

**SHENZHEN ATTEN TECHNOLOGY CO., LTD.**

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- Soldering Iron ●Soldering Station ●Hot Air Rework Station
- Multi-function Rework System ●BGA Rework System
- Regulated DC Power Supply ●Switching DC Power Supply
- Programmable Power Supply

# ATTEN

**ST-990/ST-909**

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**SOLDERING STATION**

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**USER'S MANUAL**

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MADE IN CHINA



**SHENZHEN ATTEN TECHNOLOGY CO., LTD.**

## Copyright

The design of this product (including software) and its accessories is under tutelage of laws. Any action to violate relevant right of our product will be penalized through law. Please consciously observe relevant local laws in the use of this product.

## Symbols and conventions


Thank you for purchasing this soldering station product. Please read this manual carefully and pay attention to warnings and precautions mentioned herein before using this product.

	<b>Warning you against the risk of electric shock.</b>
	<b>Warning you against the risk of physical injury.</b>

## Assumption for user

We assume that user have common sense and basic relevant electrical operation knowledge before using this product. This device is not intended for use by persons (including children) with limited physical, sensory or mental aptitude, or by persons who lack knowledge or experience in handling the device. This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

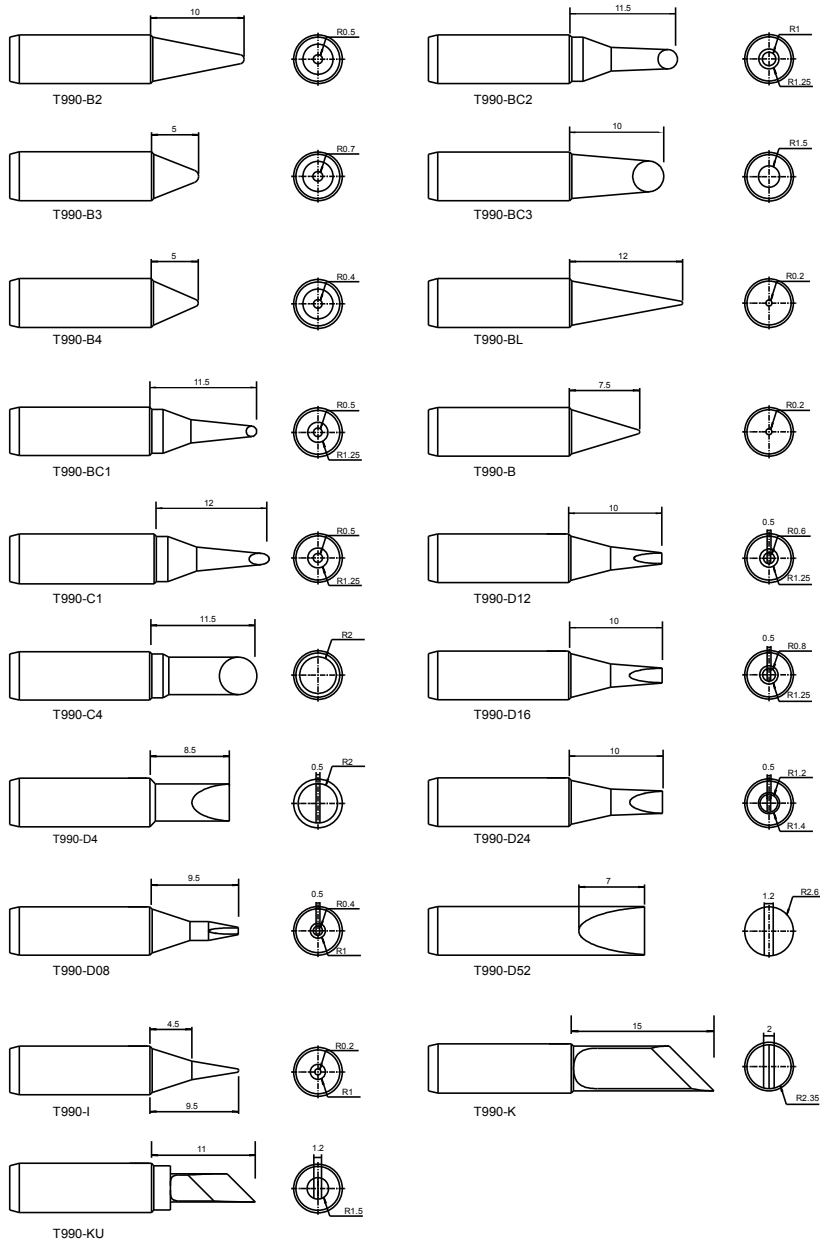
## Safety

 <b>WARNING:</b> The soldering tip temperature can reach 200°C~500°C as this product in working status. User should obey following rules rigorously in view of improper operation will cause fires or burns. <ul style="list-style-type: none"><li>● Never touch soldering tip and surrounding metal part of soldering tip before soldering tip cool down completely.</li><li>● Never use this product around flammable objects.</li><li>● Always turn switch off after operation and always turn switch off for temporary not-operation.</li><li>● User must waiting soldering iron cool down completely after turning switch off for the replacement of soldering tip and internal parts.</li><li>● Never operate on product for those who have no experience or have no basic knowledge for the circumstance of no guidance.</li><li>● Keep this product out of reach of children.</li><li>● Never place product and part of it in water or operate as your hands are wet.</li><li>● Please keep workplace well ventilated for fumes produced in soldering work.</li><li>● Never play with others while using this product.</li></ul>
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## Disclaimer

- For physical injuries and possessions loss caused by those reasons which are not related to product quality such as operating without following manual guide, natural disasters or force majeure, we take no responsibility for that.
- Under the supervision of Shenzhen Atten Technology Co., Ltd, this manual has been compiled and published which covered the latest product description and specification. The content of

**Interchangeable soldering tip specifications ( T990 series)**



- this manual is subject to change without notice.

**ATTENTION:** To avoid damaging to unit and keep operation safe, please read the instruction manual ahead and keep it accessible for any operator.

**Item check list**

Name	Quantity
Soldering station	1 Unit
Soldering iron	1 PCS
Iron soldering stand	1 Unit
Power cord	1 PCS
Manual	1 Copy
Copper wire ball	1 PCS

**Product overview**

ST-990/ST-909 is a new designed digital soldering station which got better performance and is more convenient and safer to use. And it has been widely used in colleges & universities, institutes, industrial production line and so on.

**Features**

- Brand new design and LCD display which can display various setting values.
- New designed menu enable system setting easier.
- Visual control over operation process which Analogue heating-up status bar to indicate heating up status and visual setting.
- 3 keys to store and retrieve frequently used temperature values quickly.
- Provide temperature locking function to make production line management convenient.
- Smart standby, shutdown function, adjustable standby time and adjustable shutdown time enable more energy saved and environment friendly.
- Touchtone could be turned off and on.
- Temperature calibration was designed to be more precise and more convenient to keep this product in good performance for a long time.
- This product was designed with low-voltage heating heater which is completely separated from power supply to keep soldering work safer.
- Separated iron stand to save room and to make soldering station layout easier.

**Specifications**

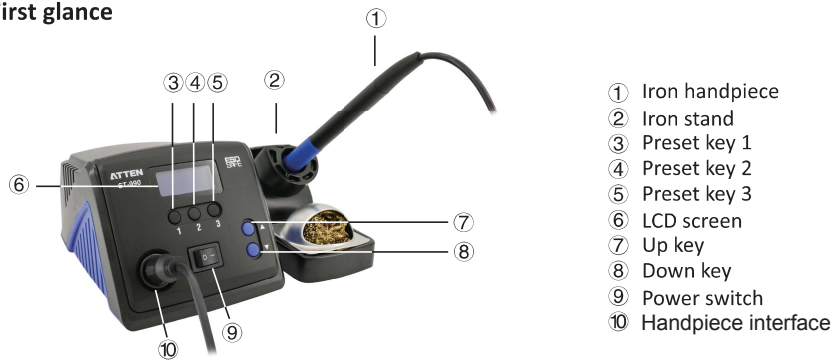
	ST-990/ST-909
Input Voltage	AC (100V/110V/120V   220V/230V/240V) 50/60Hz(optional)
Power	90W
Heating element voltage	24VAC
Temperature Range	200-500°C/392-932 °F
Temperature calibration range	± 50°C/ ± 90°F
Temperature Stability	± 2°C ( in still air, without load )
Automatically stand-by time	1-60 minutes
Standby temperature	200°C

	ST-990/ST-909
Heating element	Integrated
Temperature lock	Yes
Beeping	Yes
Tip-to-ground impedance	< 2 Ω
Tip-to-ground voltage	< 2 mV
Volume	175(L)*115(W)*95(H)mm
Net Weight	2.2KG

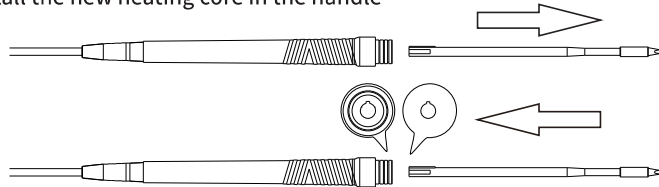
※The above specifications are subject to further change without notice and refer to actual products.

※It is not recommend to set working temperature above 450℃ for a long time to keep this product lifespan longer.

### First glance

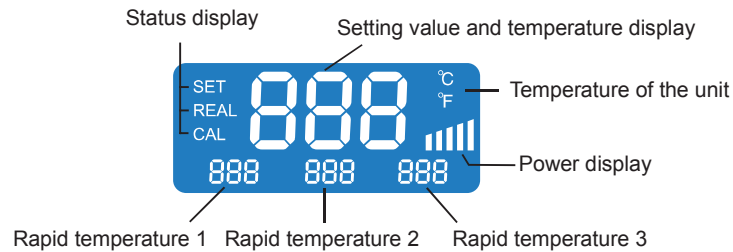


Reinstall the new heating core in the handle



Insert the slot of the handle into neck on the heating core.

### LCD display panel



## Maintenance

(diagram 1-25) Display S-E is a sensor fault, (diagram 1-26) diplay H-E is a heater core fault.



diagram 1-25



diagram 1-26

### After-sales contact

After-sales service department Tel: (+86) 0755-8602 1266

## 6. Restore factory setting

Under the FAC menu, press “▲” and “▼” to adjust ON and OFF. Press [2] to return the normal operation interface and restore the factory setting when the menu is ON.



Factory default : Loc (Temperature lock) : OFF  
 CAL(Temperature calibration) : 0  
 STB (Auto-sleep) : Open ( 1 min)  
 BL(Alarm) : Open  
 H-L ( Upper/Lower temperature) : 20°C

C-F (Temperature unit) : °C  
 Quick temp.1 : 200°C  
 Quick temp.2 : 300°C  
 Quick temp.3 : 400°C

## 7. Alarm setting function switch

Under the BL menu, press “▲” and “▼” button to turn on/off the alarm function. ( diagram7-2 ) means OFF , ( diagram7-1 ) means ON .



diagram7-1



diagram7-2

## 8. Upper/Lower temperature alarm settings

Under the H-L menu, press “▲” and “▼” button to set the upper /lower temperature values. (diagram 8-1 )It will alarm if upper temperature more than 20 °C and the lower temperature less than -20 °C. (diagram 8-2 ) alarm function is OFF . The upper and lower temperature rang is 20 to 80 °C.

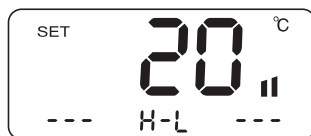


diagram8-1

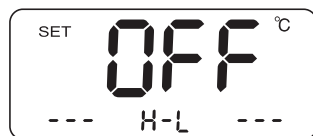


diagram8-2

## Product warranty

- This product is guaranteed for two years from the date of purchase(excluding consumables such as soldering tips and heating core). If any quality problem is found within the guarantee period, we will response for the maintenance free of charge.
- For those product beyond the warranty period, we provide life-long maintenance services.
- For those product damaged due to users' improper application and unauthorized changes to the product parts, our company only provides limited warranty service.
- In case of a product fault, please send the faulty product to the designated maintenance shop for maintenance, and those service center and personnel unauthorized by the factory are prohibited from carrying out any maintenance on the product.

## Operational guide

### 1.Connection

- 1.1 Plug soldering iron cable into the front panel interface and put handle on the stand.
- 1.2 Plug the power cord into the behind interface .(Please ensure the power voltage is fit for this product)

### 2. Power-on

Turn the switch on after connecting the power cord .The LCD display screen will display the system version number for 1 second ,then the LCD display screen will show the last setting temperature value. Three seconds later, the display screen will show the soldering iron real-time temperature value



(means: ST-909 V0.1 version)

### Working status

#### 1. Normal working state

Set the temperature to 350 °C, the real-time temperature value is 350 °C, 3 sets shortcut temperature heating power value 2 grids, real-time status display symbol

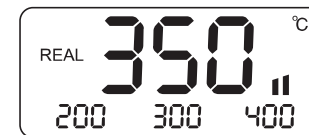


diagram1-1

#### 2. Temperature lock state

The button cannot adjust the temperature.

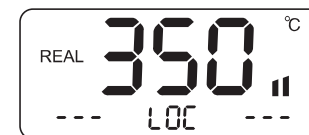


diagram2-1

#### 3. standby mode

In the standby state, it will heat at 200 °C. Press any key or move the handle to return to normal working state.

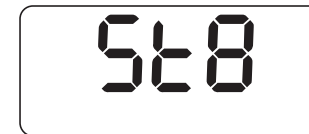


diagram3-1

#### 4 .Heating off state (only available after the standby function is turned on)

The heating function is off, heater will not heating up. Press any key to resume heating



diagram4-1

## Temperature setting

Under normal work, press “▲” or “▼” button (diagram 1-4) to adjust temperature value (diagram 1-5). Long pressing can quickly adjust. Data will be stored after stop pressing for 3 seconds (The temperature value cannot be adjusted when locked)

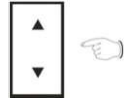


diagram 1-4



diagram 1-5

## Memory temperature (user-defined)

Press “1 or 2 or 3” button (diagram 1-6) to quickly preset temperature value which stored. Long pressing “1 or 2 or 3” button ( more than 3 seconds ) to store temperature value.

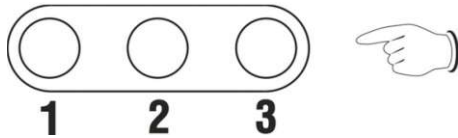
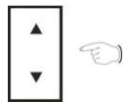


diagram 1-6

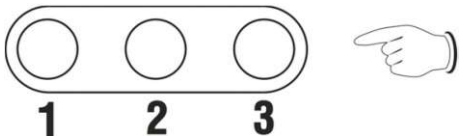
## Menu setting

Under normal work, press “1”+ “3” button more than 3 seconds to enter the password input interface. No password for the first time. press 2 button to enter the menu mode, then input password to enter. Press the 2 button on the menu to exit and save the settings. (Note: After all the functions are set, press 2 to save the settings)

1. Button definitions in menu setting mode.



- 【1】 Menu up button
- 【2】 Exit and set button
- 【3】 Menu down button
- ▲ increase value
- ▼ decrease value



## 2. Temperature lock function

Under the Loc menu, press “▲” and “▼” button to turn on/off. button [1] [3] to switch menus up and down, button [2] to exit and save settings. diagram2-1 means locked, diagram2-2 means unlocked.



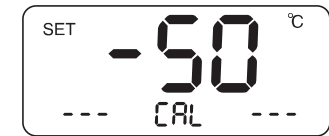
diagram2-1



diagram2-2

## 3. Temperature calibration

Under the CAL menu, press the “▲” and “▼” button to adjust the value. Calibration range [-50 °C ~ 50 °C (-90°F ~ 90°F)]. When the real temperature is lower than the display temperature, the compensation takes a positive temperature value. When the real temperature is higher than the display temperature, take a negative temperature value.



When replacing the heating element or the handle, the temperature if not accurate, can be calibrated by changing the following parameter.

Operation is as follows:

1. Set the to-be-calibrated temperature of the handle to a suitable temperature, such as 350° C / 662 °F.
2. After the temperature is stabilized, use the thermometer to measure the actual temperature of the soldering tip of the current handle, for example, the actual temperature is measured as 365 °C / 689 °F.
3. Through the analysis, it is concluded that the actual current temperature is 15 °C / 27 °F higher than the set temperature.
4. Set the temperature compensation value to -15 °C / -27 °F to compensate the error of the output temperature.

## 4. Temperature unit exchange

Under C-F menu, press “▲” and “▼” button to exchange temperature unit, (Diagram 4-1) -C- set temperature unit is °C, (Diagram 4-2) is °F.

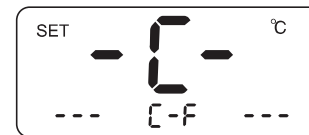


diagram4-1

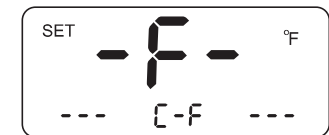


diagram4-2

## 5. Setting automatic stand-by time

Under “STB” menu, Press the “▲” and “▼” button to adjust the standby time (1-60 minutes) and turn off the standby function, Auto-off heating time = standby time + 20 minutes (the standby function is off, and the heating off function is off too)

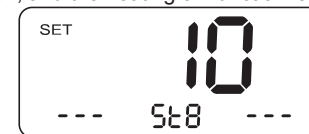


diagram5-1

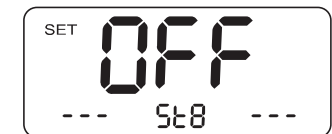


diagram5-2