

# **Pro'sKit®**

## **SS-989**

### **2 IN 1 SMD HOT AIR REWORK STATION**



**CE**

**User's Manual**


1<sup>st</sup> Edition' 2012


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## SAFETY INSTRUCTIONS

### **WARNING**

Warnings and cautions are placed at critical points in this manual to direct the operator's attention to significant items. They are defined as follows:

 **WARNING:** Failure to comply with a WARNING may result in serious injury or death.

 **CAUTION:** Failure to comply with a CAUTION may result in injury to the operator, or damage to the items involved. Two examples are given below.

NOTE : A NOTE indicates a procedure or point that is important to the process being describe.

EXAMPLE : AN EXAMPLE is given to demonstrate a particular procedure, point or process.

**\_ Be sure to comply with following WARNINGS and CAUTIONS for your safety.**

### **WARNING**

\_ Be sure not to operate the unit with any combination of temperature and air flow settings that makes the thermal protector trip (the heater lamp turns off during use). This could damage the unit.

### **CAUTION**

**When the power is ON, the temperature of the hot air and the nozzle ranges from 100 to 450°C (212 to 842°F). To avoid injury to personnel or damage to items in the work area, observe the following:**

- \_ Do not direct the hot air toward personnel or touch the metal parts near the nozzle.
- \_ Do not use the product near combustible gases or flammable materials.
- \_ Advise those in the work area that the unit can reach very high temperatures and should be considered potentially dangerous.
- \_ Turn the power OFF when no longer using the Pro'sKit SS-989 or when leaving it unattended.
- \_ Before replacing parts or storing the unit, allow the unit to cool and then turn the power OFF.

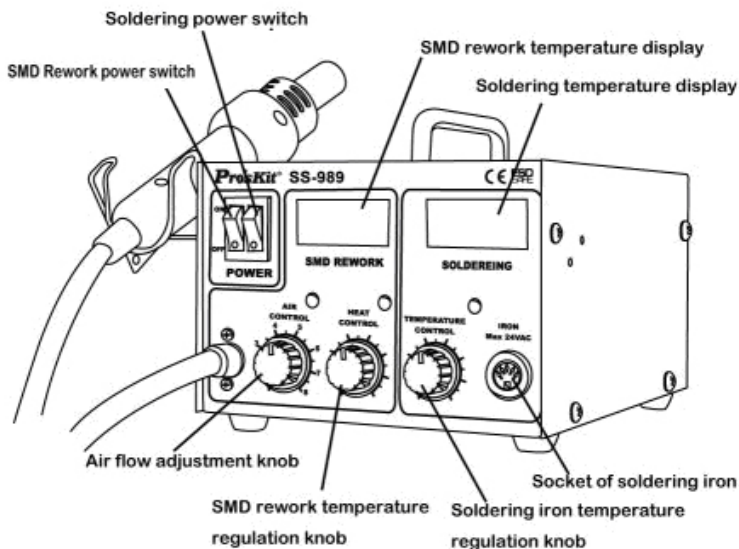
**To prevent accidents and failures, be sure to take the following precautions:**

- \_ Do not strike the hand piece against hard surfaces or otherwise subject it to physical shock.
- \_ Be sure the unit is grounded. Always connect power to a grounded receptacle.

- \_ Do not disassemble the pump.
- \_ Do not modify the unit.
- \_ Use only genuine Pro'sKit replacement parts.
- \_ Do not wet the unit or use the unit with wet hands.
- \_ Remove power cord by holding the plug – not the wires.
- \_ Make sure the work area is well ventilated.
- \_ The Pro'sKit SS-989 is not intended for use by children or infirm persons without supervision.
- \_ Children should be supervised to ensure that they do not play with the SS-989.

## I. Packing list and name of parts

### Name of Parts



### Packing List

1. 1.SS-989 2 in 1 SMD Hot Air Rework Station
2. User's manual
3. Soldering iron
4. Soldering iron Stand
5. Heat Gun holder
6. Air nozzle x 3

## II. Features and Specifications

### **Features:**

#### **2 in 1 Rework Station to save the cost**

Antistatic soldering iron and hot air desoldering 2 in 1 design to save the cost.

#### **Closed Circuit Sensor Design**

Closed-loop temperature control for accurate and air-flow-independent temperature

#### **High Power, Quick Warm Up Times**

High heating power, warm up quickly, adjustable temperature and air flow for easy surface or hole mount components QFP, SOP type IC devices rework.

#### **Individual Function Start Save Energy**

Individual function starts save energy, or share function by 2 users at the same time, three knobs control hot air volume, hot air temperature, and soldering iron temperature.

#### **LED Digital Display**

Digital LED displays for both rework and soldering station

#### **Quiet in operation**

Diaphragm pump with maximum capacity at 24L/min, equipment noise less than 45dB, wind volume and temperature are adjustable, suitable for many kinds of use

#### **Auto Cool-Off Process**

After power switch is turned off, the auto cool-off process leaves the blower on until the nozzle is cool in order to prolong the life of heating element and to ensure safety

#### **ESD Safe Design**

Prevent static and leakage electric to damage the PCB.

#### **Interchangeable hot air nozzles and tips**

Interchangeable hot air nozzles and tips design for different type of surface mount components. Also applicable to most of branded nozzles and tips.

## Specification:

Model	SS-989B SS-989H	SS-989A	SS-989A7	SS-989B4	SS-989C
Input voltage	AC220V 50Hz	AC110V 60Hz	AC127V 60Hz	AC240V 50Hz	AC240V 50Hz
Fuse	3A 250V	6A 250V	5A 250V	3A 250V	3A 250V
Total power	700W				
Overall package size (mm)	330 (L) * 275 (W) * 195 (H)				
Weight	3.7 kg				
SMD Rework Specifications					
Power consumption	640				
Air pump	Diaphragm type				
Volume	24L/min (max)				
Temperature of hot air	100°C-450°C				
Noise	Noise < 45dB				
Scale	LED display				
Soldering Iron Specifications					
Power consumption of soldering iron	60W				
Temperature range of soldering iron	200°C-480°C				
Leakage voltage of soldering iron tip	<0.5mV				

## Assembly

### A. Station assembly

- Attach the Heat Gun holder

Remove the heat gun holder screw from the side of the station; attach the heat gun holder to the station (Fig. 1)

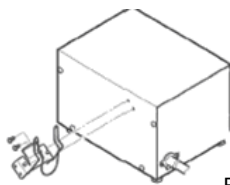
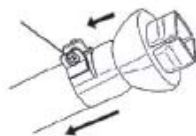


Fig. 1

### B. Attach the nozzle

- Loosen the nozzle mounting screw, attach the nozzle on heat gun then screw
- Show as the figure 2



it.

Fig. 2

### C. Electrical Connection and Power ON

- Place the heat gun on the holder.(Fig3)



Fig3

- Loosen the pump securing screw which on the bottom of control station.  
(See below pictures)



- Insert the power plug into socket
- Turn on the power switch and the lamp will be lit
- Don't pull out the power plug instantly after turning off the power switch, because the fan keeps operating to protect heat element. Until the fan stops operation completely, the power plug should not be pulled out.

### III. Operation instructions (SMD rework)

- Remove **SMD components** (such as QFP, SOP, PLCC and so on)

1. Adjust air flow and heat gun temperature to desired level
2. Slip the pick-up puller (optional part) under the component lead. (Fig. 4) If the width of the component does not match the size of the pick-up, adjust the width of the pick-up by

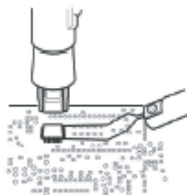


Fig. 4

squeezing the wire. In case of PLCC or small components such as chip resistors, desolder by using tweezers, etc.

3. Hold the heat gun up on the SMD components, but do not touch the components, and allow the hot air to melt the solder. Be careful not to touch the leads of the components with nozzle.
4. When the soldering tin is melted, remove the SMD components by lifting the pick up puller (Fig. 5)



Fig. 5

5. After removing SMD components, remove residual soldering solder tin with desoldering tool.

#### ●SMD rework operation instructions

1. Apply proper quantity of solder paste and install the SMD components on PCB.
2. Refer to (Fig. 6) to preheating components



Fig. 6

3. Heat the lead frame evenly (Fig. 7)

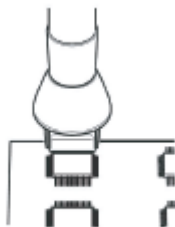


Fig. 7

#### 4. Cleaning

When soldering is completed, clean the residual flux from the board with an appropriate cleaner.

### IV. Soldering iron operation instructions

#### 1. Soldering iron stand assembly

- Install the cleaning sponge into the seat. (Fig. 8)



Fig. 8

\*\*\*ATTENTION\*\*\*

Sponge will swell when wet. Dampen the sponge with water and squeeze dry before using. The tips may be damaged when used with dry sponge.

2. Insert soldering iron into the stand. (Fig. 9)
3. Take out the protection tube on the top of soldering iron.
4. Connect soldering iron cable to the 5 hole socket on control station. (Fig. 9)

\*\*\*ATTENTION\*\*\*

Switch off the power before inserting or pulling out the plug

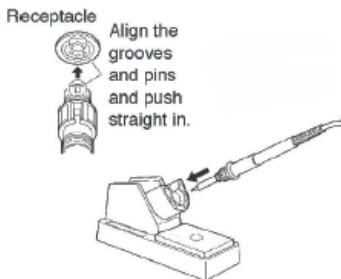


Fig. 9



5. Insert power plug into power socket then turn on power switch.
6. Adjust temperature with regulation temperature knob.

\*\*\*ATTENTION\*\*\*

High temperature shortens tip life and may cause thermal shock to components. Always use the lowest possible temperature when soldering. It will also provide better protection for some components which sensitive to temperature.

\*\*\*ATTENTION\*\*\*

Always put soldering iron into holder after use.

\*\*\*ATTENTION\*\*\*

Always clean the soldering iron tip after use and coat it with fresh solder to prevent oxidation and prolong tip life.

#### 7. Soldering iron tip maintenance and operation

- Always clean the soldering tip before use to remove any residual solder or flux adhering to it. Use a clean and moist cleaning sponge. Contaminants on the tip have many detrimental effects including reduced heat conductivity which contribute to poor soldering performance.
- If the soldering iron is not in use, do not keep it at high temperature for long time otherwise the tin flux will become oxidized and reduce heat conductivity function.
- After use, always clean the soldering iron tip after use and coat it with fresh solder to prevent oxidation and prolong tip life.
- Checking and cleaning the soldering iron tip

\*\*\*ATTENTION\*\*\*

- ◆ Never cut the oxide on soldering iron tip by cutter.
- ◆ Set the temperature at 250°C or 482.°F.
- ◆ After the temperature is stable, clean soldering iron tip with sponge, and check its condition. If the tip is badly worn or deformed, replace it.
- ◆ If the tin-plating part of soldering iron tip covered with black oxide,

apply fresh solder containing flux and clean the tip again. Repeat until all the oxide is removed then coat the tip with fresh solder.

◆ If the soldering iron tip gets deformed, replace it with a new one.

## V. Fuse replacement

When fuse is blown, replace it with the spare fuse. (see below picture)

1. Unplug the power cord from the power receptacle
2. Use the Phillip (+) type screwdriver to loosen the fuse holder
3. Replace the fuse with new one
4. Put the fuse holder back in place



# Trouble shooting



## Warning:

Before checking the inside of the SS-989 or replacing parts, be sure to disconnect the power plug. Failure to do so may result in electric shock.

<b>Defect Situation</b>	<b>Possible Problem</b>	<b>Solution</b>
Dead, Doesn't work	Blown fuse	Change new fuse SS-989A(110V) 250V 6A SS-989B(220V) 250V 3A SS-989A7(127V) 250V 5A SS-989H(220V) 250V 3A SS-989B4(240V) 250V 3A SS-989C (240V) 250V 3A
	PCB Board broken	Contact vendor for repair
Soldering Iron doesn't heat up	Panel display S-E, plug didn't connect properly	Reconnect the plug of Soldering Iron
	Heating Element broken	Replacing heating element
Heat Gun air Temperature doesn't heat up	Heating Element broken	Replacing heating element
Heat Gun airflow level abnormal	Internal pipe obstruction or loosen caused air leakage	Clearing the internal pipe, reconnect the pipe tightly.
	Pump securing screws haven't loosened	Loosen the pump securing screw which on the bottom of control station.
Display shows abnormal	Transportation caused inside PCB board didn't connect properly	Open the case, reconnect the PCB board
	Input voltage lower than standard request	Check with local power service provider
Temperature unit display abnormal	IC broken	Contact vendor for repair

**Other problems not mentioned:**

**Contact the vendor**

# SS-989 2 合 1 SMD 吹焊烙鐵組

## 使用說明書

### 警告

警告本說明書之注意事項，區分為如下的 ” 警告 ” 及 ” 注意 ” 二者加以表示。請充分理解其內容後再閱讀本文。

**警告:** 濫用可能導致使用者死亡或是重傷。

**注意:** 可能導致使用者受傷或對涉及物體造成實質破壞，為了使用者的安全著想，請嚴格遵守 ” 注意事項 ”。下面舉二個例子說明之。

備註：備註是在指示一個步驟或是在指出敘述那是一個重要的程序。

舉例：舉例是在證明一個特別的步驟、重點或是程序。

\_ 為了您的安全，請務必遵守下面的 ” 警告 ” 及 ” 注意 ” 事項。

### 警告

確定不去操作與任何與溫度相關及設定風量溫度保護行程的組裝的元件(當使用的時後, 溫度開關燈號為滅的時候)。可能會損壞這些元件。

### 注意

當電源是 ” 開 ” 的狀況，熱風槍噴嘴的溫度範圍約在 100 to 450°C (212 to 842°F) 之間。為了避免傷害使用者或是損壞使用區域物件，請注意下列事項:

- \_ 熱風不可以對著人吹，不可以碰觸接近噴嘴的金屬部份。
- \_ 不可以使可燃氣體或可燃材料附近使用本產品。
- \_ 建議可以在高溫工作區域應該注意潛在的危險性
- \_ 當長時間不使用或是附近沒人的時候將寶工產品 SS-989 的電源關閉。

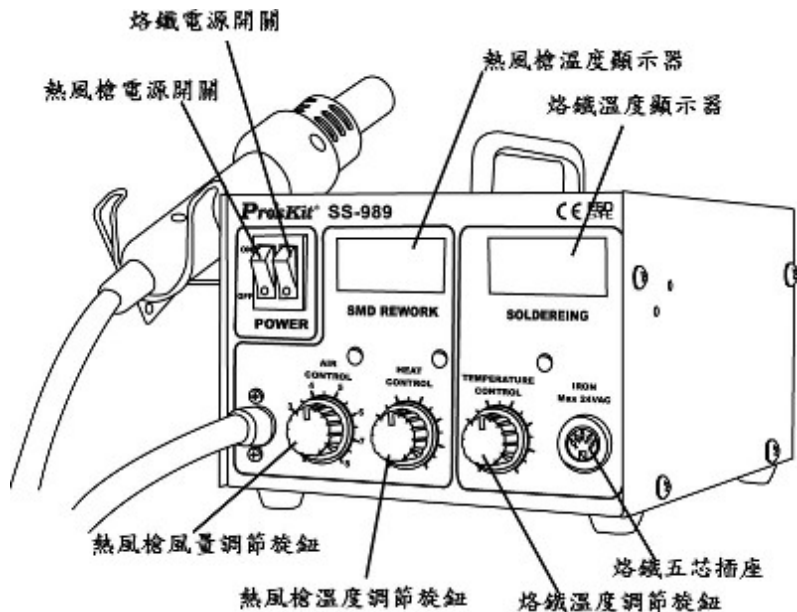
為了預防意外的發生，請遵從下列的注意事項:

- \_ 手握持的裝置不要敲打堅硬的地方否則會造成主體的震動而損壞。
- \_ 請確認產品接地的元件有連結電源的接地的插座。
- \_ 不要拆開氣泵。
- \_ 不要任意修改任何原件。
- \_ 請使用正牌寶工的替換元件。

- \_ 不要弄濕產品或是用濕的手去使用產品。
- \_ 拔掉插頭時請拉插頭不要拉電線。
- \_ 請確任工作的區域通風良好。
- \_ 寶工產品 SS-989 兒童或是年長者使用旁邊必須有人指導使用。
- \_ 兒童必須被監督以確保他們不會玩弄機台。

## 一、包裝清單及各部件名稱

### 1. 各部件名稱



### 2. 包裝清單:

1. SS-989 吹焊台主機
2. 使用說明書
3. 烙鐵
4. 烙鐵座
5. 噴氣嘴配件 x 3pcs
6. 熱風槍架

## 二、規格

型號	SS-989B SS-989H	SS-989A	SS-989A7	SS-989B4	SS-989C
輸入電壓	AC220V 50Hz	AC110V 60Hz	AC127V 60Hz	AC240V 50Hz	AC240V 50Hz
保險絲規格	3A 250V	6A 250V	5A 250V	3A 250V	3A 250V
電源功率	700W				
外包裝尺寸 (mm)	330 (L) * 275 (W) * 195 (H)				
重量	3.7 kg				
拔放台部分					
功率消耗	640W				
空氣泵	膜片式				
容量	24L/min 最高				
熱空氣溫度	100°C -450°C				
運作噪音	雜訊 <45dB				
刻度值	LED 標示				
電焊台部分					
烙鐵功率消耗	60W				
烙鐵溫度範圍	200°C -480°C				
烙鐵頭漏電壓	<0.5mV				

## 三、組裝

### A. 組裝控制臺

#### ● 安裝熱風槍架

取下機身的熱風槍架安裝用螺絲，將熱風槍架裝到機身後再鎖上螺絲（圖 1）

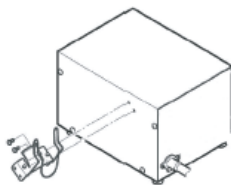


圖 1

### B. 組裝噴氣嘴

● 鬆開噴氣嘴的安裝用螺絲，安裝噴氣嘴鎖緊噴氣嘴的螺絲（圖 2）

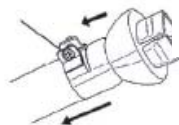


圖 2

- 將熱風槍放到熱風槍支架上（圖 3）



圖 3

- 將緊泵螺絲拆下(如下方照片)



- 將電源插頭插入插座
- 打開電源開關電源燈就會亮起
- 關閉電源開關後，風扇會繼續運轉冷卻以保護發熱元件，請勿將插頭拔起。待風扇靜止後才可以拔掉插頭。

#### 四. 使用方法 (SMD吹焊作業)

- 取下 (QFP)

- 1.調節氣量及溫度控制旋鈕
- 2.安裝起拔器(選配)

將起拔器套入元器件底下（圖 4）如果元器件寬度不適合起拔鋼線尺寸,可擠壓鋼線寬度以適應之。PLCC，積體電路電阻等部件時，請用小鑷子拆下部件

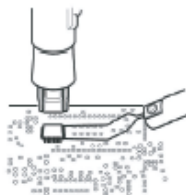


圖 4

- 3.加熱

將熱風槍放在積體電路正上面，用噴氣嘴對準所要熔化焊錫部份，讓噴出熱風熔化焊錫。噴氣嘴不可觸及元器件引線

- 4.拆下部件

焊錫熔化時，提起起拔器移開部件（圖 5）

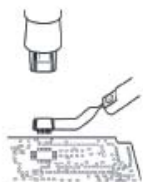


圖 5

#### 5.清除焊錫

移開部件後，使用吸錫器或除錫工具清除殘餘焊錫

### ●安裝（QFP）

#### 1.塗抹適量錫膏

塗抹適量錫膏，將部件放在線路板上

#### 2.預備加熱

參閱（圖 6）預熱部件



圖 6



#### 3.焊接

向引線框平均噴出熱風（圖 7）

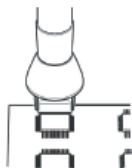


圖 7

#### 4.清理

焊接完畢，清除殘餘助焊劑

## 五、使用方法（烙鐵座）

#### 1. 組裝烙鐵座

●將清潔海綿放置在底座上（圖 8）





圖 8

\*\*\*注意\*\*\*

海綿是壓縮物體，沾水後會膨脹，使用海綿時，先沾水再擠乾否則會損壞烙鐵頭

2. 取下烙鐵保護套
3. 將烙鐵手柄塞進底座上的焊台支架（圖 9）
4. 將電線元件上的插頭插進控制臺上的五芯插座上（圖 9）

\*\*\*注意\*\*\*

插入或拔出插頭之前，注意要關掉電源

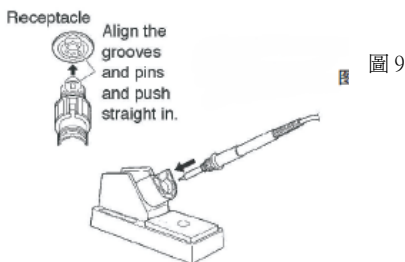


圖 9

5. 打開電源開關
6. 以溫度控制鈕設置溫度

\*\*\*注意\*\*\*

溫度過高會減弱烙鐵的功能，因此選擇盡可能低的溫度，較低的溫度也可充分的焊接可保護對溫度敏感的元件

\*\*\*注意\*\*\*

使用完畢後，必須將烙鐵放置烙鐵座上

\*\*\*注意\*\*\*

使用完後，應抹淨烙鐵頭，鍍上新的錫層以防止烙鐵頭引起氧化作用

## 7. 烙鐵頭的維護和使用

- 應定期使用清潔海綿清理烙鐵頭。焊接後烙鐵頭的殘餘焊劑的氧化物和碳化物損害

烙鐵頭，造成焊接差誤，或者使烙鐵頭導熱功能減退

- 不使用電焊台時，不可讓電焊台長時間處

在高溫狀態，會使烙鐵頭上的焊劑轉化為氧化物，致使烙鐵頭導熱功能大為減退

- 使用後，應抹淨烙鐵頭。鍍上新錫層，以防止烙鐵頭引起氧化作用

檢查和清理烙鐵頭

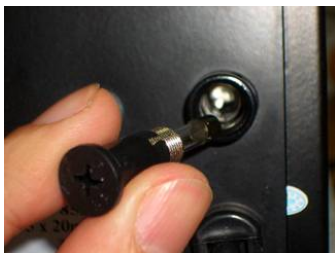
\*\*\*注意事項\*\*\*

- ◆切勿用刀片削除烙鐵頭的氧化物
- ◆設定溫度為攝氏 250 度（華氏 482 度）溫度穩定後，以清潔海綿清理烙鐵頭，並檢查烙鐵頭狀況
- ◆如果烙鐵頭的鍍錫部分含有黑色氧化物時可鍍上新錫層，再用清潔海綿抹淨烙鐵頭，如此重複清理，直到徹底除去氧化物為止，然後再鍍上新錫層
- ◆如果烙鐵頭變形，必須替換新的

## 六、更換保險管

當有誤用的狀況而造成保險管燒斷時，可以自行更換新的保險管

以十字起子拆下保險管座後裝換上新的保險管再裝回去。



# SS-989 故障排除說明

⚠ 警告：檢查前請先移除插頭

故障現象	可能原因	解決方法
打開電源不工作	保險絲燒毀	更換相同型號保險絲 SS-989A(110V) 250V 6A SS-989B(220V) 250V 3A SS-989A7(127V) 250V 5A SS-989H(220V) 250V 3A SS-989B4(240V) 250V 3A SS-989C (240V) 250V 3A
烙鐵不正常	顯示 S-E，插頭連接不良	重新連接烙鐵插頭
	發熱芯燒毀	更換發熱芯
熱風溫度不正常	發熱芯燒毀	更換發熱芯
熱風風量不正常	內部器件異物阻礙或管通路開裂漏氣	清除雜物，接好開裂處
	氣泵底部螺絲未鬆脫	拆解底部運輸螺絲
顯示不正常	因為運輸振動造成接觸不良	重新插接 PCB 板插頭
	使用電源電壓偏低	檢查市壓是否正常
死機	器件損毀	請退回廠商維修
溫度單位顯示混亂	芯片故障	請退回廠商維修

上述故障現象以外之問題：

請聯絡經銷商

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