. When placing the soldering iron back in the 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 in 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, clean the soldering iron tip, then tin the tip with a new layer of solder to prevent 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.

   Nozzle   Fastener   Heating Element

   Heating Element   Steel Tube (Heating Element)
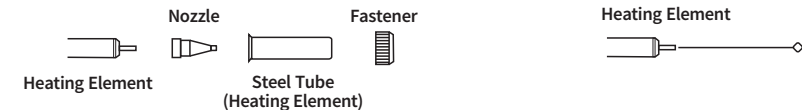
   C. Filter Tube Cleaning
   1) Turn OFF the power switch, and wait for the filter tube to cool before removing the tube as instructed by the below graph.

   C. Replace the filter tube
   B. Automatic ejection
   A. Pull-down
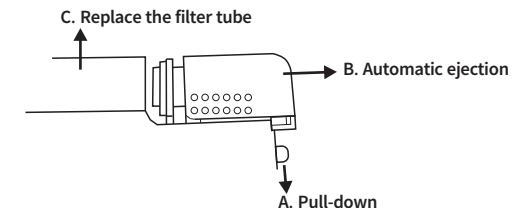
2) Disassemble the filter tube as per the illustration in the graph, and then remove the spring filter. Clean the solder off the spring filter.
*CAUTION: The filter tube is extremely HOT, beware of burn injuries when cleaning.*

Retainer   Spring Filter   Ceramic Filter Paper
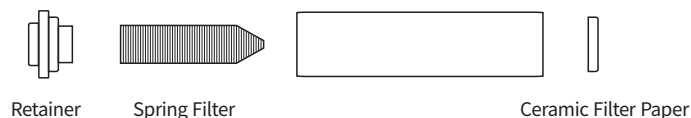
Replace the filter tube if any of the following conditions occur:
*Unable to remove the solder from the spring filter, or the filter has collected more than 2/3 of solder of its capacity – Replace the spring filter.
*The retainer has hardened and cracked – Replace the retainer.
*The ceramic filter paper is hardened due to the over-accumulation of solder and flux – Replace the ceramic filter paper .

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

Remove the fastener, then remove the steel tube and nozzle.

Heating element   Nozzle   Heating element steel tube   Fastener

Remove the screws securing the heating element

Remove the filter tube

Casing

Remove the casing screws and open the casing

Heating Element

Remove the wires connecting heating element and remove the heating element
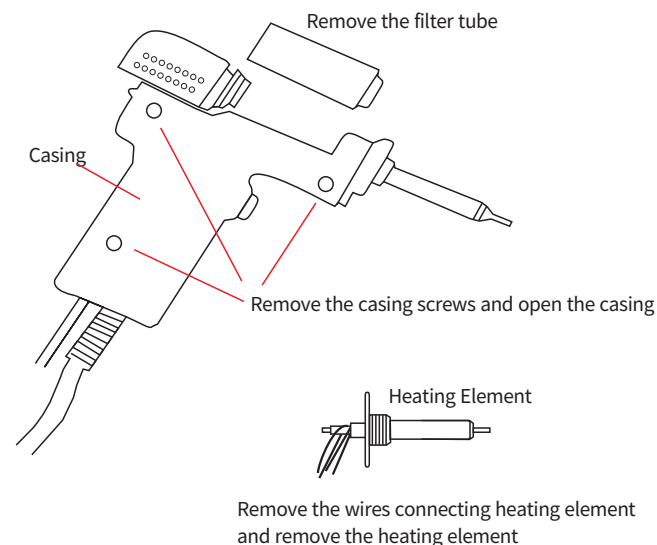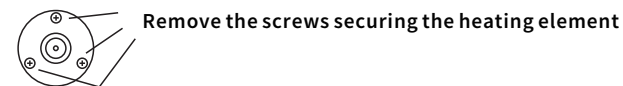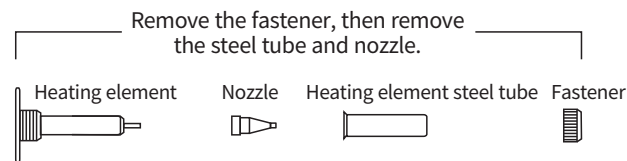
V. TROUBLESHOOTING

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

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