

U3-NEO/U4-NEO

智能平衡充电器



用户手册

WWW.EV-PEAK.COM
深圳市永航新能源技术有限公司

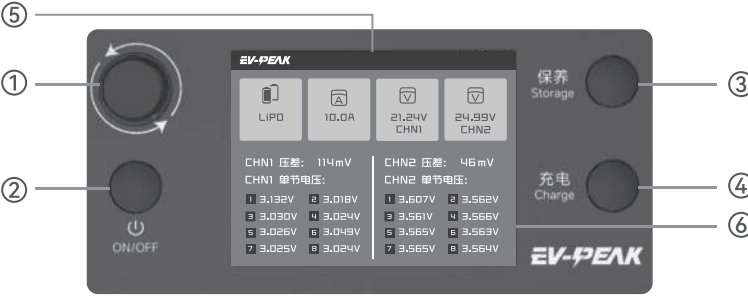
5.使用本产品时，建议参考电池厂商使用手册中推荐的充电方法，并按其规定的充电电流与充电时间进行操作。尤其是锂电池，必须严格遵循制造商提供的充电说明。

- ⚠ 特别注意:
- ① 请务必正确连接锂电池的电极;
 - ② 禁止随意拆卸电池组;
 - ③ 不同规格或型号的锂电池组不得串联或并联充电，以免发生危险

产品简介

U3-Neo/U4-Neo智能平衡充电器，充电速度快，平衡精度高，使用能耗小，双通道输出。充电电流5A~40A（U3-Neo）/1A~30A（U4-Neo)可调，使用操作简单;产品充电过程中显示屏窗口，能准确的实时显示电池单节电压与总电压，方便了解电池性能及充电状态。产品内部温升散热通道设计合理，能有效散热保证产品连续稳定可靠工作。

操作面板&主界面



- ① 选择&确认旋钮

短按：选择及确认功能。
用于激活目标选项，旋转以更改设置，再次短按进行确认。
- ④ 充电

长按此按钮，屏幕将进入充电状态界面，充电器立即开始为电池进行标准充电。您可以在该界面查看实时电压、电流和充电进度。
- ② 开关机

长按2秒开启或关闭设备。
- ⑥ 工作信息配置区

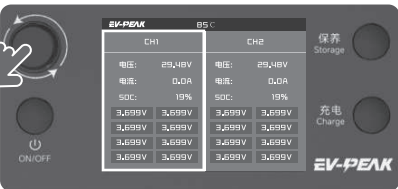
设置电池的类型、节数、容量工作、电流等信息
- ③ 保养

长按此按钮，屏幕将进入保养状态界面，充电器随之启动电池保养模式（通常包括均衡充电与容量校准）。
- ⑧ 实时信息区

显示充电器连接的电池实时信息，包括电池总电压、单节电压压差、循环次数（需要BID支持）等信息。



⚠ 注意:
如需增大充电电流，请务必先向电池供应商确认电芯可承受的最大电流值。若设置的电流超出此安全限值，可能导致电池损坏，甚至引发火灾。



7.设置电池电流
充电器会根据您选择的电池容量智能匹配充电电流，您也可根据电池的规格手动调节所需电流，选择范围为U3-Neo：5A~40.0A/U4-Neo:1A~30A。

8.开始充电
长按【充电】按钮，充电器会进行智能安全检测，通过后，开始充电，并跳转至工作界面；本充电器支持锂电池的充电模式，保养模式。

9.正在充电
进入充电状态界面，充电过程中设备工作期间，按【充电】/【保养】按键可暂停当前工作并回到主界面。再次按下【充电】按键继续充电。充电器启动后，本次设定的所有参数将被保存(充电必须成功)。下次使用时，充电器将自动调用该次存储的参数配置。

前言

感谢您购买永航EV-PEAK的智能平衡充电器；本操作说明旨在帮助您快速了解并使用本产品，因此在使用之前，请务必仔细阅读本说明书，并妥善保存。
本说明书中提到的安全事项只作为当地安全规范的补充。

安全注意事项

⚠ 警告及安全提示

首次使用请务必仔细阅读说明书，错误使用充电器或采用错误的方法给电池充电非常危险，可能引起火灾甚至爆炸。

- 以下种类电池，请不要进行充电/放电操作：
- 不同型号组成的电池组(包括不同生产厂家)。
 - 已充满或者刚放电的电池。
 - 不能再充的电池(可能引起爆炸)或对充电技术有特殊要求的电池。
 - 已经损坏或者有缺陷的电池。
 - 有内置组合电路或者保护电路的电池。
 - 安装在其他设备中或连接其他部件的电池。
 - 未经生产厂家确认适合本充电器承载电流的可充电电池。

- 着手充电之前,请务必检查以下4点:
- 是否为充/放电电池选择了正确的电池类型与节数。
 - 是否设置了合适的充电/放电电流。
 - 是否设置了正确的电池容量。
 - 锂电池组禁止串联或者并连充电。

产品参数

型号	U3-Neo	U4-Neo
输入	100V~240V~ 50/60Hz	100V~240V~ 50/60Hz
输出	Max. 36V $\overline{\text{~}}$ Max.40.0A	Max. 65V $\overline{\text{~}}$ Max.30.0A
输出功率	1500W	1500W
电池节数	2S~8S	6S~14S
电池类型	LiPo/LiHV/LiSol/LiFe	
通道数	双通道	
平衡精度误差	<20mV	
输入保护	过流，欠压，短路	
输出保护	过压，欠压，短路，过温，反接	
工作环境温度	5~45°C	
冷却系统	强制冷风	
外部升级接口	Type-C	
尺寸	230X155X118mm	
重量	2.06kg	

内置电池标准参数

项目	标称电压	最高电压	允许快充电流	最低电压
LiPO	3.7V/节	4.2V/ 节	≤ 1C	3.0~3.4/节
LiFe	3.3V/节	3.6V/节	≤ 4C	2.6~3.0/节
LiHV	3.8V/节	4.35V/节	≤ 1C	3.1~3.5/节
Lisol	3.8V/节	4.45V/节	≤ 1C	3.0~3.5/节

快速操作指南

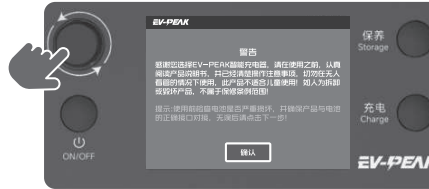
开机与设置流程



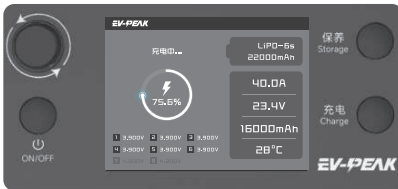
1.开机启动
正确接入电源后，等待7秒后长按【**开关键**】2秒启动设备。



2.语言选择
充电器内置中英文，首次开机时，请根据您的需要选择适合的语言选项。
之后开机将自动沿用已选语言，且不再显示语言选择界面。如需修改语言，请在显示开机页面时长按【**旋钮**】，可以进入修改语言。



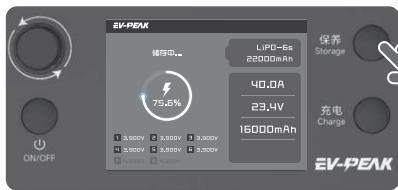
3.警告页面
• 本产品不适用于存在肢体、感官或精神障碍，以及缺乏相关经验和知识的人员包括儿童）使用。
（本品非玩具，请将本产品放置在儿童无法触及的地方，并确保儿童不会玩耍操作。
• 如产品表面出现裂纹，请立即停止使用并关闭电源，以避免触电。
• 本产品仅限室内使用。



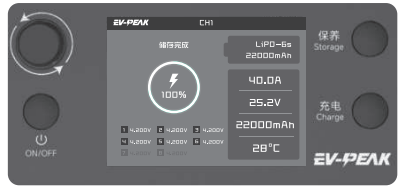
⚠ 注意:
连接电池并开始充电后，界面将自动跳转至并充状态。此时，可通过旋转旋钮查看单一电池充电信息。



10.充电完成
当充电状态显示充电完成时屏幕将显示充电进度100%。



11.储存模式
长按【**保养**】键进入存储模式，当存储状态显示储存完成时表示存储结束。



⚠ 注意:
连接电池并开始充电后，界面将自动跳转至并充状态。此时，可通过旋转旋钮查看单一电池充电信息。

充电禁忌

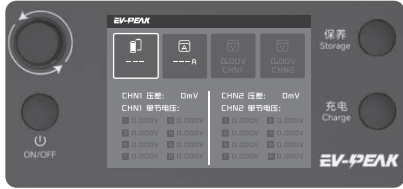
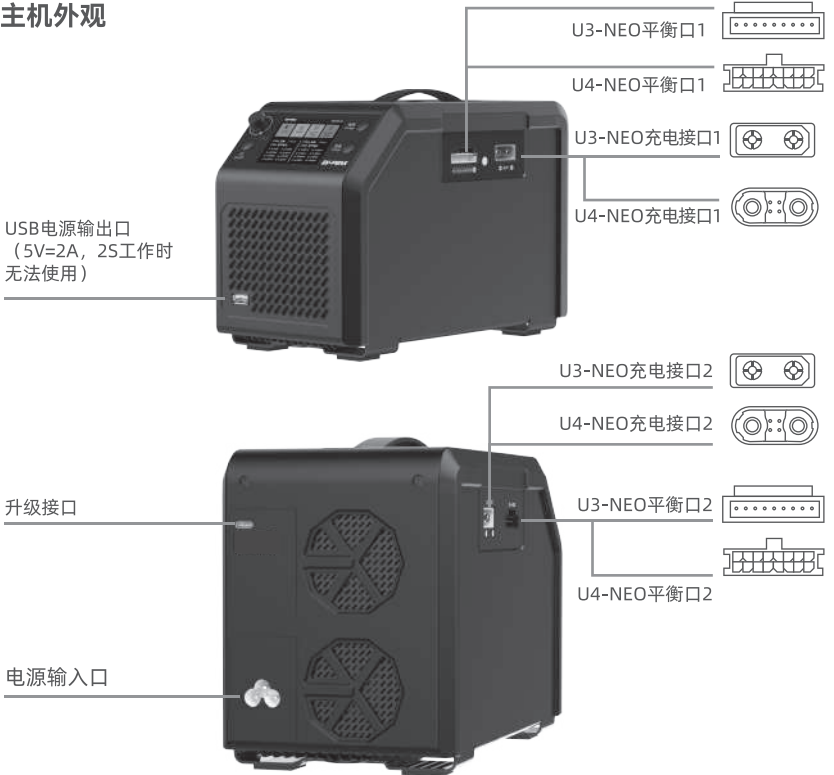
- 请勿在无人看管的情况下使用充电器。如发现任何功能异常，请立即停止充电，并参照说明书排查原因。
- 保持充电器远离灰尘、潮湿、雨水、高温、阳光直射及强烈振动环境，严禁撞击充电器。
- 请将充电器放置在耐热、阻燃、绝缘的表面上，避免置于车座、地毯等易燃物附近，并确保充电区域远离任何易燃易爆品。
- 充电器支持支持的交流输入电压范围为AC100~240V。
- 在进行充/放电前，请务必确认所设定的电池规格与实际电池一致。参数设置错误可能导致设备损坏，过度充电更可能引发火灾或爆炸等严重事故。

注意事项

- 请注意给不同类型的电池组选择正确的电压类型，否则可能损坏电池。错误的设置可能导致电池起火或爆炸。
- 充电过程中，总电荷量可通过充电电流乘以充电时间来估算。。任何电池组的最大允许电量均不得超过电池制造商规定的额定容量。此外，适宜的充电电流范围可能因电池类型和性能特征而异。若电池文档未提供准确的充电参数，用户应始终采用充电器制造商推荐的标准充电速率进行充电。
- 电池与充电器之间的连接线通常以红色标识正极，黑色标识负极。由于电线及接头本身存在内阻，充电器无法精确单独检测电池组的阻值。为确保充电器正常工作，连接端子须具备足够大的导体横截面，并采用高质量的电镀工艺以降低接触电阻并保证充电效率与安全。
- 放电的主要目的是消除电池多余电量或将电池电压调整至特定值。与充电过程类似，放电过程中也存在多项需特别注意的事项。必须合理设置放电终止电压，否则可能导致电池过放;对于锂电池，放电电压严禁低于其额定最低电压，否则将造成不可逆的容量衰减或电池完全损坏。通常情况下，锂电池并不需要刻意放电。为有效保护电池，请务必关注其截止电压下限。建议对锂电池采取部分放电而非深度放电的方式，并应尽量避免频繁进行完全放电。

产品外观

主机外观



4.初始界面
进入初始界面，界面无任何参数展示，正确接入电池后展示相关信息。



5.选择电池类型
旋转【**旋钮**】至电池类型设置区，浏览电池类型并按下【**旋钮**】选择对应的电池类型（LiPo/LiHV/LiFe/LiSol），设置电池节数（支持范围U3-Neo:2-8S/U4-Neo: 6~14S）



6.截止电压设置
当选择框停留在电池类型选择上，长按【**旋钮**】可进入截止电压调整界面，为不同电池类型单独设置参数。操作说明如下：
• 旋转【**旋钮**】，选择需要修改的电池类型。
• 短按【**旋钮**】，激活该类型电压值的调整状态（数值高亮或闪烁）。
• 旋转【**旋钮**】，设定所需的精确电压值。
• 再次短按【**旋钮**】确认修改。
• 重复步骤2~4，设置其他电池类型。设置完成后，长按旋钮退出。



12.警告提示和错误提示
当进入错误界面，按【**充电**】/【**保养**】键可退出错误模式（若造成错误的因素未消除则会重复进入错误）。错误页面中可通过短按【**旋钮**】键轮流显示各个通道的错误;若只有单通道出错,则仅显示该通道的错误码与提示。

售后与保修

感谢您选购本公司的充电器。永航将竭诚为您提供完善的售后服务，全面保障您的权益。如产品出现故障，请及时与永航售后服务中心联系。

- 产品保修期的计算以送达永航售后服务中心的日期为准;
- 自购买之日起一年内，如因产品本身质量问题发生故障，将享受免费保修服务。若无法提供有效购买凭证，则以机身编码日期为准;
- 自购买之日起超过一年保修期后，我们将酌情收取维修成本费用，用户需自行承担往返运输费用;
- 在您送修时，请您务必留下有效联系方式，以便维修完成后我们能及时与您取得联系。

有下列原因造成产品损坏不能正常使用的不在保修范围内。

- 未按要求接入正确电压导致产品损坏的;
- 未按照说明书正确使用造成损坏;
- 一切人为、意外撞击或其他不可抗力导致产品损坏;
- 未经本公司认可，擅自改装、拆卸或修改本产品的内部电路;
- 水浸、受潮或其他异物进入产品内部造成损坏的;
- 产品表面外壳的老化，碰伤及划痕。

SMART BALANCE CHARGER



User Manual

WWW.EV-PEAK.COM
Shenzhen EV-PEAK New Energy Technology Co.,Ltd

- When using this product, follow the charging method recommended in the battery manufacturer’s user manual, including the specified charging current and charging time. Lithium batteries in particular must be charged strictly in accordance with the battery manufacturer’s instructions.

❗ Special Notes:

① Make sure the lithium battery terminals are connected with the correct polarity.

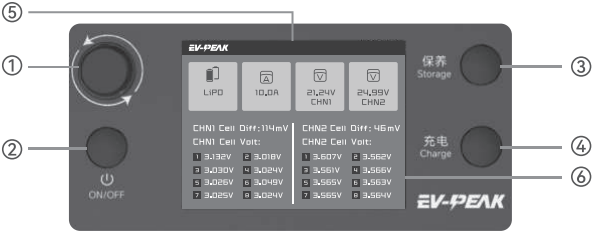
② Do not disassemble the battery pack.

③ Do not charge lithium battery packs of different specifications or models while connected in series or parallel.

Product Overview

The U3-Neo/U4-Neo balance chargers provide fast charging, high balancing accuracy, low power consumption, and dual-channel output. The charging current is adjustable from 5 A to 40 A on the U3-Neo and from 1 A to 30 A on the U4-Neo, and operation is simple. During charging, the display shows the individual cell voltages and total battery voltage in real time, making it easy to monitor battery performance and charging status. The internal airflow and heat-dissipation design provides effective cooling for continuous, stable, and reliable operation.

Control Panel & Main Interface



① Select & Confirm Knob

Press briefly to select or confirm a function. Press to activate the selected item, rotate the knob to change the setting, and press again to confirm.

④ Charge

Press and hold this button to open the charging status screen and start standard charging. Real-time voltage, current, and charging progress can be viewed on this screen.

② Power On/Off

Press and hold for 2 seconds to turn the device on or off.

⑤ Parameter Settings Area

Set the battery type, cell count, capacity, operating current and other parameters.

③ Storage

Press and hold this button to open the Storage status screen. The charger will enter battery Storage Mode, which typically includes balance charging and capacity calibration.

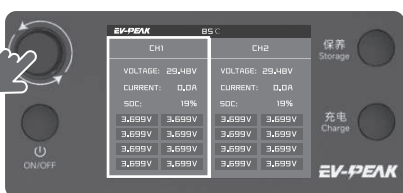
⑥ Real-Time Information Section

Displays real-time information for the battery connected to the charger, including total battery voltage, cell voltage difference, cycle count, and other information.



⚠ Note:

Before increasing the charging current, confirm the maximum current that the battery cells can safely withstand with the battery supplier. Setting a current above this safe limit may damage the battery or cause a fire.



7.Set the Charging Current

The charger automatically matches the charging current to the selected battery capacity. You may also adjust the charging current manually according to the battery specifications. Available range: (U3-Neo: 5A-40.0A; U4-Neo: 1A-30A) .

8.Start Charging

Press and hold the **[Charge]** button. The charger will perform an intelligent safety check. After the check is passed, charging will start and the display will switch to the operating screen. This charger supports Charging Mode and Storage Mode for lithium batteries.

9.Charging

While charging is in progress, press the **[Charge]** or **[Storage]** button to pause the current operation and return to the main screen. Press the **[Charge]** button again to resume charging. After charging starts successfully, all parameters set for the current session will be saved. The charger will automatically recall the saved parameter configuration the next time it is used.

Foreword

Thank you for purchasing the EV-PEAK Smart Balance Charger. This manual is intended to help you quickly understand and use the product. Please read it carefully before use and keep it for future reference.
The safety information in this manual is intended only as a supplement to applicable local safety regulations.

Safety Precautions

⚠ Warnings and Safety Information

Read this manual carefully before using the product for the first time. Incorrect use of the charger or improper charging methods can be extremely dangerous and may cause a fire or even an explosion.

- Do not charge or discharge the following types of batteries:
- Battery packs made up of different battery models, including batteries from different manufacturers.
 - Batteries that are fully charged or have just been discharged.
 - Non-rechargeable batteries (risk of explosion), or batteries that require special charging procedures.
 - Damaged or defective batteries.
 - Batteries with built-in integrated circuitry or protection circuitry.
 - Batteries installed in other equipment or connected to other components.
 - Rechargeable batteries that have not been confirmed by the manufacturer as suitable for the charging current delivered by this charger.

Before charging, make sure that:

- The correct battery type and cell count are selected for the battery to be charged or discharged.
- The appropriate charging or discharging current is set.
- The correct battery capacity is set.
- Lithium battery packs are not connected in series or parallel for charging.

Product Specifications

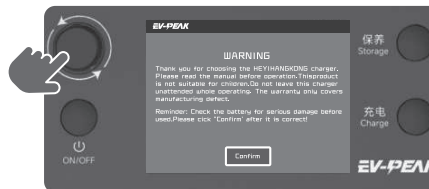
Product Model	U3-Neo	U4-Neo
Input	100V-240V~ 50/60Hz	100V-240V~ 50/60Hz
Output	Max. 36V⚡Max.40.0A	Max. 65V⚡Max.30.0A
Output Power	1500W	1500W
Battery Cell Count	2S-8S	6S-14S
Battery Type	LiPo/LiHV/LiSol/LiFe	
Number of Channels	Dual-channel	
Balancing Accuracy	<20 mV	
Input Protection	Overcurrent, undervoltage, short circuit	
Output Protection	Overvoltage, undervoltage, short circuit, overtemperature, reverse polarity	
Operating Temperature	5-45 ℃	
Cooling System	Forced-air cooling	
External Upgrade Port	Type-C	
Dimensions	230X155X118mm	
Weight	2.06kg	

Preset Battery Parameters

Battery Type	Nominal Voltage	Maximum Voltage	Max. Fast-Charge Rate	Minimum Voltage
LiPO	3.7V/cell	4.2V/cell	≤ 1C	3.0-3.4/cell
LiFE	3.3V/cell	3.6V/cell	≤ 4C	2.6-3.0/cell
LiHV	3.8V/cell	4.35V/cell	≤ 1C	3.1-3.5/cell
Lisol	3.8V/cell	4.45V/cell	≤ 1C	3.0-3.5/cell

Quick Start Guide

Startup and Setup Process



1.Startup

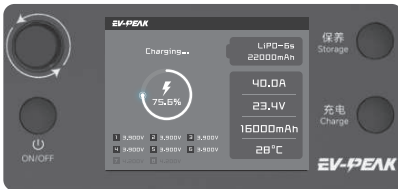
After connecting the power supply correctly, wait 7 seconds, then press and hold the **[Power]** button for 2 seconds to turn on the device.

2.Language Selection

The charger has built-in Chinese and English language options. When the charger is powered on for the first time, select the language you want to use.
On subsequent startups, the charger will automatically use the selected language and the language selection screen will no longer be displayed. To change the language, press and hold the **[Knob]** while the startup screen is displayed.

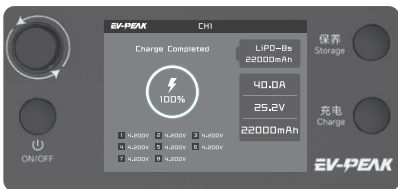
3.Warning Page

- This product is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of relevant experience and knowledge. This product is not a toy. Keep it out of reach of children and ensure that children do not play with or operate it.
- If any cracks appear on the product surface, stop using the product immediately and turn off the power to avoid electric shock.
- This product is for indoor use only.



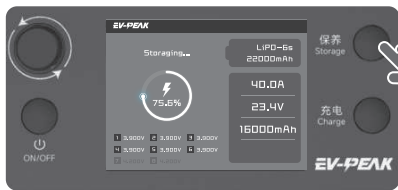
⚠ Note:

After the batteries are connected and charging begins, the display will automatically switch to the simultaneous charging screen. Rotate the **[Knob]** to view the charging information for each battery individually.



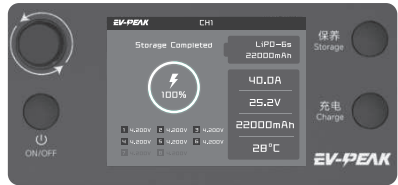
10.Charging Complete

When the charging status indicates that charging is complete, the screen will show 100% charging progress.



11.Storage Mode

Press and hold the **[Storage]** button to enter Storage Mode. When the storage status shows “Storage Complete,” the storage process is finished.



⚠ Note:

After the batteries are connected and charging begins, the display will automatically switch to the simultaneous charging screen. Rotate the **[Knob]** to view the charging information for each battery individually.

Charging Restrictions

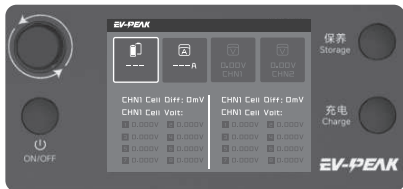
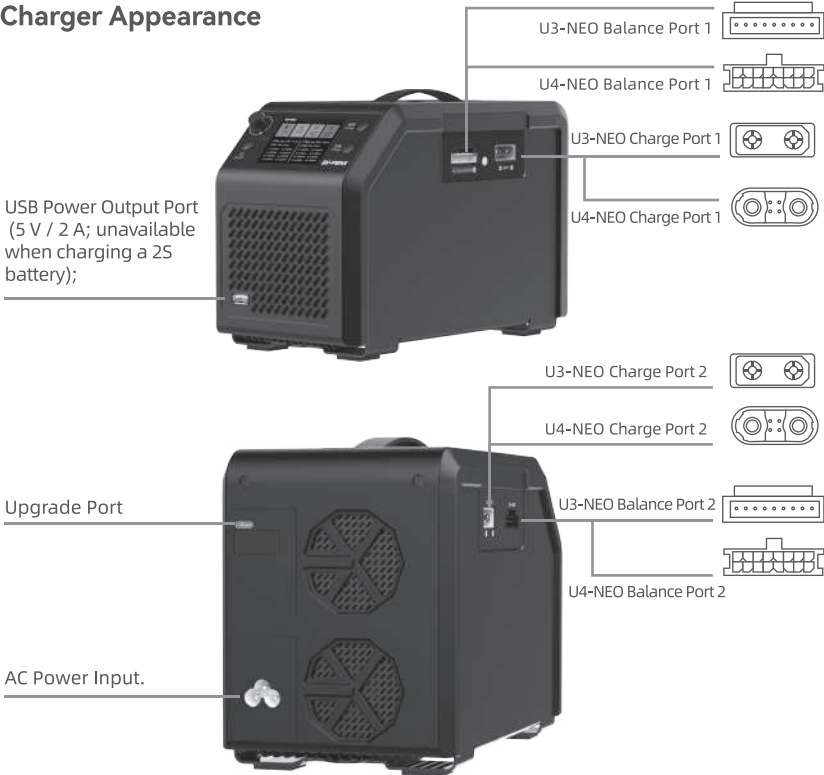
- Do not leave the charger unattended while in operation. If any abnormal operation is observed, stop charging immediately and refer to this manual to identify the cause.
- Keep the charger away from dust, moisture, rain, high temperatures, direct sunlight, and strong vibration. Do not subject the charger to impact.
- Place the charger on a heat-resistant, flame-retardant, and electrically insulated surface. Do not place it near flammable materials such as vehicle seats or carpets, and keep the charging area away from flammable or explosive materials.
- The charger supports an AC input voltage range of 100-240 V.
- Before charging or discharging, always make sure that the battery settings match the actual battery specifications. Incorrect settings may damage the equipment, and overcharging may cause serious accidents such as fire or explosion.

Important Notes

- Select the correct voltage setting for each battery type. An incorrect setting may damage the battery and may cause a fire or explosion.
- During charging, the total amount of charge can be estimated by multiplying the charging current by the charging time. The maximum allowable charge for any battery pack must not exceed the rated capacity specified by the battery manufacturer. The appropriate charging current may vary depending on battery type and performance. If the battery documentation does not specify exact charging parameters, use the standard charging rate recommended by the charger manufacturer.
- The connection leads between the battery and charger are normally marked red for positive and black for negative. Because the wires and connectors have internal resistance, the charger cannot accurately measure the resistance of the battery pack alone. To ensure proper operation, the connection terminals must have an adequate conductor cross-sectional area and high-quality plated contacts to reduce contact resistance and ensure charging efficiency and safety.
- The main purpose of discharging is to remove excess charge from the battery or adjust the battery voltage to a specified level. As with charging, special care is required during discharge. The discharge cut-off voltage must be set correctly to avoid over-discharging. For lithium batteries, the discharge voltage must never fall below the specified minimum voltage, as this may cause irreversible capacity loss or complete battery failure. Lithium batteries generally do not require deliberate full discharge. To protect the battery, monitor the lower cut-off voltage and use partial discharge rather than deep discharge whenever possible. Frequent full discharges should be avoided.

Product Appearance

Charger Appearance



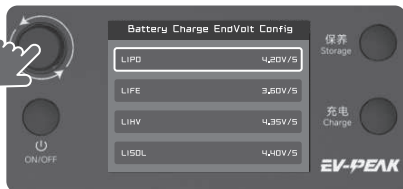
4.Initial Screen

When the initial screen appears, no parameters are displayed. Relevant information will be shown after the battery is connected correctly.



5.Select Battery Type

Rotate the [Knob] to the battery type setting area, browse the available battery types, and press the **[Knob]** to select the required battery type (LiPo / LiHV / Life / LiSol). Then set the battery cell count. Supported range: U3-Neo: 2S-8S; U4-Neo: 6S-14S.

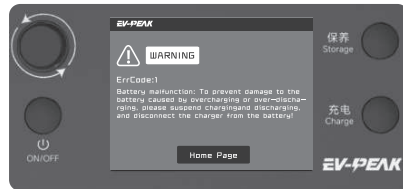


6.Charge Cut-off Voltage Settings

When the selection box is on Battery Type, press and hold the **[Knob]** to enter the charge cut-off voltage adjustment screen. The cut-off voltage can be set separately for each battery type as follows:

- Rotate the **[Knob]** to select the battery type to be adjusted.
- Press the **[Knob]** briefly to activate the voltage value for adjustment (the value will be highlighted or flashing).
- Rotate the **[Knob]** to set the required voltage value.
- Press the **[Knob]** again to confirm the change.
- Repeat Steps 2-4 to set the other battery types.

When finished, press and hold the **[Knob]** to exit.



12.Warning and Error Messages

When an error screen appears, press the **[Charge]** or **[Storage]** button to exit the error screen. If the cause of the error has not been removed, the error screen will appear again. On the error screen, press the **[Knob]** briefly to cycle through the errors for each channel. If only one channel has an error, only the error code and message for that channel will be displayed.

After-Sales Service and Warranty

Thank you for choosing an EV-PEAK charger. EV-PEAK is committed to providing comprehensive after-sales service and support. If the product malfunctions, please contact the EV-PEAK After-Sales Service Center promptly.

- The product warranty period is calculated based on the date the product is received by the EV-PEAK After-Sales Service Center.
- Within one year from the date of purchase, failures caused by product quality defects are covered by free warranty service. If valid proof of purchase cannot be provided, the warranty period will be determined based on the date encoded in the product serial number.
- After the one-year warranty period has expired, repair costs may be charged as appropriate, and the user is responsible for round-trip shipping costs.
- When sending the product in for repair, provide valid contact information so that we can contact you promptly after the repair is completed.

- The following types of damage are not covered by the warranty:
- Damage caused by connecting the product to an incorrect voltage.
 - Damage caused by failure to use the product in accordance with this user manual.
 - Damage caused by misuse, mishandling, accidental impact, or force majeure.
 - Damage caused by unauthorized modification, disassembly, or alteration of the product’s internal circuitry without EV-PEAK approval.
 - Damage caused by water ingress, moisture, or foreign objects entering the product.
 - Aging, dents, or scratches on the product enclosure.