Pro'sKit®

SS-989

2 IN 1 SMD HOT AIR REWORK STATION

CE

User's Manual

1st Edition, 2011

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:

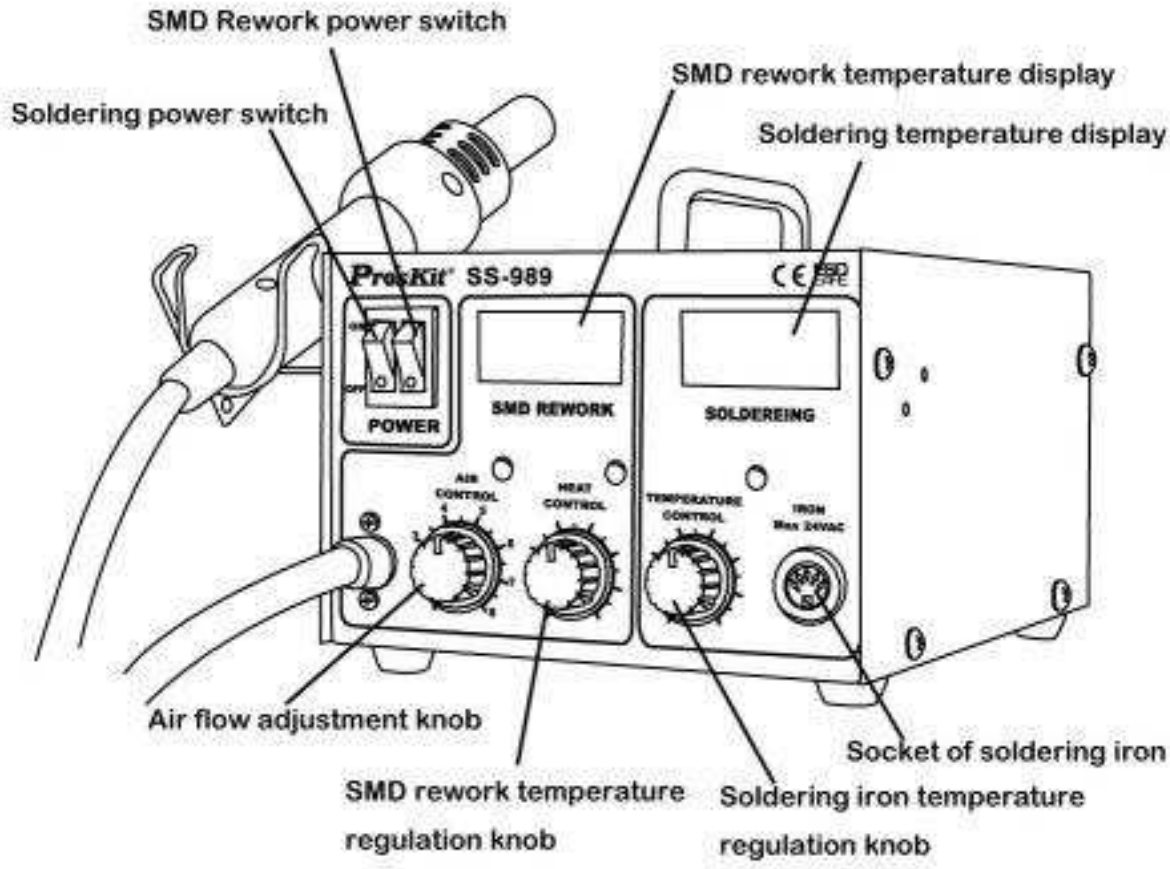
_ Do not strike the handpiece against hard surfaces or otherwise subject it to physical shock.

_ 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
Input voltage	AC220V 50Hz	AC110V 60Hz	AC127V 60Hz
Fuse	3A 250V	6A 250V	5A 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℃-450℃		
Noise	Noise < 45dB		
Scale	LED display		
Soldering Iron Specifications			
Power consumption of soldering iron	60W		
Temperature range of soldering iron	200℃-480℃		
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)

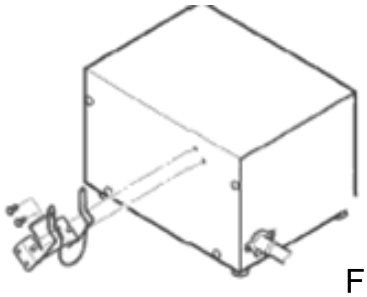


Fig. 1

B. Attach the nozzle

● Loosen the nozzle mounting screw, attach the nozzle on heat gun then screw it. Show as the figure 2

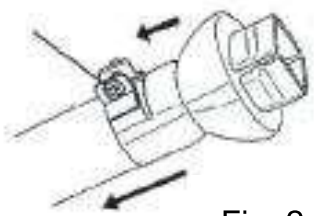


Fig. 2

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

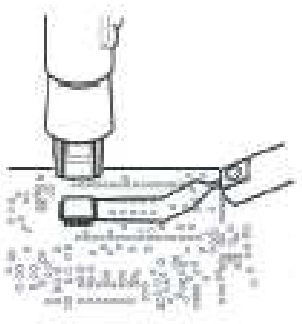


Fig. 4

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)

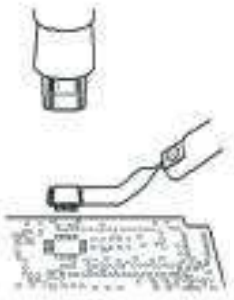


Fig. 5

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

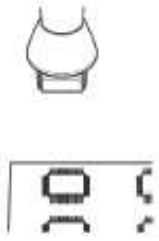


Fig. 6

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

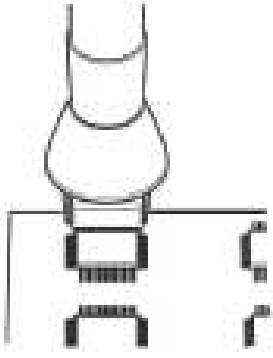


Fig. 7

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)

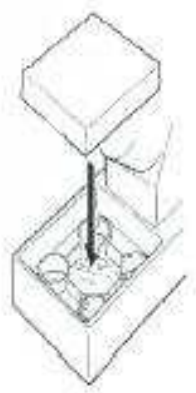


Fig. 8

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

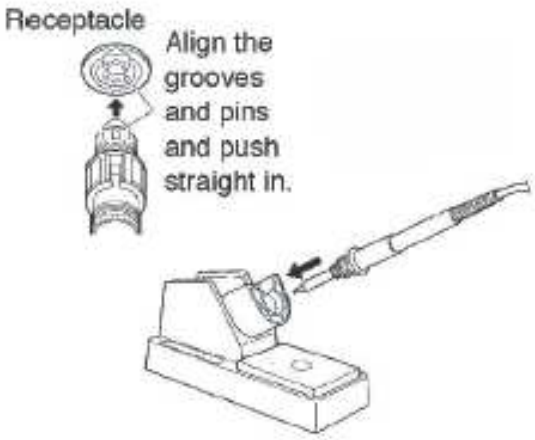


Fig. 9

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℃or 482.℉.
- ◆ 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.

Defect Situation	Possible Problem	Solution
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
	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