DAGAN 200Q

User Manual

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Hellsel Co., Ltd

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Contents

1. Introduction

Thank you for purchasing the DAGAN 200Q balance charger. Read this manual carefully before using.

2. Key points

 Tip  Key  Information

3. careful and safety matters

1. DAGAN 200Q allows input voltages AC 100V-240V and DC 10-18V to ensure that the power supply voltage is constant and pay attention to the positive and negative electrodes of the power supply when connecting.

2. Do not use this product in environments with heat, moisture, flammable liquids, or explosive gases.

3. Do not use this charger without professional supervision, do not leave the battery that is being charged.

4. Look at the power cord when you are not using this product.

5. Set the appropriate current for the battery when using the charging function. Do not set excessive current for charging to prevent damage to the battery. Check and use the correct charging instructions.

Battery Type Precautions

1. If you choose the wrong battery type to charge, the battery, charger will be damaged, which can lead to fire and other hazards. Please choose carefully.

2. Do not use this product to charge batteries that do not indicate battery termination; always follow the battery manufacturer's charging instructions.

Battery Type Description

1. Lipo: Also known as a lithium polymer battery, it has a nominal voltage of 3.70V and 4.20V when fully charged.

2. LiHV: Also known as a high voltage lithium battery, it is a battery with a nominal voltage of 3.85V and 4.35V when fully charged.

3. LiFe: Also called lithium-iron battery, it is said to be fully charged
It is a battery with a nominal voltage of 3.30V and 3.60V.

4. Lion: Also commonly referred to as a lithium-ion battery, it is a battery with a nominal voltage of 3.60V and 4.10V when fully charged.

5. NiMh : Also known as nickel-hydrogen battery, it has a nominal voltage of 1.20V.

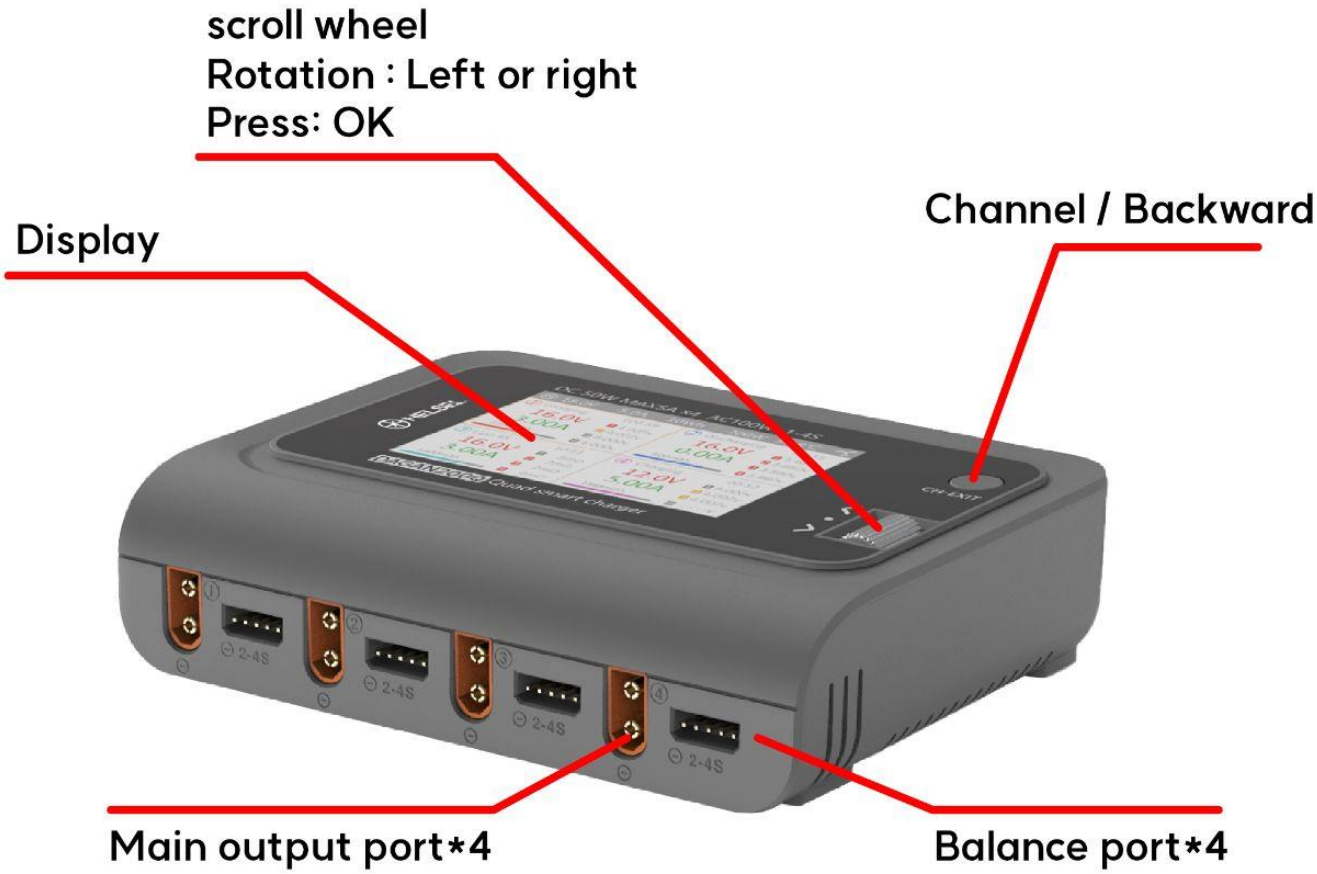
6. PB: Also called lead-acid battery, the nominal voltage is 2.00V.

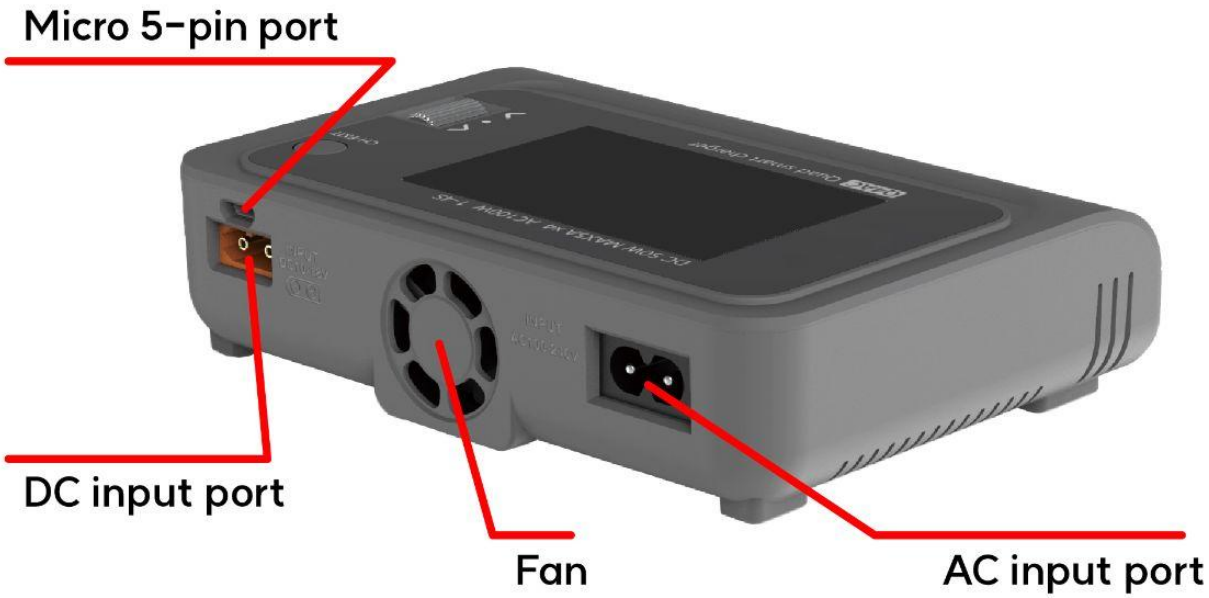
4. Product Description

The DAGAN 200Q is a four-channel balanced charger with an IPS display and wheel menu navigation, making it easy and convenient to operate.

- **Charge, discharge and balance management of LiPo, LiHV, Lion 1-4S, NiMh 1-10S, PB 1-8S batteries**
- **AC and DC power supply modes: AC 100-240V up to 100W / DC 10-18V up to 200W.**
- **Charging power: Up to 5A@Up to 50W*4**
- **Discharge power: Up to 2A@5W*4**
- **Charging accuracy: <0.005V.**
- **balancing current: 240mA.**
- **You can set the lithium battery shut-off voltage (TVC).**
- **Depending on the DC and AC connection, the charger automatically recognizes and sets it, and the voltage and current available for charging vary accordingly.**
- **All languages can be set up with a multi-lingual system.**
- **The device connects to your PC like a USB drive, and can be easily updated by copying and pasting new firmware files.**
- **Without setting the battery type and number of cells for each charge, you can store the number of cells and charging current for each battery type to make it like a profile.**
- **It can record the power of three commonly used groups for convenient and fast translation.**

5. DAGAN 200Q Layout





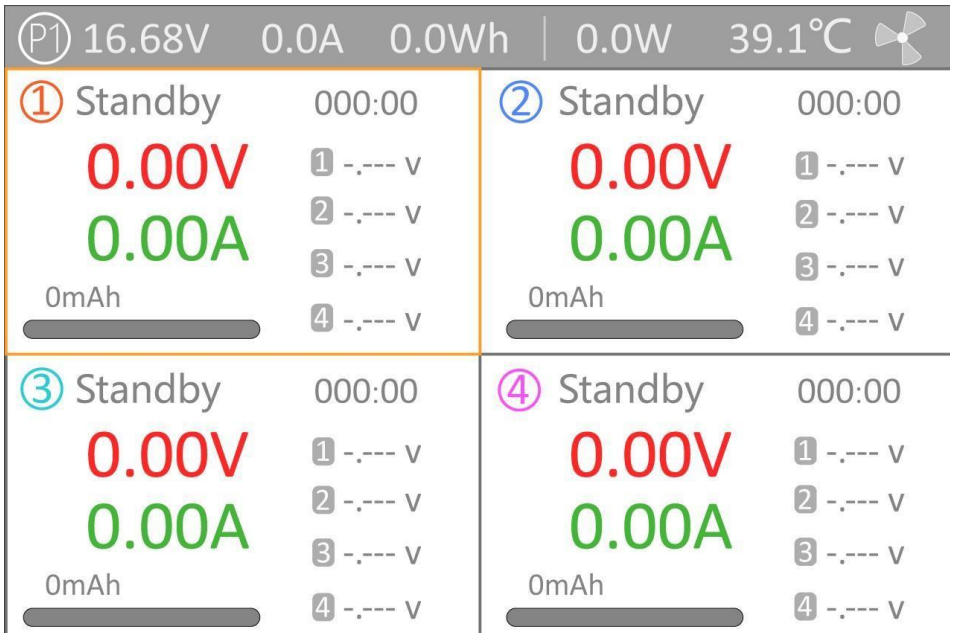
6. Quick Start (Quick Start)

1. Connect the AC100-240V or DC10-18V power supply to the Corresponding input port on the back of the DAGAN 200Q

2. The boot logo is displayed on the screen for 2 seconds.

3. A beep code is generated at the same time.

4. After booting, the screen enters the main interface as shown below.



5. Pressing [CH/Exit] briefly causes the cursor to switch between the four channels in order.

6. Scroll through [Scroll Wheel] to display the voltage and internal resistance of the channel.

7. When the channel is in standby, press [OK] briefly to select the charge operation. You can adjust and exit the charge when the channel is in progress.

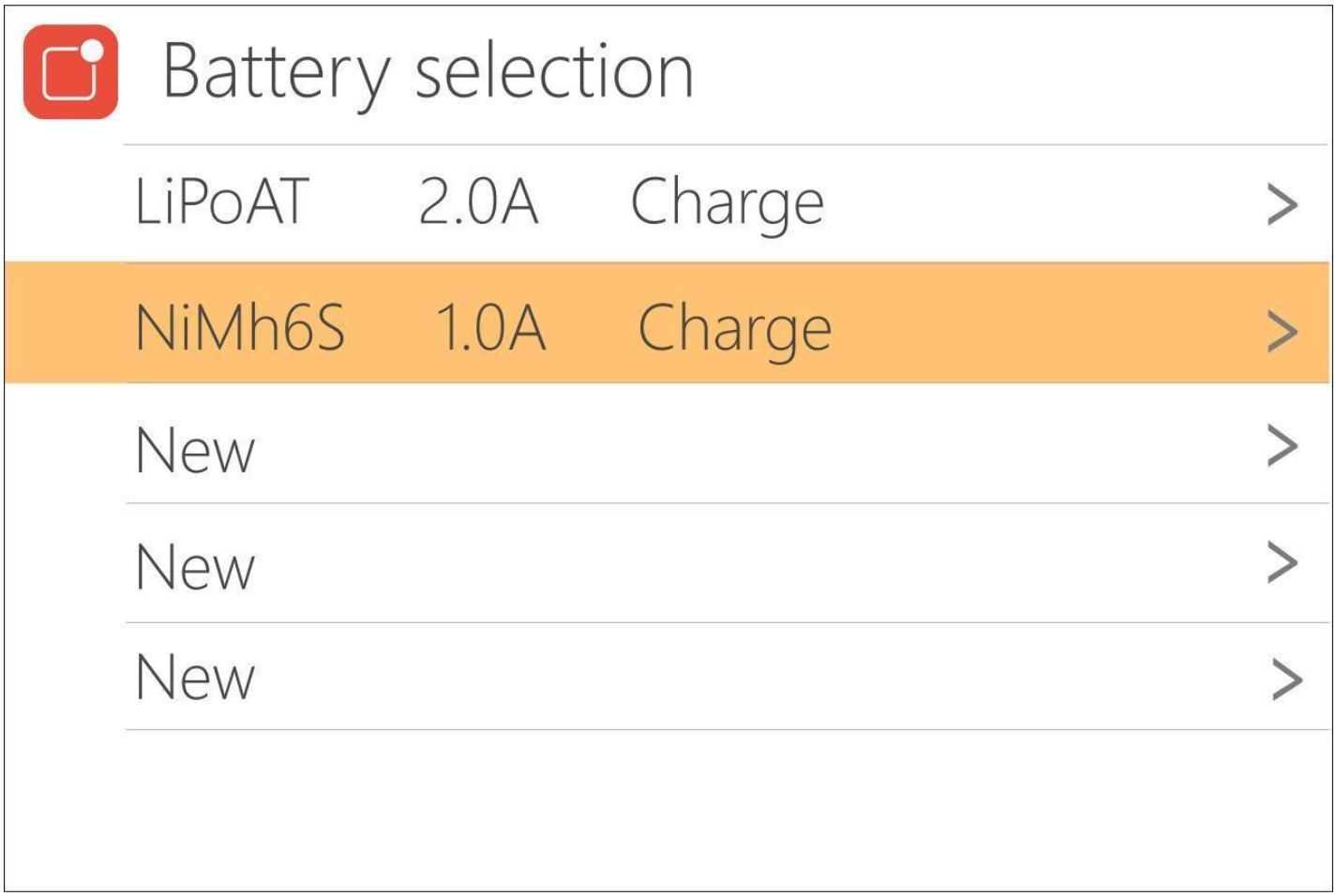
8. When all four ports are waiting, press and hold OK to enter the system settings interface.

9. Press [CH/Exit] to exit the modification or return to the previous interface.

1. Press [Scroll Wheel] briefly to verify the feature.
2. Press and hold [Scroll Wheel] for 2 seconds to delete key function.
3. The key will make a di-di sound if it works successfully.

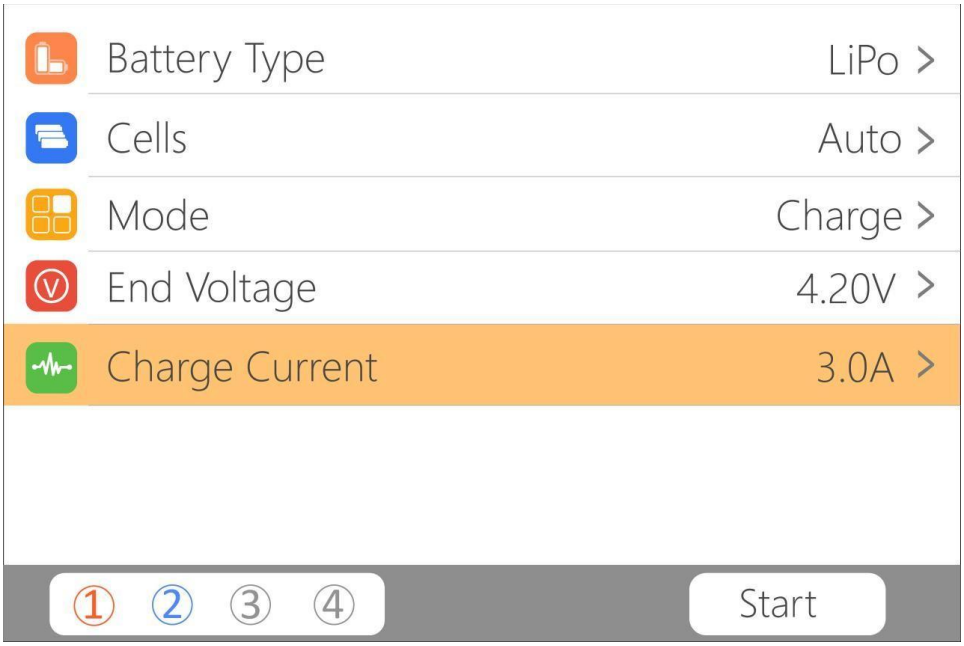
7. Charging Settings

Select from the main interface and press [OK] briefly to enter the charging function. Turning on the battery selection in the main settings interface allows you to save five battery records and the following interface will be displayed. Otherwise, skip this step as it is set to the first battery record by default.

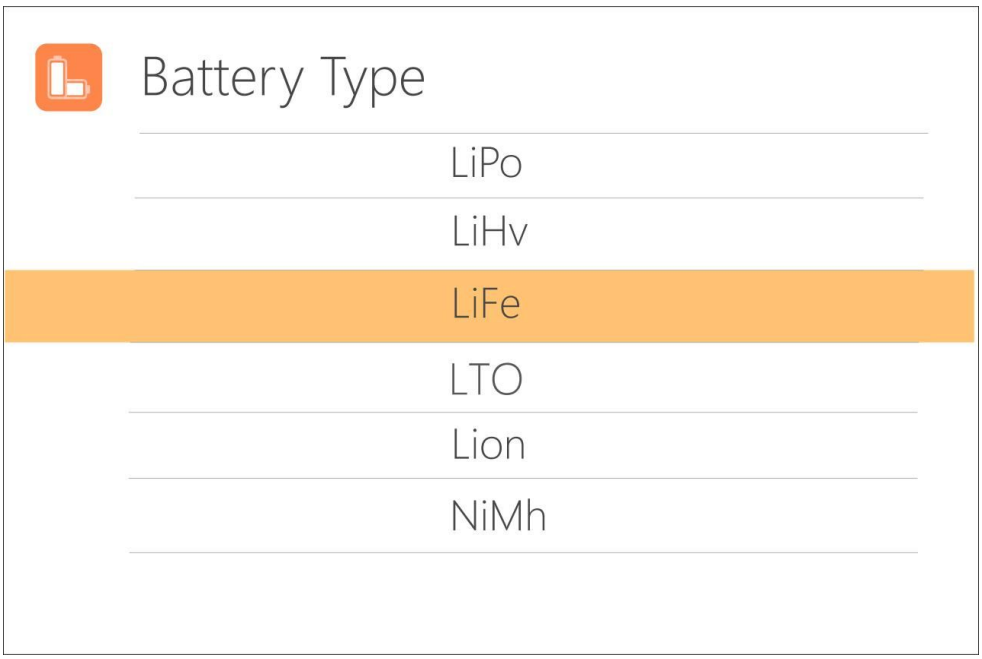


1) Battery Type

Scroll through the [Scroll Wheel], move the cursor, select the set battery, create a new battery, and click OK to enter the battery settings interface for this group, which appears as follows.



If you move the cursor to "Battery Type" and click OK to modify the battery type, it will appear as follows.

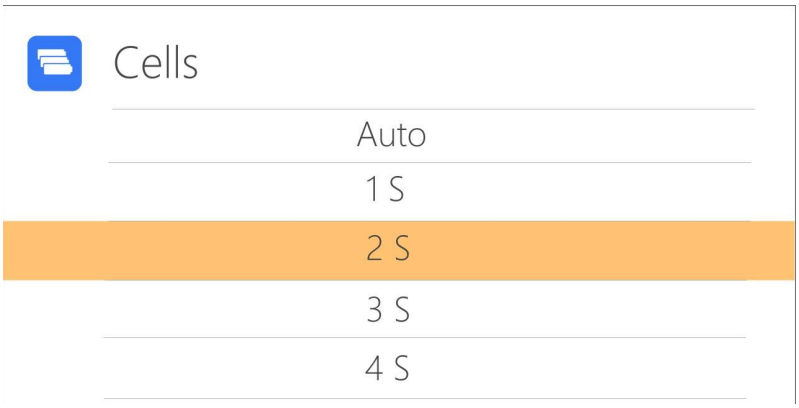


The charger selects the battery according to the actual battery and supports Lipo, LiHV, LiFe, Lion, NiMh, PB, 6 types of batteries. Press [OK] and [CH/xit] briefly to apply and return to the previous interface.

2) Number of cells

Move the cursor to the "cell" position and press OK to modify the number of battery cells. The display is as follows.

The Automatic (Auto) Cell Recognition feature on the charger carries a risk of detecting an incorrect cell count (S-Value) depending on the current voltage state of the battery being charged. Over-voltage charging resulting from this incorrect cell recognition (when using Auto mode) can lead to fire and/or explosion.
Mandatory Recommendation: You must manually set the correct cell count for the battery you are charging to ensure safe operation.
(The manufacturer is not liable for any issues or damages arising from the use of the Automatic (Auto) charging mode.)



1. Move the [Scroll Wheel] to select the number of cells in the battery you want to charge. When set to "Automatic", the charger automatically identifies the number of cells connected to the battery, depending on the battery capacity. Press [OK] and [CH/Exit] briefly to return to the previous interface.

2. You can also specify the number of cells, or if you set it automatically, it recognizes 1-4S when the balance cable is connected and automatically sets the number of cells.

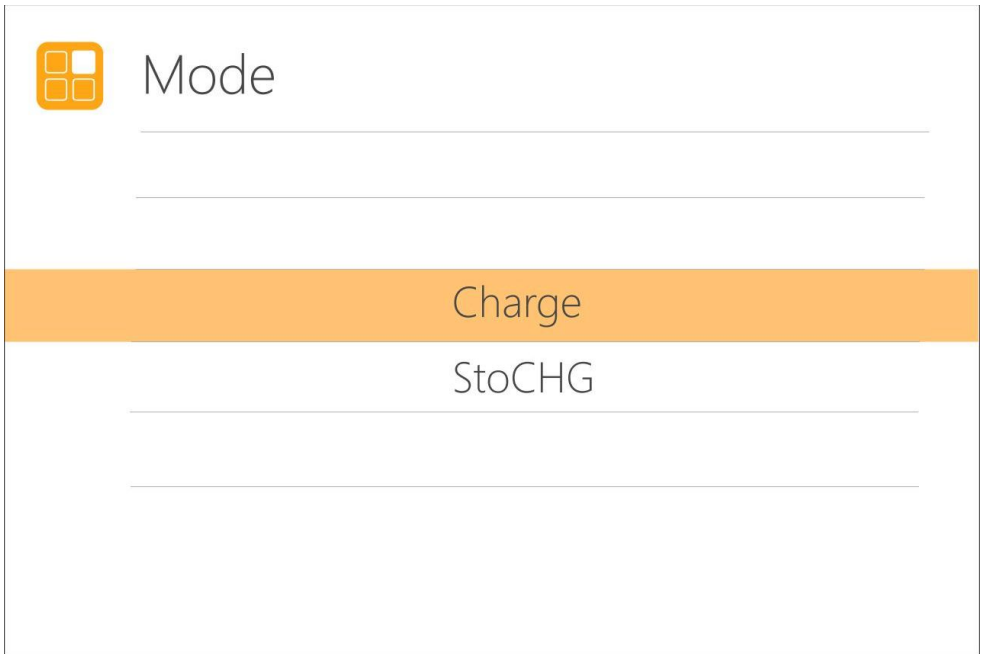
1. Battery cell identification errors can occur due to overdischarge or overcharge of the connected battery.

2. If the number of cells is incorrectly set, set them carefully as charging may be insufficient or overcharging may damage the battery.

3. After connecting the Lixx battery to the balance port, the number of battery strings can be identified more accurately.

3) Working Mode

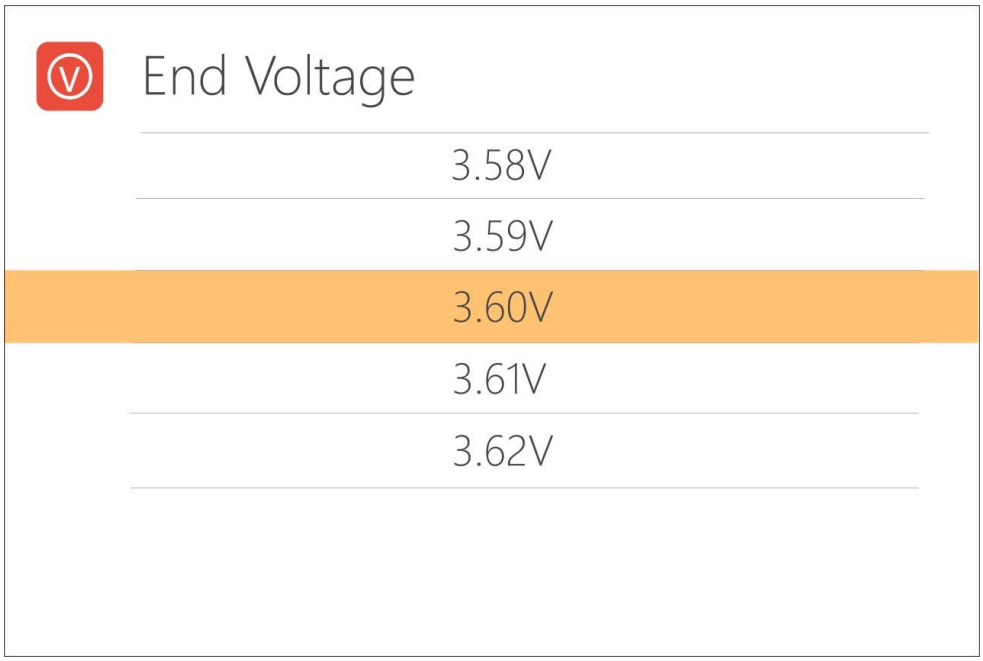
Move the cursor to "mode" and click OK to modify the working mode as shown below.



Lipo, LiHV, LiFe and Lion batteries can select the charging mode and storage mode.NiMh, battery and PB battery and PB batteries can only select only the charging mode.[OK] and [CH/Excited] and go back to the previous interface.

4) Full charge voltage (TVC)

To correct the end voltage for the single-cell battery, move the cursor to the end voltage and press [OK]. The work mode is the cut-off voltage when charging, with a range of plus or minus 50 mV of the total voltage. When the work mode is discharged, it is the cut-off voltage. Scroll through [Scroll Wheel] to adjust the value in units of 0.01V.



1. Only LiPo, LiHV, and LiFe batteries can set the cutoff voltage.

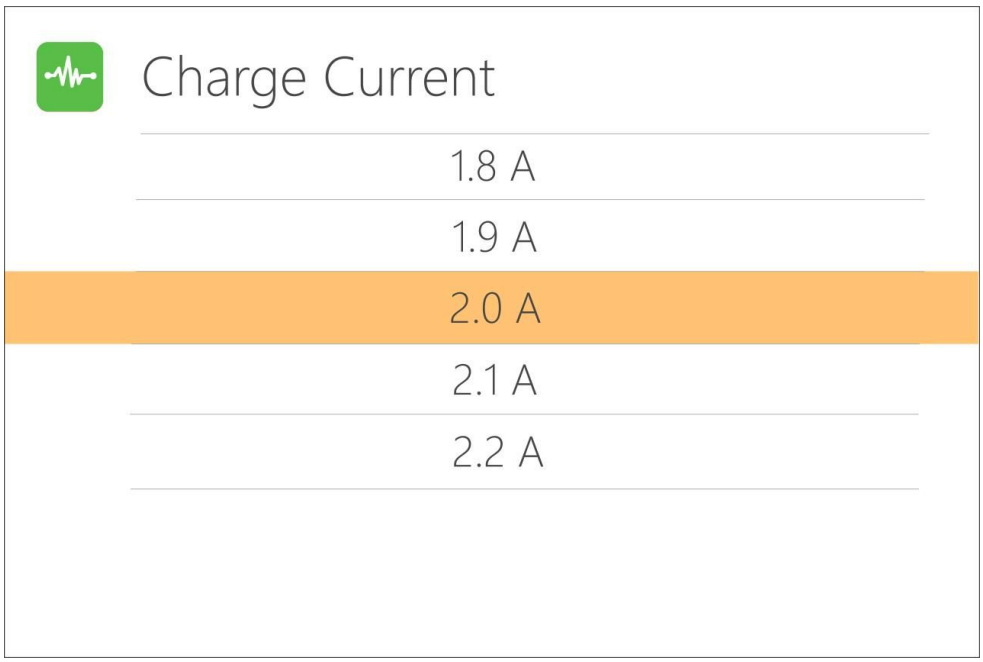
2. Do not modify the cutoff voltage when you are not familiar with the battery characteristics.

3. The charge cutoff voltage can be set to a positive or negative 50 mV range of the total voltage.

4. TVC: English abbreviation for terminal voltage control.

5) charging current

Modify the current by moving the cursor to the "Charging Current" position and pressing [OK]. Scroll through [Scroll Wheel] to adjust the value by 0.1 A steps. Quick scroll through [Scroll Wheel] allows you to increase or decrease quickly. Chargers support up to 5.0 A.

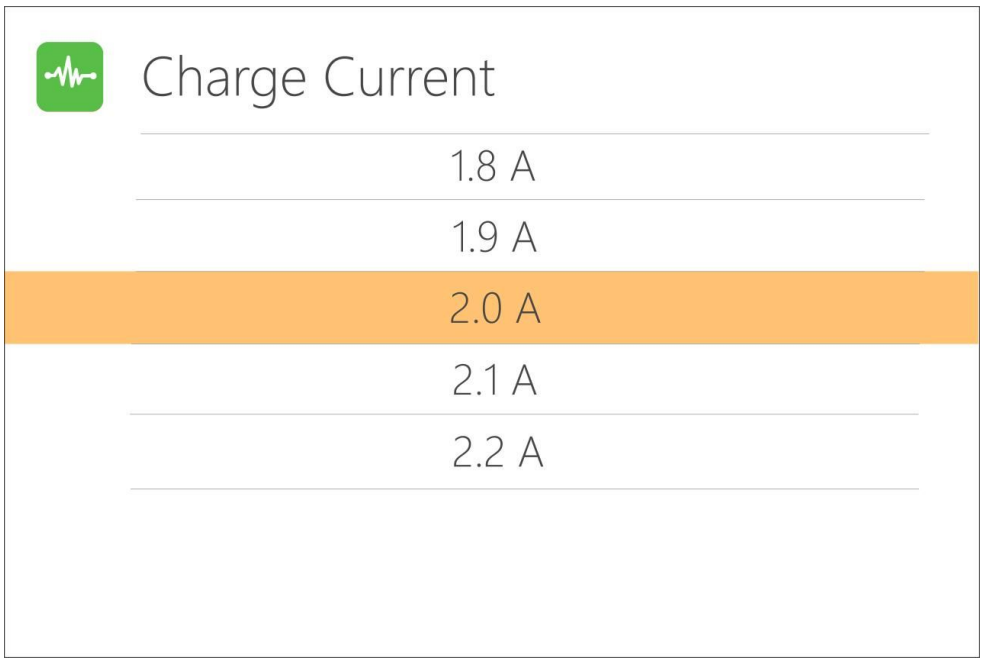


1. Set the charging rate of 1-2C according to the battery capacity, for example, if the battery capacity is 2000mAh, set the charging current to 2.0-4.0A.

Check the battery instructions.
Contact the manufacturer for correct charging instructions.

6) NiMh setting (PeakV)

When the battery type is NiMh, the sound pressure value can be set when the battery is fully charged, and the set range is 5 mV-15 mV as shown below.

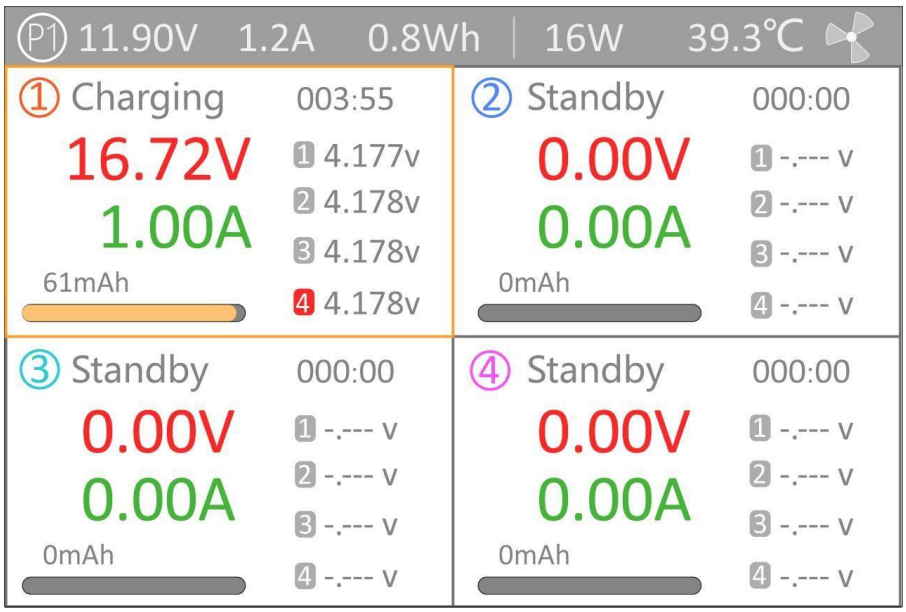


1. Only the NiMh battery can set the battery sound pressure value.

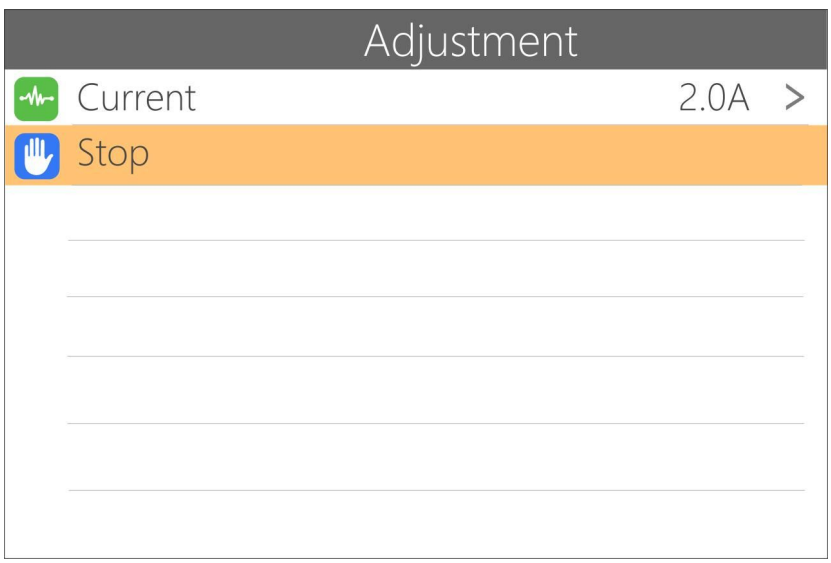
PeakV: When the NiMH battery is fully charged, the peak voltage in each cell drops.

8. Charging operations

When charging starts, the charger enters the operating interface as shown below.



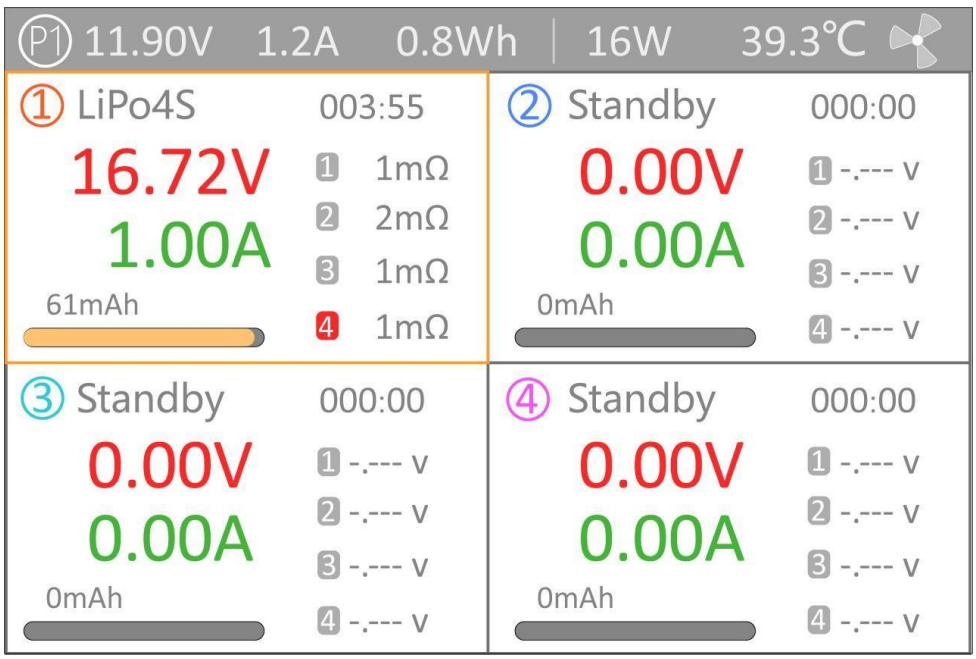
From this interface, scroll through [Scroll Wheel] to switch the display of the internal resistance voltage values for the channel. Press [OK] briefly to set the operating current dynamically or to stop the operation. To complete the charging and discharging operation as shown below, press [OK] briefly, move the cursor to [Stop], press [OK] briefly, stop the operation, and return to the main interface.
If charging is complete or a charging error occurs, a prompt box appears with the sound of the prompt.



Display Content Description:

11.90V: Input power voltage.
1.2A: Input power current.
0.8Wh: The cumulative power consumption of the input power.
39.3°C: Internal temperature of the charger.
16.72V: Main port voltage of the first channel.
1.00A : Main port current on the first channel.
003:55: The working time of the first channel.
61mAh: The cumulative capacity of the first channel.
4.177V: First battery voltage.
4.178V: Fourth battery voltage (this battery is balanced)
-.--V : The battery is not connected.

Move the Use [Scroll Wheel] to switch to the second column of the second channel, which is the internal resistance information.

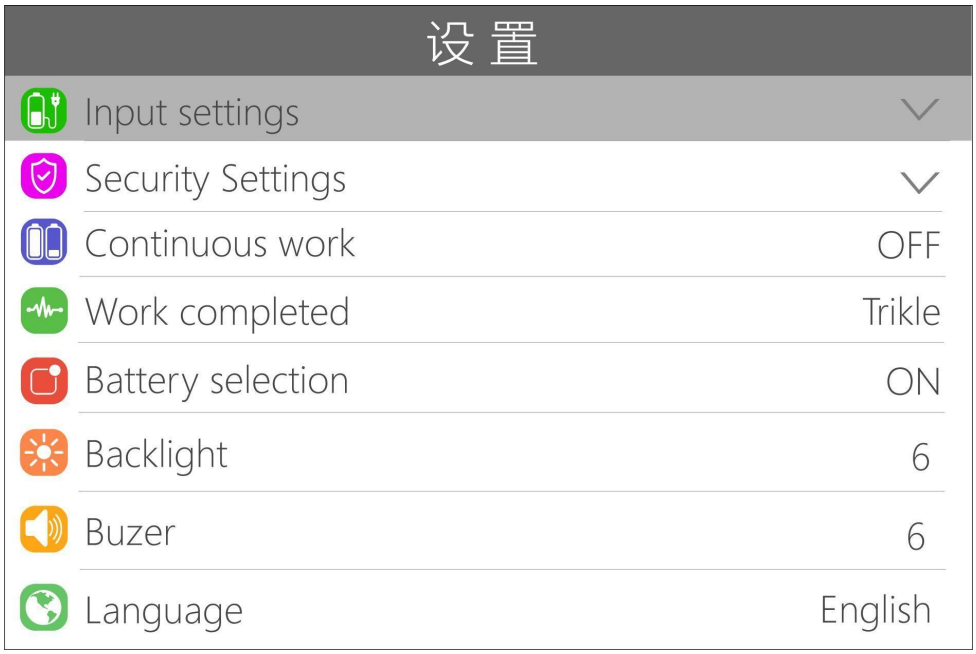


1. When charging, make sure someone is overseeing the charging throughout the charging process to ensure that you can safely cope with anomalies.

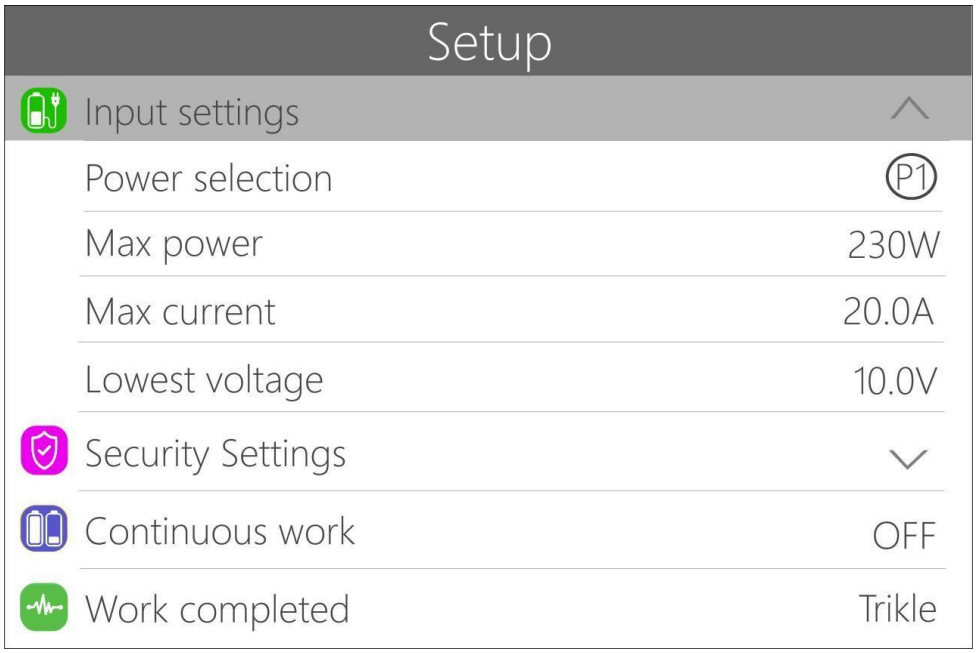
2. When charging a lithium battery, if you just connect it to the main port, the remaining capacity management will not be performed. Be careful of the remaining capacity of the battery. When you connect it to the remaining capacity port, the remaining capacity management will start automatically.

9. System Settings

Press and hold [OK] on the main interface to enter the system setup interface only when all channels are not in use, as shown in the figure below.



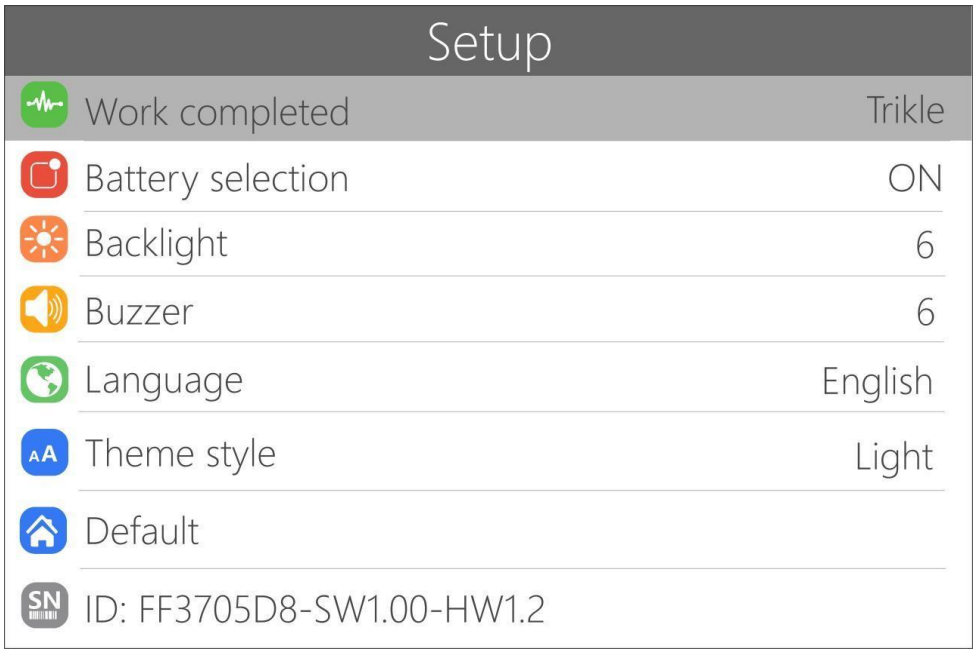
Input settings: Input power-related settings, short presses extend the settings.
As shown in the picture below.



Power Selection: When the AC power supply is connected, the power selection is fixed to P1, and the power, current, and voltage are also fixed values. P1 and P2 can be selected when the input is DC. The user can set the power, current, and voltage directly.

Maximum power : The maximum power absorbed by the input port during charging.
Maximum current : The maximum current drawn from the input port during charging.
Minimum voltage : The minimum allowable input voltage.
Charging Safety Settings: Short press expands the settings, as shown below.

Safe internal temperature : Above this temperature value, the device stops outputting the main port.
Safety time : Maximum continuous charging time, if exceeded, charging stops.
Safety Capacity : When it exceeds the maximum capacity for continuous charging, it stops operating.
Continuous operation : After charging, check whether to continue charging after replacing the battery or if the next connected battery needs the same settings as the previously charged battery.



Task completed : Whether to stop charging or charge little by little after charging.

Battery Selection : Whether to skip the battery selection interface when selecting to charge.

Backlight : You can set the backlight brightness level of the display from 1 to 10.

Booster : The sound of the buzzer can be set to off.

Language : System Display Language. You can choose English, Chinese, etc.

Theme Style : You can choose between Light and Dark styles.

Default : Restore all settings to factory values.

ID : Unique ID of the device factory settings.

10. Other Features

1. Fan level
When the internal temperature of the unit exceeds 42°C, the fan turns on the air volume at half speed to reduce noise. When the internal temperature exceeds 50°C, the fan turns on the full-speed air volume to enhance heat dissipation.

2. Manually calibrate voltage
In the shutdown state, press and hold [scroll wheel] without letting go and connect the power supply, and the system will enter the manual voltage calibration function. Using the voltmeter, measure the actual voltage of each battery, move the cursor to the corresponding voltage value, correct the voltage value to match the voltmeter value, and complete the calibration. Once the calibration is complete, move the cursor to save and a short press will cause the buzzer to ring for a long time and successfully save. Leave or exit the screen.

3. Full charge
When the lithium battery is fully charged, the message "fast charging has ended" is displayed. If the battery is not removed, constant voltage flow charging will be performed automatically and the battery will remain full.

11. Product Specifications

Charger	Input	AC100-240V@MAX1.5A DC10-18V@MAX20A
	Supported Batteries	LiPo LiHV LiFe Lion LTO @1-4S NiMh @1-10S Pb @1-8S
	balance current	240mA @2-4S
	voltage deviation	<0.005V
	charging power	0.1-5A@50W*4 DC input
		0.1-5A@50W*2 AC input
		0.1-5A@25W*4 AC input
	Discharge power	0.1-2A@5W*4
	USB	upgrade@USB
	Battery voltage	1.0V-5.0V @1-4S
	Battery internal resistance	1-100mR @1-4S
Display	LCD	IPS 3.5 寸 480*320 Pixel
product	Size	150mm*112mm*36.5mm
	Weight	450g
Packaging	Size	160mm*160mm*46mm
	Weight	600g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