FNIRSI

DWS-200

PRECISION INTELLIGENT SOLDERING STATION INSTRUCTION MANUAL

PRECAUTIONS

Soldering Station Usage Precautions

To avoid damage to the soldering station and ensure safety in the work environment, the following should be observed:

- This product uses a three-wire grounded plug, which must be inserted into a three-prong grounded outlet. Do not modify the plug or use an ungrounded three-prong adapter. If extending the power cord, please use a grounded three-wire power cord.
- Do not modify the soldering station without authorization.
- When replacing parts, use original factory components.
- Do not wet the soldering station. Do not use the soldering station with wet hands or pull on the power cord.
- Smoke may be emitted during soldering, so ensure good ventilation in the work area.
- Do not engage in any actions that may harm the product while using the soldering station.
- If the product is not used for a long time, please put it in a dry environment.

Precautions for using head of soldering iron

When the power is turned on, the temperature of the soldering iron tip is at a high temperature, which may cause burns or fire due to abuse.Please strictly observe the following:

- Please avoid misuse of this soldering station and use the product according to the operating instructions.
- Do not touch the soldering iron tip directly when replacing it to prevent burns.
- Never use the soldering iron tip near flammable objects.
- Notify others that the soldering iron tip can cause burns and may lead to dangerous accidents. Turn off the power when taking a break or after finishing work.
- Do not tap the soldering iron on the workbench to remove solder residue, as this may cause severe damage to the soldering iron.

- Do not use the soldering iron tip for tasks other than soldering.
- Keep out of reach of children to prevent burns.

NOTICE

This product has anti-static measures,
please make sure to ground it when using.

NOTICE TO USERS

- This manual provides detailed instructions on how to use the product and important precautions. Please read this manual carefully and follow the instructions to ensure optimal performance of the product.
- Do not use the instrument in flammable or explosive environments.
- Disposed batteries and obsolete instruments should not be treated as household waste; please follow the relevant national or local laws for proper disposal.
- If there are any quality issues with the instrument or if you have any questions regarding its use, please contact us promptly, and we will address your concerns in a timely manner.

1.PRODUCT INTRODUCTION

The DWS-200 is a high-power precision soldering station introduced by FNIRSI, which is a commonly used manual tool in electronic soldering processes. This product features a built-in high-power pure copper transformer, suitable for voltage inputs of 100-240V, supporting a maximum power of 200W, adjustable temperature range of 100-450°C, support for pre-setting 3 temperature groups, and the ability to connect to a soldering iron stand for induction hibernation.

2.PRODUCT FEATURES

- HD color screen, intelligent control
- Adaptive wide voltage (100-240V) input
- Maximum power of 200W, rapid heating
- Multiple preset groups, convenient and fast
- Supports F245, F210 type handles, strong compatibility
- Real-time hibernation mode to extend soldering iron tip life
- Multiple mode real-time monitoring of power and temperature status

3.STRUCTURE INTRODUCTION AND WIRING DIAGRAM

3.1 Host introduction

Type-C firmware upgrade interface
Power switch
Hibernate Holder Connection Hole
Power supply interface
Input fuse
Soldering station handle interface

3.2 Introduction to hibernation seat

3.3 Wiring diagram

Host power wiring

After the power cord is connected, if you need to disconnect the power you can do so by toggle the power switch to operate.

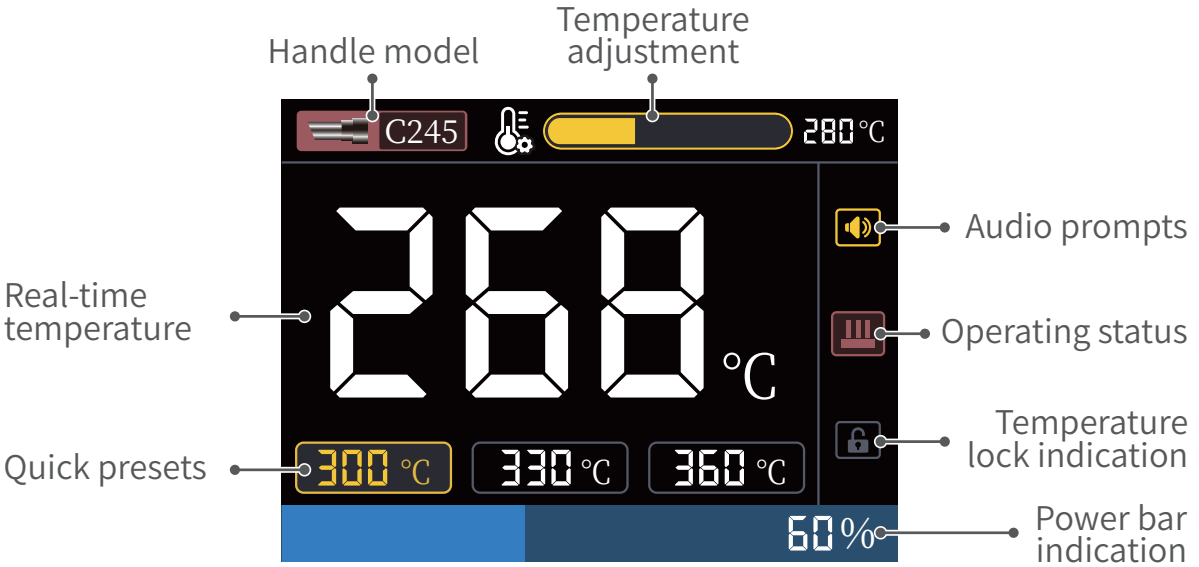
Host soldering iron handle wiring

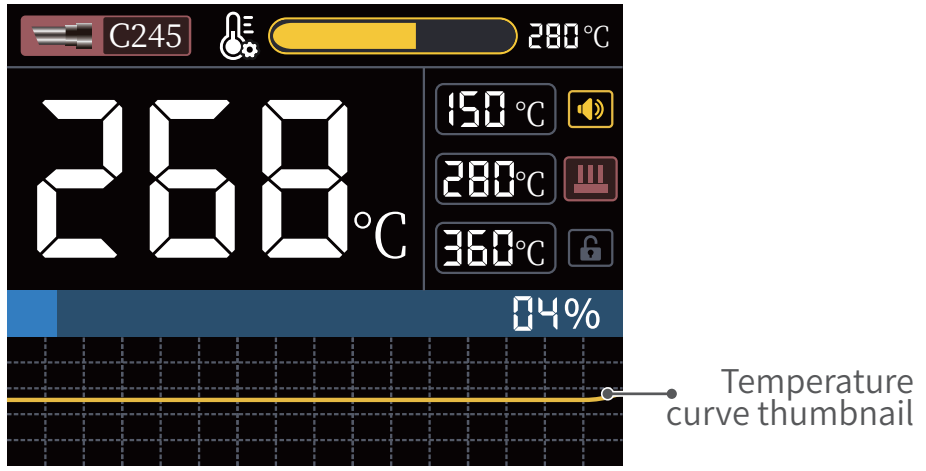
After inserting the handle into the interface, make sure to use the knob to lock it again to prevent the handle from having poor contact or becoming loose during use.

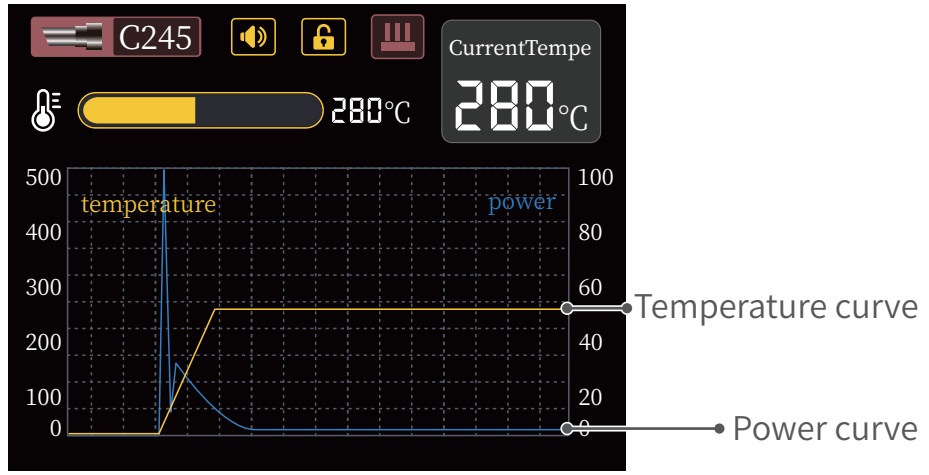
Main Unit Hibernation Seat Connection Cable

The main unit and the secondary unit need to be connected through the connecting cable, and the handle is placed on the hibernation seat in order to sense hibernation.

4.PANEL INTRODUCTION



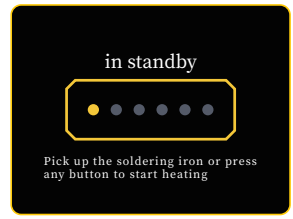




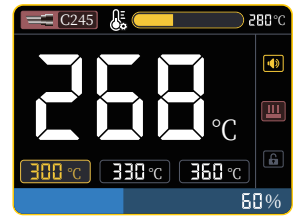
5.WORK PROCESS DESCRIPTION

Power-on page

Hibernate page



Standby page

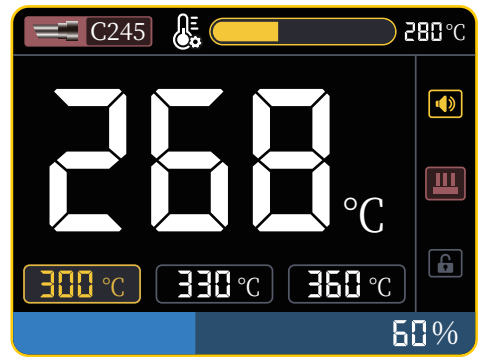


Main interface

Connect the devices according to the wiring diagram, turn on the power switch on the back of the main unit, and press the power button briefly to turn on the device. After powering on, the logo will be displayed, and after the logo disappears, the device will enter hibernation mode. There are two ways to exit hibernation mode.

Scenario ①: Pick up the soldering iron during the hibernation process to exit the hibernation page and enter the main interface.

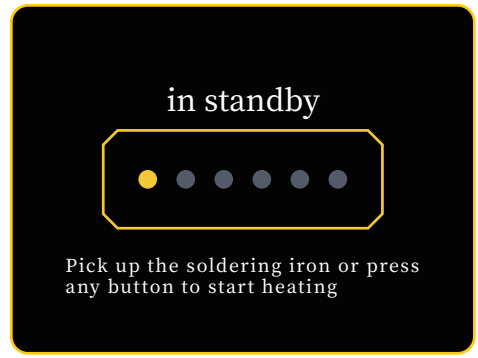
Hibernation page



Main interface

Scenario ②: If the soldering iron is not picked up during the hibernation process, the device will enter the standby page when the countdown reaches 00:00:00.

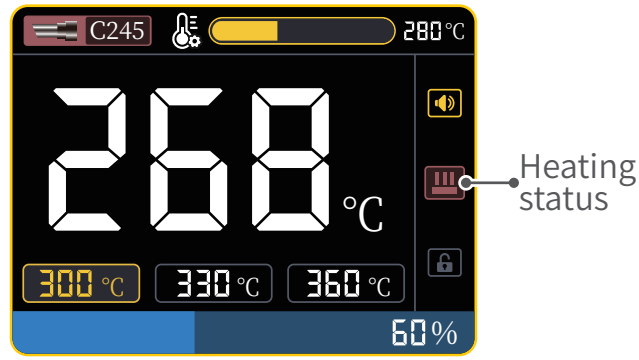
Hibernation page



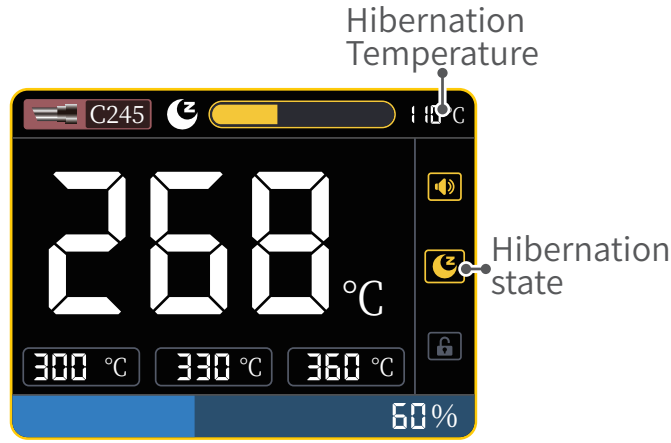
Standby

Entering the main interface, the soldering iron is in normal working condition, divided into the following four states:

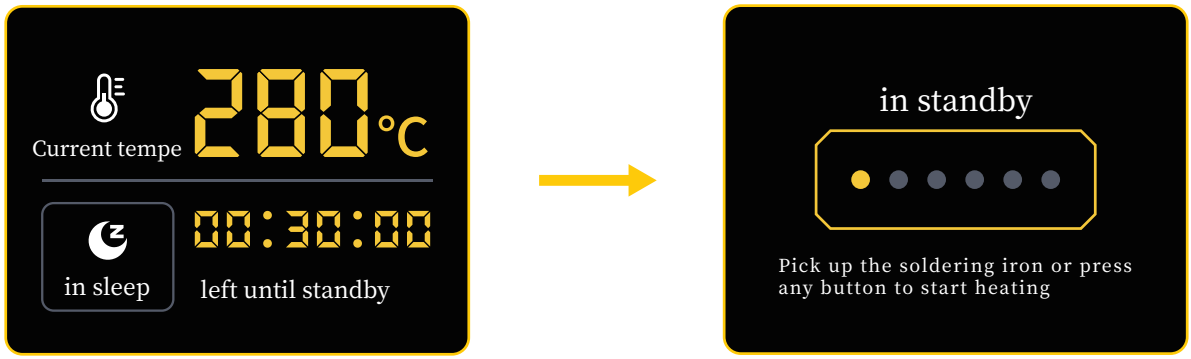
Heating status: In this state, the second icon on the right side of the status bar will change to a heating icon. The soldering iron is either heating up or the heating process has been completed, with the actual temperature reaching the set temperature.



Hibernation state: The soldering iron has been inserted into the soldering iron stand. The second icon on the right side of the status bar will change to a hibernation icon. When the hibernation function is activated and the real-time temperature is equal to or lower than the hibernation temperature, the device will enter the hibernation page and go into hibernation mode. It can be awoken by picking up the soldering iron.



Standby mode: After the soldering iron enters hibernation mode and the countdown timer ends, it will enter the standby page. Press any button or pick up the soldering iron to deactivate the standby mode.



Hibernate page

Standby

Shutdown/Power on state: Press the power button briefly to shut down/power on.

NOTICE

Do not touch the hot parts when the soldering iron is in the heating or heated and ready to use state.

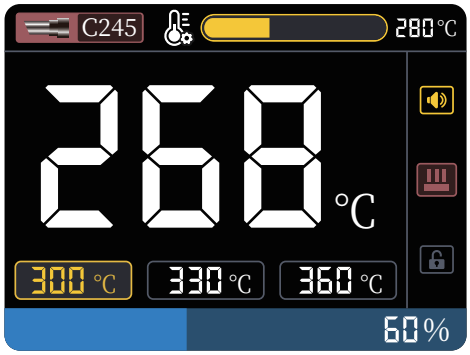
6.OPERATING INSTRUCTIONS

6.1 Host introduction

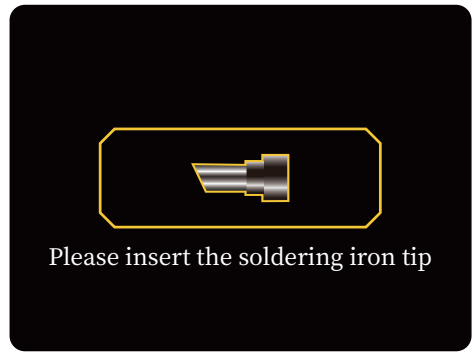
Power on: The screen displays the boot icon, then automatically transitions to the hibernation page or main page (if the soldering iron tip is picked up during the boot process, it will automatically transition to the main page, otherwise the hibernation page). If there is a prompt to insert the soldering iron tip, after inserting the soldering iron tip, the interface will automatically transition to the soldering iron tip ready page.

Power on page

Hibernate page

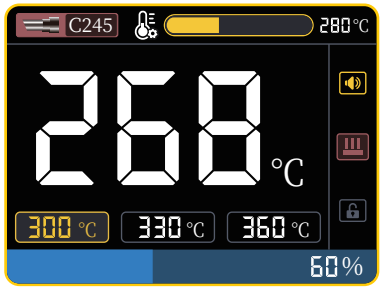


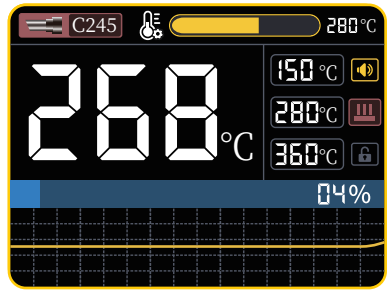
Main interface

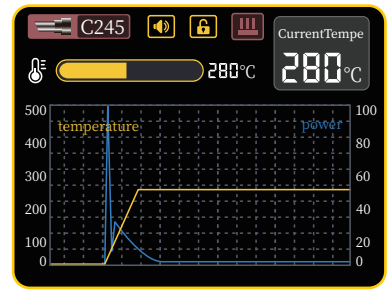


Prompt to insert soldering iron tip

Homepage switch: There are three pages on the main interface, press the MODE button briefly to switch between pages.

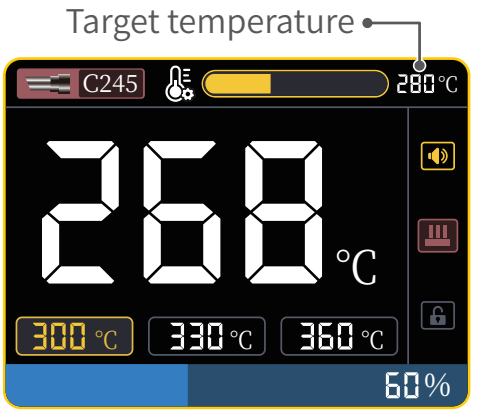




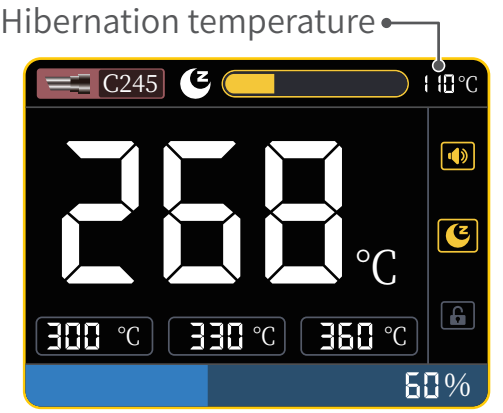


Target temperature setting: You can set the target temperature on all three main pages in two ways.

①Pressing briefly or holding down the button can both set the target temperature. When in heating mode, pressing the button sets the target temperature, and when in hibernation mode, pressing the button sets the hibernation temperature.

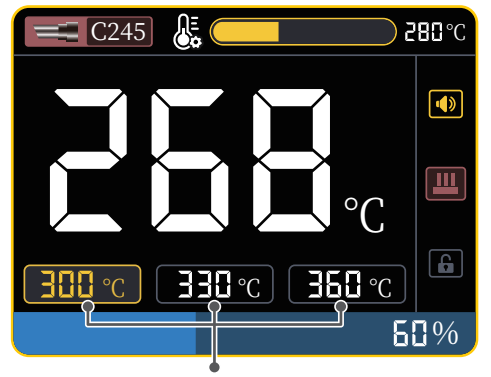


Heating mode



Hibernation mode

②Short press the CH button to select the quick temperature channel to quickly set the target temperature. Pressing the CH button in hibernation mode will not take effect immediately, it will only take effect after exiting hibernation mode.



Quick preset

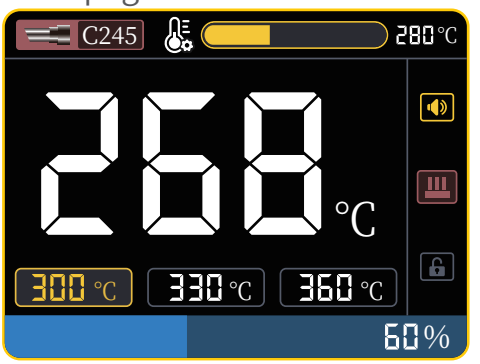
NOTICE

After the temperature lock is activated,
the target temperature cannot be adjusted.

6.2 Basic menu operations

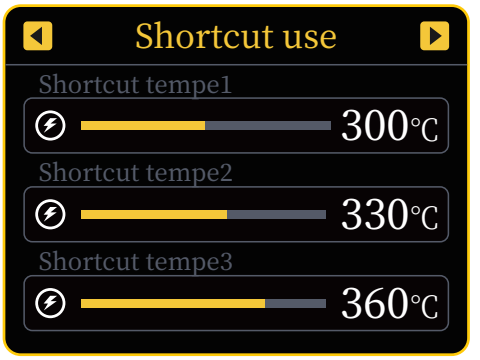
Accessing the first-level settings page: press the key briefly to enter the temperature settings page.

Return to the main page: When on the first-level settings page, press the CH key briefly to return to the main page.



Accessing the second-level settings menu: press the MODE OK key briefly to enter the second-level menu. settings page.

Switching menus: When on the first-level settings page, press the key briefly to switch to other settings pages .



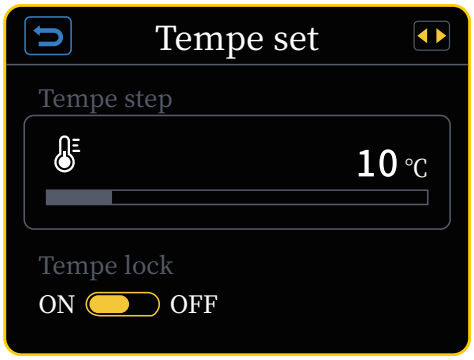
Return to the previous menu: press the CH key briefly to return to the previous menu.

Switching setting options: Press the key briefly to switch to other setting options.

6.3 Temperature Setting

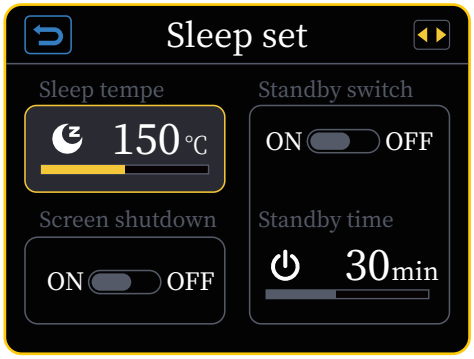
Temperature increment: Press the MODE OK key briefly to select, after which a triangle symbol will appear. Press the ◀ ▶ key briefly or long press to adjust the increment value. Press the MODE OK key again to save the setting.

Temperature lock: Press the MODE OK key to toggle the lock switch. Please note that after enabling temperature lock, the target temperature cannot be changed on the main page.

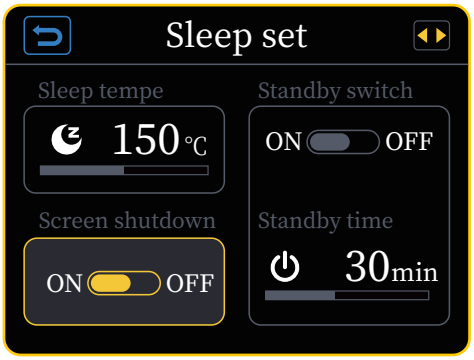


6.4 Hibernation settings

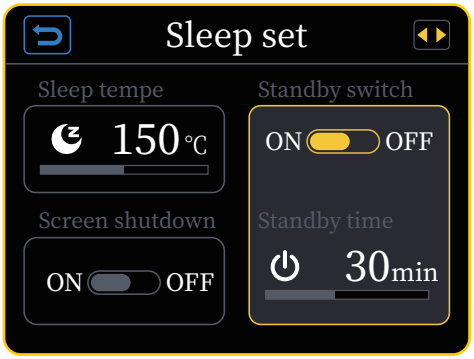
Hibernate temperature: Select the hibernate temperature, short press the MODE OK key to adjust the hibernate temperature. After adjusting to the desired value, press the MODE OK key again to confirm and save. Alternatively, you can quickly adjust the hibernate temperature by short or long pressing the ◀ ▶ key while in hibernate mode and before entering the hibernate page.



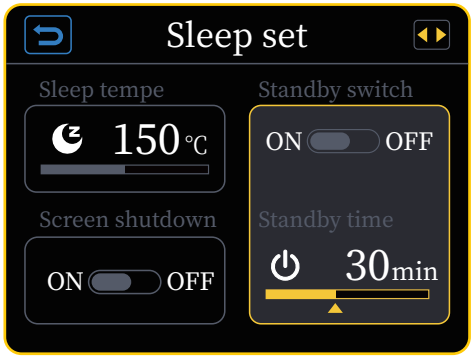
Standby screen off: After selecting the standby screen off, simply short press the MODE OK key to turn it on or off. When the standby screen off is activated, the screen will not display the standby screen when entering the standby screen off page.



Standby switch: After selecting the standby switch, simply short press the MODE OK key to turn it on or off. When the standby switch is activated, the screen will display the standby screen when entering the standby screen off page. Displaying the standby screen requires the standby switch to be turned on while the standby screen off needs to be turned off.

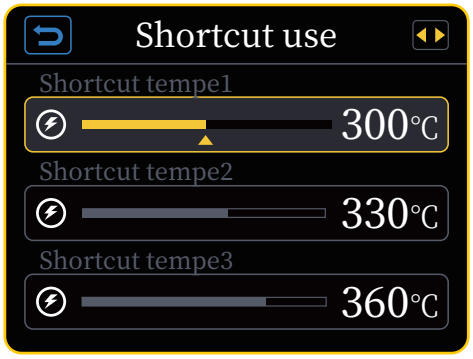


Standby time: After selecting the standby time, short press the MODE OK key will display a triangle symbol indicating that you can short press or long press the left and right keys to adjust the standby time. The standby time is mainly used to start a countdown to enter the standby screen after entering the Hibernation page.



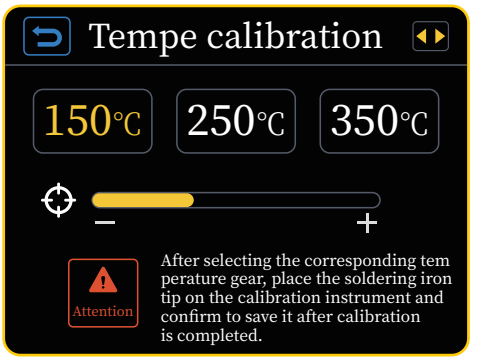
6.5 Quick access

Quick temperature 1/2/3: After selecting quick temperature 1/2/3, press the MODE OK key to display a triangle symbol. You can then press or hold the ◀ ▶ key to adjust the value, and finally press the MODE OK key again to confirm and save the value.



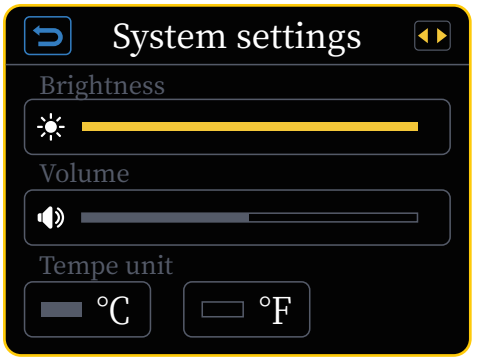
6.6 Temperature calibration

Temperature calibration 150/250/350:
After selecting the temperature that needs to be calibrated, press the MODE OK key to enter calibration mode. Place the soldering iron tip on the calibration device, and once the temperature stabilizes, press or hold the ◀ ▶ key to adjust the temperature value. After calibration is complete, press the MODE OK key to save the settings.

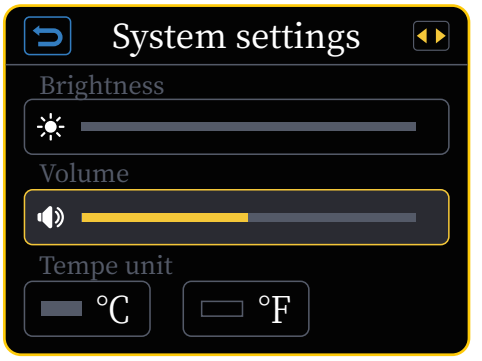


6.7 System settings

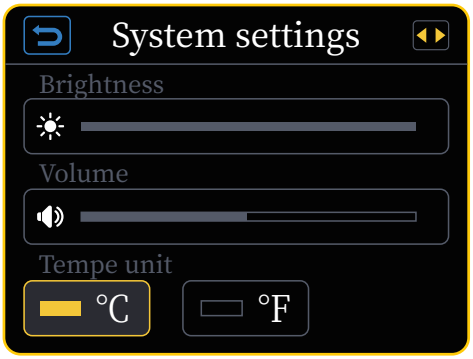
Screen brightness: After selecting the screen brightness, press the MODE OK key briefly, and then press or hold the ◀ ▶ key to adjust the screen brightness. The screen brightness will be updated in real time during the adjustment process. Once the adjustment is complete, press the MODE OK key briefly to save the settings.



Alert sound: After selecting the alert sound, press the MODE OK key briefly, and then press or hold the ◀ ▶ key to adjust the alert sound. The alert sound will be updated in real time during the adjustment process. Once the adjustment is complete, press the MODE OK key briefly to save the settings.



Temperature unit ℃/℉: After selecting the temperature unit, press the MODE OK key briefly to switch between ℃ and ℉.



6.8 System language

Switch language: by pressing the ◀ ▶ key, then press MODE OK to confirm and switch.

6.9 Restore factory settings

Restore factory settings: After short-pressing the MODE OK key, you will be prompted again to choose between "Yes" and "No". Short-pressing the ◀ ▶ key at this time can toggle the selection. Choosing "Yes" and short-pressing the MODE OK key again will reset all settings and restore to the default factory settings; if you choose "No" and short-press the MODE OK key again, the restoration of factory settings will be canceled and you will return to the previous level page.

7.FIRMWARE UPGRADE

Power off the device, press and hold the **MODE** button, then use the USB Type-c cable to connect to the computer to power on the device and enter the Bootloader interface, wait for the USB flash drive to pop up and copy the firmware file to the USB flash drive.

8.PRODUCT PARAMETERS

Model Number	DWS-200
Power	200W (MAX)
Temperature Range	100—450°C
Host Size	L 156 x W 96 x H 103 (in mm)
Input Voltage	110-250V
Input Fuse	3A
Supported Soldering Iron Type	F210、F245
Host Net Weight	475g (single host)

9.SOLDERING IRON TIP REPLACEMENT AND CLEANING

9.1 Replace the soldering iron tip

1.Use the plug-in holder to separate the soldering pen from the soldering iron tip.

2.Use the plug-in holder or bare hands to insert the new soldering iron tip Insert the new soldering iron tip into the handle.

3.After replacing the soldering iron tip, you need to follow the instructions on the screen. Put the handle into the hibernation seat or press any key to start working to start working.

⚠ NOTICE

For the initial assembly, make sure the soldering iron tip temperature is not too high to prevent burns. The added burn protection is only designed to prevent immediate heating of the soldering iron tip after installation, allowing users a cushioned response time.

9.2 Cleaning of soldering iron tips

Using a high-density fine copper wire brush can effectively clean the soldering iron tip while also providing protection for the tip.

10.SOLDERING IRON TIP USE AND MAINTENANCE

①After the temperature stabilizes, use a clean sponge to clean the soldering tip and check the iron's condition.

②If the tin plating on the soldering iron tip contains black oxide, it can be replated with new tin, then wiped clean with a clean sponge. Repeat this cleaning process until all oxides are completely removed, then replate with new tin.

③If the soldering iron tip deforms or develops rust, it must be replaced with a new tip.

⚠ NOTICE

Do not use a file to remove oxides from the soldering joint

10.1 Use of soldering iron tips

Soldering iron head temperature seat	Excessive temperature will weaken the functionality of the soldering iron tip, so it is recommended to use the lowest possible temperature setting. This soldering iron tip has excellent temperature recovery, allowing for sufficient soldering at lower temperatures to protect temperature-sensitive components.
Cleaning	Regularly clean the soldering iron tip using a cleaning sponge. Residues of flux and oxides generated after soldering can damage the soldering iron tip, leading to soldering errors or reduced heat conduction efficiency.
	For prolonged and continuous use of the soldering iron, it is recommended to disassemble the soldering iron tip once a week to remove oxides and prevent damage that may result in reduced temperature.
When Not in Use	Do not leave the soldering iron tip at high temperatures for extended periods when not in use, as it can cause flux residues to turn into oxides, significantly reducing heat conduction efficiency.
After Use	After use, clean the soldering iron tip, coat it with fresh solder to prevent oxidation.

10.2 Possible causes of "non-tinning" soldering iron tips

- The soldering iron tip is not covered with fresh solder when the iron is not in use.
- The soldering iron tip is in a high humidity condition.
- The soldering iron tip is not sufficiently melted during soldering work.
- Scrubbing the soldering iron tip on a dry or unclean sponge or cloth. [A clean, moist industrial grade sulfur-free sponge]
- The solder or iron plating is impure, or the soldering surface is not clean.

11.PRODUCTION INFORMATION

Any FNIRSI'users with any questions who comes to contact us will have our promise to get a satisfactory solution + an Extra 6-Month Warranty to thanks for your support!

By the way, we have created an interesting community, welcome to contact FNIRSI staff to join our community.

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