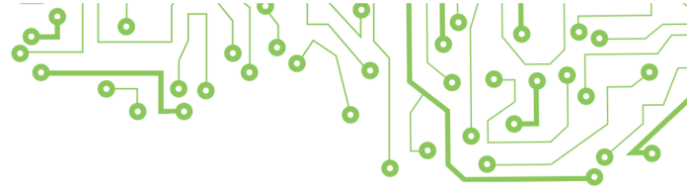


MiniSmart Operation Guide V1.4

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1. Product Specifications



Specifications		Packing List	
CPU	Custom MCU, Frequency: 168MHz	MiniSmart Device	1
Transmission	WIFI, USB (Type-C)	JIG	1
Power	DC5V/1A, Charging Interface Type: Type-C	Type-C Cable	1
Battery	Capacity: 950mAh, Working Time: 4.5 hours at room temperature, 1.5 hours at -20°C, 2.5 hours at 55°C	950mAh Lithium Polymer Battery	1
Screen	2-inch Screen, Resolution: 240*320, Non-touch screen	Spare Probe Box	1
Operating Environment	-20°C—55°C	MiniSmart Device	1
Service Life	Device: ≥3 years, Keypad Life: ≥500,000 times, Probe Life: ≥50,000 times	User Manual Scan the QR code on the packaging to access the PDF file.	1
Dimensions	53mm (L) * 110mm (W) * 21mm (H); Weight: 77.5g	Optional accessories are listed in Appendix I.	

2. Overview

2.1 MiniSmart device introduction



- Power on: If the device battery is fully charged, hold the "Power" button for 2 seconds, then release. When you hear a beep and see the light flashing, wait about 3 seconds for the main interface to appear.
- Power off: Hold the "Power" button for 2 seconds. Release it when you hear a beep, and the screen will go dark, indicating the device is off.

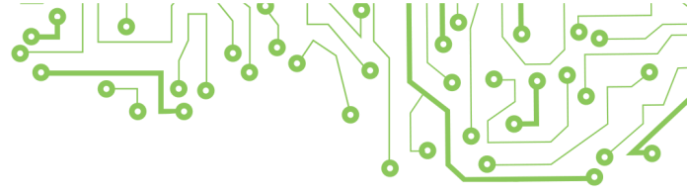
2.2 JIG replacement



*To replace the JIG, simultaneously press the fastening buckles on both sides of the JIG to pop it out.



Ensure that the JIG's alignment groove and the device's screen are on the same side.



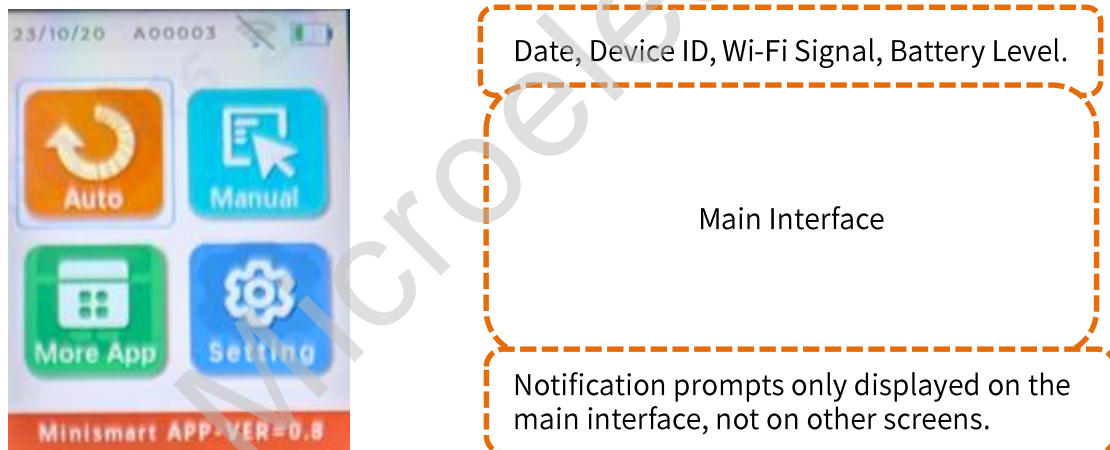
2.3 Device activation



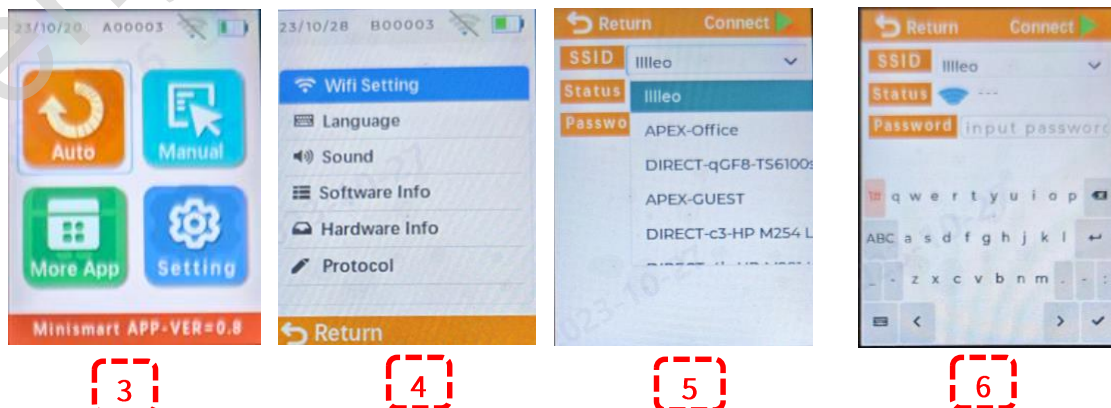
① In Figure 1, use the arrow keys to select your preferred language. Navigate to the green button at the bottom and press to confirm, entering the user agreement interface (Figure 2).

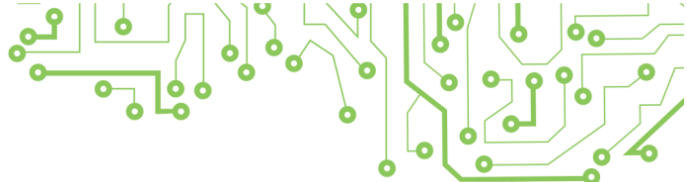
② In Figure 2, move the cursor with the arrow keys. After reading, select "Activate" and press the OK button to complete the activation.

2.4 Device main interface

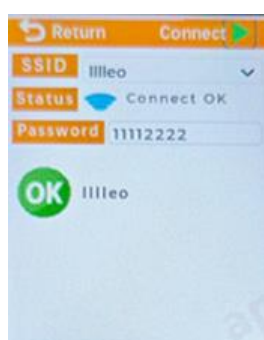


2.5 Connect to a Wi-Fi network

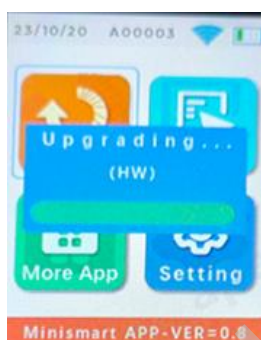




- ① After activation, you'll reach Figure 3. Move the cursor to "Setting" and press the OK button to access Figure 4.
- ② In Figure 4, select "Wi-Fi Setting" and press the OK button.
- ③ In Figure 5, choose your Wi-Fi network and enter the password (Figure 6).
- ④ In Figure 6, use the "1#" and "ABC" buttons on the left side to switch between numbers and upper/lowercase letters. After entering the password, move to the checkmark (✓) and press the OK button. Then, move the cursor to "Connect" and confirm by continuously pressing the right arrow key.
- ⑤ When Wi-Fi connects successfully, it switches to the interface in Figure 8, initiating the update. Once the progress bar is full and the Wi-Fi icon shows no issues, your update is successful. Now, you can attach the right test head for chip upgrades.



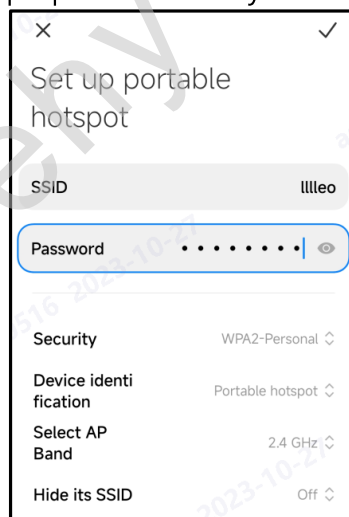
7



8

Wi-Fi connection notes

- Connect to a 2.4GHz Wi-Fi router. Use network names without Chinese or special characters. Don't connect more than 10 devices to the same router, as this can affect the speed of the device's firmware upgrades.
- Mobile hotspots support a maximum of 8 connected devices. Avoid Wi-Fi hotspots on iPhones 11 or below. Please adjust settings as per the provided images to ensure proper connectivity with Mini devices.



9



Auto reset demonstration



[10]



[11]

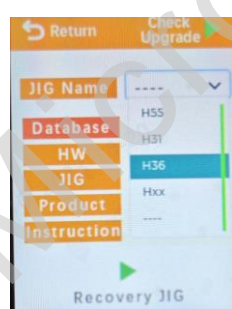
JIG types and product series comparison

JIG Type	Applicable Products
H55	HP 90x/95x/97x Series
H31	HP 91x/96x Series
H36	HP 289 Series

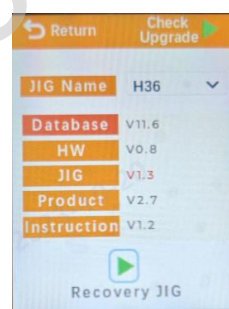
2.6 Check the software version



[12]

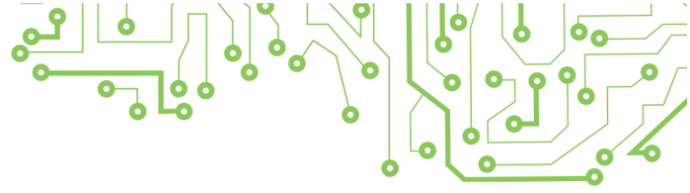


[13]



[14]

- As shown in Figure 12, select "Software Info" from the Setting interface and press the OK button to access Figure 13.
- In Figure 13, select "JIG Name" and confirm. Use the up and down keys to choose the JIG type. Move the cursor to "Recovery JIG" and confirm to manually upgrade the H36 program.



3. Notices

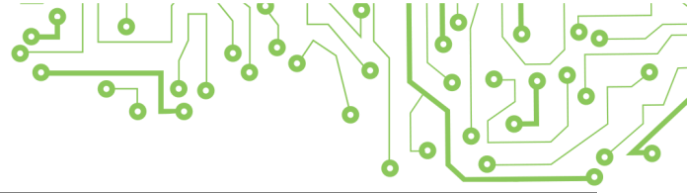
- Since OEM firmware upgrades differ in content and methods, we will provide specific instructions for each one. Please ensure to follow our upgrade notifications for the correct device usage.
- This device is designed for upgrading chips that are not recognized after an OEM upgrade. **It is not intended for upgrading chips that are already recognized.** Please use the device correctly to avoid unnecessary rework.
- The logo, labels, trademarks, and other information on MiniSmart are protected by trademark law. Unauthorized changes are prohibited to prevent copyright infringement.
- Do not disassemble MiniSmart devices. Unauthorized disassembly can render the device inoperable.
- Protect the MiniSmart device's display screen and prevent liquid from entering during use.
- The MiniSmart device has a 950mAh polymer lithium battery. Handle with care to prevent fire or explosions.
- The internal battery of the MiniSmart device has a battery life of 4.5 hours. Charge promptly when the battery is low.

4. Product Maintenance Instructions

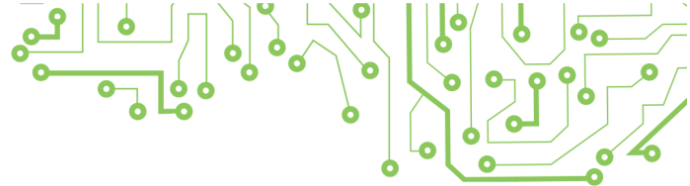
- From the day of activation, MiniSmart devices with non-human-caused quality issues are eligible for free replacement within 30 days.
- Activated MiniSmart devices are eligible for one year of free warranty for non-human-caused quality issues. Damage caused by human factors or damage beyond the warranty period will incur fees for parts and repairs.
- Human-caused damage to the device includes unauthorized disassembly, use of non-compliant power sources, device drops, impacts from other objects, or liquid damage, among other improper uses.

5. FAQ

Minimart Error Codes V1.0		
Error Code	Error Message	Solution
0x00	Operation Succeeded.	/
0x0D	Chip is Already OK.	For a brand-new chip, no rework is required.
0x01	Operation Failed.	①Check if the JIG is correctly installed and the latch is secure. Test the chip alignment in both directions. ②If one chip consistently fails and other chips work



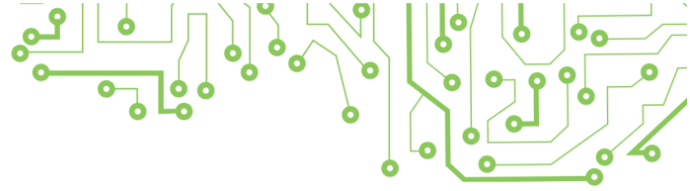
		correctly, contact our sales manager for assistance. ③If the same error occurs with other chips, contact our technical support for help.
0x02	Data Mismatch.	①Reprogram the chip and ensure the probe doesn't slide during the process. ②If one chip consistently fails and other chips work correctly, contact our sales manager for assistance. ③If the same error occurs with other chips, contact our technical support for help.
0x9A	Non-Reworkable Chips.	①Some chips are not reworkable, typically older versions or those with batteries. ②Verify if the JIG corresponds to the product series, see Appendix I.
0x51	Battery Data Loss; Key Loss.	Chips with batteries cannot be reworked.
0x13	NO Chip Detected.	Check if the probe aligns accurately with the chip's contact points.
0x9F	Reversed Chip.	Try operating the chip again after inverting the direction of the device or the chip.
0x0C	Model Not Found.	Confirm if the chip model is listed in the catalog.
0x03	Chip Mismatch.	Ensure the correct JIG is used, see Appendix I.
0x06	Wrong JIG Used.	
0x04	Incorrect CRC Check.	Ensure the JIG is securely plugged in; unplug and re-plug if necessary.
/	Wrong JIG Type.	Ensure the JIG is securely plugged in; unplug and re-plug if necessary. If it still doesn't work, connect the corresponding JIG. In the "Setting-Software Info" interface, select "Recovery JIG" to update the program. Then try the chip operation again.
0x0B	JIG Not Found.	
0x52	JIG Inconsistent.	
0x53	Function Not Support.	This is a new feature under development, and it will be enabled through future upgrades.
0x09	Authentication Failed.	If there's a hardware fault with the device, please contact our repair department.
0x0F	Read File Error.	
0x22	Hardware MCU Error.	
0x23	Hardware FLASH Error.	
0x24	Hardware RAM Error.	
0x25	Hardware WIFI Error.	



0x26	Hardware RTC Error.	
0x27	Hardware POWER Error.	
0x49/0x50	Server Error.	If connected to Wi-Fi without server access, change your Wi-Fi or adjust the firewall settings.
0x48	Network Error.	If Wi-Fi drops during the upgrade, reconnect.
0x52/0x54	Download File Failure.	If Wi-Fi is weak or of poor quality, use a stronger network for faster downloads (avoid phone hotspots).
0x53/0x5A/ 0x5B/0x5C/ 0x60/0x61/ 0x62	Version Retrieval Failure.	

H55 (HP95x/90x/97x Series) Error Codes V1.0

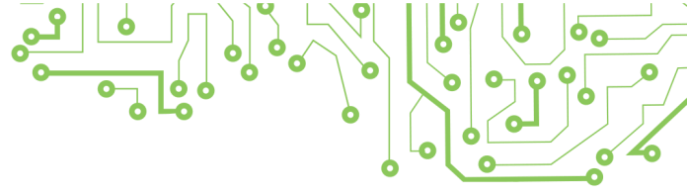
Error Code	Error Message	Solution
0xA1	VDD wire bond capacitor abnormality, entry into test mode, or incorrect frequency calibration.	①Check if the capacitors on the chip are loose. If not loose, reprogram the chip. ②If one chip consistently fails and other chips work correctly, contact our sales manager for assistance. ③If the same error occurs with other chips, contact our technical support for help.
0xA2	Chip erasure error.	①Reprogram the chip and ensure the probe doesn't slide during the process. ②If one chip consistently fails and other chips work correctly, contact our sales manager for assistance. ③If the same error occurs with other chips, contact our technical support for help.
0xA3	Writing to specified Flash address error.	
0xA4	Reading data from specified Flash address error.	
0xA5	Comparing data from specified Flash address error.	
0xA6	Abnormal communication with the security chip.	①Connect the corresponding JIG. In the "Setting-Software Info" interface, select "Recovery JIG" to update the program. Then try the chip operation again. ②If the issue persists, contact our technical support for help.
0xA7	Incorrect security chip key generation (writing). Incorrect chip version and CRC reading (testing).	
0xA8	Incorrect front door 62 command.	①Reprogram the chip and ensure the probe doesn't slide during the process. ②If one chip consistently fails and other chips work correctly, contact our sales manager for assistance.
0xA9	Incorrect front door command reading serial number data.	
0xAA	Incorrect front door serial number	



	validation.	③If the same error occurs with other chips, contact our technical support for help.
0xAB	Incorrect reading of 256 bytes of data from the front door.	
0xAC	Incorrect front door read/write operation.	
0xAD	Incorrect front door read/write operation.	
0xAE	Abnormal front door chip data reading.	
0x9F	Reversed chip.	①Reverse either the device or the chip and reprogram it. Make sure that the probes do not slide during the operation. ②If one chip consistently fails and other chips work correctly, contact our sales manager for assistance. ③If the same error occurs with other chips, contact our technical support for help.

H31 (HP91x/96x Series) Error Codes V1.0

Error Code	Error Message	Solution
0xA1	Error in Flash erasure.	①Reprogram the chip and ensure the probe doesn't slide during the process. ②If one chip consistently fails and other chips work correctly, contact our sales manager for assistance. ③If the same error occurs with other chips, contact our technical support for help.
0xA2	Error in writing the rear door EE command.	
0xA3	Error in reading the rear door EE command.	
0xA4	Error in comparing data in the rear door.	
0xA5	Error in reading front door command.	
0xA6	Error in front door command response data.	
0xA7	Error in front door algorithm command.	
0xA8	Error in writing front door command.	
0xA9	Error when attempting to enter test mode.	
0xAA	Failed writing of APP.	
0xAB	Abnormal data comparison.	
0xAC	Abnormal comparison of critical data.	
0x9F	Reversed chip.	①Flip the probes and reprogram once more, ensuring that the probes do not slide during the operation. ②If one chip consistently fails and other chips work correctly, contact our sales



		manager for assistance. ③If the same error occurs with other chips, contact our technical support for help.
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H36 (HP289 Series) Error Codes V1.0

Error Code	Error Message	Solution
0xA3	Failed serial number writing.	①Reprogram the chip and ensure the probe doesn't slide during the process. ②If one chip consistently fails and other chips work correctly, contact our sales manager for assistance. ③If the same error occurs with other chips, contact our technical support for help.
0xA4	Failed reading of Info data.	
0xA5	Communication failure with the front door.	
0xA6	Failed reading of data from the front door.	
0xA7		
0xA8	Failed comparison of data from the front door.	
0x33	Battery data loss.	Chips with batteries are not supported for rework. Please contact our sales manager.
0x9A	Chip with a battery.	
0x9F	Reversed chip.	①Flip the probes and reprogram once more, ensuring that the probes do not slide during the operation. ②If one chip consistently fails and other chips work correctly, contact our sales manager for assistance. ③If the same error occurs with other chips, contact our technical support for help.

6. Appendix I: Optional Accessories List

JIG Type	Applicable Products	Remarks
H55	HP 90x/95x Series	Bulk.
H31	HP 91x/96x Series	
H36	HP 289 Series	
Pending	HP289 Series Smart Version	Coming Soon.
Pending	HP96X Series Smart Version	

There are slight differences between the products in the material and the real thing, please take the real thing as the standard; we reserve the right to change the product design and specifications; all the information has been carefully proofread, if there is any printing error or omission of the company will not be responsible for the consequences arising from this; the company reserves the right to interpret the above publicity data; all other product or brand names that appear are trademarks or registered trademarks of their respective owners.