

# AiXun



# User Manual

## T420D Dual Channel Smart Soldering Station

# 01 Product features

## What can it do for you?

- 1. Real time standby function, prolong the service life of soldering pen
- 2. Intelligent identification system, real-time monitoring the status of handle and soldering pen
- 3. Dual channels work at the same time, improve work efficiency
- 4. High definition liquid crystal display interface, personalized settings, more worry free operation
- 5. Compatible with 245 / 210 / 115, easily deal with all kinds of precision soldering scenes
- 6. Modular handle base, separated or combined, patented innovative design
- 7. Global networking upgrading, continuous innovation

# 02 Parameters

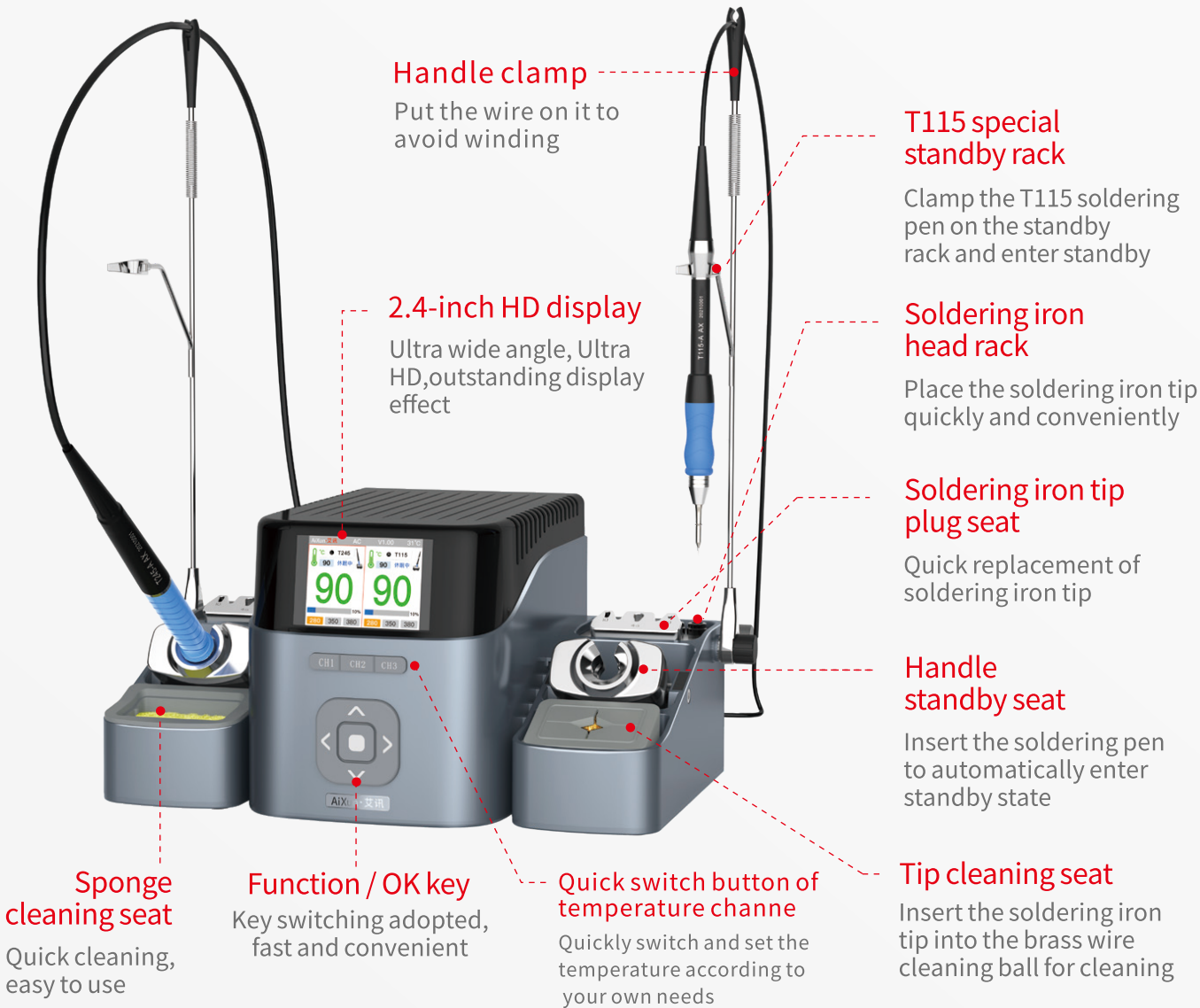
## ⊙ Host parameters

Model: T420D	Input voltage: 220V	Rated power: 200W
Temperature range: 90°C-450°C	Host size: 178.4*112*125mm	
Input fuse: 3A.	Standby base size: 154*65*77.4mm	
Host N.W.: 4406g	Supported handles: T245/T210/T115	

# ◎ Soldering pen parameters

Iron tip: C115 / C210 / C245	Handle material: plastic / metal
Temperature range: 100°C~450°C	Handle plug: aviation plug
Grounding resistance of soldering iron tip: <2ohms	
Grounding voltage of soldering iron tip: <2mV	

## 03 Product structure



**Handle clamp**

Put the wire on it to avoid winding

**T115 special standby rack**

Clamp the T115 soldering pen on the standby rack and enter standby

**2.4-inch HD display**

Ultra wide angle, Ultra HD, outstanding display effect

**Soldering iron head rack**

Place the soldering iron tip quickly and conveniently

**Soldering iron tip plug seat**

Quick replacement of soldering iron tip

**Handle standby seat**

Insert the soldering pen to automatically enter standby state

**Sponge cleaning seat**

Quick cleaning, easy to use

**Function / OK key**

Key switching adopted, fast and convenient

**Quick switch button of temperature channel**

Quickly switch and set the temperature according to your own needs

**Tip cleaning seat**

Insert the soldering iron tip into the brass wire cleaning ball for cleaning

For assembling, connect it one by one according to the instructions. Do not connect it incorrectly, otherwise the soldering station will be damaged



- 01 Right soldering pen connector**  
Connect the handle to the handle base
- 02 Left soldering pen connector**  
Connect the handle to the handle base
- 03 Right handle base connector**  
Connect the host with the handle base
- 04 Left handle base connector**  
Connect the host with the handle base
- 05 Grounding interface**  
Antistatic
- 06 Power input interface**  
Power cable interface
- 07 Power switch**  
Turn on / off the power supply of the soldering station
- 08 Ventilation holes**  
For chassis ventilation
- 09 Type-C data cable interface**  
Connect AiXun platform to upgrade software



**Brass wire cleaning ball**

Very effective cleaning method. After use, leave a thin layer of flux on the tip to prevent oxidation during cleaning and tin planting

**Splash guard**

Prevent solder particles from splashing in using brass wire cleaning ball

Modular handle base, separated or combined



# Three handles compatible(standard)

T245handle



T210handle



115handle



Soldering iron tip:



Soldering iron tip:



Soldering iron tip:

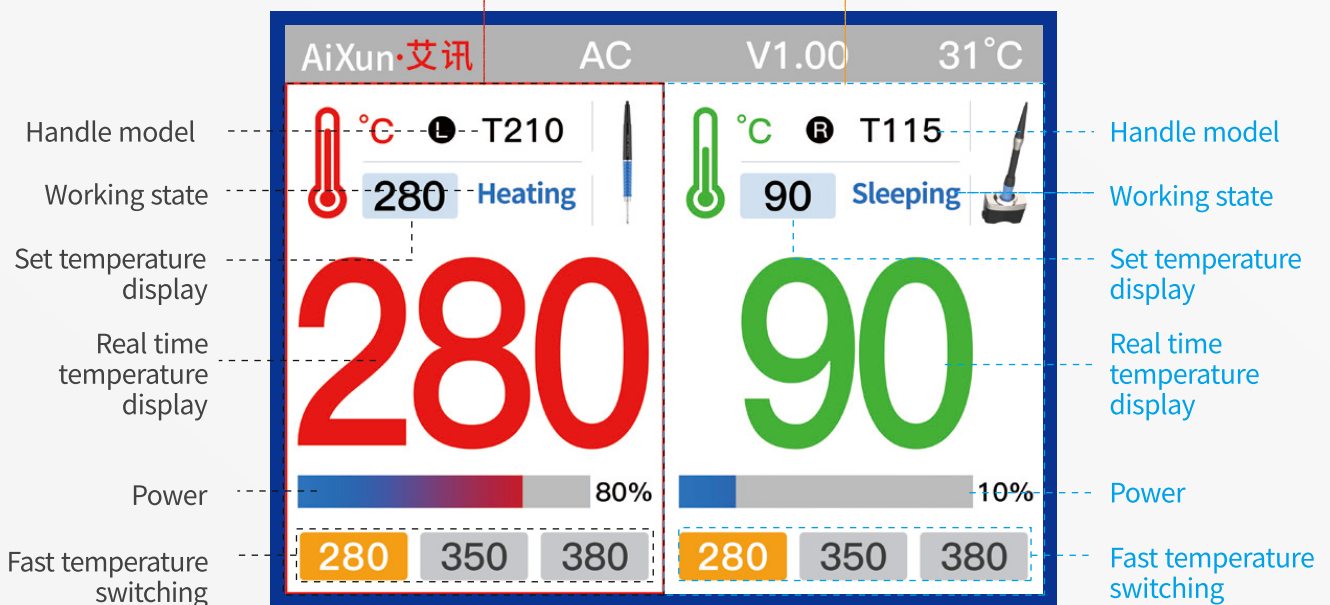


## 04

# Main interface and button introduction

## Main interface introduction

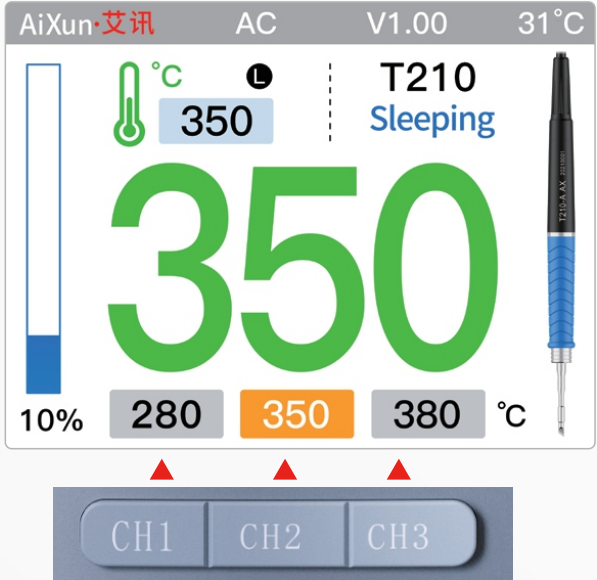
Left soldering pen operation interface      Right soldering pen operation interface



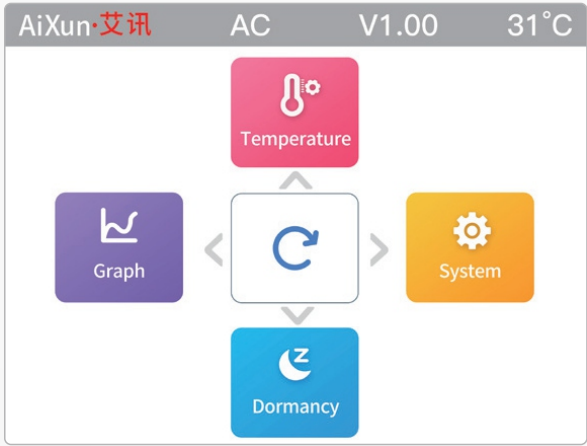
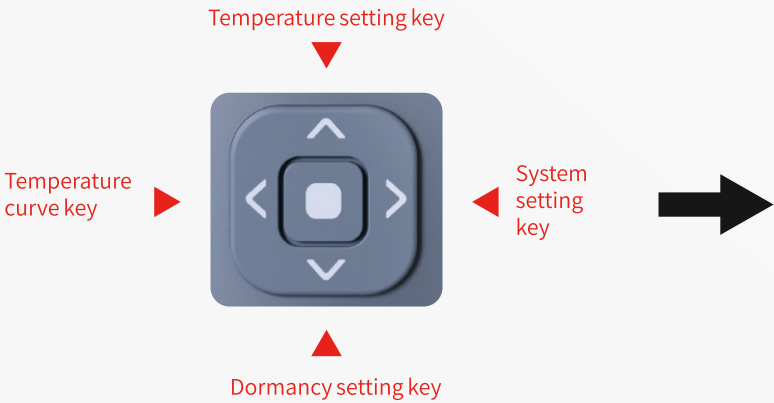
Note: the left and right channels can work at the same time or separately

# Fast temperature switching





The keys "CH1, CH2, CH3" corresponds to a temperature channel. Users can adjust the set temperature according to their own needs. Click the key to quickly switch the temperature channel (as shown in the figure)



# Function key operation



The power on interface of the station default to be the main interface. Click any of the host function keys to enter the function setting interface. The functions displayed on the interface correspond to the function keys one by one, and the user can operate according to the prompts.

- Click  to enter the temperature setting interface. The user can set "temperature unit, channel temperature setting, temperature compensation" and other functions as required. Click the left button to return to the function interface, and click the right button to exit to return to the main interface.
- Click  to enter the dormancy setting interface. The user can set "dormancy temperature, dormancy delay, sleep time" and other functions as required. Click the left button to return to the function interface, and click the right button to exit to return to the main interface.
- Click  to enter the temperature curve interface. The temperature power curve is displayed, and the welding state can be monitored in real time. Click the left button to return to the function interface, and click the right button to exit and return to the main interface.
- Click  to enter the system setting interface. Users can set "language, sound, factory reset, system info" functions according to their own needs. Click the left button to return to the function interface, and click the right button to exit and return to the main interface.

# 05 Soldering station operation

## ● Working mode

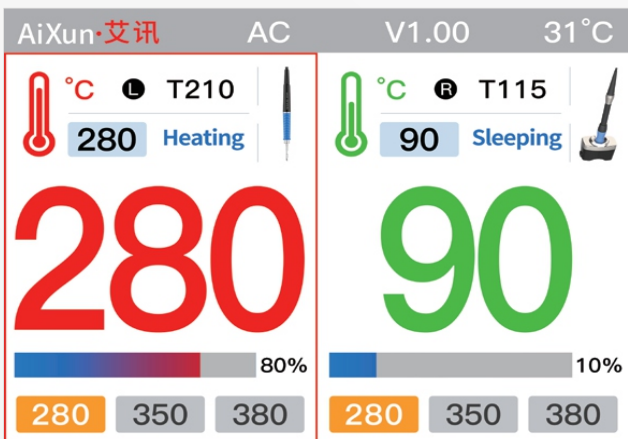


The dual channels of the soldering station can work separately or simultaneously. When the soldering pen is picked up from the holder, the iron tip will automatically heat to the selected temperature. You can start the job

## ● Standby mode

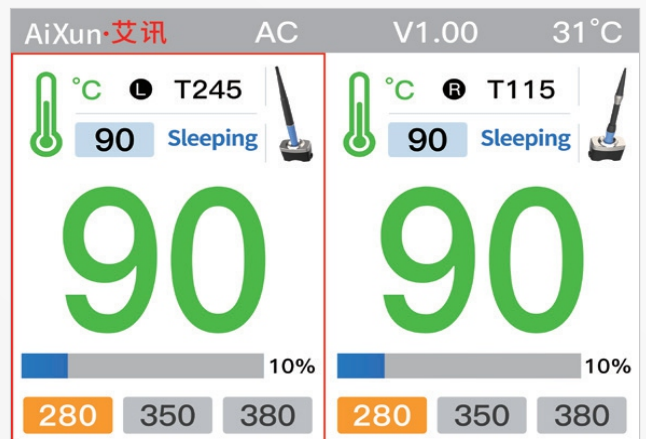


When the soldering pen is placed in the Standby seat or suspended on the Standby rack, the host will automatically enter the Standby mode and the temperature will automatically drop to the preset Standby temperature.



Change the temperature setting (90 °C to 450 °C)  
Through the temperature setting interface:

- Change fast temperature settings



Through the Standby setting interface: (90 °C to 450 °C)

- Change Standby temperature (temperature can be customized)
- Change Standby delay (Standby delay time can be customized)

## 06 Precautions



### Precautions for soldering station

To avoid damage to the soldering station and consider safety of the working environment, the following matters shall be observed:

- This product uses a three wire grounding plug, which must be inserted into a three hole grounding socket. Do not change the plug or use an ungrounded three head adapter to make the grounding poor. To lengthen the wire, use a grounded three wire power cord.
- Please do not make any change to the soldering station without authorization.
- When replacing parts, the original factory parts shall be used.
- Please do not wet the station. When your hands are wet, do not use the station nor pull the power cord.
- There is smoke during soldering, good ventilation facilities should be available in the working environment.
- Please do not do anything that may harm the product when using the station.
- If you do not use this product for a long time, please place it in a dry environment.



### Precautions for soldering iron tip

When the power is turned on, the soldering iron tip is in a high temperature state. In view of the possibility of burns or fire caused by abuse, please strictly abide by the following matters:

- Please avoid the abuse of this station and use this product according to the operating instructions.
- Do not touch the metal part near the soldering iron tip.
- Never use a soldering iron near flammable objects.
- Inform other personnel that the soldering iron is very easy to burn and may cause dangerous accidents. The power supply shall be turned off when not using.
- When replacing the soldering iron tip, do not touch it directly by hand to prevent scalding.
- Do not knock the soldering iron on the workbench to remove the residual flux, which may seriously damage the soldering iron.
- Never use a soldering iron tip for work other than soldering.



**This product has anti-static measures.  
Please be sure to use it grounded.**



## 07 Use and maintenance of soldering iron tip



**Note: do not use a file to remove the oxide on the iron tip**

1. Set the temperature at 250 degrees Celsius (482 degrees Fahrenheit).
2. After the temperature is stable, clean the iron tip with a cleaning sponge and check the state of the soldering iron.
3. If there is black oxide, plate with a new tin layer, and then wipe with a cleaning sponge. repeat the cleaning until the oxide is completely removed, and then plated with a new tin layer.
4. If the soldering iron tip is deformed or rusted, a new soldering iron tip must be replaced.

### Use of soldering iron tip

<ul style="list-style-type: none"> <li>● Soldering iron tip temperature</li> </ul>	Too high temperature will weaken the tip function, choose the temperature as low as possible. This tip temperature restoring force is excellent, and the low temperature can be fully welded, which can protect the temperature sensitive components.
<ul style="list-style-type: none"> <li>● Cleaning</li> </ul>	Clean the soldering iron tip regularly with a cleaning sponge. After soldering, the oxides and carbides derived from the residual flux will damage the tip, cause soldering errors, or reduce the thermal conductivity of the tip. When used continuously for a long time, should disassemble the tip once a week to remove the oxide, to prevent it from being damaged and reduce the temperature.
<ul style="list-style-type: none"> <li>● When not in use</li> </ul>	When not in use, the tip is not allowed to keep at high temperature for a long time, which will convert the flux on the tip into oxide and greatly reduce the heat conduction function.
<ul style="list-style-type: none"> <li>● After use</li> </ul>	After use, the tip shall be wiped clean and plated with a new tin layer to prevent oxidation.

### Tin planting failure may be caused by:

1. When the soldering iron is idle, it is not covered with new tin layer.
2. The soldering iron tip is at high temperature.
3. Insufficient melting during soldering work.
4. Clean the tip on a dry or unclean sponge or cloth. [clean and moist industrial grade sulfur-free sponge should be used]
5. The solder or iron coating is impure, or the soldering surface is not clean.



**Proper daily maintenance will effectively improve the service life of the soldering iron tip**

## How to extend the service life of soldering iron tip?

- Soak with fresh solder after each use, to prevent the oxidation and prolong its service life.
- Apply the temperature as low as possible to fulfill the work, low temperature can not only reduce the oxidation of the iron tip, but also easy to weld.
- Use a thin iron tip only in necessary, the coating of a thin iron tip is not as durable as that of a thick iron tip.
- Do not use the soldering tip as a detection tool, bending of the soldering tip will lead to The rupture of the coating and shorten the service life.
- Use less active rosin flux, because the high content of active rosin will accelerate the corrosion of iron head coating.
- When not in use or stop soldering, put the handle into the dormancy stand or turn off the power in time.
- Do not exert heavy pressure on the soldering tip, higher pressure does not mean fast heat transfer. in order to provide heat transfer, the solder must be melted to form a heat transfer solder bridge between the soldering tip and the solder joint.

## 08 After Sales

### Warranty regulations

- This product is guaranteed for one year from the date of purchase (subject to the purchase certificate).
- The warranty service is only valid under normal use. Any man-made damage, such as the use of inappropriate accessories, failure to use in accordance with the instructions, damage caused by non official maintenance, wrong use or negligence, the warranty service will be invalid immediately.
- AiXun company has the final right to interpret the above regulations.

**AiXun·艾讯**  
**智能精密焊接专家**  
The Intelligent & Precision Soldering Expert

Address: **503, Building C4, Zhonghao New Town, Xiangjiaotang  
Community, Bantian Street, Longgang District, Shenzhen**  
Hotline: 0755-84651380 400-175-8688  
Official website: <http://www.aixuntech.com>