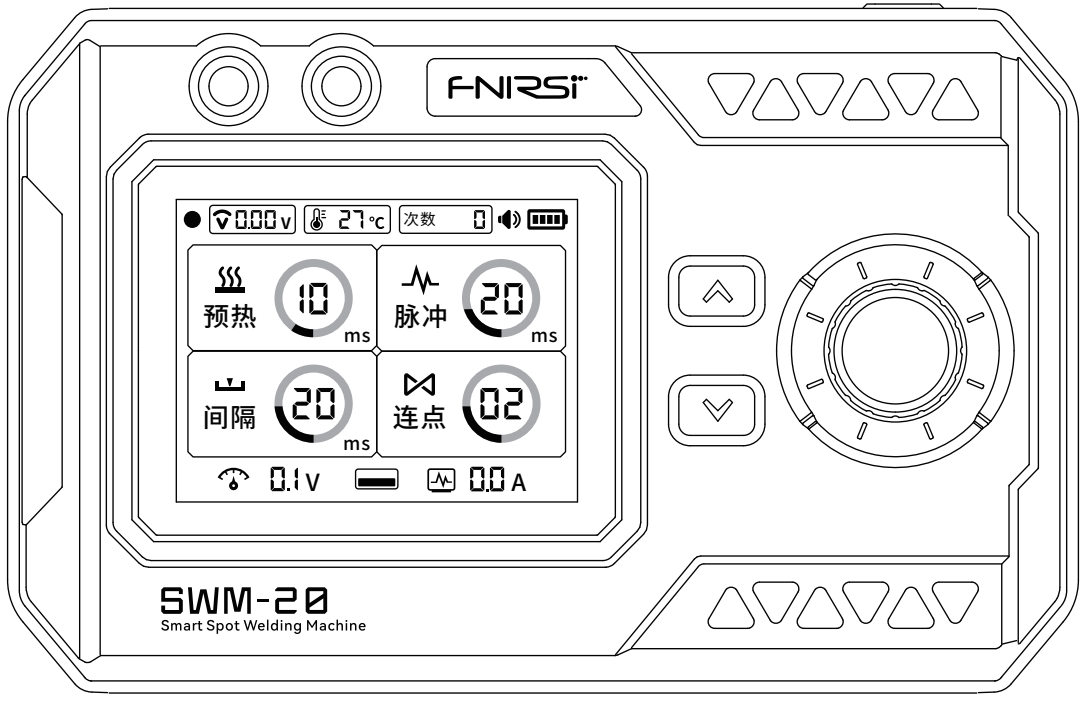
FNIRSi 菲尼瑞斯

SWM-20

智能点焊机产品说明书 V1.1

INTELLIGENT SPOT WELDER USER MANUAL



※使用产品前请仔细阅读本说明书，并妥善保管。

※Please read this instruction manual carefully before using the product and keep it properly.

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1. SAFETY STATEMENT

Please read this user manual carefully before using the product. It contains important safety information. Keep this manual properly for future reference. You can visit our official website to check for the latest updates to the user manual.

1.1 User Information

- This manual provides detailed instructions on the product' s usage, precautions, and other related matters. Please read carefully before use to ensure optimal performance.
- Do not use the device in flammable or explosive environments.
- Used batteries or discarded devices must not be disposed of with household waste. Please follow national or local regulations for proper disposal.
- If you encounter any quality issues or have questions about the device, please contact FNIRSI online customer service or the manufacturer. We will assist you promptly.

1.2 Safety Precautions

- Be sure to read this manual and all related safety information before using the product. Users must fully understand and follow all instructions.

- Do not operate the product in flammable or explosive environments. It may generate sparks that could ignite dust or vapors.
- The tip of the spot welding pen may emit sparks during use. Please ensure proper protection and safety measures.

※Disclaimer: FNIRSI assumes no legal responsibility for any consequences arising from the use of this product.

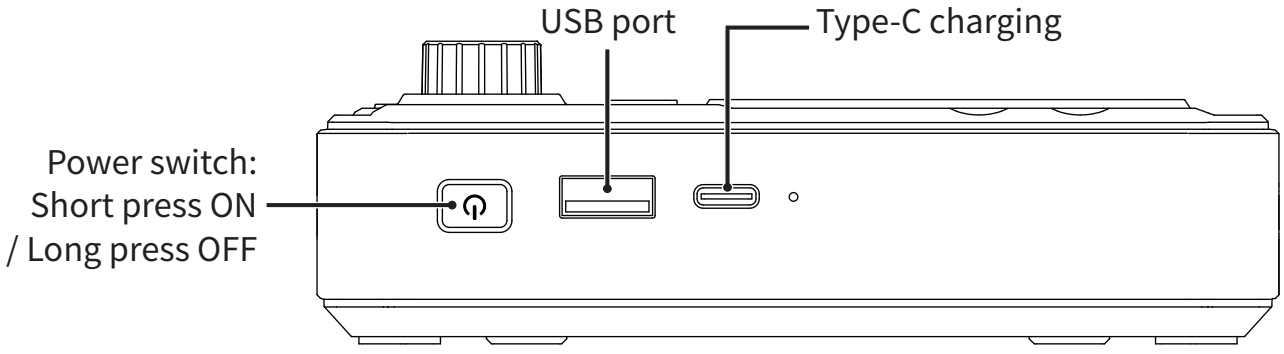
1.3 Precautions

- Do not press the nickel strip too hard during welding, as it may result in false welding or weak welds. The correct method is to apply gentle pressure to ensure optimal contact with the battery surface.
- Low battery voltage may lead to poor welding performance or failure to weld. Please fully charge the battery before welding.
- It is not recommended to weld while charging, as this may damage the charging chip.
- After repeated use, the welding pen tip may develop black oxide buildup. Please clean it with sandpaper before reuse.

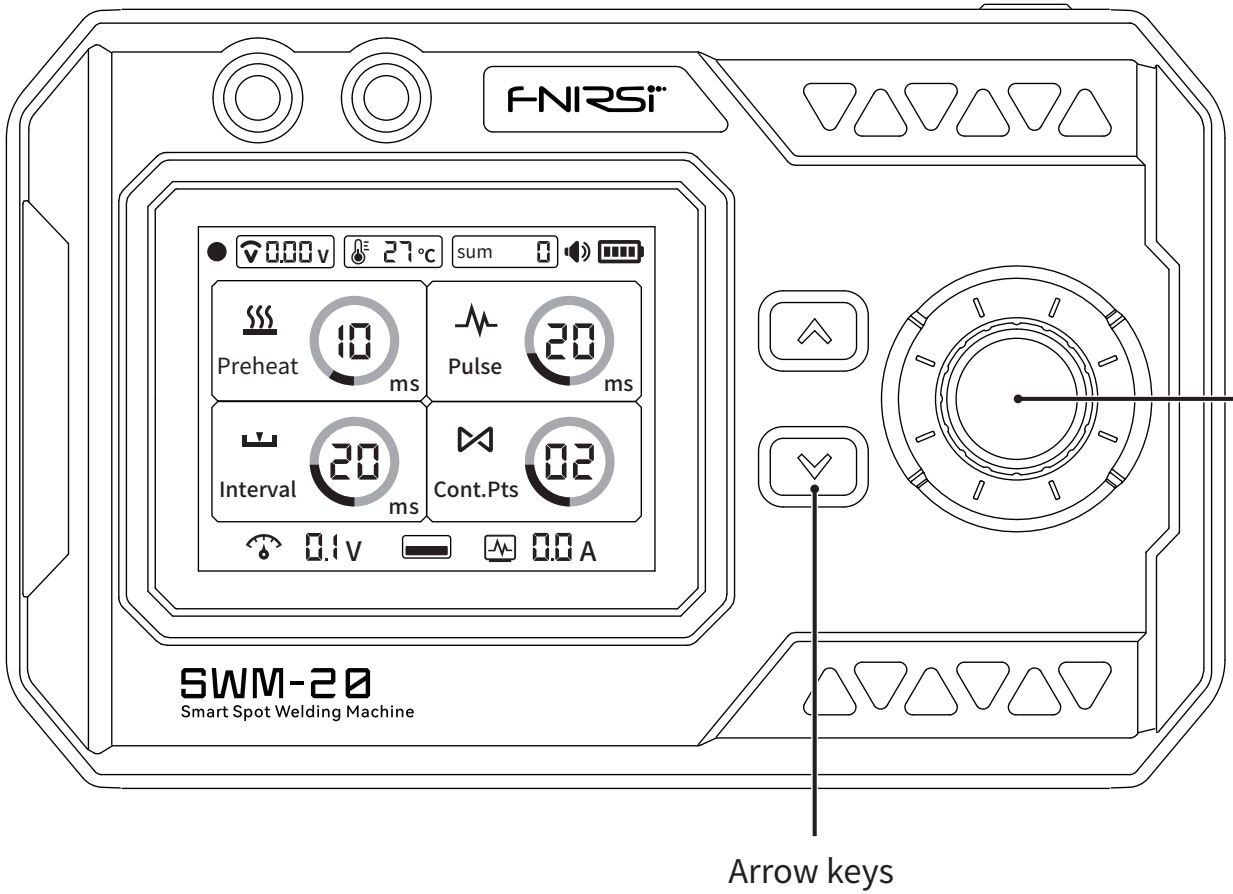
2.PRODUCT OVERVIEW

2.1 Product Introduction

The portable handheld spot welder is a high-efficiency, convenient, and easy-to-carry welding tool that adopts dual-pulse spot welding technology to ensure more stable and reliable welds and also features a power bank function. It is equipped with a 2.4-inch high-definition display screen for intuitive and clear operation, and a rotary encoder knob for parameter adjustment, allowing users to easily and accurately set welding parameters, thereby enhancing the user experience.



2.2 Panel Overview



① Rotate on the home screen to adjust parameters

② Short press to enter the settings menu – rotate to adjust parameters

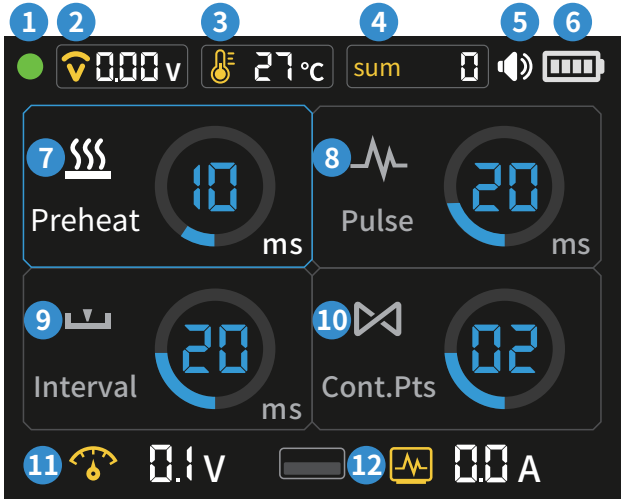
③ Long press to return to the home screen

Arrow keys

3.QUICK START

3.1 Interface Overview

① Welding status
② Battery voltage
③ Temperature
④ Total welding count since power on
⑤ Volume
⑥ Battery level
⑦ Preheat time
⑧ Pulse time
⑨ Interval time
⑩ Continuous spot count
⑪ Output voltage
⑫ Output current



3.2 Usage Instructions

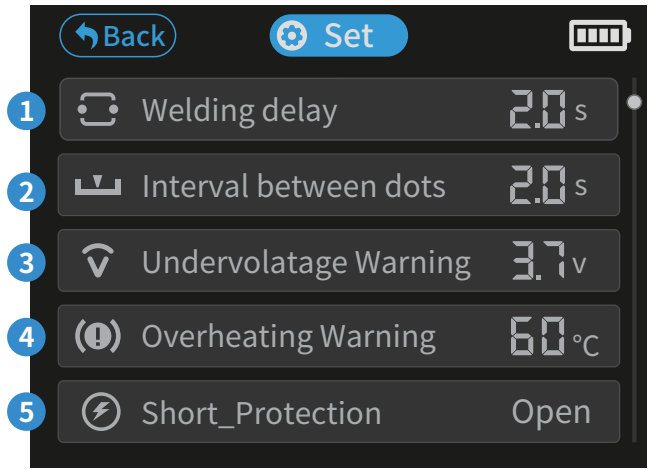
Use the【↑】and【↓】buttons to switch options, and lightly turn the【rotary knob】to precisely adjust parameters.

- **Preheat pulse:** Briefly heats the electrode to reach the preset temperature, before spot welding.
- **Main pulse:** During spot welding, the device outputs a short, high-energy pulse to generate sufficient welding heat while preventing electrode overheating and excessive current that could burn through or melt the material. (Adjust the main pulse size according to actual conditions: too high may burn through, too low may cause weak welds.)

- **Interval time:** To avoid prolonged heating, electrode overheating, and premature separation from the joint, set the time interval between spot welding pulses to ensure weld strength and quality. (On uneven surfaces, after the preheat pulse softens the material, insufficient interval time may cause the nickel strip not to fully adhere to the battery surface.)
- **Continuous spot count:** Used to reinforce the weld spot. After the welding tip contacts, the machine will perform N continuous welds. The default is 01. When welding thick nickel strips, you can appropriately increase the count to strengthen the weld, but it cannot exceed the maximum welding thickness limit.

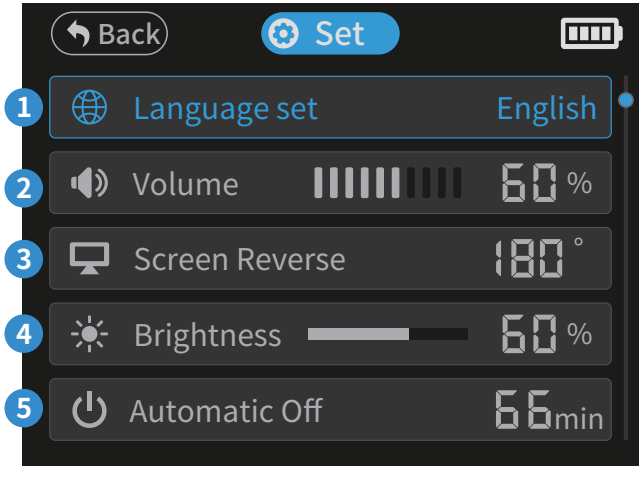
3.3 Menu Settings

Short press the【rotary knob】to enter the settings menu. Use the【↑】and【↓】buttons to switch options, and lightly turn the【rotary knob】to precisely adjust parameters. Long press the【rotary knob】to return to the main screen.

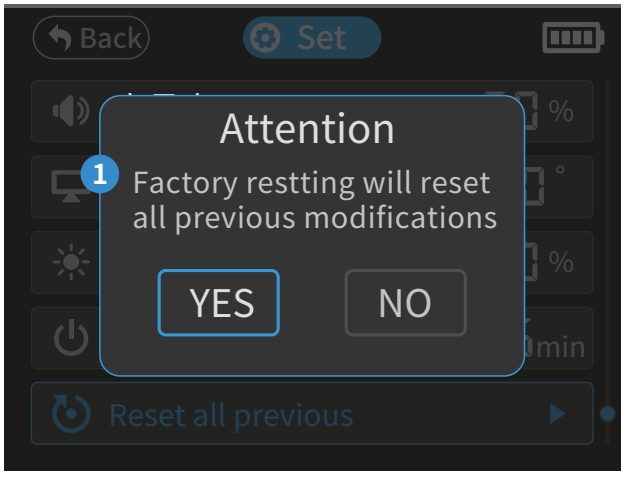


No.	Menu Name	Description	Setting Range	Default Value
①	Welding delay	Sets the delay time before welding operation	0.1s – 9.9s	0.8s
②	Interval between dots	Sets the time interval between continuous weld spots	0.1s – 9.9s	0.5s
③	Undervolatage Warning	Sets warning when battery voltage drops below value	3.7V – 4.0V	3.7v
④	Overheating Warning	Sets warning when temperature exceeds value	45°C – 99°C	65°C
⑤	Short_Protection	Enables or disables short circuit protection	On / Off	On

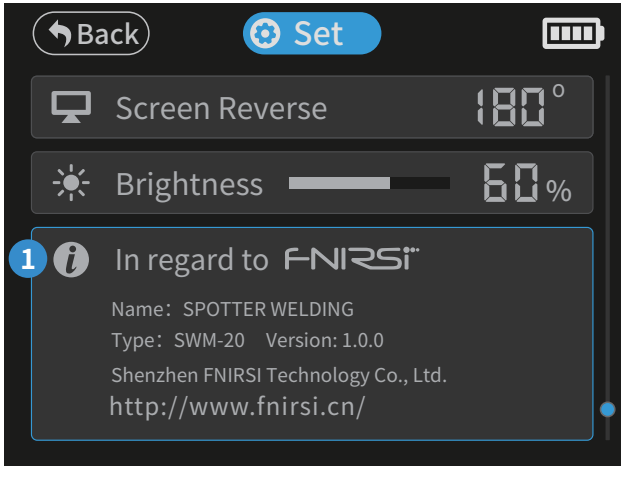
No.	Menu Name	Description	Setting Range	Default Value
①	Languages set	Set device display language	Chinese/ English	Chinese
②	Volume	Set operation sound volume	0-100%	100%
③	Screen Reverse	Set screen rotation	0°/180°	180°
④	Brightness	Set screen brightness	10-100%	100%
⑤	Automatic Off	Set auto shutdown time	0-99min	10min



No.	Menu Name	Description	Setting Range	Default Value
①	Factory Reset	Reset to factory settings	Yes / No	/



No.	Menu Name	Description	Setting Range	Default Value
①	About	Display device information and manufacturer	/	/



3.4 Firmware Upgrade

①While the device is powered off, press and hold the【↑】button, then briefly press the【Power】button to enter the firmware upgrade mode.

②Connect the device to a computer using a USB Type-C data cable.

③The computer will automatically recognize the device as a USB drive. Simply drag and drop the firmware file into the drive.

④Once the upgrade is complete, the device will restart automatically.

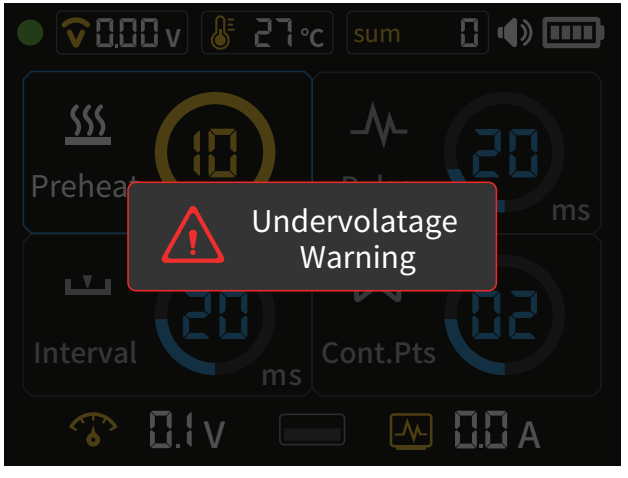
4.INDICATOR LIGHT DESCRIPTION

Light Status	Description
Blue light on	Device is operating normally
Red light on	Device is in alarm state (over-temp, undervoltage, etc.)
Off	Device is powered off

5.WARNING INSTRUCTIONS

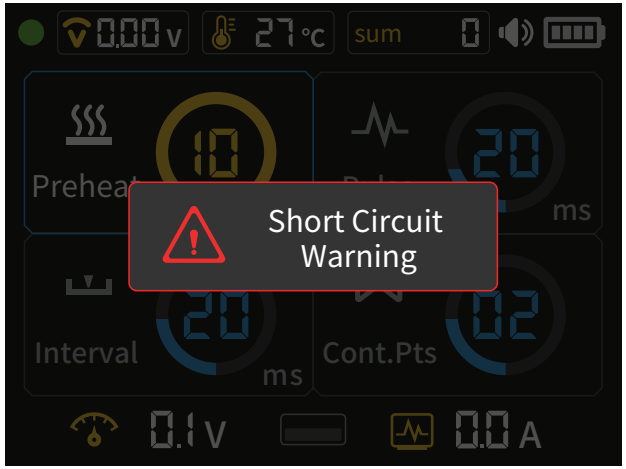
5.1 Undervoltage Warning

When the device detects the battery voltage is below the normal operating range, an undervoltage warning will be triggered. At this time, a prominent "Undervoltage Warning" prompt box will pop up on the device interface to alert the operator.



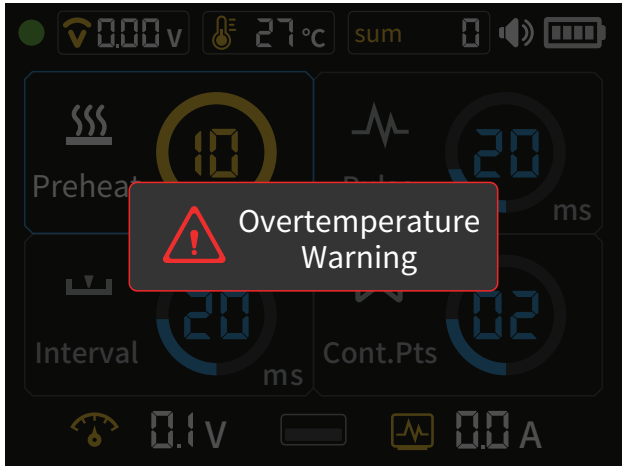
5.2 Short Circuit Warning

When the device detects a short circuit in the internal circuitry or welding loop, a short circuit warning will be issued. A "Short Circuit Warning" prompt box will appear on the interface to alert the operator.



5.3 Overtemperature Warning

When the device detects that the internal temperature exceeds the safety threshold, an overtemperature warning will be issued. A "Overtemperature Warning" message box will appear on the interface to alert the operator.



6.SPECIFICATIONS

Battery Capacity	5000mAh
Charging	5V / 2.1A
Discharging	5V / 2.1A
Welding Materials	Nickel, Iron, Stainless Steel
Welding Thickness	0.1–0.25 mm
Max Welding Current	1200A
Level	4 Preset Combination Levels

7.MAINTENANCE

- Do not disassemble or modify the instrument without authorization. Unauthorized handling may cause damage to the device. If the instrument is damaged, please contact your local distributor.
- Do not dispose of this product together with household waste. Disposal of the device or its components should comply with local regulations.

8.CONTACT US

Product Name: Intelligent Spot Welder

Model: SWM-20

Manufacturer: Shenzhen FNIRSI Technology Co., Ltd.

Address：8th Floor, West Side, Building C, Weihua Da Industrial Park, Dalang Street, Longhua District, Shenzhen, Guangdong, China

Tel: 0755-28020752

Service Email: support@fnirsi.com

Business Email: business@fnirsi.com

Website: www.fnirsi.com

Standard Implemented: GB/T 25443-2010

http://www.fnirsi.com/

9.WARRANTY INFORMATION

※This page is the basic warranty card. Please keep it.

Thank you for choosing our company's products. The warranty period of this product starts from the date of sale. During the product warranty period, if the product is installed and used in accordance with the product manual and used in normal environment and conditions, and the fault is caused by defects in the original materials and processing, you can enjoy free repair services according to the content of this warranty clause. Please keep this warranty card properly as a warranty certificate. No reissue will be issued if it is lost.

The following situations will incur paid repair services:

- Unable to present the original valid warranty card.
- Damage caused by improper installation not meeting product requirements, standards, or relevant specifications.
- Damage caused by accessories in the installation environment not meeting product requirements, standards, or relevant specifications.
- Damage caused by improper use, improper storage, unauthorized disassembly, or unauthorized repairs by the user.
- Expiration of the warranty period.

Warranty Card

Product Model	SWM-20	**Qty.**	
Distributor Name (where to buy)		**Contact**	
Address		**Invoice Number** (Order Number)	
Purchase Date (as per invoice)	**Year** **Month** **Day**		
User Name:		**Address:**	
Contact:		**Fault Description:**	



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