HOBBYWING HW-SMD004DUL00 Multifunction LCD Program Box User Manual

Contents

HOBBYWING HW-SMD004DUL00 Multifunction LCD Program Box

Product Information

Specifications

- **Model:** Multifunction LCD Program Box Pro
- **Exterior Size:** 105.6mm (Length) x 59mm (Width) x 24.4mm (Including wheel height)
- **Weight:** 85g
- **Input Voltage:** DC 5V~12.6V

Product Usage Instructions

Thank you for purchasing this HOBBYWING product! Please read this declaration carefully before use. Once you use the product, we will assume that you have read and agreed with all the content. Any improper use may cause personal injury and damage to the product and related devices, so please strictly follow the instructions during installation and use. Because we have no control over the use, installation, or maintenance of this product, no liability may be assumed for any damages or losses resulting from the use of the product. We do not assume responsibility for any losses caused by unauthorized modifications to our product. Besides, we have the right to modify our product design, appearance, feature, es and usage requirements without notification. We, HOBBYWING, are only responsible for our product cost and nothing else as a result of using our product. Regarding the possible semantic difference between two different versions of declaration, for users in mainland China, please take the Chinese version as standard; for users in other regions, please take the English version as standard.

Features

- As a programming device, directly use the built-in LCD screen to display, set, and share ESC parameters (import).

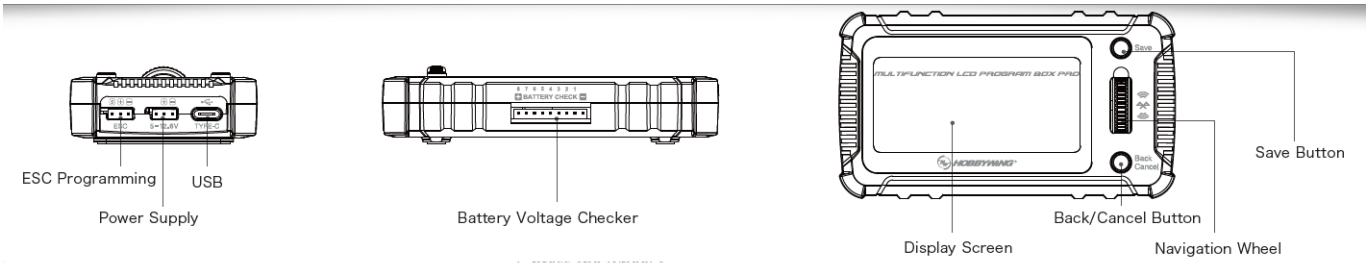
- Connect the ESC to a computer using a USB adapter. Use the USB Link application software on the computer to upgrade the ESC firmware and set the parameters.
- The OTA Bluetooth module: Using the mobile APP to set ESC parameters, upgrade firmware, and read data.
- Detect the overall voltage of the lithium battery and the individual voltage of each cell.

Scope of Application

- XERUN series car model brushless ESC (V2.0 and above)
- EZRUN series car model brushless ESC (V2.0 and above)
- PLATINUM series air model brushless ESC
- SEAKING Pro series ship model brushless ESC
- Some ESCs of QUICRUN series Remarks:
    1. The scope of application here can also be understood as all the ESCs that the old LCD G2 program box and OTA Bluetooth module can support.
    2. Whether the programmable box is supported depends on the specific ESC model. If necessary, you can check the ESC information introduction on the official website or consult the Hobbywing official.
    Hobbywing official website: **https://www.hobbywing.com**

Product Icon and Button/Interface Description

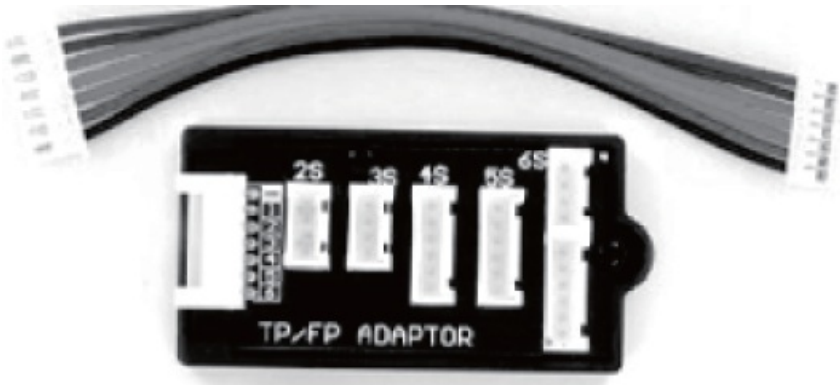
Refer to the manual of the ESC and use the correct programming interface to connect with the program box. Do not supply power to the program box unless specified in the ESC instructions.



- Navigation Wheel: Select the target menu by rotating the wheel up and down, press the wheel to enter the item.
- Save: Save button to save parameter settings.
- Back/Cancel: The eturn button is used to return to the previous menu. If you press and hold this button for about 2 seconds, you will be returned to the home page.
- ESC (S + -): This interface is used to connect to the programming interface of the ESC.
    - Remarks: Different types of ESCs may have different programming interfaces. For example, some ESCs have an independent programming port, some ESCs share the interface with the fan, and someESCs have a throttle signal line. Please check the manual of the ESC and use the correct programming interface to connect with the program box.
- 5-12.6V (+ -): The power supply interface of the program box. Please use an independent battery or UBEC to supply power to the program box from this interface if the programming interface of the ESC has no voltage output (such as some old OPTO ESC; please refer to the ESC manual).
    - PLEASE NOTE: DO NOT SUPPLY POWER TO THE PROGRAM BOX UNLESS THE ESC INSTRUCTIONS STATES TO SUPPLY THE PROGRAM BOX WITH EXTERNAL POWER!!!
- TYPE-C: Connect the program box to a computer.
- Battery Checker: This interface is connected to the balance charging plug of the battery pack and is also used

to detect the overall voltage of the battery pack and the individual voltage of each cell.

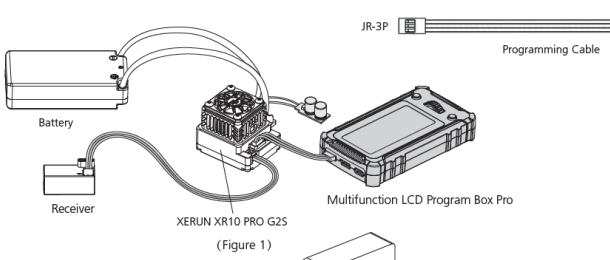
- Remarks: Please pay attention to the wiring direction to avoid damage to the equipment; The pin pitch of this interface is 2.54mm, and is consistent with XH, EH, HP/PQ standards. The battery balance plug can be directly inserted into this interface.
- However, some battery-balancing charging plugs may have a different pin pitch and cannot be directly connected. It is recommended to use the conversion cable shown in the right figure to connect.



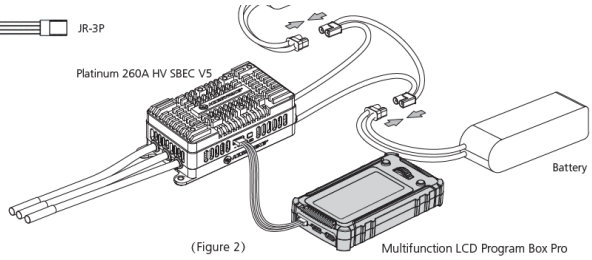
User Guide

Set the Parameters of the ESC as an Independent Device

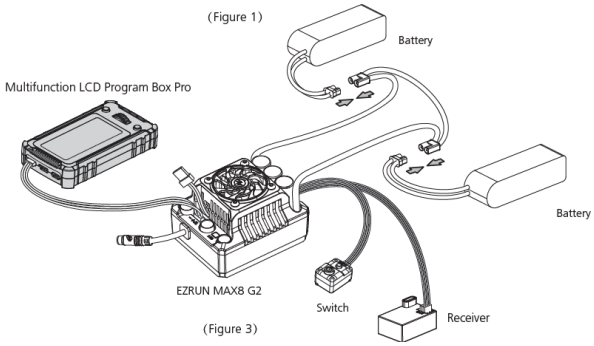
1. Determine the programming interface of the ESC (check ESC manual) and use the corresponding connection method:
   - ESC has an independent programming interface: Use a programming cable (JR/DuPont connectors) to connect the programming port of the ESC to the program box interface.
   - Programming interface shared with fan interface: Remove fan plug, use programming cable to connect fan interface to program box.
   - Programming port is throttle cable: Pull the ESC cable from the receiver and insert it into the ESC socket of the program box.



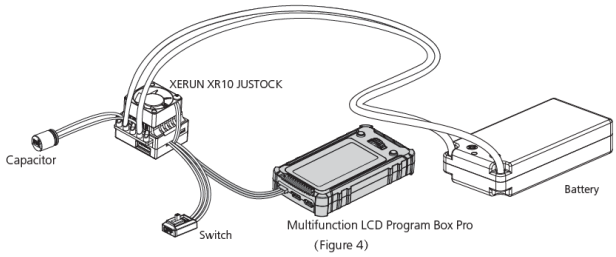
(Figure 1)



(Figure 2)



(Figure 3)



(Figure 4)

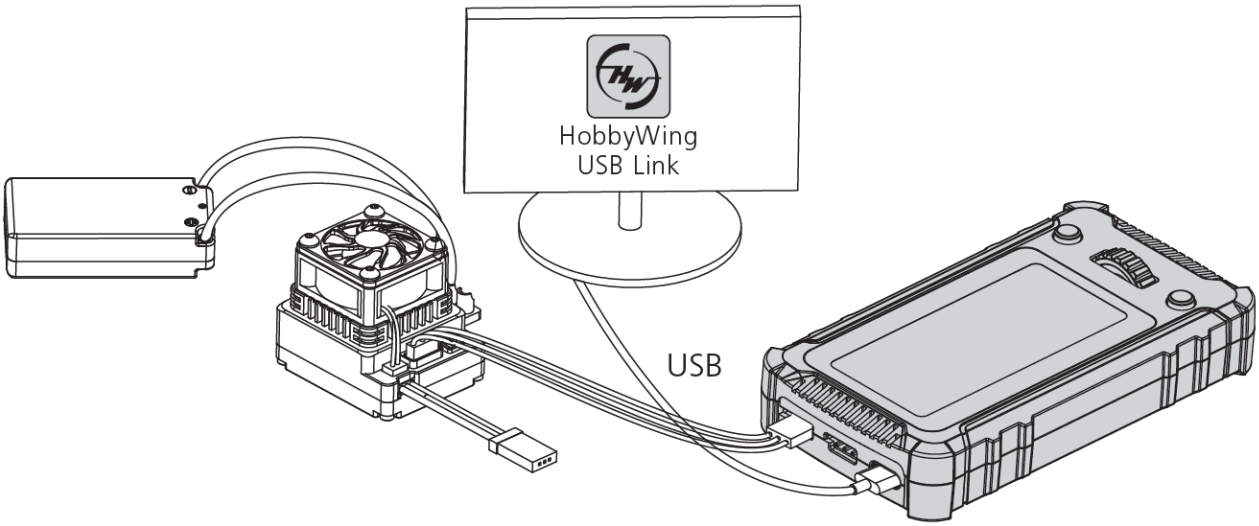
2. Determine whether the programming interface of the ESC has voltage output and if the program box needs a separate power supply (check the ESC manual). The majority of Hobbywing ESCs have voltage output equipped. This does not require an external power source. However, there are also a few older ESCs whose programming interface does not have voltage output (such as Platinum-150A-OPTO V2). In that case, you would need to use an independent battery or UBEC on the “5-12.6V (+ -)” interface of the program box to power

the device.

3. Connect the battery to the ESC and turn on the ESC switch (if there is a switch). The program box will display the homepage interface. Select the corresponding function menu according to your needs.

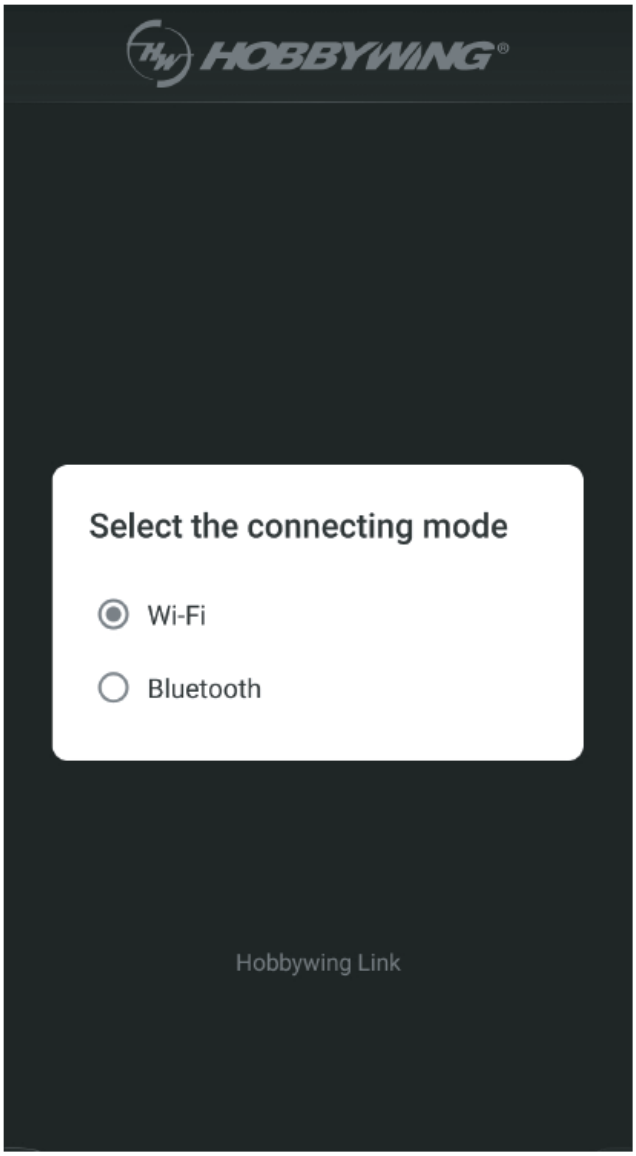
Computer USB Connection (WINDOWS ONLY): Connect the ESC to a computer for parameter setting and firmware update.

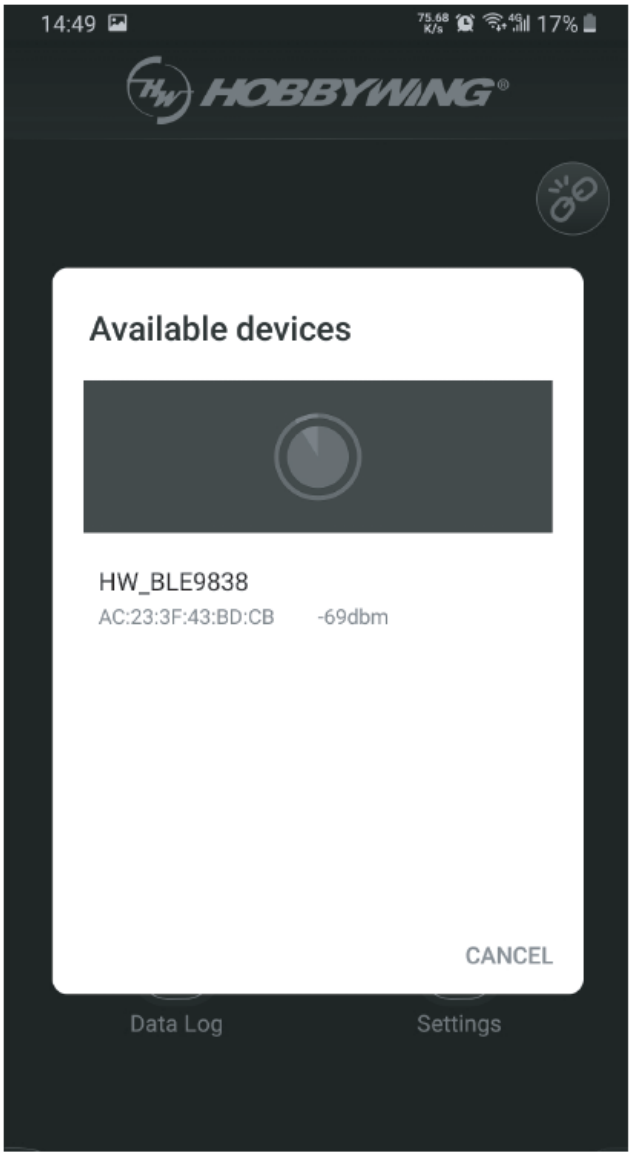
Connect the program box to the ESC according to the connection method introduced in the points above. Next, connect the program box to the computer using a USB cable. Open the HOBBYWING USB LINK application software on the computer and connect the ESC to a battery. Finally, turn on the ESC switch (if any), and the HOBBYWING USB LINK software on the computer can establish a connection with the ESC. Establish parameter settings and firmware upgrades on the computer.
(HOBBYWING USB LINK software can be downloaded from Hobbywing's official website, **https://www.hobbywing.com**)



As an OTA Bluetooth module, set parameters, update firmware, and read data for ESCs

1. Connect the ESC to the program box according to the correct connection method (as described in the points above).
2. Download the official HW LINK V2 APP on the mobile phone. For iOS, search for Hobbywing directly in the App Store; for Android, search for Hobbywing in Google Play, or download it from the Hobbywing official website (**https://www.hobbywing.com**).
3. Power on the ESC and open the APP. When you enter the APP for the first time, you will be prompted to choose a Bluetooth connection or a WiFi connection. Here, choose the Bluetooth connection. If you want to switch to a Bluetooth connection after using a WiFi connection, please click "Select Connection Method" in the "System Settings" to change the settings. Click the ESC logo on the upper right-hand corner of the APP. The Bluetooth devices that can be connected will pop up. Click the Bluetooth name inside the program box to connect (Bluetooth factory default name: HW_BLE****, factory default password: 888888). After the connection is successful, you can make parameter adjustments, firmware updates, data reading,gand other operations on the connected ESC.

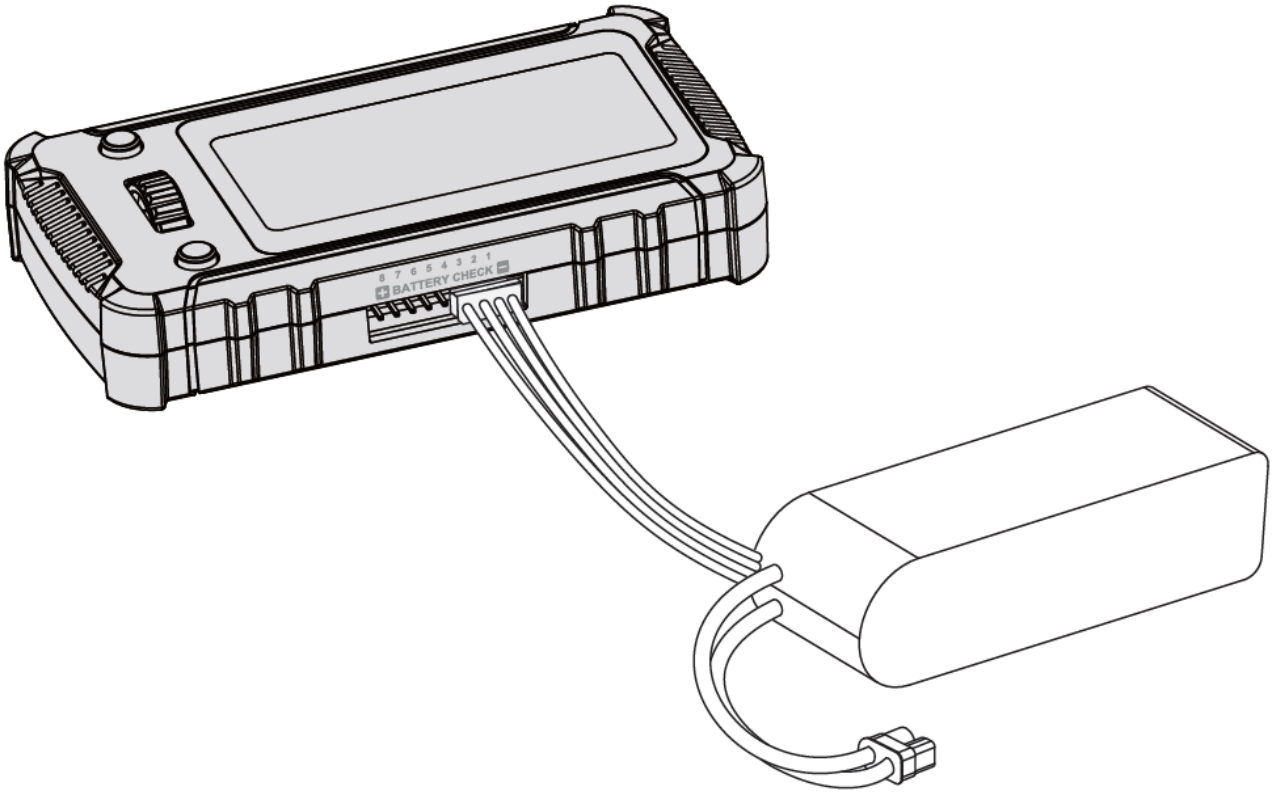




As a battery voltage detector (Monitor), it measure and displays the overall voltage of the battery pack and the voltage of the single cell

- Measuring range: 2-8S Li-Polymer/Li-Lon/Li-Fe
- Measurement accuracy: ±0.1V

How to use: Insert the battery balancing plug into the “BATTERY CHECK” port of the program box separately (the negative pole of the battery balance port corresponds to the negative pole symbol on the shell of the program box), as shown in the figure, after the battery is connected, the program box will Automatically display the total battery voltage and the voltage of each cell.



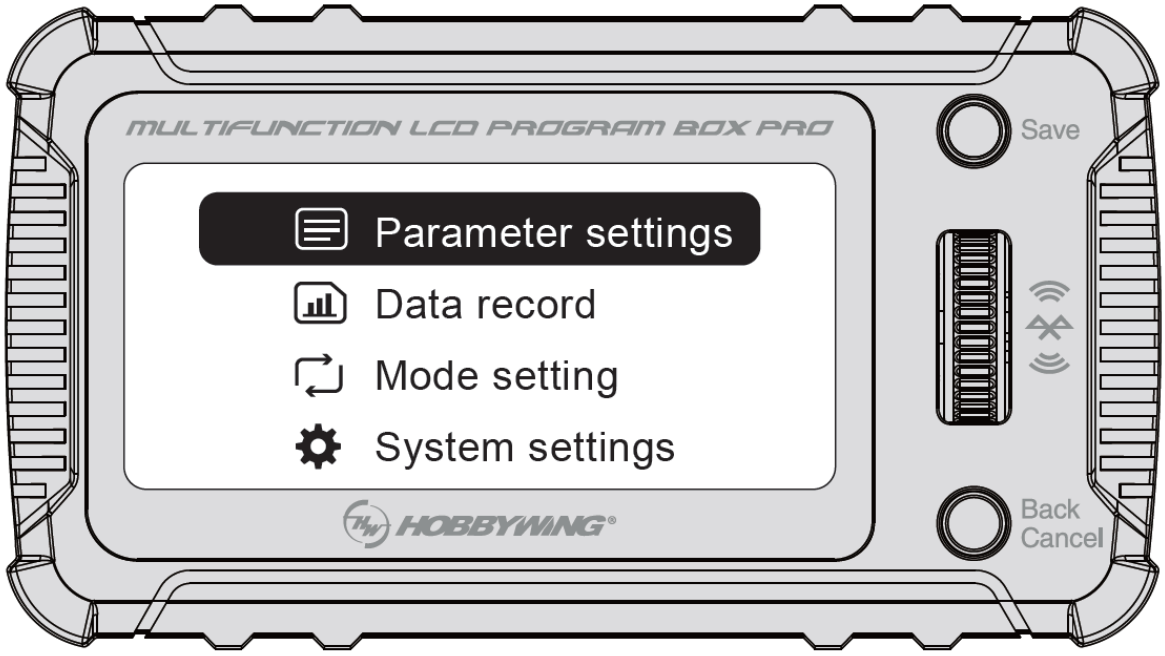
NNote When detecting the battery voltage, please do not connect the ESC and USB port at the same time. DUAL POWER CONNECTIONS WILL CAUSE DAMAGE TO THIS DEVICE OR CONNECTED DEVICES.

Parameter settings

Click to view and set the ESC parameters.

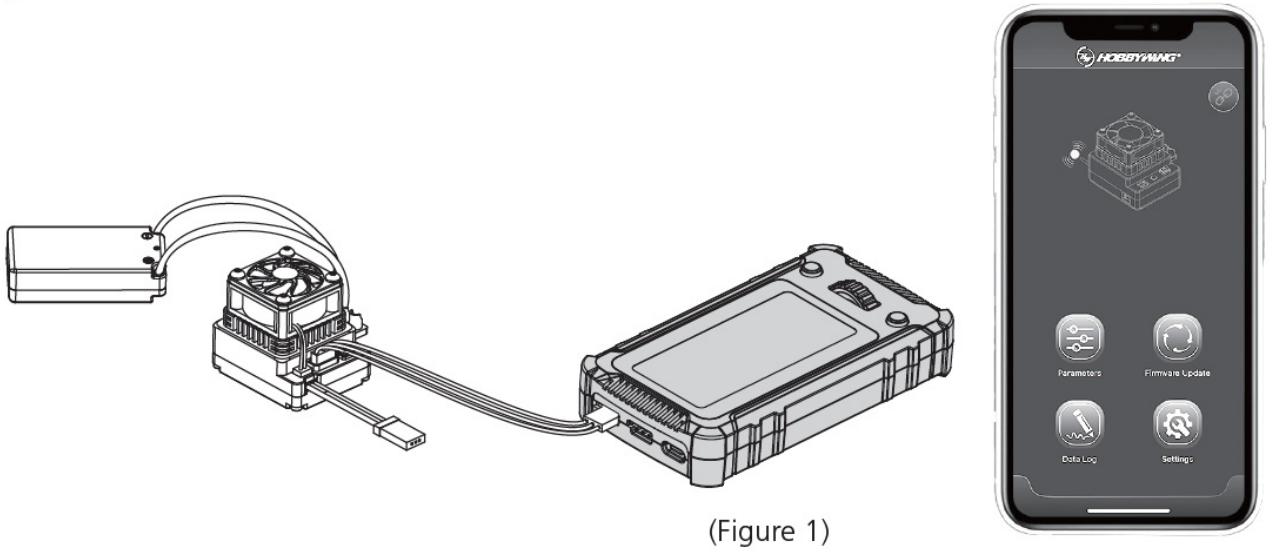
- **Data record**
  Click to view the recorded data such as “maximum temperature of ESC”, “maximum temperature of motor”, “minimum voltage of battery,” and “maximum rpm of motor” recorded by the ESC. Please note: The ESC needs to support the data-recording function to be viewed.
- **Mode setting**
  1. Profile switching: This refers to switching the application mode (profile) of the ESC, suitable for ESCs with multiple application modes.
  2. Import setup file: This is the sharing function for settings. Import the setting file of a certain ESC stored in the program box to another ESC of the same model. Use the scroll button to select and click a file to import, view, copy, delete, and rename. Press and hold the scroll button to delete all files with one click.
  3. Add setup file: This is the function of saving the setting file. Store and name the setting table of the current ESC separately in a file.
- **System settings**
  1. Language settings: Chinese/English/Japanese and other languages are switchable.
  2. Brightness: Set the brightness of the screen.
  3. On/Off Sound: Turn on and off the beeping sound during operation.
  4. Device information: View the version information of the ESC and the program box.
  5. Reset: “Only reset default setting” is to restore the system settings of the program box. “Full recovery” is

to restore the system settings and database of the program box



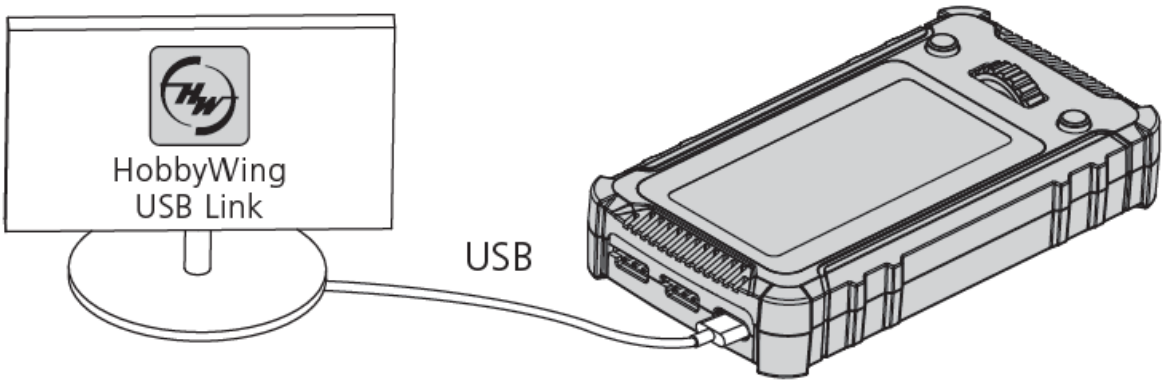
LCD program box firmware and database update

1. **Update the firmware and database of the program box on the mobile phone (as shown in Figure 1)**
   Power the LCD program box (it can be powered through the esc programming interface or power supply interface), and open the HW LINK V2 APP on the mobile phone, click on the connection icon in the upper right corner of the APP homepage to connect to the program box via Bluetooth, click on Settings - Setting of the Bluetooth Module , and then click on Firmware Update to upgrade the firmware of the program box click on Database Update to upgrade the database of the program box.



(Figure 1)

2. **Update the firmware and database of the program box on the computer (as shown in Figure 2)**
   Use a USB cable to connect the LCD program box to the computer. Run the HOBBYWING USB Link software. Select “LCD Program Box” under the “Device” menu.On the “Firmware Update” page, select the latest version of the firmware program and click “Upgrad.”; On the “Database Update” page ,click”Upgrad e”to update the database of the program box.



(Figure 2)

Note: HW LINK V2 mobile app or HOBBYWING USB Link computer software can be downloaded from the official website of Hobbywing Technology: **https://www.hobbywing.com**

FCC Information

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 interferencThishis device must accept any interference received, including interference that may cause undesired operation.

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

FAQs

Why is it important to check the ESC manual before connecting to the program box?
It is crucial to refer to the ESC manual to determine the correct programming interface for connection, as different ESC models may have varying interfaces for programming.

Can I directly connect any battery balance plug to the program box?
The pin pitch of the interface is 2.54mm, compatible with XH, EH, and HP/PQ standards. Some battery-balancing charging plugs may have a different pin pitch and require a conversion cable for connection.

Documents / Resources

	**HOBBYWING HW-SMD004DUL00 Multifunction LCD Program Box** [pdf] User Manual HW-SMD004DUL00 Multifunction LCD Program Box, HW-SMD004DUL00, Multifunction LCD Program Box, LCD Program Box, Box

References

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- **User Manual**