

I. APP Operation Guide

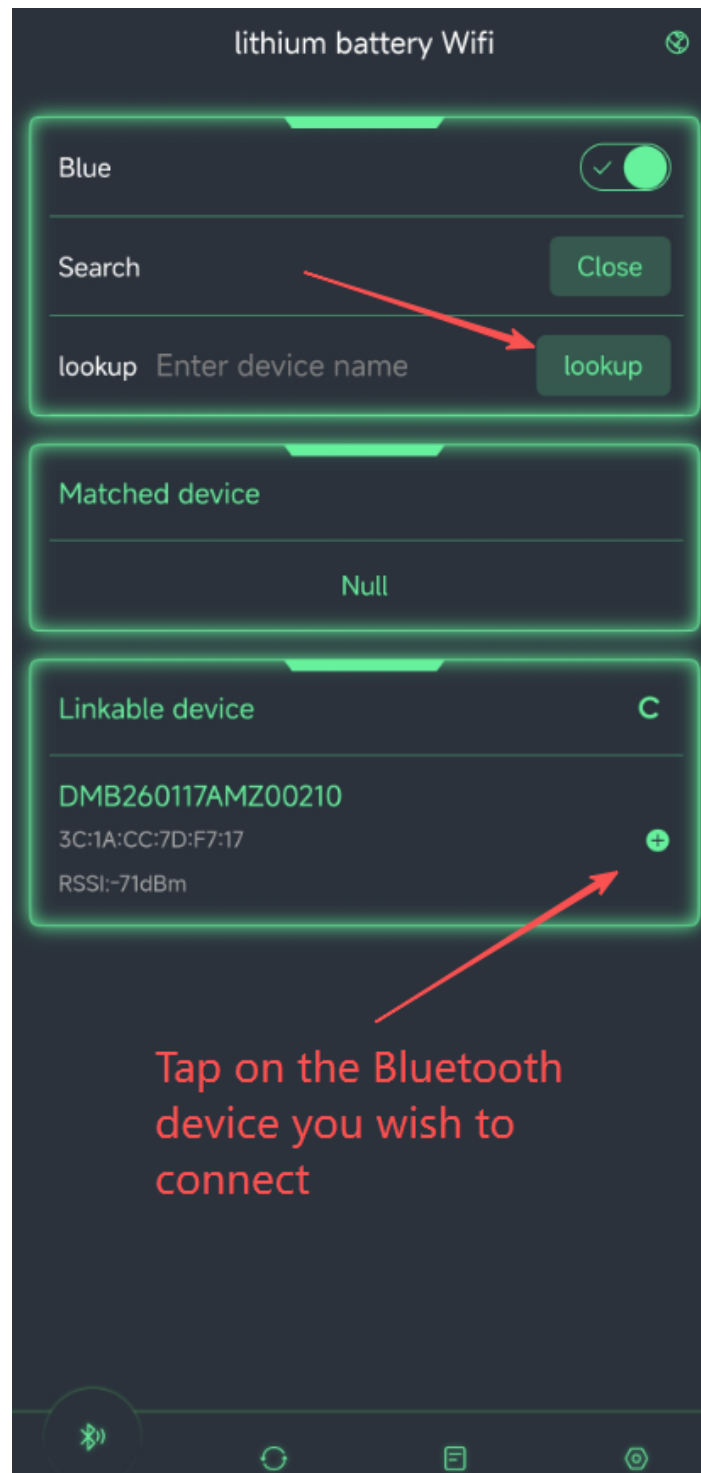
1. Download and Install the "lithium battery wifi" App

- **For Android Devices:** Please scan the QR code below to download and install the Android version of the "**lithium battery wifi**" app.
- **For iOS Devices:** Please go to the App Store and search for "**lithium battery wifi**" to download and install the app.



2. Searching for and Connecting Bluetooth Devices

- After opening the app, search for Bluetooth devices.
- Select the device you wish to connect to and establish a Bluetooth connection.



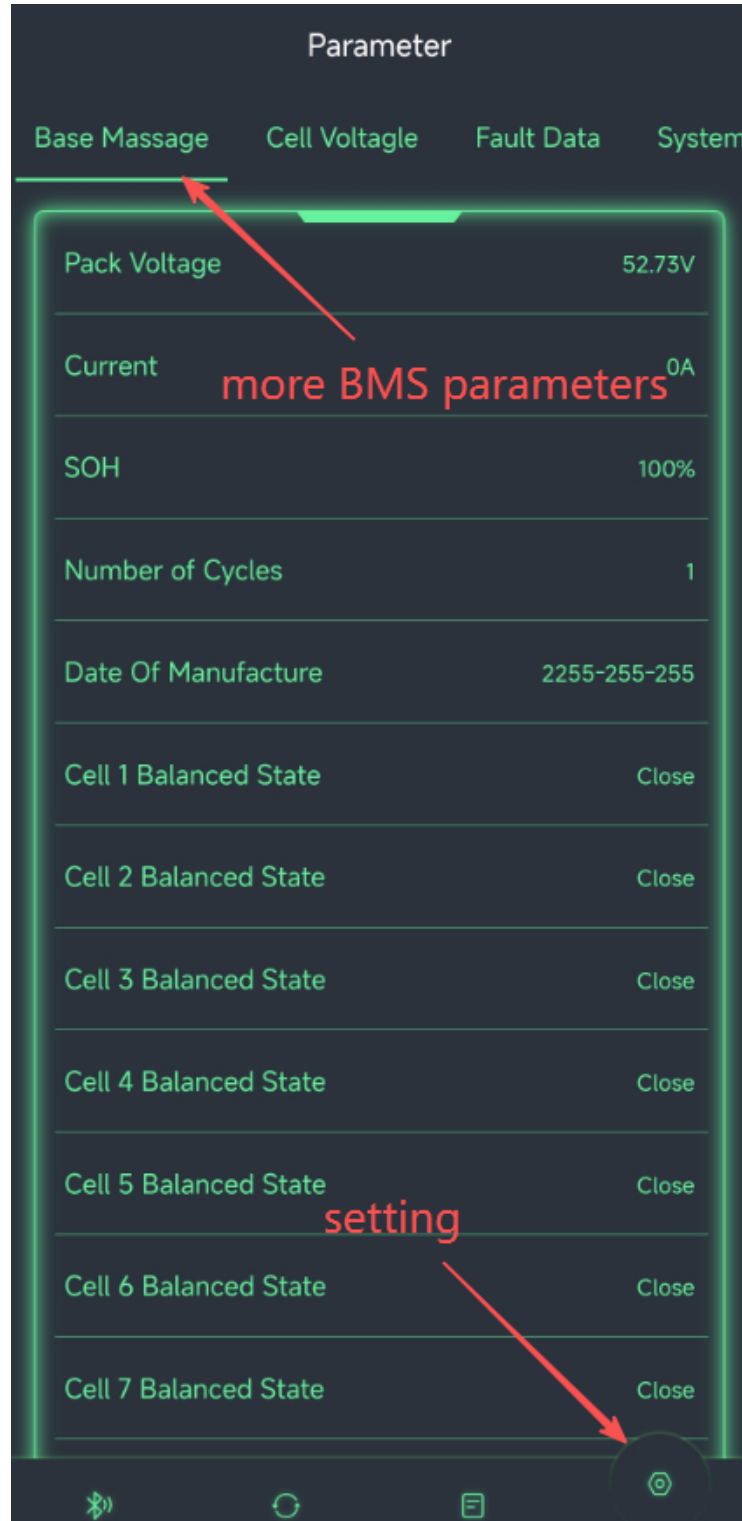
3. Connection Successful - Home Screen Display

As shown in the figure below, once the Bluetooth device is successfully connected, the app will automatically navigate to the home screen, where you can view the battery's data.



4. Accessing the Settings Interface

Navigate to the Settings interface to view more BMS parameters, configure BMS actions, and modify editable settings.

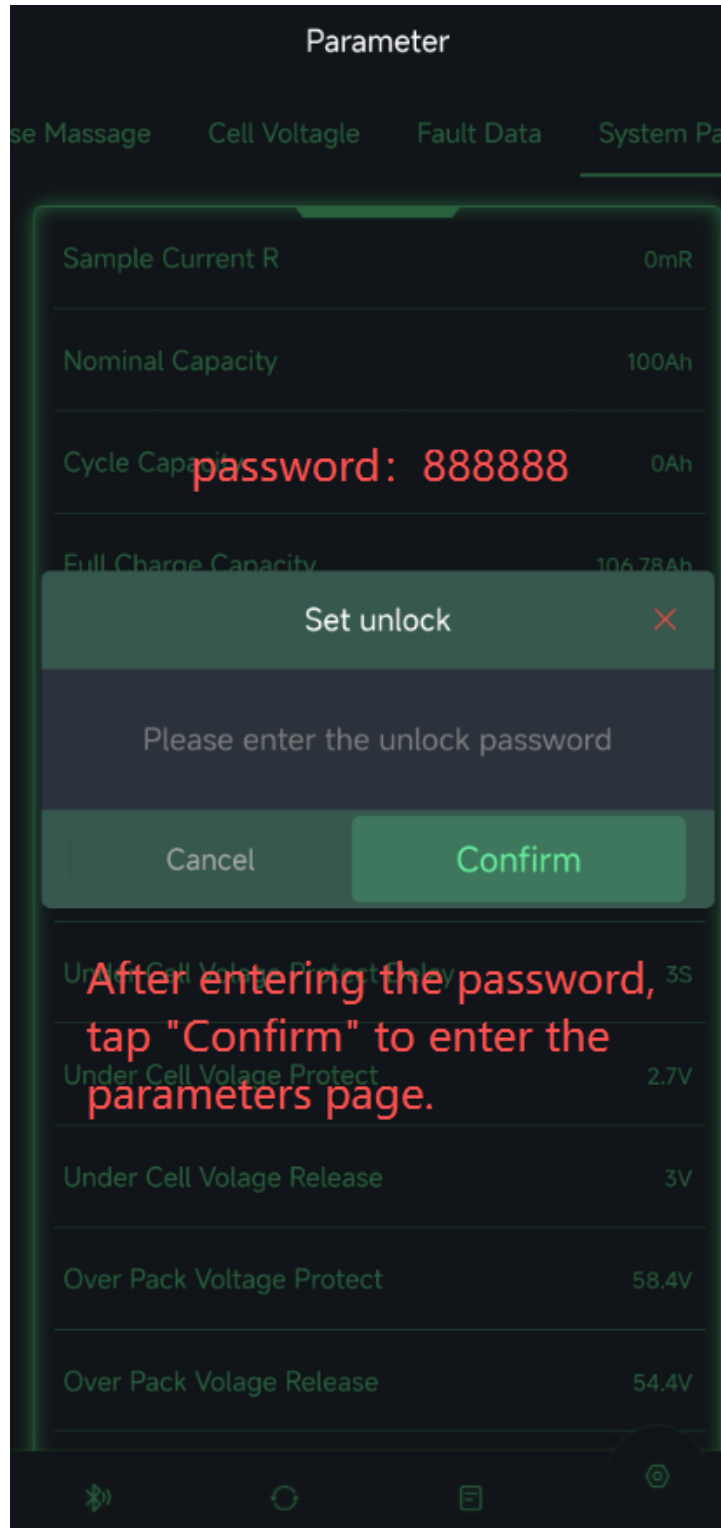


In the Settings interface, you can switch to different sub-interfaces by selecting the corresponding tabs at the top. Swipe left on the tab selection area to reveal more sub-interface options, then tap to access the desired one. For example, tap the **Cell Voltage** tab to enter the cell voltage display page, where you can view detailed cell voltage information. Refer to the image below for an illustration.

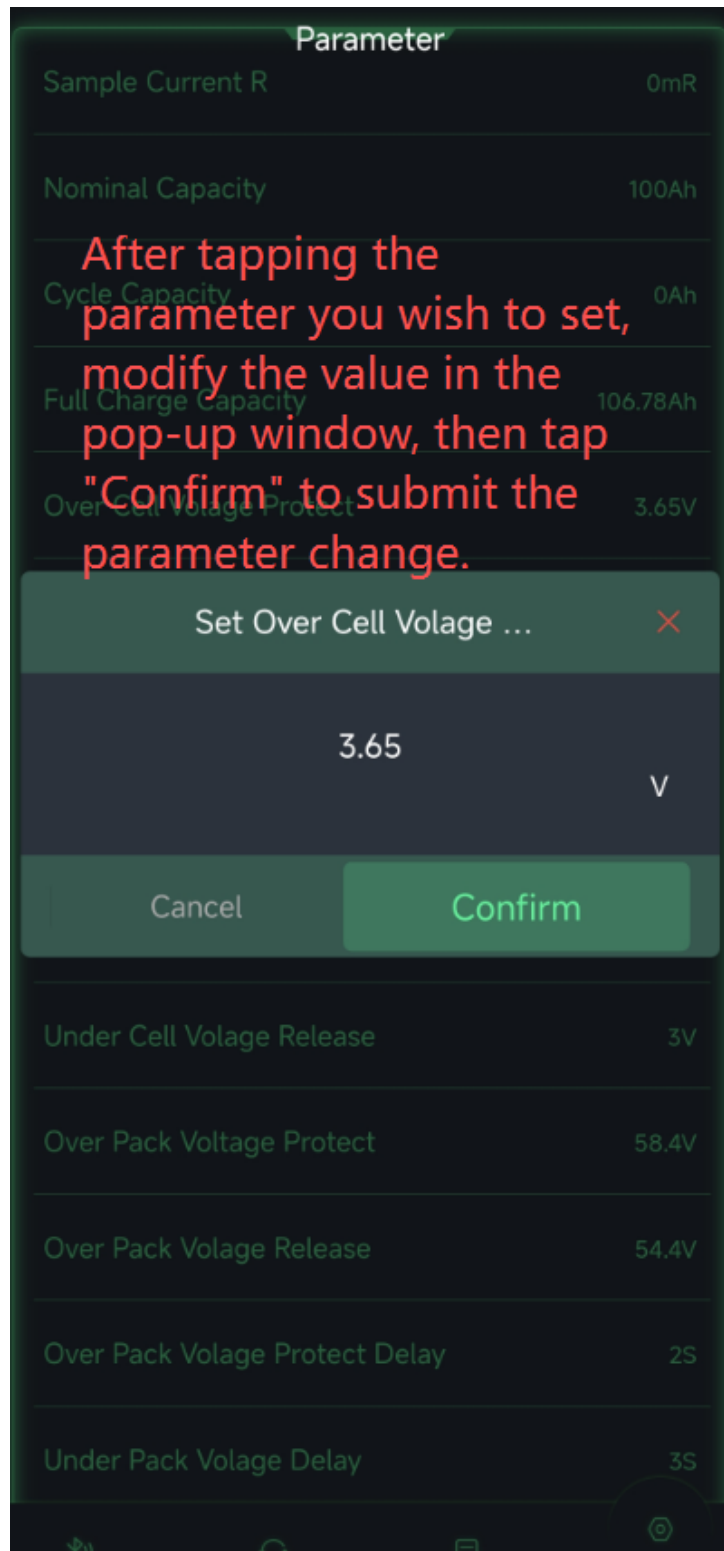


5. Accessing the Parameter Settings

To configure editable BMS parameters and control BMS actions, enter the settings interface. Password required: 888888.



As shown in the image below, in the parameter settings interface, tap the parameter you want to configure. Then, enter the desired value in the pop-up settings window and click "Confirm" to modify the BMS parameter.

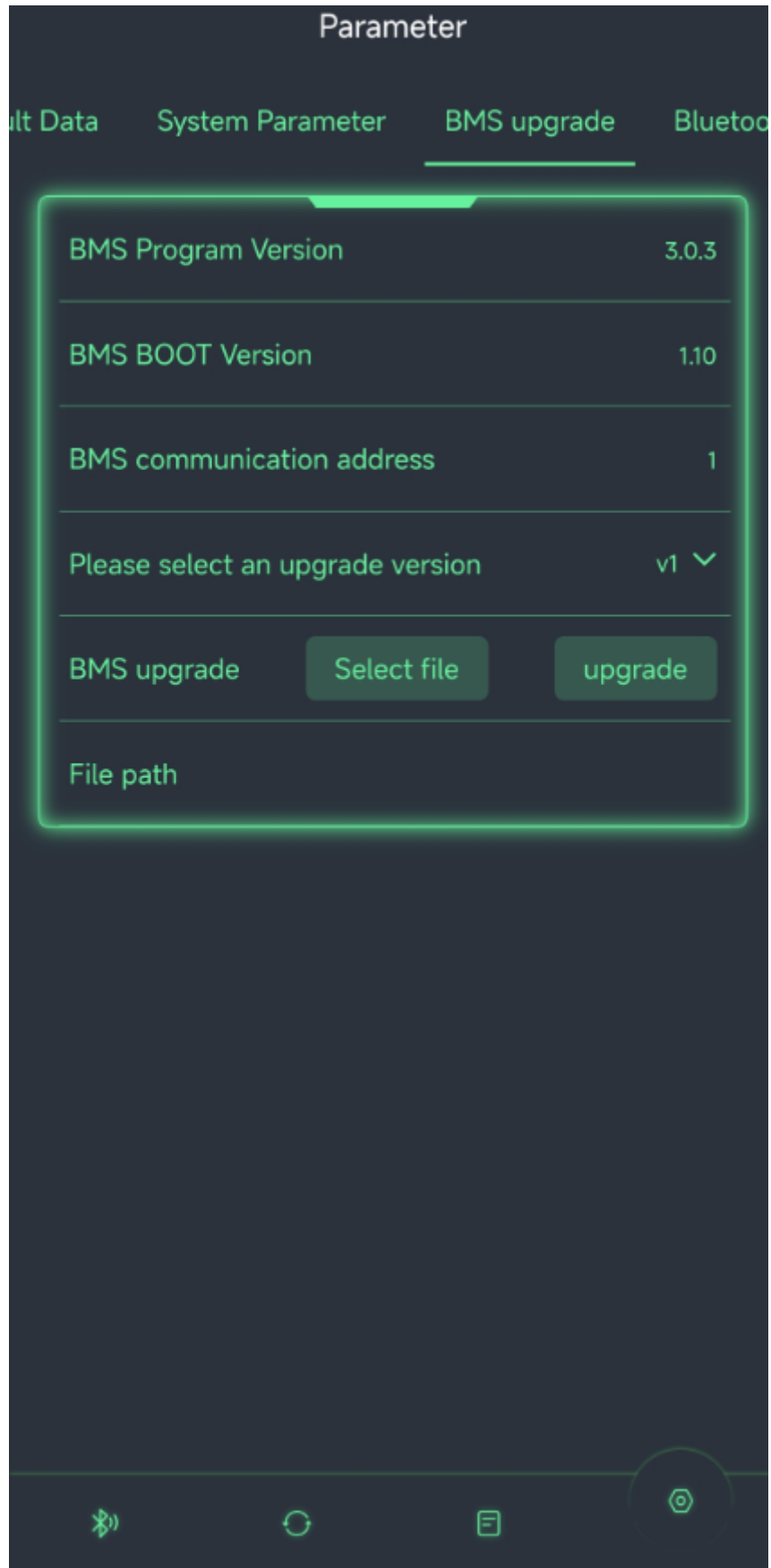


6. Upgrading BMS Firmware

In the BMS Upgrade interface, you can import the BMS upgrade file. The file is then transferred from the app to the communication module via Bluetooth, and the module subsequently upgrades the BMS via the serial port. Accessing the BMS Upgrade interface requires entering the password: **888888** (the process is the same as entering the Parameter Settings interface described earlier). The detailed steps for upgrading the BMS via the app are described below:

Step 1: In the BMS Upgrade interface, tap "**Select File**". Navigate to and select the BMS upgrade file from your phone's file manager. Once selected, the app will display the loaded file path, indicating successful import. Step 1 is now complete.

Step 2: Initiate BMS Upgrade. After successfully importing the upgrade file in Step 1, tap the "**Upgrade**" button. A confirmation pop-up will appear. Tap "**Upgrade Now**" to initiate the BMS upgrade process.



Notes on the Upgrade Progress Bar

The app supports two methods for upgrading BMS firmware via Bluetooth:

1. Online Bluetooth Upgrade:

In this method, the module does not first save the complete BMS upgrade file via Bluetooth before upgrading the BMS via the serial port. Instead, it first instructs the BMS to enter the boot upgrade state. Then, it starts downloading the upgrade file from the app. Each time the module receives a full *frame* of BMS upgrade data (as defined by the BMS serial port upgrade protocol) via Bluetooth, it immediately transmits it to the BMS.

- **Progress Bar Meaning:** When the progress bar appears on the app, the BMS is already in the boot upgrade state. The progress bar displayed reflects the actual progress of the BMS upgrade.

2. Offline Upgrade Package Download:

In this method, the module first downloads the complete BMS offline upgrade package via Bluetooth. Only after the download is complete is the BMS upgrade operation triggered.

- **Progress Bar Meaning:** When the progress bar appears on the app, it indicates the progress of downloading the BMS upgrade file to the module. The BMS is not in the boot upgrade state at this point; the actual upgrade has not yet started. After the progress bar completes (i.e., the file is fully downloaded to the module), the module then triggers the BMS to enter the boot state and begin the upgrade.

Summary: The process represented by the progress bar differs between these two upgrade states, as explained above.

Comparison of the Two Methods:

Method	Pros	Cons
Online Upgrade	The progress bar on the app directly and intuitively reflects the real-time progress of the BMS upgrade.	Requires a stable Bluetooth connection throughout the process. If the Bluetooth connection is interrupted, the upgrade will fail, leaving the BMS in the boot state. The upgrade process must then be restarted via the app.

Method	Pros	Cons
Offline Package Download	The upgrade file can be transferred to the module more quickly. After successful verification, the upgrade is triggered. There is no risk of upgrade failure due to an incomplete file during the BMS upgrade phase. Once the file download is complete, the upgrade process will continue even if the Bluetooth connection is disconnected.	The progress bar on the app does not reflect the actual progress of the BMS upgrade itself. The upgrade occurs after the module finishes downloading the file. The duration depends on the BMS upgrade file transfer protocol and upgrade mechanism.

Important: Both upgrade methods are valid and will successfully upgrade the BMS, although their processes differ.

7. WiFi Configuration Interface

This interface allows you to configure the module to connect to an internet-enabled WiFi hotspot. Once connected via WiFi, the module can report BMS data to the server platform, enabling remote monitoring and control of the BMS through the platform.

- Accessing the Interface: Enter the password 888888 to access the WiFi Configuration interface (the process is identical to entering the Parameter Settings interface described earlier).

Interface Overview:

- The WiFi Name and WiFi Password fields display the hotspot name and password currently saved on the module. If a field is empty, it indicates the module has no corresponding information saved.
- The Module Network Status field at the bottom shows the module's current connection status.

Configuring a New WiFi Connection:

You can configure the module to connect to a nearby, internet-enabled WiFi hotspot using one of the following methods:

1. Manual Entry:

- Enter the WiFi hotspot name (SSID) in the "WiFi Name" setting field.

- Enter the corresponding password in the "WiFi Password" setting field.
- Tap the "Set" button. The module will save this information and attempt to connect to the specified hotspot.

2. Selection from List (Recommended):

- Tap on the "WiFi Name" field. A list of available WiFi networks detected by your phone will appear at the bottom of the app screen.
- Select the desired WiFi network from this list. The app will automatically fill the "WiFi Name" field.
- Manually enter the password for the selected WiFi network in the "WiFi Password" field.
- Tap the "Set" button to save and connect.

❑ Important Notice:

The module's WiFi only supports the 2.4GHz frequency band. Do not attempt to connect it to a 5GHz WiFi hotspot. Connecting to an incompatible band will result in connection failure and the feature will be unusable.

