

Integrated Infrared BGA Rework Station

INSTRUCTION MANUAL

1000A/1000B

English



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

Thank you for choosing this type of BGA preheating station. The product is designed for soldering and unsoldering without lead. Please read the User Guide thoroughly before use, and keep it in a safe place for future reference.

Warning!!!

Use the machine, the following basic measures should abide, avoid electric shock or cause injury or damage caused by fires.

1. **To ensure personal safety, after the machine completed work, please turn off the main power switch, and unplug the power cord if long time no use.**
2. This unit is high temperature soldering machine, please protect the eyes from scald.
3. This unit is high light intensity equipment, please protect the eyes.
4. To ensure personal safety, you must use the original approval or recommendation of the parts, otherwise it will lead to serious consequences.
5. Machine failure must be by professionals or the company designated personnel for repair.
6. This product is grounded three-wire plug, must be inserted within the three-hole grounded outlet, do not change the plugs or use ungrounded three adapter made it bad grounded.
7. Hot air gun or soldering station is open, its temperature are likely to reach 400 degrees. Do not use it near flammable gas, objects. Tube and the heat emitted very hot, can burn the body, do not touch the hot pipe and direct injection to heat the human body.
8. Before turn on hot air gun, please ensure it is safety state, when hot air gun is turned on, do not leave the job site.
9. When the hot air gun opening do not install nozzle, the heat pipe and the nozzle must be cooling. Then installed the other nozzle.
10. Please keep inlet and outlet air flow, don't have obstruction.
11. After use, remember that the cooling body, the handle should be released into the handle frame, then shut down the machine to sleep.
12. Do not use a soldering iron to weld outside the work; Do not iron percussion table to clear the residual flux, this could seriously damage the iron.
13. The machine welding will take smoke, please do proper ventilation.
14. When Preheating plate is working, the temperature is high, do not touch the preheating plate, circuit board fixed frame and case box around the preheating plate.
15. During working, you should equip with light filter, do not often observe the light without light filter, do not expose yourself on lamplight.
16. If the supply cord is damaged, it must be replaced by a special cord or assemble available from the manufacturer or its service agent.
17. **WARNING:** This tool must be placed on its stand when not in use.
18. Be careful when using the appliance in places where there are combustible materials; Do not apply to the same place for a long time.
19. Be aware that heat may be conducted to combustible materials that are out of sight; Do not leave the appliance unattended when it is switched on.
20. 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. Children should be supervised to ensure that they do not play with the appliance.

I. Precaution

Before using this product, please read the user guide thoroughly to help you master how to use this machine.

1. Repair circuit boards required precautions and necessary protective measures :
 - A. To ensure that both sides of the circuit board preheat zone (edge of preheating plate + 20 mm) without fusible explosive flammable components, like: Plastic, Display, Phone camera, LED, Electrolytic capacitors.
 - B. Ensure that no combustible fusible explosive components in Infrared light can shine on the area, If you can not avoid, Must use reflective paper keep out that. like: Plastic, Display, Phone camera, LED, Electrolytic capacitors.
2. According to IC size, use a suitable diameter lamp cup (lamp cup size larger than IC size); Install lights Cup minimize the distance between lamp and IC, to facilitates heating.
3. Ensure that the working environment is no greater airflow to prevent heat loss, well sheltered measures when necessary.
4. Apply solder paste to the IC before the de-soldering, also you can early preheat then Apply solder paste, Especially BGA package IC, should be early preheat then apply solder paste, the can make solder paste penetrate into the bottom of the IC.
5. Wear heat protective gloves and goggles. Place the visor, good shading measures to protect the eyes.
6. Put bracket above the Preheating plate, the bracket can not touching Preheating plate, the can prevent bracket overheating and avoid Ceramic heating element has damage. The circuit board on the stand, Height of the stand preferably between 8~15mm, In order to ensure circuit board have effective preheating. Adjust of the Infrared light bracket assembly height, make IC facing the lamp cup, Lamp cup rom IC between 10~20mm in height in order to ensure efficient heating infrared lamp.
7. Turn on the main power switch, the first open only preheat coil power, The preheating plate set temperature is about 180°C. Make the appropriate adjustments based on the size of the IC and circuit board. Kept warm-up time long enough Let IC temperature slowly heated to the set temperature from low to high (Generally 8 to 15 minutes). BGA package IC preheating time needs to be extended, because the bottom of IC has Sol treatment with red plastic.
8. Turn on the Infrared light power, Set the temperature to about 280°C. Make the appropriate adjustments based on the size of the IC and circuit board. IC by infrared light irradiation will be rapidly warming (generally 1 to 3 minutes) Tweezers to pick up IC, turn off the preheating plate and infrared light power when the IC was completely molten tin, If the IC is soldered tin melting collapse, close preheating plate and infrared lamp power, let it cool down.
9. If you can not accurately grasp the heating temperature and time, To avoid the IC damage due to overheating. Please use sensor on the bracket the contact with IC when de-soldering When the IC surface temperature is higher than the set temperature, the infrared light will automatically stop heating.

10. Infrared lamp heating power adjustment, You can adjust the infrared lamp heating power according to IC size. Adjustment method: Left hand while holding the IR set temperature plus / minus two key simultaneously when the main power switch is turned off, then turn on the main power switch on the right-hand, when a "drop" beep, infrared temperature display will show "5 to 80" infrared lamp heating power parameters, That means entered the infrared lamp heating power adjustment mode. Set the infrared temperature by plus/minus keys to adjust the parameters, The lower the number the infrared lamp heating greater the power, 10 seconds no operation will automatically enter into normal work mode, infrared lamp heating power parameters are saved automatically, heating power will be change.
11. Just started using this product, it is best to try to use the abandoned circuit board rework a few times. And so familiar with the use of this product then carry out normal maintenance work.

II. Usage

1. Suitable for desoldering and soldering BGA, SOIC,CHIP, QFP,PLCC package SMD IC, Particularly suitable for de-soldering BGA module, computer motherboard north and south bridge, all kinds of mobile phone motherboard SMT IC and LED lights.
2. Shrinking, Paint drying, adhesive removal, thawing, warming, Plastic welding etc.

III. Products Feature

1. Using the PID programmable temperature control technology, precise control temperature, rapid heating, simple operation, digital display of temperature. At the same time the internal use of SMT double panel manufacturing process, internal process system, the direction of signal clarity, machine stability and safety performance is further improved, can adapt to a variety of harsh environment.

2. Using infrared heat transfer technology, infrared penetration strength, components uniform heating, beyond the traditional hot air heating vowed to prevent blow off the IC surrounding small components. Infrared work mode has 2 types: The first type is an external sensor temperature control mode, that is detected by the sensor IC surface temperature control temperature; second type is no external sensor temperature control, easy to operate.
3. Preheating station is to use a glaze layer having a high thermal effect, good thermal shock resistance of the ceramic as the substrate, high-quality nickel plated alloy wire once sintering. It has a high thermal effect, overall good, good thermal stability, uniform heating, high dielectric strength, clean, easy to install and so on features.
4. The gun heater adopts a ceramic heater, heating element firmly around the model of ceramic, rapid and uniform heating up. Ceramic super high temperature and very tough material at long time high temperature under the condition of no deformation, greatly enhance the heating element stability, prolong the life of the heating elements.
5. The air gun has no wind protection function, If use a heat gun is not normal in the process of stop the wind, the heating wire to stop heating, and the prevention of the no wind burning handle, so as to greatly improve the safety performance of the product.
6. Has bright delicate, low voltage LED lighting, safety and energy conservation.
7. Circuit board fixed bracket, use biaxial fixation techniques, can be moved fixed support bracket. In fixing the circuit board while very convenient position adjustment requires disassembly of the device.
8. Powerful human function design, with the following functions:
 - A. Temperature correction function :**
Adapted due to environmental conditions or the replace the heater/fan blower/iron tips caused by iron or hot air gun temperature deviation, this feature can be corrected temperature. Correction of temperature range: - 50°C ~ + 50°C (Infrared lamp analog value :5-80).
 - B. Celsius / Fahrenheit temperature display function:**
meet different market needs to design the temperature display mode. According to the custom to choose.
9. Iron part adopts import heater, quick temperature rise, temperature stability, long service life; static design, prevent electrostatic damage the SMD element.

IV. Specification

Model	1000A	1000B
Voltage	AC 110V ±10% 60Hz/AC 220V~240V 50Hz	
Max power consumption	≤715W	≤1415W
Measurement	L288xW360xH52mm ±5mm	
Weight	9.2kg	9.8kg
Working environment	0~40°C/32~104°F	
Storage environment	-20°C~80°C/-4°F~176°F	
Storage humidity	35%~45%	
Infrared lamp part		
Max power consumption	≤150W	
Light-emitting components	Infrared emission lamp	
Temperature Stability	100~350°C/212~662°F	
Display Type	LED	
Effective irradiation area	35x35mm	
Preheating station part		
Max power consumption	≤540W	
Light-emitting components	Far infrared heating plate	
Temperature Range	50-200°C/122-392°F	
Display Type	LED	
Preheating area	120x120mm	
Hot Air Reworks part		
Max power consumption	NO	≤700W
Heating components		Skeleton-type ceramic heater
Airflow type		Brushless fan spiral wind
Air Flow		≤120L/min
Temperature Range		100°C~480°C/212°F-896°F
Temperature Stability		±1°C(statics)
Display Type		LED
Handle cable length		≥100cm

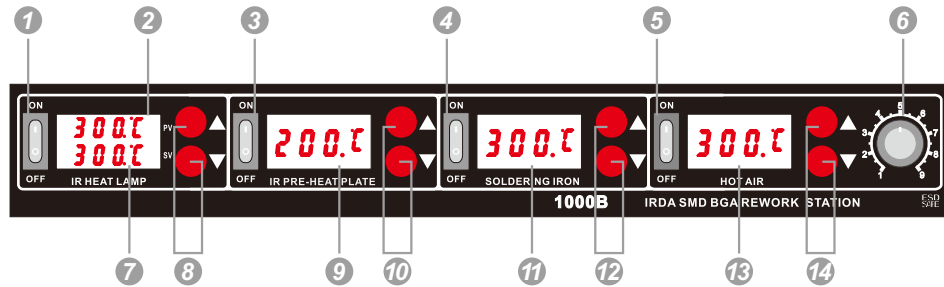
Soldering Iron Part	
Max power consumption	\leq 75W
Light-emitting component	Imported heater
Temperature range	200°C~480°C/392°F-896°F
Temperature stability	\pm 1°C(statics)
Tip of ground voltage	$<$ 2mV
Tip of ground resistance	$<$ 2ohm
Display type	LED
Handle cable length	\geq 100cm

V. Performance Comparison Table

Function	Model	1000A	1000B
Function composition		Infrared lamp/ preheating station/ soldering station	Infrared lamp/ preheating station/ soldering station/hot air reworks
Display type		LED	LED
Fahrenheit/ celsius conversion		YES	YES
Temperature correction		YES	YES
Gun type		NO	Brushless fan
The way of control temperature		Digital PID	Digital PID
Air gun handle		NO	YES
Soldering iron handle		YES	YES

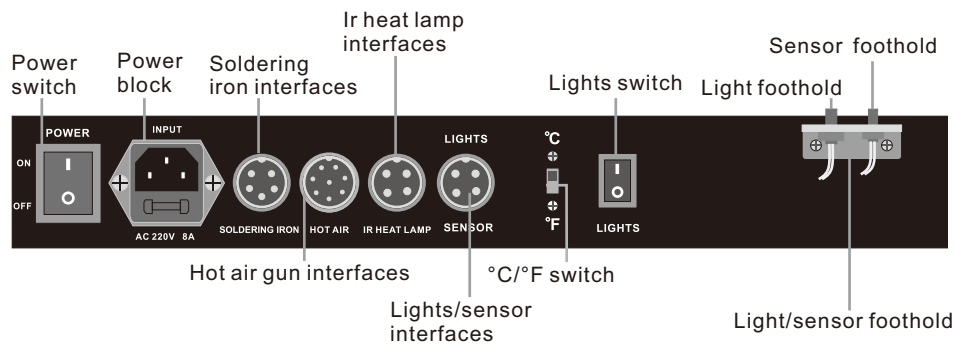
VI. Product Schematic

Panel Schematic

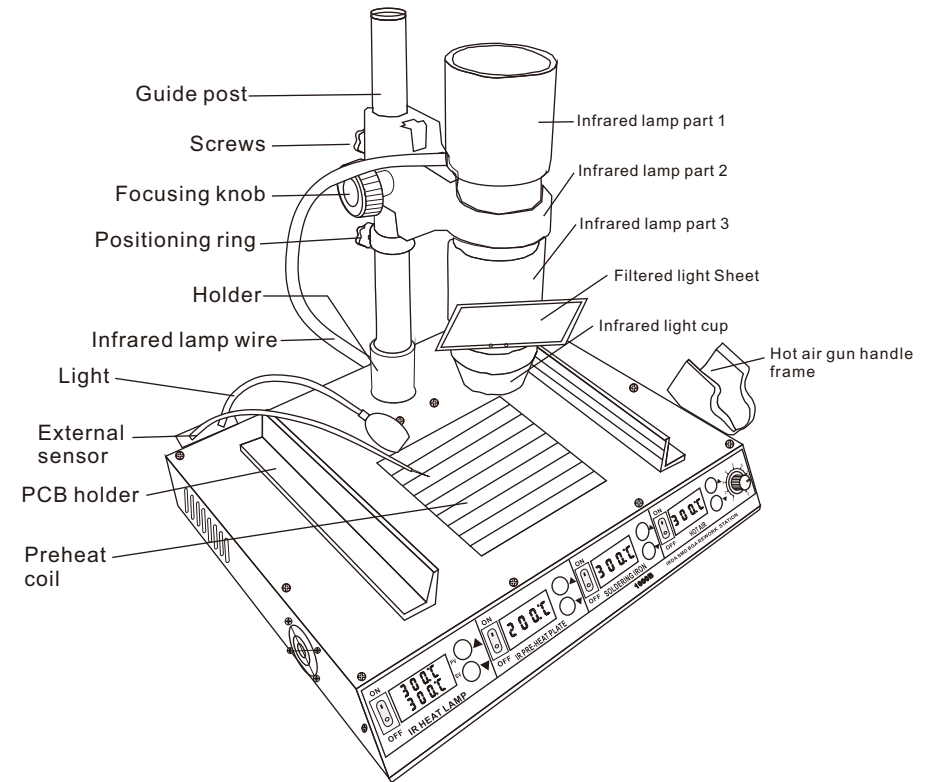


- | | |
|-----------------------------------|---------------------------------|
| ① Infrared lamp switch | ⑧ Temperature control button |
| ② Infrared lamp temperature | ⑨ Preheating plate temperature |
| ③ Preheating plate switch | ⑩ Temperature control button |
| ④ Soldering station switch | ⑪ Soldering station temperature |
| ⑤ Hot air gun switch | ⑫ Temperature control button |
| ⑥ Hot air gun airflow adjust knob | ⑬ Hot air gun temperature |
| ⑦ External sensor temperature | ⑭ Temperature control button |

Rear Panel Schematic



Main parts schematic

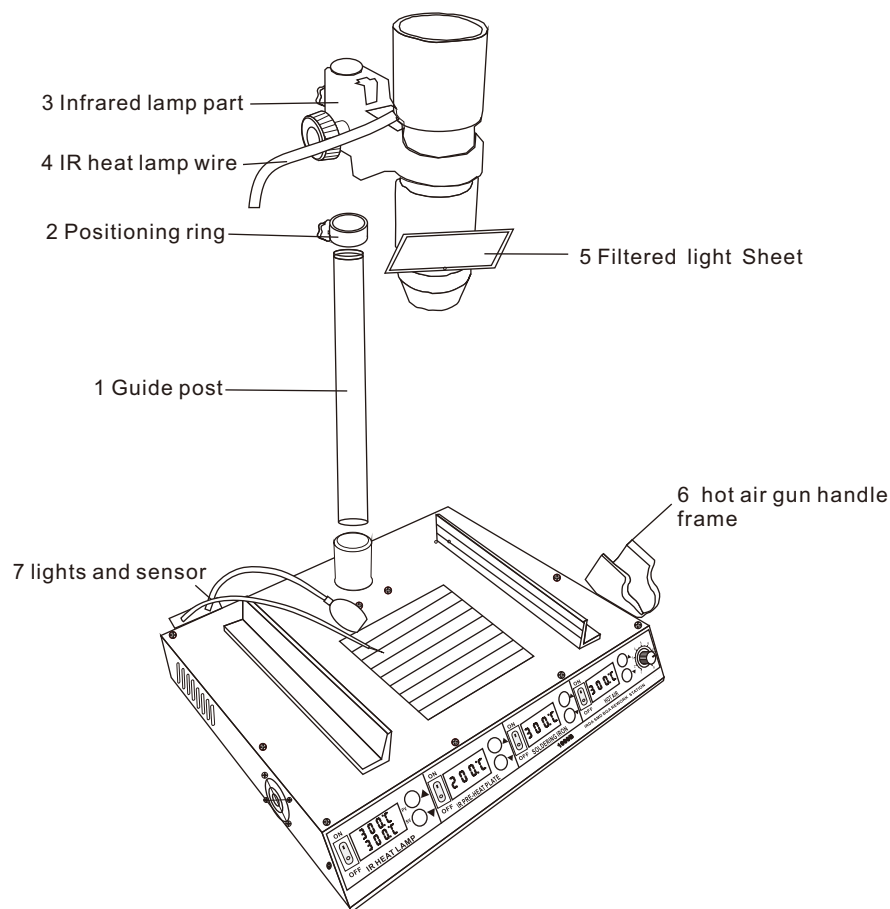


VII. Installation Steps

1. Rotate the guide post mount bracket, must be tightened.
2. Load retainer ring, and locking nut.
3. Set infrared lamp part into the guide post, and tighten the nut.
4. put infrared light wire to the rear panel IR port, and tighten.
5. Install filtered light Sheet.
6. Install air gun handle frame.
7. Install lights and sensor.
8. Soldering station handle connected to the soldering station interface of the rear panel.

9. Hot air gun handle connected to the hot air interface of the rear panel.

Warning: Disassembly the air gun handle, power must be disconnected. (Danger of high Voltage.)



VIII. Operating Instructions

Infrared lamp part

Note:

1. Used in conjunction with Infrared light and preheating station, can be best results.
2. Infrared lamp has two modes, select the external sensor method move the sensor on the surface of the IC, program high-speed track and control temperature According to sensor feedback the temperature (If the sensor is moved outside light spot in the work process, the program automatically converted for no external sensors mode, prevent the error detection of sensor and burned the IC) No external sensor selection method is to remove the sensor.

A. Infrared lamp temperature setting:

Open the temperature switch, press the infrared lamp temperature increase / key "▲" then can raise the temperature, and press the infrared lamp temperature decrease key "▼" then can reduce the temperature. Each time you press the temperature change 1°C (Long press for fast set temperature). IC area less than 15x15mm, the temperature set to 160°C-200°C is best. IC area is 15x15mm-30x30mm, the temperature set to 200°C-280°C is best. IC area greater than 30x30mm, the temperature set to than 280°C is best. Infrared light is strongest when the temperature set to than 280°C, Please control the desoldering time, Prevent burn IC or circuit boards.

B. Light Cup selection:

According IC size select the light Cup, light Cup diameter have $\Phi 28\text{mm}$ / $\Phi 38\text{mm}$ / $\Phi 48\text{mm}$, Respectively, to adapt IC area less than 15x15mm / IC area is 15x15mm-30x30mm and IC greater than 30x30mm. Change the lamp cup and adjust the focus knob to make light spot hooded of IC

C. Desoldering

Select the appropriate lamp cup, and fixed the circuit boards, make IC align and vertical with infrared light, adjust the focus knob to make lamp cup and IC distance to 15-20mm. Open the preheat coil switch, Wait for the temperature to rise to the set temperature. Open the infrared lamp switch, set all need temperature, Infrared light begins to heating, Work lights of infrared lamp is work (Bottom right corner of the infrared lamp screen), Always light is heating, thermostatic the light is regular of flashing, Lower the temperature the lights go out. Remove the IC until tin is melted.

D. Re flow

- a. Clean bonding pad.
- b. Implants solder balls and coated with a thin layer of flux.
- c. Use infrared lamp heating solder paste, after waiting flux solvent was evaporated with clips aligning the re flow of the IC pads, put positive, then heated to completely melt the solder ball, IC automatic welding into place. Wait until the

IC removed after cooling circuit board test welding effect, if unsuccessful, please try again.

Preheating plate part

1. Will require preheated components fixed to in the preheating plate the upper member.
2. Open the preheat plate switch, in accordance with the method set up infrared lamp to set / the desired temperature (generally 100°C-180°C, IC or the IC at the bottom of a large area coated with sealant, the temperature is set at 150°C -200°C, and the warm-up time longer) work can be preheated.
3. Work is completed, turn off the power.

Hot air gun part

1. Set the infrared BGA rework station in a good place, first please install air gun frame in the right of the machine, then the handle must be set in the handle frame.
2. Connected power supply, turn on the whole machine switch, the device the air nozzle (to make use of large-diameter nozzle)
3. Open the air gun power switch ,display window display "---" at this time desoldering station for standby; Then according to set method of infrared lamp to set the desired temperature, when set the desired operating temperature, please picking up the gun handle that the gun into the normal heating condition. when the gun working pilot lamp (gun display on lower right corner) ! Warming up the pilot lamp light, constant temperature the pilot lamp will regular high flicker, cooling the pilot lamp off. Adjusting airflow knob setting appropriate airflow, stay stable temperature will be normal operation.
4. Work is completed, must be put the handle on the holder, at this time desoldering will automatic cut off the heating current into the body to send cold air cooling heating mode. When the temperature is below 100°C shows "---" desoldering station, that means the machine will enter into standby mode. At this time you ormally turn off the power of the hot air gun.

Soldering station part

1. The soldering iron handle connected, it will handle on the iron holder.
2. Open the iron power switch, the heater heating. Then according to set method of infrared lamp to set the desired temperature, when the iron indicator work a regular high-speed flash into a constant temperature after normal working!
3. Work is completed, clean high-temperature sponge to clean up the residue of the iron lips under re-plated on a new layer of solder, the iron into the iron frame, you can turn off the power!

IX. Function Setting Instruction

1. Celsius / Fahrenheit temperature display function settings:

Chassis rear panel has Celsius Fahrenheit temperature display switch , stir switch can switch the display status.

2. Temperature correction function settings:

A. Preheating plate / soldering station / hot air reworks temperature correction function settings:

Respectively while pressing the temperature of each function plus and minus buttons for 3 seconds, the temperature display shows "00", then press the plus and minus buttons to set their own calibration temperature, stop the operation for 3 seconds, the program automatically remembers and exit setup is complete. Calibration Temperature range: -50°C ~ +50°C. The analog value range: 5-80

B. Infrared lamp power adjustment setting:

First open the infrared lamp switch, hold down the infrared lamp temperature plus and minus button, and then turn on the power switch until the infrared lamp temperature display shows "20" release the button, and then press infrared lamp temperature plus and minus buttons to set the temperature correction simulation values. the analog value range: 5-80.

C. External sensor temperature correction settings:

Infrared lamp is in working condition, while press the infrared lamp temperature plus and minus button for 3 seconds, external sensor temperature display shows "00", then press plus and minus buttons to set the calibration temperature, stop the operation for 3 seconds, the program automatically remembers and exit setup is complete. the calibration temperature range: -50 °C ~ +50 °C.

X. Usage Notes

1. When turning on the main unit's power, the Hot Air rework's handle must be placed properly on the handle's rack.
2. Please ensure the Hot air's outlet is clear, must free from any blockages or obstructions.

3. After usage, the handle must be placed back on the handle's rack, let the unit cooling down (temperature gradually decreasing) until it displays "---" (Air flow Stop), then turn off the Hot Air power switch.
4. The unit comes with three standard nozzle sizes: large, medium, small. When using the smaller nozzle the Hot air volume must be adjusted to the maximum rate or set the temperature low and maintain it in a short time, to avoid prolonged use which could damage the Hot air unit.
5. In regards to the usage requirements, choose the appropriate Hot air flow, different Hot air flow will cause the temperature to be slightly different, and please maintain the distance between the outlet and the object must be at least 2 mm.
6. When the iron is used for the first time, please pay attention to check the iron tip warming condition, when the tip can melt the tin wire, please plate some tin on tip, then adjust to the desired temperature.
7. The tip temperature should not be too high, too high temperature would weaken the tip function. When Interval using, can lowering the temperature.
8. Should be regularly use clean sponge to clear deoldering tip, after finish use, should wipe clean soldering iron tip, plate new tin to prevent soldering iron tip oxide.
9. Because in the course of their work may produce smoke, keep the work environment ventilation, keep infrared lamp clean.
10. Infrared lamp work is completed, after waiting for fan-cooled infrared lamp, then can turn off the main power switch.
11. Preheat plate non-waterproof structure, therefore, store and use the installation do not with the oil, water, plastic pellets contacts to prevent leakage and other security risks.
12. Preheat plate should avoid being forced to tap or collision with hard objects causing tile breakage, alloy resistance wire exposed affect the operating life.
13. Preheat plate do not high temperature for prolonged use, to prevent overheating of the chassis.
14. IC nearby components, the high-temperature de-soldering stickers can be affixed before the heat shield to prevent damage during desoldering.

Special note:

Dear users, because the air gun handle and iron handle are using high strength stainless steel tube, during production, the machine must be tested or adjusted four times, the tube maybe slightly yellow because of high temperature, when new machine opened, it is normal that the tube become slightly yellow, please be assured.

XI. Cautions

1. DO NOT install / De-install Nozzles with excessive force, and DO NOT use pliers to pull the nozzle edge out, DO NOT tight the nozzle's bolt excessively, only install nozzles when the unit is cool (room temperature).
2. DO NOT face the hot air outlet or touch the soldering Iron to the human body WHATSOEVER because it is very hot and can instantly burn the skin / body. When the first use the unit might started initially with white smoke, but this soon will go away.
3. Replacement heater, be careful not to damage the grounding line! !
4. Replace the cable should pay attention to the order and color, can not take a wrong! !
5. Replace the same type of heater or heating core! ! !

XII. Display Notes

1. When the LED digital displays "---", it means the outlet temperature is below 100°C, the hot air rework station is in standby mode, and the handle is placed on the handle's rack.
2. When the LED digital displays "S - E", it means the soldering iron, Hot air rework's sensor is having a problem or handle is un-plugged, if this the case it needs to replace the heating element (heating core's element and sensor components).
3. Show "F-1 / F-2", it means the air gun without wind protection, need to check the fan and air gun power supply circuit.

XIII. Replacement Parts Instruction

Replacement of Hot Air rework heating element (Figure 1)

1. Ensure the Hot Air Rework is fully cooled down before replacing the element.
2. Figure, loosen the two screws on the handle
3. Turns the handle anti-clockwise until it comes off and then remove the handle's cover.
4. Gently takes out the fan, loosen the three screws to remove the fixed wiring board.

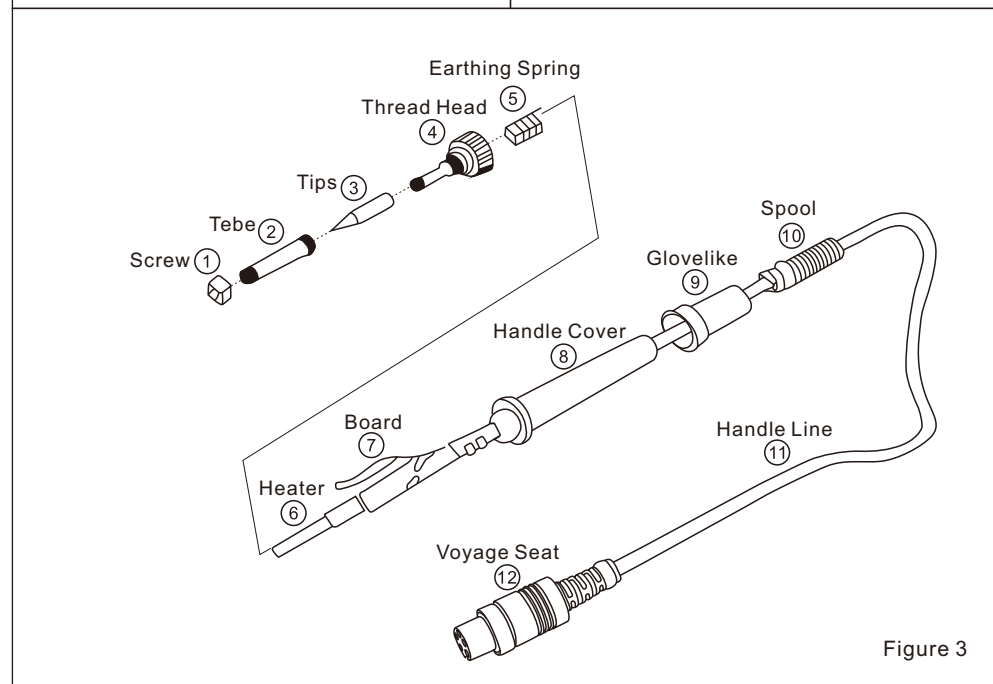
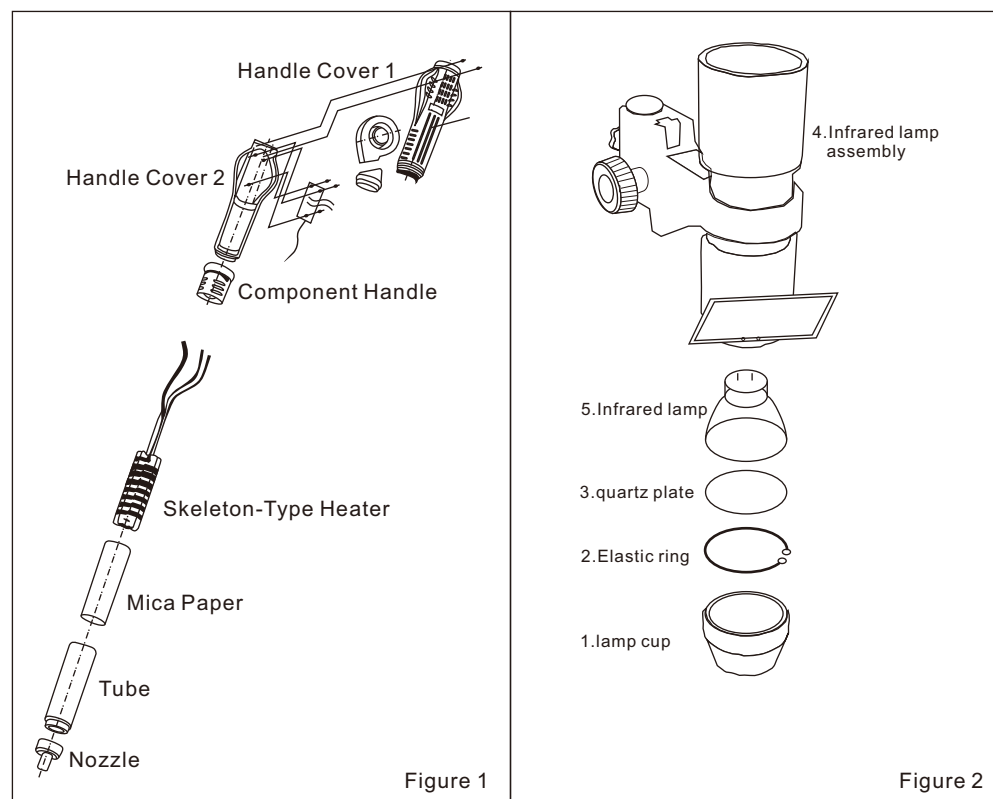
5. The wiring board vice versa, apart from the heater wiring board connection cable, pay attention to the connection location.
6. Remove from the heat pipe heat body wrap body with mica paper, careful not broken ground wire of the steel.
7. Wraps well with the new heater mica, inserted into the tube, the attention heater to install in place.
8. According to the original location of the connection to connect heater.
9. As per the reverse procedure by open and back to the installed handle.

Replacement of the soldering iron's tip and soldering iron heating core's element (Figure 2)

1. Unscrews the nut NO.1, and then removes the steel tube NO.2, followed by removing the tip which is going to be replaced.
2. For the replacement of heating core's element can be performed by unscrewing the plastic cap NO.4, pulls out gently the heating core's element NO.6 along with the circuit board NO.7, please carefully remember the connection of spring NO.5.
3. The iron core from the circuit board welding, the replacement of the heating core, can be fitted well. Note that the order of the iron core wire connection.

Replacement of lamp cup and Infrared lamp (Figure 2)

1. Spin out the lamp cup 1, replace other types of lamp cup.
2. To replace the infrared lamp, remove the elastic ring 2 (Note: be careful not to break the quartz plate), take down the quartz plate 3, spin out the infrared lamp assembly 4, remove the infrared lamp 5 (Note: be careful not to break the infrared lamp).
3. As per the reverse procedure by open and back to the installed infrared lamp.



Attachment: Electric welding machine using welding head model figure


900M-T-0.8D 0°C		900M-T-LB -10°C/-18°F		900M-T-K 30°C/54°F	
900M-T-1.2D 0°C		900M-T-0.5C 0°C		900M-T-R 0°C	
900M-T-1.6D 0°C		900M-T-0.8C 0°C		900M-T-RT 0°C	
900M-T-2.4D 0°C		900M-T-1C 0°C		900M-T-SI 0°C	
900M-T-3.2D 0°C		900M-T-1.5CF 0°C		900M-T-I -10°C/-18°F	
900M-T-1.2LD -10°C/-18°F		900M-T-2C 0°C		900M-T-H -20°C/-36°F	
900M-T-SB 0°C		900M-T-3C 0°C		900M-T-1.8H -10°C/-18°F	
900M-T-B 0°C		900M-T-4C 0°C		900M-T-S4 0°C	

900M Series Tip Out Diam Ø6.5mm

General parts *Nozzle specification and size means the IC size

mm(inch)				
A1125 QFP 10x10 (0.39x0.39) 	A1126 QFP 14x14 (0.55x0.55) 	A1127 QFP 17.5x17.5 (0.68x0.68) 	A1128 QFP 14x20 (0.55x0.78) 	A1129 QFP 28x28 (1.1x1.1)
A1135 PLCC 17.5x17.5 (0.68x0.68) (44 needle) 	A1136 PLCC 20x20 (0.78x0.78) (52 needle) 	A1137 PLCC 25x25 (0.98x0.98) (68 needle) 	A1138 PLCC 30x30 (1.18x1.18) (84 needle) 	A1139 PLCC 12.5x7.3 (0.49x0.49) (18 needle)
A1140 PLCC 11.5x11.5 (0.45x0.45) (28 needle) 	A1141 PLCC 11.5x14 (0.45x0.55) (28 needle) 	A1182 BOFP 24x24 (0.94x0.94) 	A1187 TSOL 18.5x8 (0.73x0.31) 	A1257 SOP 11x21 (0.43x0.83)
A1258 	A1259 SOP 13x28 (0.51x1.1) 	A1260 SOP 8.6x18 (0.34x0.71) 	A1261 OFP 20x20 (0.78x0.78) 	A1262 OFP 12x12 (0.47x0.47)
A1263 QFP 28x40 (1.1x1.57) 	A1264 QFP 40x40 (1.57x1.57) 	A1265 QFP 32x32 (1.26x1.26) 	A1124 Single-tube φ2.5 (1.1x1.57) 	A1130 Single-tube φ4.4 (0.17)
A1134 SOP 7.5x18 (0.3x0.7) 	A1142 Curved single tube 1.5x3 (0.06x0.12) 	A1325 Single-tube φ1.5x10 (0.06x0.02-0.39) Pin distance adjustable 	A1132 SOP 5.6x13 (0.22x0.51) 	A1133 SOP 7.5x15 (0.3x0.59)

Product certification

Model NO.	
Product ID	
Examine	Upon examination products meet technical standards 
Sales Date	
Date of manufacture	

Warranty Card

Thank you for choosing this type of products, please read the following terms before using:

1. From purchasing date within 7 days, under normal use(Non-artificial damage), new package, not be disassemble and repaired ,enjoy replacement service.
2. From purchasing date within one year, under normal use, if there are quality problem, not be disassemble and repaired ,enjoy free repair service.
3. For more than warranty, we provide a lifetime warranty service, free of labor costs, charge only spare parts costs.
4. Failure to present warranty card during warranty period, the company will not be a free service.
5. Users need warranty service, please contact your original sales unit.
6. When users need warranty service, please provide warranty card and purchase invoice, or receipt of the certificate of the company seal.
7. Warranty does not include transportation costs and provide on-site service.

Maintenance records

NO.	Date for repair	Cause	Fix date	Repairer