

mLink MP290
Portable Wireless Gateway
User Manual V1.0

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Read Before Operating

This manual must be carefully read by all individuals who have or will have the responsibility of using, maintaining or servicing this product. The product will perform as designed only if it is used, maintained and serviced in accordance with the manufacturer's instructions. The user should understand how to set the correct parameters and interpret the obtained results.

⚠️ WARNINGS !

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Proper Product Disposal at the End of Life



The Waste Electrical and Electronic Equipment (WEEE) directive (2002/96/EC) is intended to promote recycling of electrical and electronic equipment and their components at end of life. This symbol (crossed-out wheeled bin) indicates separate collection of waste electrical and electronic equipment in the EU countries. This product may contain one or more Nickel-metal hydride (NiMH), Lithium-ion, or Alkaline batteries. Specific battery information is given in this user guide. Batteries must be recycled or disposed of properly. At the end of its life, this product must undergo separate collection and recycling from general or household waste. Please use the return and collection system available in your country for the disposal of this product.

1. Product Overview

MP290 is a gateway platform for on-site real-time forwarding or uploading of terminal device data. It communicates with terminal devices such as VOXI (Mounti), NEO, etc. using short-range wireless module MP280L. After the gateway collects terminal device data, it can upload the information to the cloud server through the internal BLE module. If there is no available network connection on site, this device can also relay data with another host within 2~3Km. The MP290 has a built-in BLE Bluetooth module, which can be easily configured or read data with the mPower Suite app of the mobile phone.

Main Feature:

Compact Structure

- Compact structure, rubber boot protection

Easy Operation

- Single button operation

Bluetooth 4.0

- Built-in BLE4.0 module, connected to mobile phone mPower Suite app

Data transmission

- LORA short-range wireless communication

mPower Suite App

- Supports 8 Bluetooth device connections at the same time, and can operate simultaneously on each connection
- Support real-time data monitoring and equipment maintenance, as well as data record downloading and sending, etc.
- Real-time monitoring supports sound and/or vibration alarm, and supports remote phone SMS alarm and/or email alarm
- Support local storage, browsing and email sending of data and events
- Support real-time upload of data to the cloud

Durable

- Continuous running time with full power is greater than 24 hours

2. Operation

There is only one button on the MP290 portable gateway, which is used to power on/off the unit and start the Bluetooth connection function. Other operations such as registering the device, reading data, checking status, etc. all need to be performed on the mobile phone mPower Suite app.

2.1. Power On

In power-off state, press the button for 5 seconds, the green LED light is on, mLink power on. After releasing the button, the mLink automatically enters the Bluetooth pairing state, and the green indicator light flashes.

If the red indicator light is on after 5 seconds of pressing the button, it means that the battery

is low. After releasing the button, the mLink will automatically shut down. Please charge the mLink.

2.2. Power Off

In power-on state, press the button for 5 seconds, the red LED will be on. After the button is released, the mLink will automatically shut down. It should be noted that the mLink will automatically shut down when the battery is too low.

2.3. Activate Bluetooth

In power-on state, press the button, the LED indicator will flash green, and the mLink enters the Bluetooth pairing state. At this time, you can search and connect to the mLink on the mobile app. After the connection is successful, the LED will off and the information of the mLink will be shown on mPower Suite. The Bluetooth pairing will be automatically cancelled after the indicator flashes for a period of time and return to normal working status.

2.4. Alarm Indication

When the battery is low, the LED flashes green to remind the user to charge. In addition, you will receive a more intuitive low battery warning message on mPower Suite.

2.5. Charging

Please use mPower charger adapter to charge the mLink. A full charging takes about 5 hours.

3. User Interface

All data of MP290 portable gateway is viewed on mPower Suite, and all connected wireless devices are managed through the app.

3.1. mPower Suite App

mPower Suite Android version is an application software based on the Android mobile platform. As part of the mPower Electronics application service, it provides the basic software functions required during the use of the device.

main feature:

1. Supports 8 Bluetooth device connections at the same time, and can operate simultaneously on each connection;
2. Support real-time data monitoring and equipment maintenance, as well as data record downloading and sending;
3. Real-time monitoring supports sound and/or vibration alarm, and supports remote phone SMS alarm and/or email alarm;
4. Support local storage, browsing and email sending of data and events;
5. Support real-time upload of data to the cloud.

3.2. Operating Environment

3.2.1. Hardware Requirement

Devices such as Android phones and Android tablets.

3.2.2. System Requirement

Android (6.0 and above)

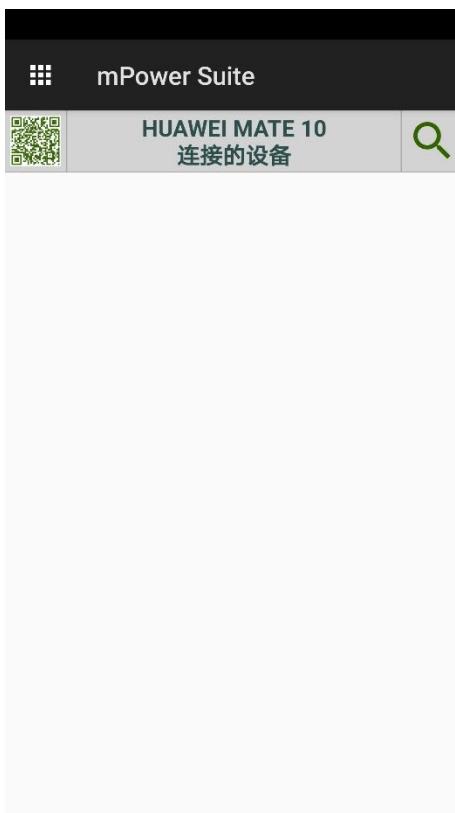
3.2.3. Operating Environment Requirement

Safety area, non-hazardous.

3.3. Operation

3.3.1. Search and connect detectors

1、Run App, click  button, as shown in Figure 1.



2、Click to select detector, as shown in figure2.



3、Repeat steps 1 and 2, to connect other detectors. As shown in figure 3. Up to 8 detectors can be connected at the same time.



图 3 连接多个仪器

3.3.2. Disconnect the detectors

Click the button  below the detector icon to disconnect

3.3.3. Shortcut buttons

The short buttons are:

1) Disconnect 

2) Bluetooth connection (status) 

If the Bluetooth connection of the mLink is lost, the panel of the mLink is grayed out. Clicking on the Bluetooth connection (status) will try to reconnect.

3) Click the mLink icon or the blank area on the right to enter the detail operation screen of the mLink



If the Bluetooth connection of the mLink is lost, the panel of the mLink is grayed out. Clicking on the mLink icon will try to reconnect.

3.3.4. mLink Operation

The operation of the wireless gateway is divided into "event", "system" and "squad". Click on the mLink panel to enter the wireless gateway operation, the App will automatically enter the "squad" screen for wireless real-time monitoring.

mPower wireless devices need to be registered with the wireless gateway before join the wireless system. Click "System" to enter the system configuration.

3.3.4.1. System

Click "Register Device" to start the operation of wireless device registration to the gateway.



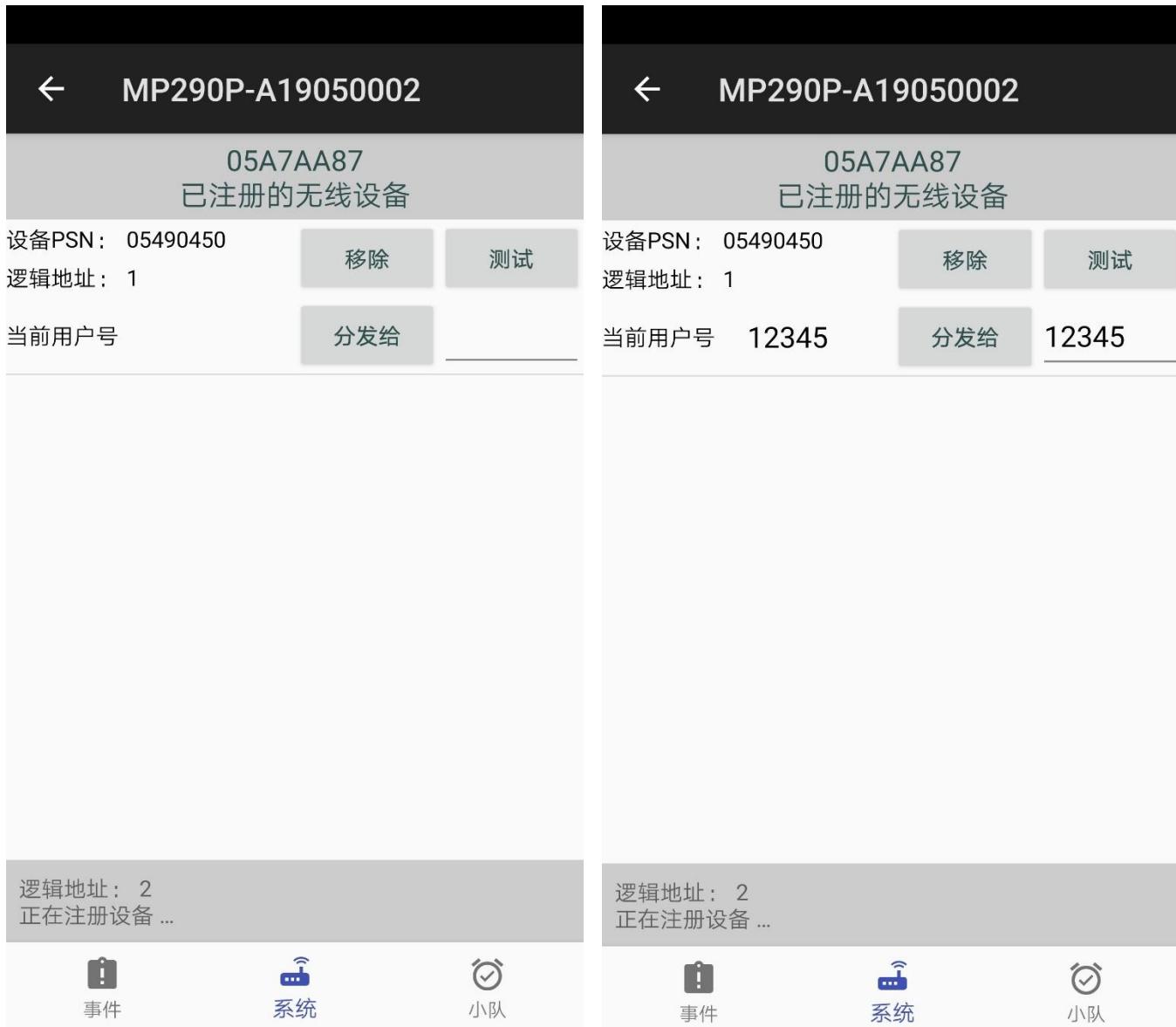
After the device is registered, it will be shown in the list. Up to 50 devices can be registered (but 8 devices are connected at the same time).

Click "Remove" to unregister the device;

Click "Test" to check the device. After receiving the command, the buzzer of the device will sound and flash the light.

After entering the device holder number on the lower right side, click "Distribute to" to send the user ID to the device.

Note: This user ID only supports ASCII characters, no Chinese.



After the device is registered, the wireless gateway starts to monitor the detectors.



3.3.4.2 Team

Click "Team" to start real-time monitoring

At the top of the screen is the status of the gateway, including the battery, Bluetooth and the last update time (updated every second).

Below is a list of online detectors. Detector information includes wireless signal, battery, status and update time, and alarm duration (if there is an alarm). If you want to view the more information of the detector, click on the detector, it will be highlighted, and the information of each sensor of the detector will display: gas name, reading, status.

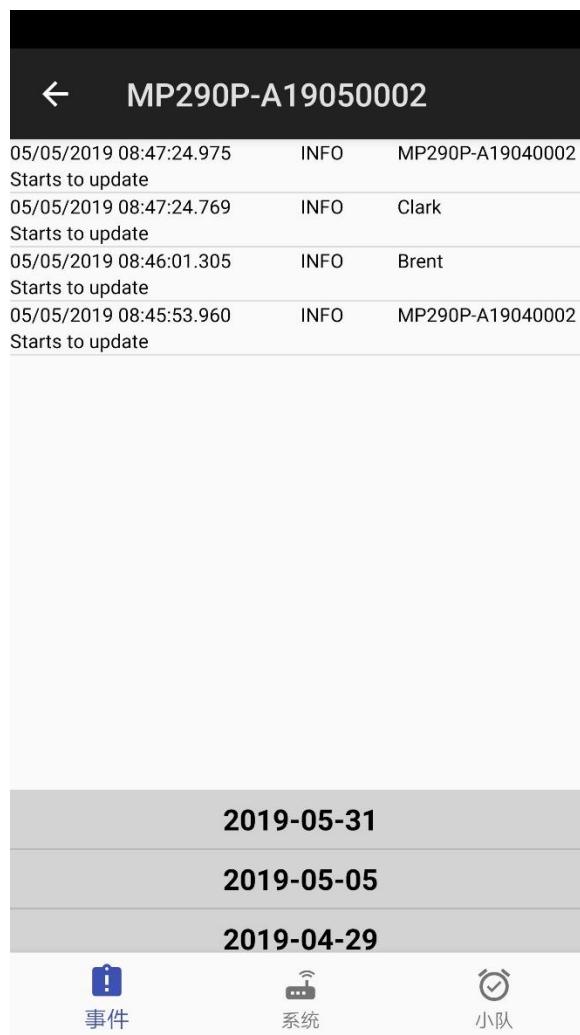
note:

- 1) Only one detector can be selected in the system at the same time.
- 2) When the detector is not selected, the system reads the detector information every 60 seconds; if the detector is selected, the system reads the detector information every 15 seconds.
- 3) After entering the gateway operation (real-time monitoring), the app starts the sound and vibration alarm, you can temporarily turn off the sound alarm in the app settings.



3.3.4.3 Event Log

Click "Event" and select a date from the date list at the bottom of the screen to view daily event records.



3.4. Software Information

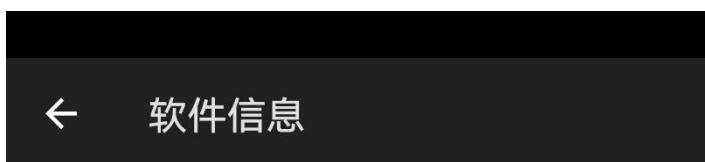
Click the button  on the main screen to show software information.

Including "EULA" (End User License Agreement), "Software Settings", "Data Recording", "Event Recording" and "Software Log".

3.4.1. EULA

Click "EULA" to view App License related content.

Note: If you do not agree to any terms of the EULA, the user should delete the software immediately.



END USER LICENSE AGREEMENT

THIS SOFTWARE END USER LICENSE AGREEMENT ("EULA") IS A LEGAL AGREEMENT BETWEEN YOU (EITHER AN INDIVIDUAL OR, IF PURCHASED OR ACQUIRED BY OR FOR AN ENTITY, AN ENTITY) AND MPower. IT PROVIDES A LICENSE TO USE THIS SOFTWARE AND CONTAINS WARRANTY INFORMATION AND LIABILITY DISCLAIMERS. BY DOWNLOADING, INSTALLING OR USING THE SOFTWARE YOU ARE INDICATING YOUR ASSENT TO THE TERMS OF THIS LICENSE. IF YOU DO NOT AGREE TO ANY OF THE FOLLOWING TERMS, DO NOT DOWNLOAD OR INSTALL THE SOFTWARE, DISCONTINUE ITS USE IMMEDIATELY AND DESTROY ALL COPIES IN YOUR POSSESSION.

1. DEFINITIONS

- "MPower" means MPower Electronics Inc.
- "Software" means the executable code of MPower software product, additional tools, libraries, source files, header files, data files, any updates or error corrections provided by



3.4.2. Software Setting

Click "Software Settings" to set up the app. The settings include:

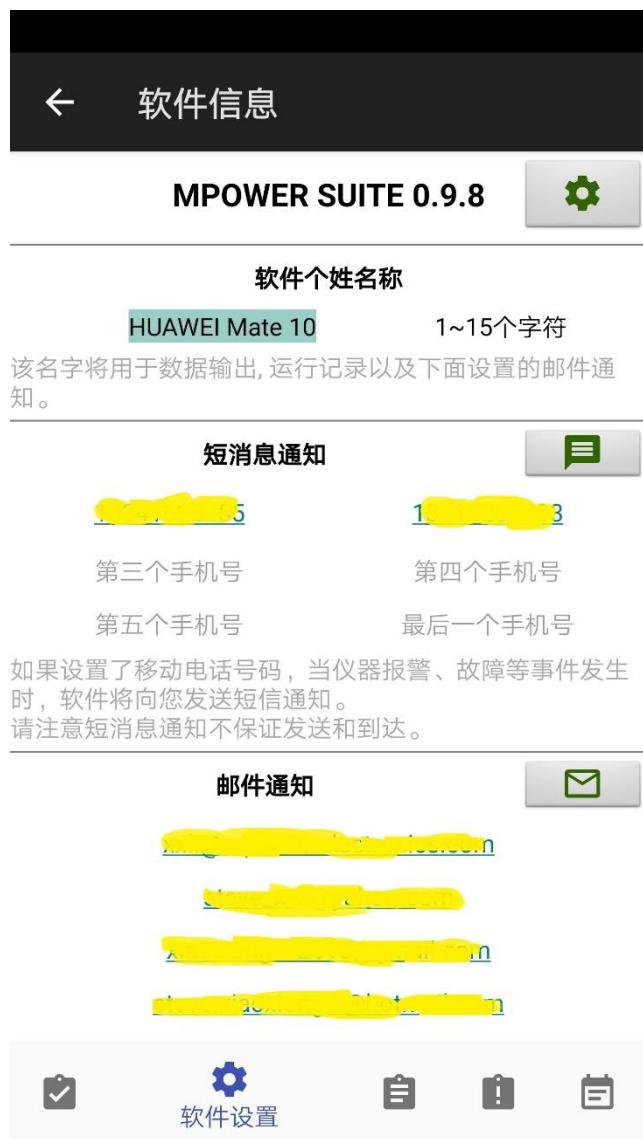
- 1) Software name
- 2) Short message notification: up to 6 mobile phone numbers
- 3) Email notification: up to 5 receiving mailboxes
- 4) Internet-based services

Join the customer experience improvement program (selected by default)

Enable remote support (selected by default)

note:

- 1) If you do not join the customer experience improvement plan, you cannot select remote support;
- 2) If the user encounters problems when running the app and cannot be solved through simple communication, remote support needs to be turned on to obtain the underlying data during the operation to troubleshoot.
- 3) The remote support is automatically closed after the App restarts
- 5) Temporarily turn off the alarm sound
- 6) Display all hidden data records (data records of a single device can be hidden on the data record page)



3.4.3. Data Logging

Click "Data Record" and select the instrument/user from the instrument/user list at the bottom of the screen to view the data record. At the same time, you can send data records by email (in txt text), and hide the record (retrieved by "show all records" in the software settings).

Data records include:

- 1) User data records obtained by the wireless gateway through wireless communication;
- 2) The instrument data record obtained by NEO through real-time communication on the panel.

Note: NEO downloads the datalog of the instrument through the panel is not in this data record.



01/28/2019 16:27:47.485 01/28/2019 16:39:24

0598C254, 90, 90, OK

一氧化碳, OK, 0, ppm

硫化氢, OK, 0.0, ppm

甲烷, OK, 0, ppm



3.4.4. Event Log

Click "Event" and select a date from the date list at the bottom of the screen to view daily event records.

软件信息		
04/28/2019 16:38:50.503	INFO	MP290P-A19040002
Starts to update		
04/28/2019 15:20:35.127	INFO	MP290P-A19040002
Starts to update		
04/28/2019 15:20:35.007	INFO	MP290P-A19040002
No update		
04/28/2019 15:05:47.325	INFO	Operation
Monitoring user from none to Brent		
04/28/2019 15:05:30.519	INFO	MP290P-A19040002
Starts to update		
04/28/2019 15:05:30.337	FAULT	Brent
Fault		
04/28/2019 15:05:30.333	ALARM	Brent
Gas Alarm		
04/28/2019 15:05:30.323	INFO	Brent
Starts to update		
04/28/2019 13:52:42.943	INFO	040319040009
Starts to update		
04/28/2019 13:52:26.968	INFO	MP290P-A19040002
Starts to update		
04/28/2019 08:09:02.952	INFO	MP290P-A19040002
Starts to update		
04/28/2019 08:08:45.714	INFO	Operation
Monitoring user from none to Brent		

2019-04-29

2019-04-28

2019-04-01

事件记录

3.4.5. Software Log

Click "Software Log" and select the date from the date list at the bottom of the screen to view the daily log. This log is mainly used for general app operation error checking.

