

SHENZHEN ATTEN TECHNOLOGY CO., LTD.

- Single soldering iron
- Constant temperature electric soldering stations
- Hot air desoldering station
- Versatile maintenance system
- BGA reworking station
- DC voltage-stabilized power
- DC switching power
- Programmable power

ATTEN

MS-900

4 in 1 Rework Station

User Manual in English

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Engineer's partner

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MADE IN CHINA

CBN030077 (A)

Product warranty

- Since the date of purchase of the product, we provide the purchaser with two years' quality warranty (excluding consumables such as heating core), and will provide free maintenance services for any failure of the product occurred during normal use of the product within the warranty period due to product defects.
- For products not covered by the quality warranty, we will provide maintenance services for the entire life span of the product.
- If the product user privately modifies any part of the product or improperly uses the product, which results in damage of the product, we will only offer limited maintenance service.
- In case of product failure, please send the product to designated maintenance offices or local agent for repair and maintenance. We strictly prohibit non-authorized maintenance companies and persons from maintaining and repairing the product.

After-sale contact

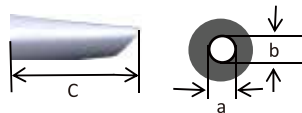



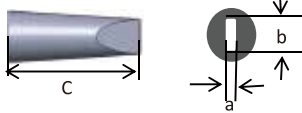



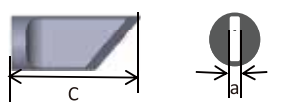

Contact number of our after-sale service department: (+86) 0755-8602 1266.

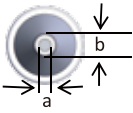

Warranty Card

The product's warranty period is valid within two years following the date of purchase. For product problems due to quality defects, we will provide maintenance and repair without charge, provided that the purchase shall provide this card and the purchase receipt. Once we receive the returned product, we will repair the product in two working days and then send the product to the customer. Note: Upon return and repair of the product, please provide the warranty card, otherwise free maintenance service will not be available, thanks for your cooperation!

Product qualification certificate

Product model: _____ Product No.: _____
Inspector: _____ Ex-factory date: _____
Sales clerk: _____ Date of sale: _____

T150 series (applicable to GT-X150 holder)					
Bevel soldering tip (type C) 	Graphical representation	Model	Φ a mm	b mm	c mm
		T150-3C	3.0	3.0	15
		T150-5C	5.0	5.0	16
		T150-6.5C	6.5	6.5	16
Chisel-like soldering tip (type D) 	Graphical representation	Model	Φ a mm	b mm	c mm
		T150-3.2D	1.2	3.2	13
		T150-4.6D	1.6	4.6	13
		T150-6.5D	2.0	6.5	13
Knife-like soldering tip (type K) 	Graphical representation	Model	Φ a mm	b mm	c mm
		T150-K	3.0		17

T151 series (applicable to GT-X150 holder)				
	Graphical representation	Model	Φ a mm	b mm
		T151-0.8	0.8	1.8
		T151-1.0	1.0	2.0
		T151-1.3	1.3	2.3
		T151-1.6	1.6	3.0

Daily use and maintenance

In order to ensure service life of the product, please pay attention to the precautions during use:

- Use lower soldering temperature, excessive soldering temperature will damage the parts and the PCB, and will also oxidize the soldering tip, shortening the service life of the soldering tip.
- Use low-activity solder flux where possible. Use corrosive solder flux will shorten the service life of the soldering tip.
- Timely remove the oxidation in the soldering tip to ensure fleet soldering. Attention! Simply scrape the oxidation layer when clearing, and do not abrade the soldering tip with force, otherwise the service life of the soldering tip may be undermined.
- When wiping the soldering tip, make sure to use soft materials, e.g. wet sponge, etc. If the soldering tip is severely oxidized, steel wool can be used to wipe and clean. Attention! Regularly use steel wool to wipe the soldering tip may influence the service life of the soldering tip.
- Upon heating, please make sure that the soldering tip is tinned, so as to prevent oxidation.
- Upon soldering, please do not exert great force in the soldering tip, otherwise it will not be helpful to melt the soldering tin, but will damage the soldering object and the heating core.
- When using the GT-X150 holder, do not suck any other materials other than soldering tin, to avoid damage to the main unit.

Contents



Copyright Information	2
Description of Common Symbols	2
Essentials for Users	2
Safety Cautions	2
Disclaimer	2
Packing List	3
Product Overview	3
Functional Features	3
Specifications and Parameters	4
Toolkit Diagram	4
Front Panel Interface Diagram	5
Rear Panel Interface Diagram	5
Work Interface Description	5
Working Interface Introduction and Operation Method	6
System Function Setting	9
Main Unit Computer Software Download Link	11
Serial User Command	11
Correct Placement Mode of the Holder	12
Connecting mode	13
Replacement of Heating Core	14
Replacement of Sponge or Steel Wool	16
Regular Cleaning	17
Specification and Model of Product	18
Integrated Heating Core Specification	18
Daily use and maintenance	19
Equipment Break-down Diagram	21
Product warranty	21
After-sale contact	21

Copyright Information

The design of this product (including internal software) and the accessories are protected by relevant laws of China. Any violation of relevant rights of our company will be subject to legal sanction. Please abide by relevant national laws when you use this product. Please abide by relevant national laws when you use this product.

Description of Common Symbols

Thank you for using our products. Before using this product, please read this Manual carefully and pay attention to the warnings and cautions mentioned herein.

	Alerts you against possible electric shock.
	Alerts you against possible bodily injury.

Essentials for Users

User should have basic knowledge of life and basic electrical operation before using the product. Underage user can only use this product under the guidance of a professional or guardian.

[Note]: In order to avoid damage to the machine and keep the operating environment safe. Please read this Manual carefully before using this product, and keep it properly for future reference.

Safety Cautions

You must observe the following basic items while using this machine to avoid electric shock, bodily injury, fire or other hazards. In order to ensure personal safety, only the parts and accessories accepted or recommended by the original manufacturer can be used, otherwise it will lead to serious consequences!

WARNING

- Please make sure that the ground wire of power cord is grounded reliably when using the machine;
- DO NOT use the hot air nozzle directly on any person or animal. No matter under any circumstance, it is strictly prohibited to use the hot air gun as a hair dryer. DO NOT touch the heating pipe or blow the skin directly with the hot air gun;
- Please use the hot air gun with care. Do not drop or violently shake the machine. Do not put heavy materials on the equipment, or roughly operate the machine;
- The temperature will differ for different nozzle models which is a normal phenomenon, and is not a quality issue of the equipment;
- Do not use the machine with wet hands, or when the electric wire is damp to avoid short circuit or electric shock hazard;
- Keep this product away from children;
- DO NOT use this product near flammable gases or other flammable substances;
- Please use the spare parts provided by the manufacturer. The machine will not be covered by quality warranty service if any non-original accessory is used;
- DO NOT touch the soldering tip, desoldering nozzle, air nozzle and surrounding metal parts;
- Before replacing a component or soldering tip, desoldering nozzle or air nozzle, turn off the power and operate after the equipment is cooled;
- Do not use this equipment for any purpose other than desoldering;
- Fume will be generated upon soldering, so please provide ventilation measures;
- Do not play around when using the equipment, which may easily lead to physical injury;
- When using the equipment, please pay attention to the power specification;
- After use, please turn off the power switch, and the equipment will automatically shut down once the blast cools off.


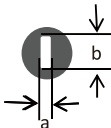


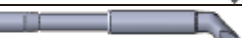

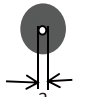

Disclaimer

The company assumes no liability for personal injury or property loss arising from failure to follow relevant instructions, natural disasters and other force majeure or personal failures or other failures other than product nonconformity.


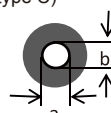





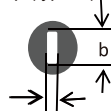





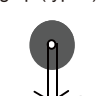



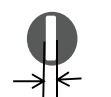

This Manual is collated, compiled and issued by ATTEN according to the latest product features. The product and this Manual may be subject to subsequent updating without prior notice.

[Note:] In order to avoid damage to the machine and keep the operating environment safe. Please read this Manual carefully before using this product, and keep it properly for future reference.

T100 series (applicable to GT-N100 holder)

Chisel-like soldering tip (type D)	Graphical representation	Model	Φa mm	b mm	
 		T100-1.3D	0.5	1.3	
		T100-2.2D	0.5	2.2	
		T100-3.0D	1.0	3.0	
Conical-like soldering tip (type I)	Graphical representation	Model	Φa mm		
 		T100-0.5I	0.5		

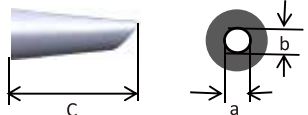

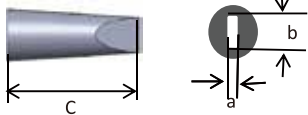



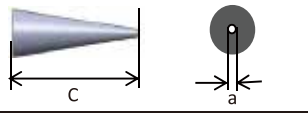

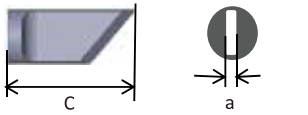

T130 series (applicable to GT-Y130 holder)

Bevel soldering tip (type C)	Graphical representation	Model	Φa mm	b mm	c mm
 		T130-1.2C	1.2	1.2	10.0
		T130-2.4C	2.4	2.4	10.0
		T130-3.2C	3.2	3.2	10.0
		T130-4.6C	4.6	4.6	10.0
Chisel-like soldering tip (type D)	Graphical representation	Model	Φa mm	b mm	c mm
 		T130-1.6D	0.8	1.6	10.0
		T130-2.4D	1.0	2.4	10.0
		T130-3.2D	1.2	3.2	10.0
		T130-4.6D	1.6	4.6	10.0
Conical-like soldering tip (type I)	Graphical representation	Model	Φa mm	b mm	c mm
 		T130-0.5I	0.5	10.0	
		T130-1.0I	1.0	10.0	
Knife-like soldering tip (type K)	Graphical representation	Model	Φa mm	b mm	c mm
 		T130-K	2.0		12.5

Specification and Model of Product

Product model	GT-Y050	GT-Y130	GT-Y150	GT-N100	GX-X150
Rated voltage	12VDC	24VDC	24VDC	12VDC	24VDC
Heating power	50W	130W	150W	50W*2	150W
Temperature range	150°C-480°C/302°F -896°F				300°C-500°C; 572°F-932°F
Material of cable	High temperature resistant silica gel				
Heating core type	Integrated heating element				Split type heating element
Temperature sensor	Thermocouple				
Heating core model	T50 series	T130 series	T150 series	T100 series	GX-X150

Integrated Heating Core Specification

T50 series (applicable to GT-Y050 holder)					
Bevel soldering tip (type C)	Graphical representation	Model	Φ a mm	b mm	c mm
		T50-1.2C	1.2	1.2	9.0
Chisel-like soldering tip (type D)	Graphical representation	Model	Φ a mm	b mm	c mm
		T50-1.3D	0.5	1.3	9.0
		T50-2.2D	0.5	2.2	9.0
		T50-3.0D	1.0	3.0	9.0
Conical-like soldering tip (type I)	Graphical representation	Model	Φ a mm		c mm
		T50-0.5I	0.5		9.0
Knife-like soldering tip (type K)	Graphical representation	Model	Φ a mm		c mm
		T50-K	1.2		9.0

Specification and Model of Product

1	Main unit	1 set	14	Rubber washer	2 pcs
2	Air gun of soldering station	1 pc	15	Desoldering nozzle	3 pcs
3	Soldering iron stand	2 pcs	16	Nozzle	4 pcs
4	Desoldering station holder	1 pc	17	Desoldering gun front plug	2 pcs
5	Electric tweezer holder	1 pc	18	Desoldering gun O-ring 6x1.5	2 pcs
6	Desoldering gun holder	1 pc	19	Desoldering gun O-ring	2 pcs
7	Desoldering pen holder	1 pc	20	Desoldering tube liner	1 pc
8	Power cord	1 pc	21	Filter cotton	10 pcs
9	Blow-dryer bracket	1 pc	22	Dust-absorbing sponge	10 pcs
10	Screw	2 pcs	23	Spring pin (cleaning pin)	1 pc
11	Suction disk	11 pcs	24	Anti-ironing mat	1 pc
12	Spring	3 pcs	25	User Manual	1
13	Suction nozzle	3 pcs			

Product Overview

MS-900 is a 4 in 1 Rework Station integrated with hot air station, soldering station, desoldering station and electric tweezers. Three tool channels can be used independently without interference. It adopts integrated and streamline design which has saved the operating space. Large LCD screen can display various information clearly. It is a perfect assistant of labs, technical personnel and electronics engineer.

※ In order to avoid damage to the machine and keep the operating environment safe. Please read this Manual carefully before using this product, and keep it properly for future reference.

Functional Features

- High accuracy MCU control is employed to synchronously detect whether the 3 tool channels can be used independently and synchronously without mutual interference.
- Built-in vacuum generator.
- Super power. The whole machine can provide a maximum of 900W power output.
- Stand-alone machine can carry out multiple desoldering tasks simultaneously.
- Large screen graphics display screen which can display all kinds of parameter data and messages graphically. The contents can be presented abundantly and intuitively.
- Automatically identify all kinds of welding tools and load corresponding parameters.
- The software can adjust the temperature automatically which is more accurate and convenient.
- Fault display and alarm functions available.
- Functions such as standby, buzzer ringing, temperature lock and factory data reset available.
- Support communication interface. It can access to a computer, and complete various settings following the specified program.
- Vacuum desoldering pen is added to facilitate dismantle the desoldering components.

Electrical soldering station

- The soldering station adopts integral heating core material which provides thermal conduction and extremely high temperature returning speed. It only needs 8s to heat up the room temperature when the machine is started up to 350℃.
- Front sensor is adopted to ensure high temperature control accuracy and good temperature stability.
- The welding holder is light and comfortable.

Electric tweezers

- The heating core of electric tweezer adopts 12VDC low-voltage power supply and the main power transformer isolation output which is safe and reliable.
- Front sensor is adopted to ensure high temperature control accuracy and good temperature stability.

Desoldering station

- The heating core of desoldering station adopts 24VDC low-voltage power supply and the main power transformer isolation output which is safe and reliable.
- Built-in vacuum pump with strong suction.

Hot air desoldering station

- Intelligent cooling system is adopted. It can automatically delay the air supply when the equipment is shutdown which can greatly extend the service life of the heating core and holder.
- Spiral heating core is adopted which can contribute to longer service life.
- The holder of hot air gun has been redesigned to make the air more even. It is not easy to damage which is convenient for maintenance, storage and transportation.

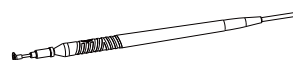
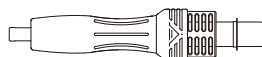
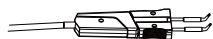
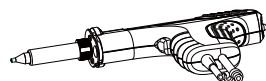
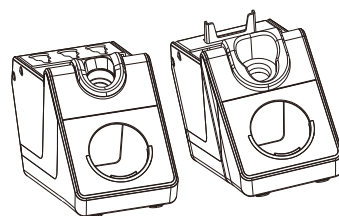
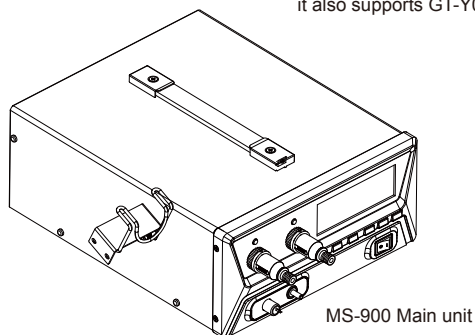
Specifications and Parameters

Input power	230VAC 50Hz (optional 110VAC 60Hz)			
Total power	900W (max)			
Name	Hot air desoldering station	Soldering station	Desoldering gun	Electric tweezers
Power	Heating component 550W, air pump 25W	130W	Heating component 150W, vacuum pump 15W	100W
Output power	The same with the input power	24VDC	24VDC	24VDC
Temperature range	150-500℃/ 302-932℉	150-500℃/ 302-932℉	300-500℃/ 572-932℉	150-500℃/ 302-932℉
Standby temperature	No standby	200℃	300℃	200℃
Standby time	NA	1-120 minutes (0 means standby deactivated)	1-120 minutes (0 means standby deactivated)	1-120 minutes (0 means standby deactivated)
Max air flow	23L/Min	NA	NA	NA
Noise	<52 dB(A)	NA	NA	NA
Temperature adjusting range	-50~+50℃/-90~+90℉			
Lock setting	Available			
Temperature stability	±5℃	±2℃	±2℃	±2℃
Tip to ground impedance	<2 Ohm			
Tip to ground voltage	<2 mv			
Overall dimension	310(L)X251(W)X119(H)			
Weight	14Kg			

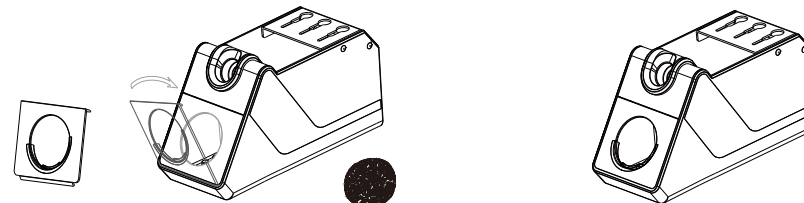
※ The above specification may change. Please refer to the actual machine parameters.

Toolkit Diagram

※ The following specification is the standard configuration of the equipment, and it also supports GT-Y050/GT-Y150 soldering pen (optional).



- 2 Put the sponge or steel wool for replacement into the soldering iron stand.

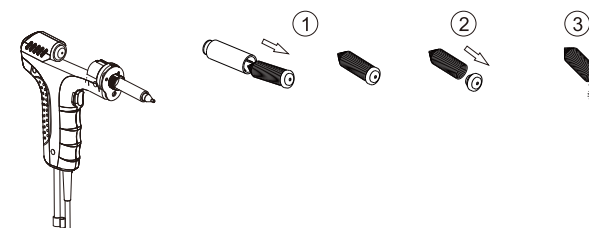


GT-X150 Regular Cleaning

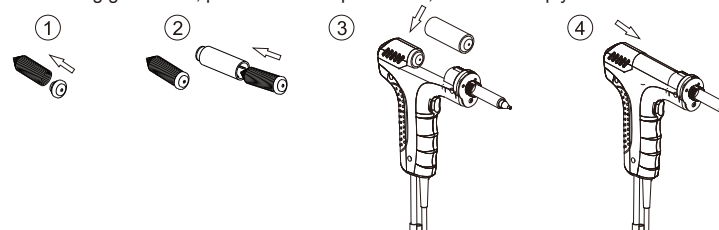
- 1 Press the switch on the rear of the desoldering gun
- 2 Draw the rear cap to withdraw the soldering tin tube.



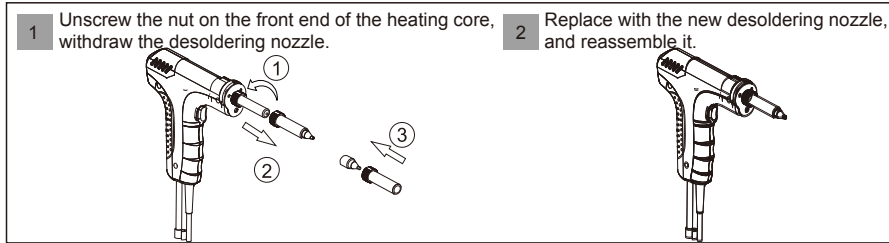
- 3 Withdraw the spring in the soldering tin tube, unplug the rubber plug, and pour out the residual tin.



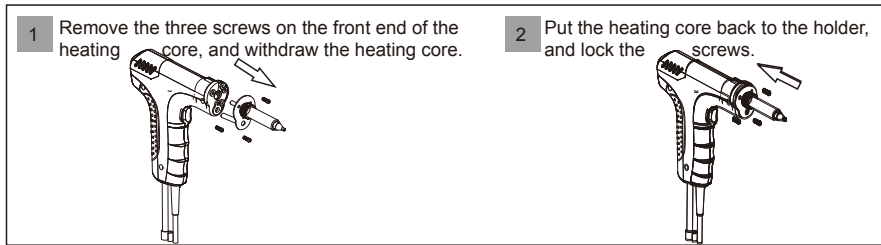
- 4 Put back the spring and the rubber plug, put them into the soldering tin tube, put back to the desoldering gun holder, push the rear cap forwards, and then simply lock it.



GT-X150 desoldering gun desoldering nozzle replacement

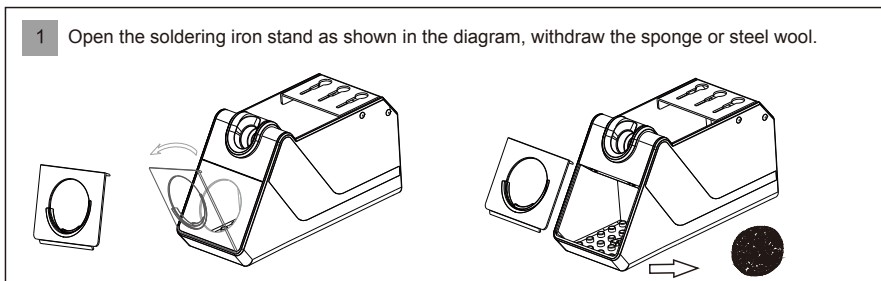


GT-X150 desoldering gun heating core replacement

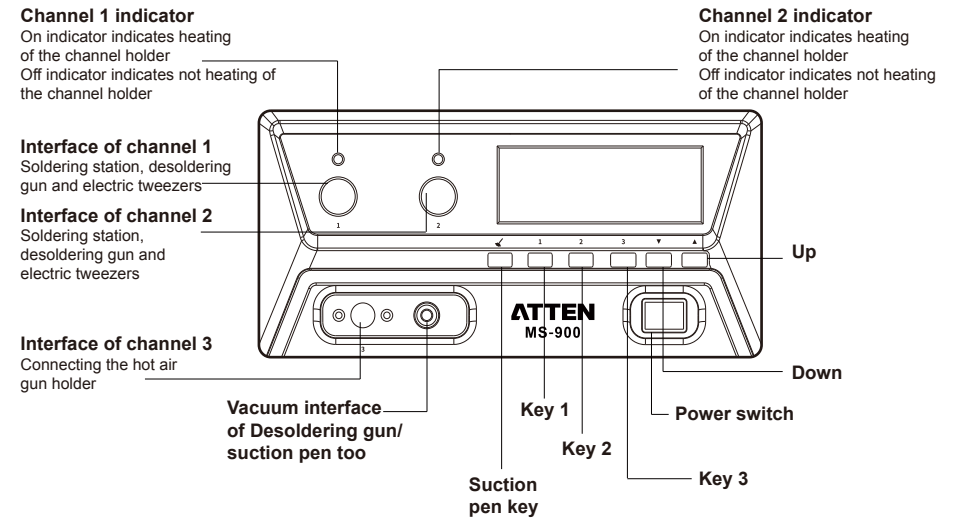


Tips: After replacement of heating core, please verify the temperature accuracy, and use temperature compensation setting items to compensate and calibrate temperature error.

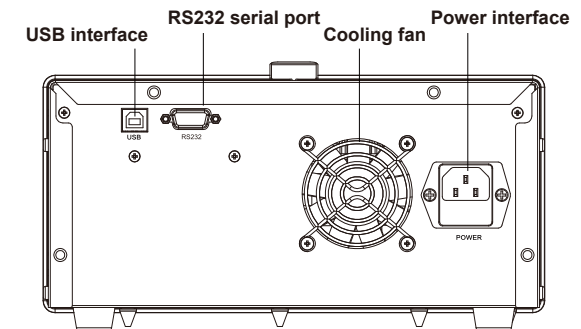
Replacement of Sponge or Steel Wool



Front Panel Interface Diagram



Rear Panel Interface Diagram



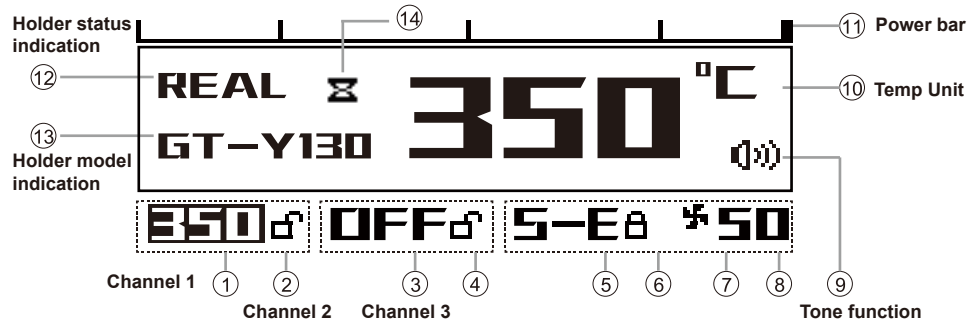
Work Interface Description

After the machine is powered on, turn on the power switch. The screen will display the company name for 3s and then switch to the normal working interface.

Boot screen of MS-900

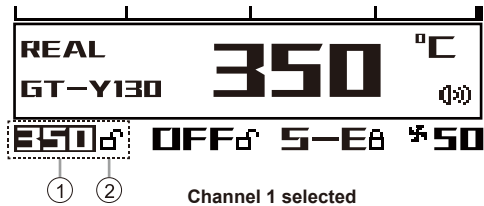


Working Interface Introduction and Operation Method



※ When the desoldering gun fails to reach the setting temperature, displays "⌘"; When the desoldering gun is blocked, displays "⚡"; In other statuses, provides no indication.

Channel 1



① Inverse selection indicates that the current channel is selected.

Long press key "1" to turn on/off channel 1.

Channel 1 off: Always shows OFF.

Channel 1 open:

Selected: Always show temperature setting values

Unselected, display according to the running state.

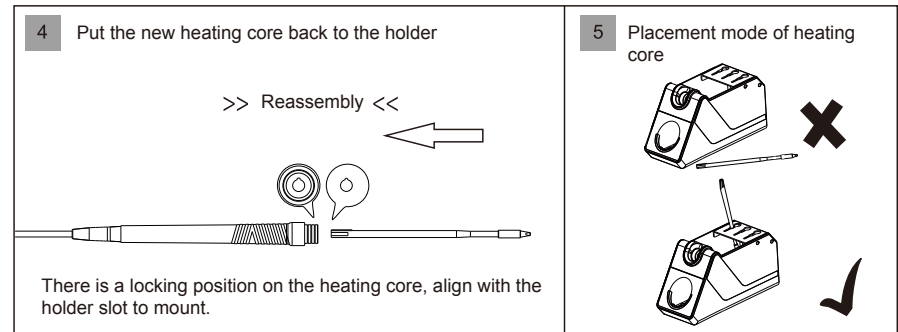
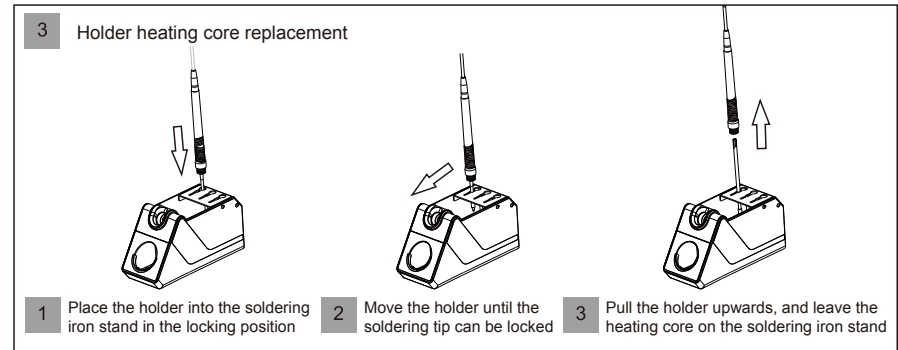
Running state	Display contents
Normal operation	Setting temperature
Standby	SLP
Sensor failure or no holder available	S-E
Heating core damage	Display H-E

Short press key 2 (or 3) to switch to the Channel 2 (or 3). And the channels switched will be in Invert Selection state.

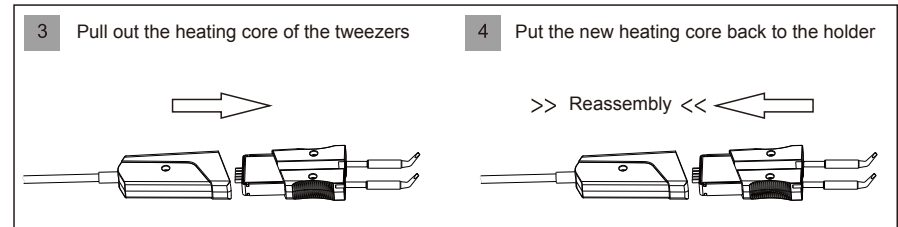
② Channel 1 locking: When it is unlocked, and press the "▼" "▲" on the panel to increase or decrease the parameter value. When it is locked, the channel parameters cannot be changed.

Channel 1 locking on/off: Press "⚡" for more than 3s to switch the locking function between on and off.

GT-Y130 GT-Y150 holder heating core replacement

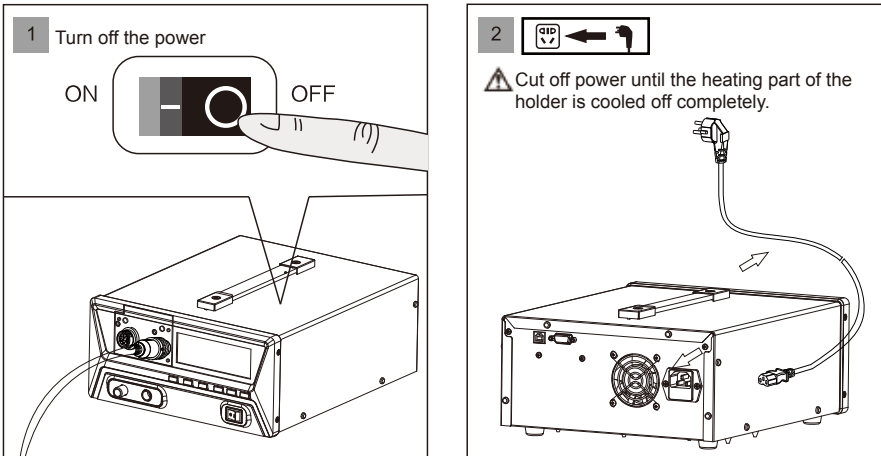


GN-N100 tweezers heating core replacement

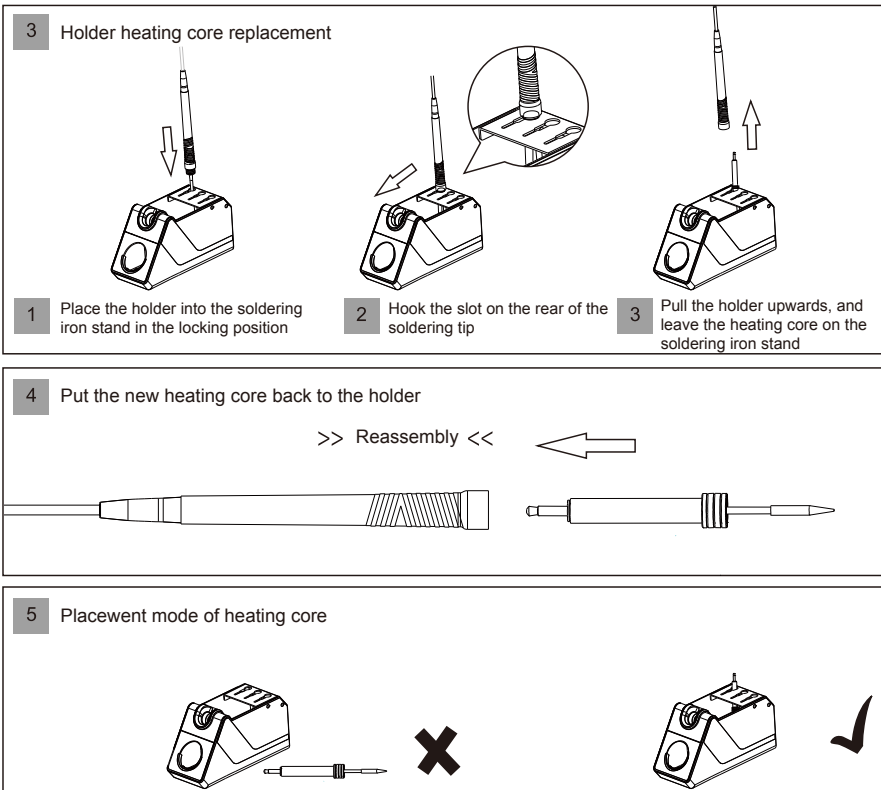


Tips: After replacement of heating core, please verify the temperature accuracy, and use temperature compensation setting items to compensate and calibrate temperature error. Do not directly place the uncooled heating core on the workbench, to avoid scald or fire.

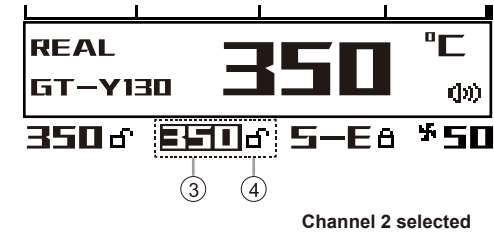
Replacement of Heating Core



GT-Y050 holder heating core replacement



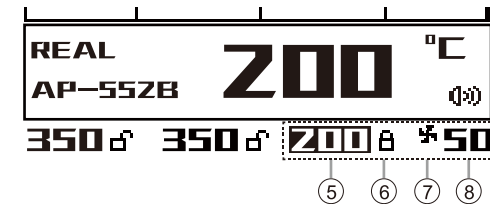
Channel 2



* Operation same with that of channel 1

- ③ Long press key "2" to turn on/off channel 2. Short press key "1" (or key "3") to switch to channel 1 (or channel 3), and the channels switched will be in Invert Selection state. Operation is the same with that of channel 1
- ④ Channel 2 lock symbol.

Channel 3



* Operation same with that of channel 2

- ⑤ Long press key "3" to turn on/off channel 3. Short press "3" to switch between temperature or blast flow settings Short press key "1" (or key "2") to switch to channel 1 (or channel 2), and symbol is in reverse selection, it means that it is in air volume adjustment state.
- ⑥ 3 Channel 3 lock symbol.
- ⑦ When the fan symbol is displayed, it means that it is in air output state; inverse selection indicates blast flow adjustment status.
- ⑧ Air volume display of Channel 3



Tone function

- ⑨ When the tone function symbol is on, keypad tone will appear at all keys operation, and will disappear after turn it off. When the power switch is off, long press "▼" and "▲" key. Turn on the power switch once more to switch tone on and off.



Tone function

- ⑩ Temp Unit displayed: °C or °F
When the power switch is off, long press " ", and then turn on the power switch. The temperature unit will switch between °C and °F.

Power bar

- ⑪ Displays current channel output power status.

Holder status indication

- ⑫ Holder status indication: REAL (real-time value).

Holder model indication

- ⑬ Holder model indication NO TOOL (current channel not connected with holder), GT-Y130, GT-X150, GT-N100, AP-552B.

Other running status display



Channel 1 is selected and is working normally
Channel 2 is off
Channel 3: Sensor failure or no holder available



Channel 1 is off
Open the Channel 2 and set the temperature to 200°C
Channel 3: Sensor failure or no holder available

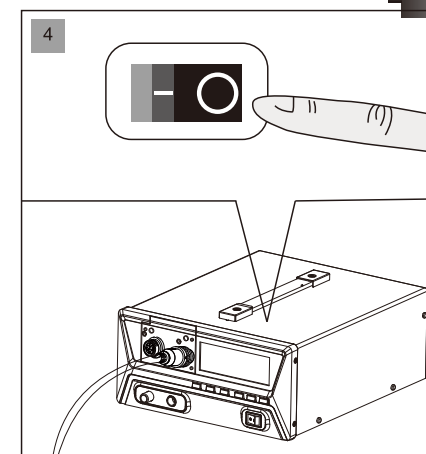
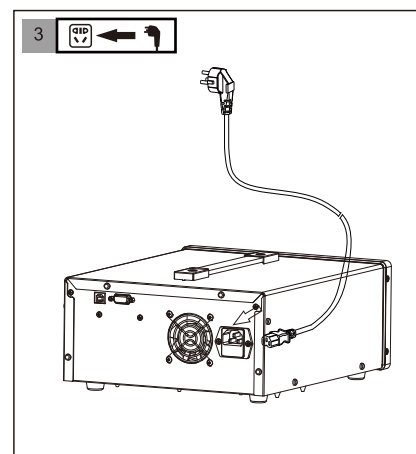
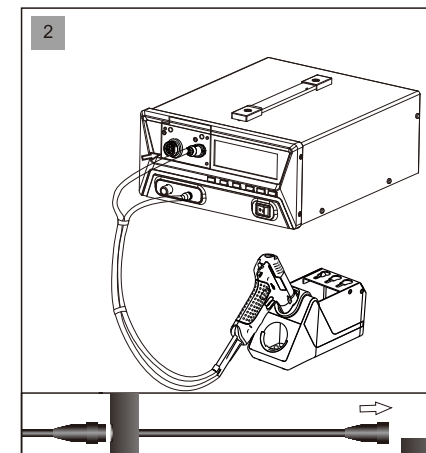
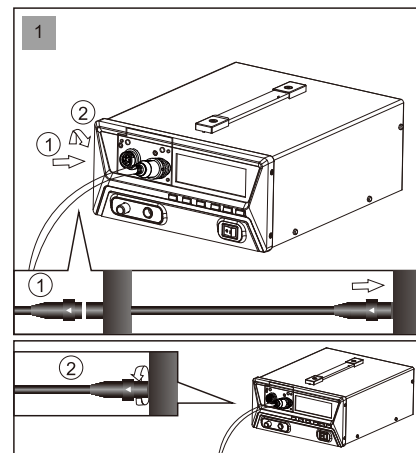


Channel 1 is selected and is in dormant state
Channel 2 is off
Open the Channel 3 and set the temperature to 300°C



Channel 1 is selected. Sensor failure or no holder available
Channel 2 is off
Channel 3: Sensor failure or no holder available

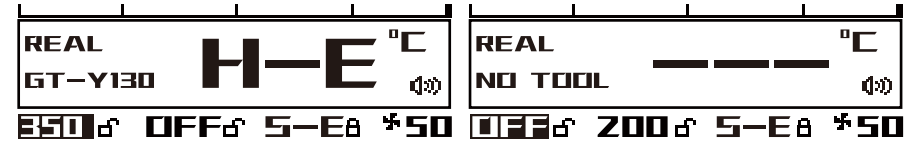
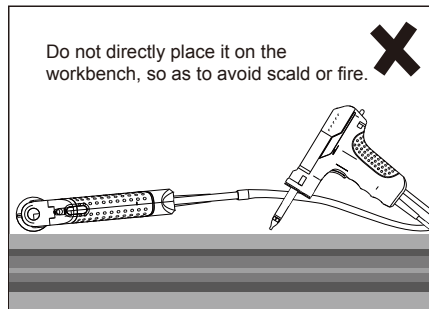
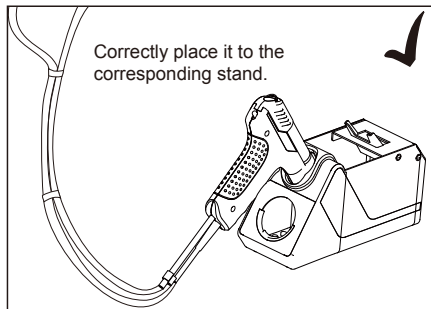
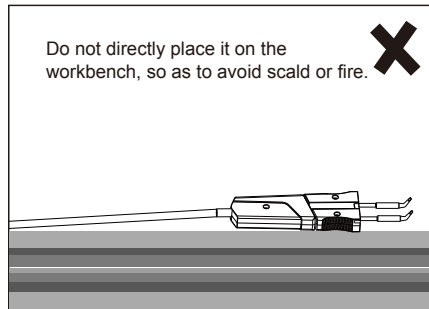
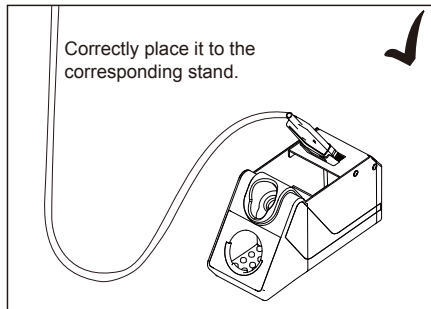
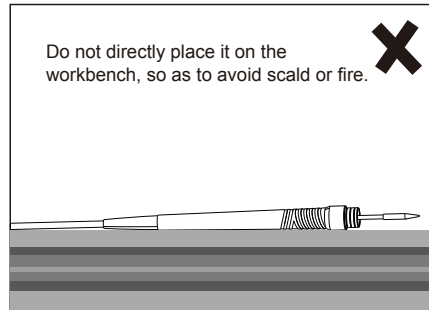
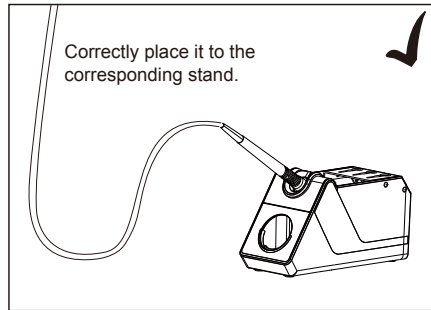
Connecting Mode



Notes: When plugging and unplugging during soldering, do remember to cut off power, so as to avoid damage to the main unit !

Correct Placement Mode of the Holder

Warning: For the sake of your safety, when the product is not in sue, please place the holder to the corresponding stand.



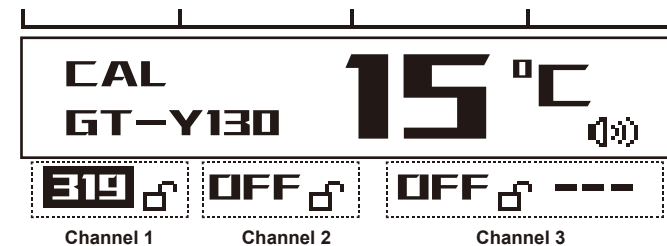
Channel 1 is selected and is in dormant state
Channel 2 is off
Open the Channel 3 and set the temperature to 300°C

Channel 1 is selected. Sensor failure or no holder available
Channel 2 is off
Channel 3: Sensor failure or no holder available

System Function Setting

Temperature calibration

Press key "1" to switch the channel to channel 1 of soldering station (skip this step if it is channel 1 of soldering station already). While pressing the key "1", press "1" for more than 3s to enter temperature calibration mode as shown in the figure below.



CAL Temperature calibration

Status bar displays "CAL" "GT-Y130" (current holder type). The main window displays the community positive values (0°C or 0°F at delivery). Press "▼" or "▲" to enter the temperature calibration value, and press "1" to save the value. And then it will enter sleep time adjustment mode. If sleep time doesn't need to be adjusted, it will exit automatically 5s later.

Calibration method: Correction method: Prepare the temperature tester. When the machine is in constant temperature, measure the temperature of the soldering iron nozzle to be corrected and keep records (Please apply some soldering material on the soldering iron nozzle so that they can contact closely). Set the measuring temperature as T1 (such as 350°C) and the display temperature as T2 (such as 335°C); the temperature should be calibrated to: T1 (350°C) - T2 (335°C) = 15°C;

Notes:

The temperature can only be calibrated in working mode; namely when there is no holder available, the temperature cannot be calibrated.
Temperature calibration of Channel 2 (or 3): The operation method is the same with that of Channel 1. That is, switch to the channel required for temperature calibration and then conduct corresponding operation.

Sleep time setting

After temperature calibration, it will directly enter sleep time setting, or press "1" after entering the temperature calibration mode to enter sleep time setting mode. The status bar will show "SLP" "GT-Y130" (current holder model). The main window will show the sleep time (default value at delivery is 0 minute, no sleep). Press "▼" or "▲" key to enter sleep time. Press "1" to save the setting.



SLP sleep setting dialog (10minutes sleeping duration in the above figure. If the soldering station is not used within 10minutes, the electrical soldering station will automatically enter into sleeping state.)



SLP sleeping status indication window (sleeping temperature drops to 200°C when the setting value is less than 200°C).



SLP sleeping status indication window (sleeping temperature drops to 200°C when the setting value is not changed).

Sleep awakening: When Channel 1 is an electrical soldering station, and if the electrical soldering station needs to be re-started in sleep mode, press "1" to enter normal working status.

Notes:

Sleep setting of Channel 2: The operation method is the same with that of Channel 1. That is, switch to the channel required for sleep setting and then conduct corresponding operation.

Restore factory settings

When the power switch is off, long press " " and "▲", and then turn on the power switch to restore factory settings.

Main unit computer software download link

[www.atten.com\(EN\)](http://www.atten.com(EN))
[www.atten.com.cn\(CN\)](http://www.atten.com.cn(CN))



Serial user command (Main unit computer software shall be equipped)

1. c?0 Help
2. C00 Restore factory settings
3. C10 Check the temperature of all channels
 C11 Check the temperature of Channel 1
 C13 Check the temperature of Channel 3
 C12 Check the temperature of Channel 2
4. C20 Open all channels
 C21 Open Channel 1
 C23 Open Channel 3
 C22 Open Channel 2
 C24 Open desoldering pen
5. C30 Close all channels
 C31 Close Channel 1
 C34 Close desoldering pen
 C32 Close Channel 2
 C33 Close Channel 3

Indicates the data to be filled in by the user, _ indicates no need of filling

6. C41 Temperature unit selection °C 0; °F 1
 C42 Tone switch On 0; Off

If the input value has less than 3 digits, use 0 to supplement;

7. C51 Temperature value setting of Channel 1 (150 - 500°C/302 - 932°F)
 C52 Temperature value setting of Channel 2 (150 - 500°C/302 - 932°F)
 C53 Temperature value setting of Channel 3 (150 - 500°C/302 - 932°F)
 C54 Temperature value setting of Channel 3 (150 - 500°C/302 - 932°F)
8. C61 Temperature calibration value of Channel 1(-50 - 50°C/-90 - 90°F)
 C62 Temperature calibration value of Channel 2(-50 - 50°C/-90 - 90°F)
 C63 Temperature calibration value of Channel 3(-50 - 50°C/-90 - 90°F)
9. C71 Sleep time setting of Channel 1 (0 - 120)(default value at delivery is 0 minute, no sleep)
 C72 Sleep time setting of Channel 2 (0 - 120)(default value at delivery is 0 minute, no sleep)
10. C80 Parameter locking for all channels Unlock 0 Lock 1
 C81 Parameter locking for Channel 1 Unlock 0 Lock 1
 C82 Parameter locking for Channel 2 Unlock 0 Lock 1
 C83 Parameter locking for Channel 2 Unlock 0 Lock 1