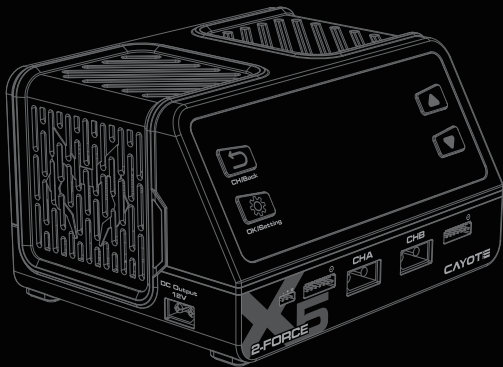




2-Force X5

使用说明书
User Manual

CAYOTE TEAM

Thank you for choosing the Cayote 2-Force X5 Dual-Channel Smart Charger. To ensure safe and proper operation, please read this manual carefully and follow all instructions and safety precautions. Due to ongoing product improvements, the actual functions and interface of your charger may differ slightly from those described in this manual. Please refer to the actual product for the most accurate information. If you experience any issues during use, please contact us to obtain the latest user manual and technical support.

尊敬的用户，感谢您购买使用 Cayote 2-Force X5 双通道智能充电器。为了确保您能够安全及顺利地使用充电器，请完整的阅读此使用说明，并遵守此使用说明中提到的注意事项。

由于产品功能的不断更新，您手中的说明书可能会与实际操作有所区别，请以实际充电器为准。如遇到使用困难，请及时联系我们以获取最新产品使用说明。

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To ensure your safety and a reliable user experience, please read this section thoroughly before using the charger.

- Do not leave unattended: Never leave the charger completely unattended while in operation. If you notice any abnormal signs (such as unusual sounds, smell, or excessive heat), stop using the charger immediately.
- Avoid harsh environments: Use the charger only in a dry, well-ventilated, dust-free area, away from high temperatures, direct sunlight, heat sources, and strong vibrations.
- Safe placement: Place the charger on a heat-resistant, non-flammable, and insulated surface. Do not use it on flammable materials such as seats, carpets, or cloth-covered surfaces.
- Keep away from flammable materials: Ensure the charging area is free of flammable or explosive items during operation.
- Protect connection ports: Keep all connection ports clean and dry. Prevent liquid ingress or contact with foreign objects.
- Use proper accessories: Always use power components that match the charger's

rated specifications. Do not overload your power circuit.

- Set correct charging parameters: Before charging, confirm the battery type, voltage, and number of cells, and set the charger accordingly to avoid damage or safety risks.
- Match voltage and cell count: Ensure the battery voltage is within the supported range, and the selected cell count matches the battery.
- Prevent overheating and burns: The charger generates heat during operation. Maintain proper ventilation and keep it out of children's reach.
- Disconnect after charging: Once charging is complete, promptly disconnect the battery and remove the power supply.

- Prohibited Operations:

- Charging overnight
- Charging swollen, damaged, wet, short-circuited, or mismatched battery packs
- Charging under extreme temperatures or direct sunlight
- Connecting both AC and DC power sources simultaneously
- Disassembling, modifying, or using a damaged charger

Cayote 2-Force X5

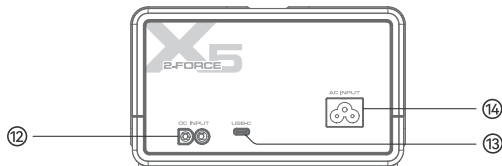
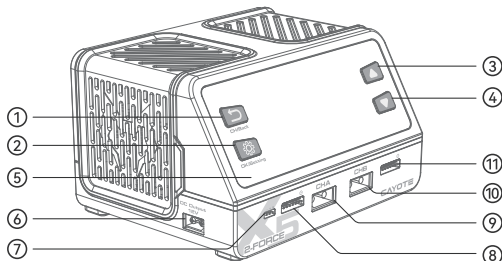
Competition-grade RC Dual-Channel Smart Charger

Cayote 2-Force X5 is a dual-channel smart charger designed for professional RC racing users. It integrates high-performance power management, an intuitive user interface, and multiple operating modes. Whether you're activating batteries before a high-intensity race or powering multiple devices on-site, the 2-Force X5 delivers robust power and stable performance to ensure reliability for every RC enthusiast.

03

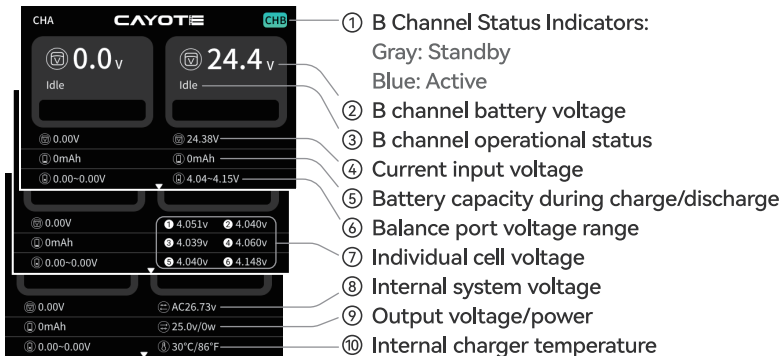
Ports and Button Descriptions

- ① CH/Back
- ② OK/Setting
- ③ Up
- ④ Down
- ⑤ Screen
- ⑥ XT60 DC 12V Output
- ⑦ Servo Testing
- ⑧ CHA Balance Port
- ⑨ CHA XT90 Output
- ⑩ CHB XT90 Output
- ⑪ CHB Balance Port
- ⑫ EC5 DC Input
- ⑬ USB-C Upgrade Port
- ⑭ AC Input



Interface Description

Once powered on, the charger will display the startup logo for approximately 2 seconds before entering the main interface.



Button Descriptions



CH/Back

- In the main interface, press the “CH/Back” button to switch between Channel A and B. When a battery is connected, use the “Up/Down” buttons to view more information such as cell voltage, internal resistance, charge capacity, power, and temperature.
- While selecting a task, pressing the “CH/Back” button cancels changes or returns to the previous screen.



OK/Setting

- In standby mode, press the “OK/Setting” button to enter the system settings menu.
- During operation, press and hold the “OK/Setting” button to stop the current task.

Model: Cayote 2-Force X5

Input Voltage: AC 100-240V 50/60Hz 6.5A (Max), DC 12-30V 65A (Max)

Output Voltage: DC 5-30V

Max Charging Power: AC 500W / DC 700W x 2 (AC charging limited to 400W when DC 12V output is active)

Max Charging Current: 40 A normal, 55A Synchronous

Max Discharge Power: 70W x 2 internal, 500W external

Max Discharge Current: 8A

Balancing Current: 2A/Cell Max.

Supported Battery Types: 1-6S LiPo/LiFe/LiIon/LiHV, 1-18S NiMH

USB-C Output: 5V/2A (10W)

XT60 DC Output: 12V/100W

Servo Test Port Output: 5V/0.5A (2.5W)

LCD Screen: 3.5-inch IPS sunlight-readable display

Operating Temperature: -10°C to 45°C

Storage Temperature: -20°C to 60°C

Dimensions: 173.5 x 132 x 103 mm

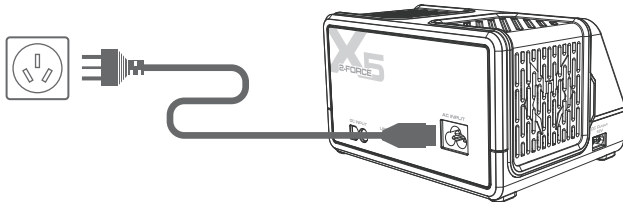
Weight: Approx. 1660g

1. Power Connection

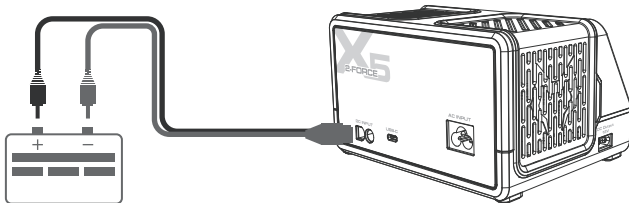
The Cayote 2-Force X5 charger supports both AC and DC input, with input voltage ranges of AC 100-240V and DC 12-30V.

⚠ Do not connect both AC and DC power sources at the same time.

(1) AC 100-240V Power Connection:



(2)DC Power Connection:

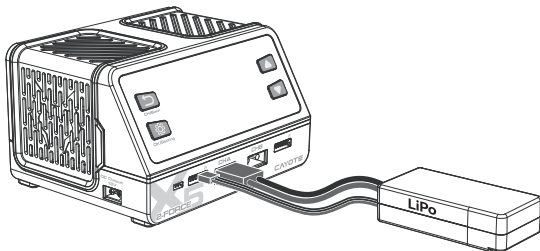


2. Battery Connection

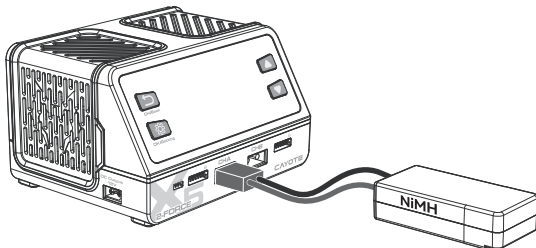
⚠ To prevent short circuits, always connect the charging cable to the charger first, then connect the battery. When disconnecting, follow the reverse order.

(1)LiPo Battery Connection

When charging a LiPo battery, make sure to connect the battery's balance lead to the charger as well. The negative terminal of the battery's balance lead must correspond to the negative terminal mark on the charger before making the connection. Refer to the diagram below for the correct connection.



(2) NiMH Battery Connection



1. LED Status Description

(1)**Normal Startup**: All three LEDs on both CHA and CHB channels flash green three times at the same frequency, then turn off.

(2)**Standby (No Battery Connected)**: All three LEDs remain off.

(3)**During Charging**: The three LEDs display the battery's real-time capacity in a sequential (running light) pattern. The LED Indicator Status is as follows:

Capacity	LED1	LED2	LED3
0-30%	Flash	OFF	OFF
31%-60%	ON	Flash	Flash
61%-99%	ON	ON	Flash
100%	ON	ON	ON

(4)**Charger Error**: The three LEDs on the affected channel flash red continuously.

2. Charging, Discharging, Balancing, Storag

The charger is capable of performing charging, discharging, balancing, and storage functions for various types of batteries. Before performing these tasks, please ensure that the battery is correctly connected to the charger. Improper connections may prevent the charger from functioning properly.

- LiPo, LiHV, LiFe, Li-ion batteries must have the balance lead connected to the charger when performing any of the above tasks.
- If any cell voltage in the battery pack is below 1.5V, the charger will not start the charging or balancing functions.
- During discharging, if any cell voltage in the battery pack is lower than the set cutoff voltage, discharging will not occur.
- During balancing/storage, if the cell voltage is below the set cutoff voltage, the charger will charge the battery to that voltage and balance it. If the cell voltage is above the set cutoff voltage, the charger will discharge the battery to that voltage and balance it.
- Once the battery is correctly connected to the charger, select the corresponding channel for the battery type and configure the necessary settings.
- The charger allows you to set the battery type, and adjust cutoff voltage, current, and other parameters.
- After starting the task, the charger will charge/discharge the battery to the preset voltage and balance any voltage differences.

3. External Discharge

The charger can achieve precise discharging of the battery by connecting an external load. The maximum discharge power is 700W, and the maximum discharge current is 40A. To discharge the battery, insert the battery into the "DC INPUT" interface on the charger, then connect the external high-power load to the output interface (CHA or CHB). By configuring the appropriate working parameters, you can discharge the battery precisely.

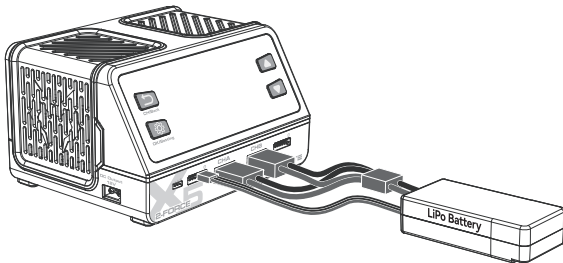
When using a resistor for discharging, the heat generated can be substantial. Please avoid touching the resistor to prevent burns or accidents.

4. Digital Power Supply

When selecting the digital power supply function, the charger can be used as a DC power supply with adjustable voltage. The output voltage can be set between 5-30V, and the current can be set between 0.1-40A. Please ensure not to short-circuit the output port or exceed the power output limit, as this may damage the product.

5. Synchronous Charging

The maximum charging power for the synchronous charging mode is 1000W (Note: The external DC input power must be greater than 1100W/20V to ensure a 1000W output). The adjustable charging current range is 0.1-55A. During charging, the battery balance lead can be connected to either the CHA or CHB balance port.



6. DC 12V Output

The XT60 12V DC output port on the left side of the charger can be used to power various 12V DC devices, with a maximum output power of 100W. By default, this function is disabled. To enable it, enter the System Settings menu by pressing and holding the “OK/Setting” button on the main screen while in standby mode. Then turn on the DC 12V Output option.

Note: When this function is enabled, the maximum AC charging power is limited to 400W.

7. PWM Measurement / PPM Output

From the main screen, press and hold the “OK/Setting” button to enter the System Settings menu. Then select “Tools” → “PWM Measurement” or “PPM Output” .

- When selecting "PWM Measurement", the charger measures the pulse width of the incoming PWM signal, allowing you to check the control value currently being sent by the transmitter or flight controller. This is commonly used for testing servos, ESCs, and similar devices.
- When selecting “PPM Output” , press the “OK/Setting” button briefly to select the channel you want to adjust. Then, use the Up and Down buttons to modify that channel’ s

output pulse width. This feature is commonly used when connecting a flight controller or receiver to other modules.

8. Manual Servo Test

From the main screen, press and hold the “OK/Setting” button to enter the system settings menu. Go to Tools → Manual Servo Test to access the testing interface. Press “OK/Setting” to toggle between T1 (cycle) and P (pulse width). Use the Up and Down buttons to increase or decrease the values of T1 and P as needed.

9. Automatic Servo Test

From the main screen, press and hold the “OK/Setting” button to enter the system settings menu. Go to Tools → Auto Servo Test to enter the auto test interface. Press “OK/Setting” to toggle between Speed (sweep speed), Range (movement angle), and Cycle (repeat rate).

Use the Up and Down buttons to fine-tune each parameter:

- **Speed:** Choose between low, medium, and high; higher speed results in faster servo movement.
- **Range:** A wider range means a larger servo swing angle.
- **Cycle:** A higher value leads to a faster oscillation cycle.

When the charger is in standby mode, press and hold the “OK/Setting” button on the main screen to enter the System Settings menu. The available menu items are as follows:

**Device
Settings**

Language: Chinese / English (Subject to the actual charger version)

Max Input Power: 250–1500W

Minimum Input Voltage: 7–26V

DC 12V Output: OFF/ON

Screen Timeout: 5–60 minutes

Backlight Brightness: Low / Medium / High

Volume: Off / Low / Medium / High

End Beep: Once / Repeat

Reset Settings: Restore factory defaults

Safety Settings	Task Timer
	Capacity Limit
Tools	PWM Measurement
	ManuTest
	Servo AutoTest
	PPM Out
CHA/CHB Calibration	Manually calibrate the cell voltage readings for each channel. Use a multimeter to measure the actual voltage of each cell in the battery pack, then adjust the charger' s readings accordingly to match. This ensures accurate voltage display and balancing.
Self-Check	When starting the self-check process, a “Do Not Connect Battery” warning will appear. During the test, the internal fan will spin and make noise. Once the screen displays

“Self-check Passed,” the device will automatically return to the settings menu. If an error is reported, refer to the Warnings & Error Messages list for troubleshooting steps. Note: Do not perform self-check repeatedly in short intervals.

About Device

View system information and firmware version.

To update the charger's firmware, use the USB upgrade cable included in the package to connect the charger to your computer. During the process, your PC may automatically install the necessary USB driver—make sure you are connected to the internet.

1. Take out the USB upgrade cable.
2. Plug the USB-C end into the charger.
3. Press and hold the “Up” button on the charger.
4. While holding the button, plug the USB-A end into your computer.
5. When you hear the “beep-beep-beep” sound from the charger, release the button.
6. Open the upgrade software on your computer and double-click to launch it.
7. Click the “Upgrade” button to begin.
 - During the upgrade, the charger screen will go black. Once the process is complete, the screen will light up again.
 - Important: Do not unplug the USB cable or power off the device during the upgrade. Doing so may interrupt the process and erase the existing firmware.
8. If the upgrade fails, simply repeat the above steps to try again.

Warning content	Error cause	Solution
"Wrong Battery Type"	Selected battery type does not match the type detected by the charger.	Reset battery type.
"Error"	Abnormal voltage/switches/converters during self-test.	Self-test error, please contact the dealer.
"Internal Error"	Abnormal voltage/switches/converters during self-test.	Internal fault info, please contact the dealer.
"High voltage from the balance port"	Battery cell voltage exceeds the specified limit for the battery type.	Battery voltage is too high, please check battery status.
"Abnormal Balancer Port Connection"	Balance port connection error.	Connect properly to the balance port.
"Reversed Polarity"	Battery polarity reversed.	Properly connect the battery's positive and negative terminals.
"Output Over-voltage Protection"	Output voltage exceeds the set value.	Reset voltage setting.

"Output Over-current Protection"	Output current exceeds the set value.	Reset current setting.
"Input voltage is too low"	Charger input voltage below rated.	Low input voltage. Check power supply.
"Input voltage is too high"	Charger input voltage exceeds rated.	High input voltage. Check power supply.
"Over-heating Protection"	Charger over-temperature protection.	Charger overheated. Please wait for it to cool down and try again.
"Time Out"	Charger working time over-time protection.	Reset the time in the task schedule as needed.
"Unstable Input Voltage"	Unstable input voltage.	Check power supply.
"Without Balancing Connector"	The battery balance plug is not connected.	Please connect the battery's balance charging plug.
"Battery voltage is too low"	Battery voltage too low.	Battery voltage too low, please check battery status.
"Operation is not supported"	Invalid operation.	Operate correctly.

"Do not connect battery"	Battery connected during self-test.	Remove the battery.
"Exceeded Capacity Limit"	Charging capacity exceeds the set limit.	Reset the capacity limit.
"Output Connection Error"	Battery disconnected or communication timeout.	Output connection error, please try reconnecting.
"No battery detected from CHA"	No battery detected from CHA.	Connect battery to CHA channel correctly.
"No battery detected from CHB"	No battery detected from CHB.	Connect battery to CHB channel correctly.
"No balancing connection CHA"	No battery detected from CHA balance port.	Connect balance port to CHA channel correctly.
"No balancing connection CHB"	No battery detected from CHB balance port.	Connect balance port to CHB channel correctly.
"Cells doesn't match the battery"	Number of battery cells does not match the detected battery.	Reset number of battery cells.

From the date of purchase, we offer a one-year warranty for this product. During this period, we will repair your product free of charge.

Please note that damage caused by misuse, improper operation, or unauthorized modifications is not covered under the warranty.

If your product develops a fault within the warranty period, please contact the local dealer/distributor where you purchased the product—they will assist you with the repair process.

Alternatively, you can contact us directly at: info@teamcayote.com

为确保您的安全和良好的使用体验，请在使用本产品前完整阅读本说明。

- 禁止无人看管：充电过程中不可完全无人看管，发现异常（如异响、异味、过热等）请立即停止使用。
- 避免恶劣环境：请在干燥、通风、无尘、无高温或阳光直射的环境中使用，远离热源及强震动。
- 安全放置：充电器应放置于耐热、不燃、绝缘的平面，避免在座椅、地毯等可燃材质上使用。
- 远离易燃物：使用时应确保操作区域无易燃易爆物品。
- 接口防护：保持各连接端口清洁干燥，避免液体渗透或异物接触。
- 配件标准：请使用额定功率匹配的电源组件，禁止超负荷使用电路系统。
- 正确设置充电参数：使用前请确认电池类型、电压和串数，并正确设定充电器参数，防止损坏或安全事故。
- 电压匹配与串数一致：确保电池电压在支持范围内，且设定串数与电池一致。
- 避免高温与烫伤：工作时充电器会发热，应保持通风，禁止儿童接触。
- 充电完成及时断电：完成充电后请尽快断开电池，移除电源。

- 禁止以下操作

- 通宵充电
- 为鼓包、损坏、进水、电线短路或不同类型电池组充电
- 在极端温度或阳光直射下充电
- 同时连接交流和直流电源
- 拆解、改装或使用损坏的充电器

02

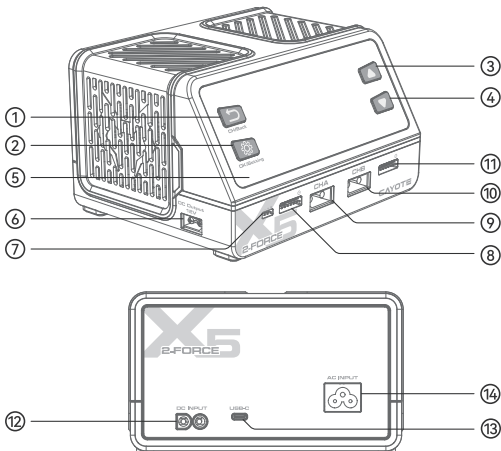
产品概述

Cayote 2-Force X5

RC 竞赛级智能双通道充电器

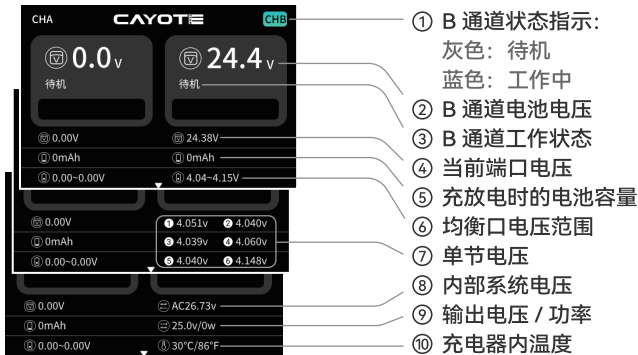
Cayote 2-Force X5 是一款面向专业 RC 模型竞赛用户的双通道智能充电器，融合高性能电源管理技术、极致人机交互体验与丰富工作模式于一体。无论是在高强度比赛前的电池激活，还是现场的多任务供电支持，2-Force X5 都能以强劲功率与稳定表现，为每一位 RC 模友提供可靠保障。

- ① 通道 / 返回
- ② 确认 / 设置
- ③ 上键
- ④ 下键
- ⑤ 显示屏
- ⑥ XT60 DC 12V 输出接口
- ⑦ 舵机检测口
- ⑧ A 通道均衡口
- ⑨ A 通道 XT90 输出接口
- ⑩ B 通道 XT90 输出接口
- ⑪ B 通道均衡口
- ⑫ EC5 DC 输入接口
- ⑬ USB-C 固件升级口
- ⑭ AC 电源接口



界面说明

充电器通电后，显示屏显示开机 logo 界面约 2 秒后进入主界面。



按键说明



CH/Back

- 在主界面中，短按“CH/Back”键可以切换 A/B 通道，当接入普通电池后，短按上 / 下键可以查看对应通道的更多信息，如电芯电压、电芯内阻、充电容量、充电功率、充电器温度等。
- 在选中任务时，短按“CH/Back”键，结束修改或者返回上一界面。



OK/Setting

- 待机状态下，短按“OK/Setting”键，可进入系统设置界面，可以进行自定义设置。
- 工作状态下，长按“OK/Setting”键，可以停止当前工作任务。

产品型号: Cayote 2-Force X5

输入电压: AC 100-240V 50/60Hz 6.5A (Max), DC 12-30V 65A (Max)

输出电压: DC 5-30V

最大充电功率: AC 500W / DC 700W x 2 (当开启 DC 12V 输出时, AC 充电功率最大只有 400W)

最大充电电流: 普通充电 40A, 二合一充电 55A

最大放电功率: 普通放电 70W x 2, 外部放电 700W

最大放电电流: 8A

平衡电流: 2A/Cell Max.

支持电池类型: 1-6S LiPo/LiFe/Lilon/LiHV, 1-18S NiMH

USB-C 输出: 5V/2A (10W)

XT60 DC 输出: 12V/100W

舵机检测口输出: 5V/0.5A (2.5W)

LCD 显示屏: 3.5 寸 IPS 阳光屏

工作温度: -10°C to 45°C

储存温度: -20°C to 60°C

尺寸: 173.5 x 132 x 103 mm

重量: 约 1660g

1. 连接电源

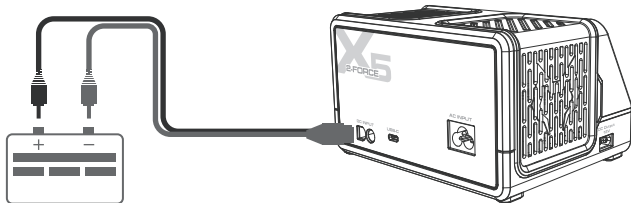
Cayote 2-Force X5 充电器支持交流 / 直流双输入，输入电压分别是 AC 100-240V, DC 12-30V。

⚠ 切勿同时连接交流和直流电源。

(1) 交流 100-240V 电源连接:



(2) 直流电源连接:

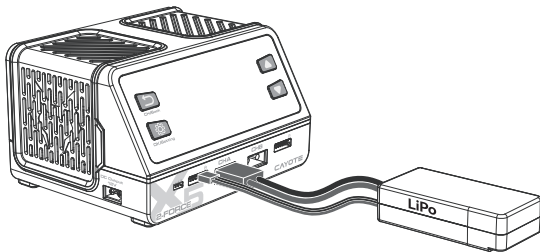


2. 连接电池

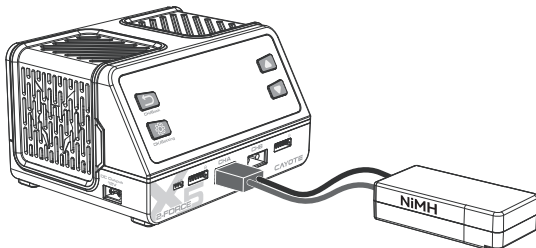
⚠ 为避免短路，请先将充电线与充电器连接，然后再连接电池。断开时，与之相反顺序。

(1) 锂电池连接

给锂电池充电时，需要将电池的平衡线也接入充电器，电池平衡充线的负极必须对应充电器的负极标志，然后再进行连接。参考如下连接示意图。



(2) 镍氢电池连接



1.LED 灯显逻辑

- (1) 正常开机：CHA CHB 通道的各 3 个灯以绿灯按相同的频率闪烁 3 次后熄灭
- (2) 待机（未连接电池）：3 个灯熄灭
- (3) 充电过程中：3 个灯以跑马灯形式显示电池的实时电量，亮灯逻辑如下：

电池电量	LED1	LED2	LED3
0-30%	闪	灭	灭
31%-60%	长亮	闪	闪
61%-99%	长亮	长亮	闪
100%	长亮	长亮	长亮

- (4) 充电器异常：对应通道的 3 个灯以红灯持续闪烁

2.充电、放电、平衡、存储

充电器具备给多种类型电池的充电、放电、平衡、存储功能。在给电池执行以上任务之前，请检查电池的线路是否正确的连接至充电器，若未正确连接，可能会造成充电器无法正常工作。

- LiPo, LiHV, LiFe, Li-ion 的电池在执行以上任务时必须连接平衡充至充电器;
- 若电池组中的任意电芯电压低于 1.5V, 充电器将无法启动充电、均衡功能;
- 放电功能时, 若电池组中的任意电芯电压低于设定的截止电压, 则无法进行放电;
- 平衡 / 存储功能时, 若电芯电压低于设定的截止电压, 则充电器将电池充电至该设定电压并均衡, 若电芯电压高于设定的截止电压, 则放电至该设定电压并均衡;
- 当电池正确连接至充电器之后, 需要先选择对应电池连接的通道进行的相关设置;
- 充电器可以设置电池的种类, 调节截止电压、电流等参数;
- 在启动任务后, 充电器将把电池充 / 放电至预设电压, 并均衡压差。

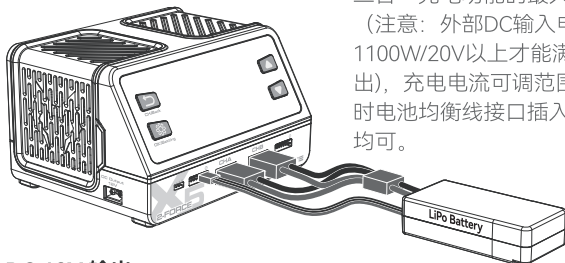
3. 外部放电

充电器可以通过外接负载实现给电池精准放电, 最大放电功率 700W, 最大放电电流为 40A。将需要放电的电池插入充电器的“DC INPUT”接口, 再将外部高功率负载插入 CHA 或者 CHB 的输出接口, 通过对相应进行工作参数的设定, 即可对电池进行精准放电。若使用电阻进行放电, 发热量较大, 请勿触碰以免烫伤或发生意外。

4. 数字电源

选择数字电源功能时, 充电器可作为一台可调节电压的直流电源。输出端口的电压可以设置在5-30V之间, 电流可设置在0.1-40A之间。请注意不要短接输出口或使用超功率输出, 以免烧毁产品。

5. 二合一充电



二合一充电功能的最大充电功率为1000W
(注意：外部DC输入电源的功率需要大于1100W/20V以上才能满足1000W的功率输出)，充电电流可调范围为0.1-55A，充电时电池均衡线接口插入CHA/CHB均衡串口均可。

6. DC 12V 输出

充电器左侧的 XT60 12V DC 输出接口，可为多类 12V 的直流设备供电，最大供电功率 100W。默认是关闭此功能的，若需要开启此功能，待机状态下，在主界面长按“OK/Setting”键可进入系统设置界面，在 DC 12V 输出的选项中开启此功能即可。

注意，当开启此功能时，AC 充电功率最大只有 400W。

7. PWM 测量、PPM 输出

主界面下长按“OK/Setting”按键可进入系统设置界面,选择“工具”→“PWM 测量”或者“PPM 输出”。

- 选择“PWM 测量”,通过测量输入的 PWM 信号脉宽,可以判断遥控器 / 飞控当前给出的指令值,广泛用于控制舵机、电调 (ESC) 等设备。
- 选择“PPM 输出”,短按“OK/Setting”键选择需要修改脉宽值的通道,短按上下键修改该通道的输出脉宽值,常用于连接飞控或接收机到其他模块。

6. 舵机手动测试

主界面下长按“OK/Setting”按键可进入系统设置界面,选择“工具”→“舵机手动测试”进入测试界面,按“OK/Setting”键,可以在 T1 (周期) 和 P (脉冲宽度) 之间相互切换,按“上”“下”键可以增大或减小 T1 (周期) 和 P (脉冲宽度)。

7. 舵机自动测试

主界面下长按“OK/Setting”按键可进入系统设置界面,选择“工具”→“舵机自动测试”进入测试界面,按“OK/Setting”键,可以在 Speed (摆动速度) / Range (角度) / Cycle (循环周期) 之间相互切换,按“上”“下”键可以增大或减小 **Speed (摆动速度) / Range (角度) / Cycle (循环周期)**。

- **Speed (摆动速度)**: 有低速,中速,高速三种模式,速度越高转动速度越快
- **Range (角度)**: 越大转动幅度越大;
- **Cycle (循环周期)**: 越大往复动作越快。

待机状态下，在主界面长按“OK/Setting”键可进入系统设置界面，菜单项如下：

设备参数

语言：中 / 英 （以实际的充电器版本为准）

最大输入功率：250-1500W

最小输入电压：7-26V

DC 12V 输出：关 / 开

屏保时间：5-60 分钟

背光：低 / 中 / 高

音量：关 / 低 / 中 / 高

结束声音：一次 / 循环

参数恢复：恢复出厂设置

安全设置	任务定时
	容量限制
工具	PWM 测量
	舵机手动测试
	舵机自动测试
	PPM 输出
CHA/CHB 校准	可手动校准电池每节电芯电压，用万用表测量电池组的每节电芯的实际电压，相应修改其电压值与电压表值一致，实现校准。
设备自检	启动设备自检时，会弹出“禁止连接电池”提示界面，自检过程中风扇会转动有响声，当显示“自检正常”后即完成，自动返回设置界面，若自检显示异常，请查询“警告及错误提示”清单找到解决办法。请注意不可连续自检。
关于设备	检查设备信息与版本信息

若需要对充电器进行固件升级，请使用包装盒中的 USB 升级线将充电器连接到电脑端，操作过程中可能需要联网自动安装 USB 驱动软件。

1. 取出 USB 升级线
2. 将 USB-C 端口接入充电器
3. 按住充电器的“上”键
4. 将 USB-A 端口接入电脑端
5. 直至充电器发出“滴”“滴”“滴”的提示音后松开充电器的按键
6. 双击打开升级软件
7. 点击“升级”
 - 升级过程中充电器黑屏，直至升级完成屏幕亮起。
 - 升级过程中若拔出 USB 升级线、断电等情况会导致升级失败（此时原版本软件可能已清除）
8. 若升级失败，重复上述步骤即可重新启动升级

警示内容	异常原因	解决方案
“电池类型错误”	电池类型和检测到的电池不匹配	重新设置电池类型
“自检故障”	自检电压、开关、升降压等异常	自检故障，请联系销售店
“内部故障信息”	自检电压、开关、升降压等异常	内部故障信息，请联系销售店
“平衡口电压高”	电池的电芯电压超过该类型电池电压	电池电压过高，请查看电池状态
“平衡口异常”	平衡口连接异常	正确连接平衡口
“输出接反”	电池的正负极接反	正确连接电池的正负极
“输出过压保护”	输出电压高于设定	重新设置电压
“输出过流保护”	输出电流高于设定	重新设置电流
“输入电压低于”	充电器输入电压低于额定	输入电压低，请检查输入电源设备

“输入电压高于”	充电器输入电压高于额定	输入电压高，请检查输入电源设备
“过温保护”	充电器温度过高保护	充电器过温保护，请等待降温后重试
“超时保护”	充电器工作时间超时保护	重新设置任务定时中的时间
“输入波动过大”	输入波动大	请检查输入电源设备
“非平衡模式”	电池未插平衡充	正确连接电池
“电池电压低”	电池电压过低	电池电压低，检查电池状态
“非法操作”	非法操作	正确操作
“禁止连接电池”	自检时连接电池	拔除电池
“安全容量超限”	充电容量限制超设定	重新设置容量限制中的容量
“输出连接异常”	电池连接断开或通讯超时	输出连接异常，尝试重新连接
“CHA输出无电池”	CHA 通道未检测到电池	CHA 通道正确连接电池
“CHB输出无电池”	CHB 通道未检测到电池	CHB 通道正确连接电池

“CHA平衡口无电池”

CHA 通道平衡口未检测到电池

CHA 通道平衡口正确连接电池

“CHB平衡口无电池”

CHB 通道平衡口未检测到电池

CHB 通道平衡口正确连接电池

“电池节数不匹配”

电池节数和检测到的电池不匹配

重新设置电池节数

11

保修及售后服务

自您购买产品之日起，我司提供一年的保修服务。一年内，我司将免费为您维修产品。若由于客户使用不当或者自行改装引起的任何损害，我司将不提供免费维修服务。如果您的产品出现问题且在保修范围内，请联系销售此产品的当地经销商，将协助您处理相关维修事宜。或者您也可以直接联系我们，请发邮件至 info@teamcayote.com。

2-Force X5

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