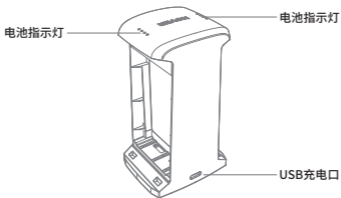


# **HOVERAir AQUA** **哈浮飞行相机 AQUA**

## **AQUA 充电管家说明书** **AQUA Charging Hub User Guide**



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## 充电管家使用说明

### 充电管家使用

充电管家推荐搭配官方 65W PD 充电器及数据线使用；第三方配件可能导致充电慢、停充或安全隐患。

具体操作方法：

1. 将电池插入充电管家。
2. 连接 USB-C 线缆与充电器。
3. 自动开始充电，指示灯显示状态。
4. 充满后拔下充电器并取出电池。



## 充电逻辑说明

充电管家优先对剩余电量较高的电池充电。如：电池A剩余电量一格，电池B剩余电量三格，此时将优先对电池B进行充电。

1. 功率充足(官方 65 W PD)：双路同时快充。
2. 功率不足或温度超限：轮流充电，单路完成后自动切换。

注：第三方充电器可能电流不足致慢充或停充，请优先使用官方 PD 充电器。

## 充电异常说明

1. 长时间将充电管家与适配器连接可能导致电池插入后无法激活，当电池充满后，请将充电管家从适配器拔出。
2. 如电池插入后无法充电，请尝试重新插拔 USB 口或适配器，等待充电管家灯语亮起。

## 充电管家指示灯说明

每个电池接口对应一组状态指示灯。

全部灯常亮，电池充满。

状况	LED 指示灯	说明
电池充电中	灯语显示当前电量	插入电池指示灯自动亮起。
电池充满		4灯全亮：电量≥98%
电池充满，且超过30分钟		4灯熄灭
可恢复的电池故障		4灯慢闪，请等待电池自行恢复
无法恢复的电池故障		4灯快闪，请更换电池
电池版本需要升级		电池装入飞机，升级版本。
充电管家进水		充电管家存在故障，请更换充电管家

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## 产品规格说明

型号: ZZ-H-4-005

输入: 5V=3A;9V=3A;12V=3A;15V=3A;20V=3.25A

防水等级: IPX4

工作温度: 5 °C - 40 °C; 推荐 25 °C 环境充电以延长寿命并提升速度。

环境温度为 25°C, 使用官方充电器供电及充电线时, 单路最快充电时间将在 80 min 以内;

低于 5 °C 或高于 40 °C 时充电减缓或停止, 请将电池置于适宜温度后再充电。

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## 使用注意事项

1. 为 AQUA 电池充电时, 须配合官方 PD 充电器及数据线; 第三方配件可能导致慢充、停充或安全隐患。
  2. 使用时将管家平稳放置, 保持干爽、通风、绝缘防火。
  3. 禁止用手或导体触碰金属端子。
  4. 端子附着液体时, 断电后用干布擦拭干净。
  5. 禁止拆解、刺穿、撞击、碾压、短路及燃烧充电管家。
  6. 充电管家进水后禁止使用。
  7. 充电时轻微发热属正常; 电池温度高时管家会暂停充电, 待冷却后继续。
  8. 水面飞行后, 请按照 AQUA 电池安全使用手册要求完成飞行后电池处理后, 再使用充电管家进行充电。
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## 免责声明

在使用哈浮飞行相机 AQUA 充电管家 (以下简称“充电管家”) 对电池充电及使用之前, 请仔细阅读本说明书, 并严格按照手册中的指导进行操作。

声明: 对于在超出本手册规定以外的条件下使用充电管家对电池充电而造成的任何意外事故, 深圳零零无限科技有限公司 (以下简称“零零科技”) 概不负责。

## AQUA 充电管家保修卡

商品名称: \_\_\_\_\_ 用户姓名: \_\_\_\_\_

商品序列号: \_\_\_\_\_ 联系电话: \_\_\_\_\_

经销商: \_\_\_\_\_ 购买日期: \_\_\_\_\_

### 申请保修服务

在产品有效保修期内产品出现性能故障,您可以申请产品保修服务,主要部件保修期限如下

部件	保修期限	服务方式
主板	12个月	用户寄修
外观件	不保修	用户寄修

本产品的保修期从您收到货物后的当日算起,若您无法提供有效购买凭证,则保修起始日期以机器所示的出厂日期向后顺延90日或由零零科技另有规定,若保修期限的最后一天为法定节假日时,以节假日的次日为有效期最后一天。在上述保修期限内,经深圳零零无限科技有限公司(“我们”或“零零科技”)确认若产品上述部件出现自身质量问题导致的性能故障,用户可以免费维修;超过上述保修期限或在上述保修期限内产品上述部件出现非自身质量问题导致的性能故障,用户可以申请付费维修。零零科技只负责因免费维修产生的寄回用户指定地点的运费。

### 以下情况不属于免费保修范围:

- 1.产品购入后由于运输、装卸所导致的故障或损坏;
- 2.任何未经零零科技授权许可的改装、拆卸、维修;
- 3.意外因素或人为行为导致产品损坏,如:进液、摔损、输入不合适电压、过度挤压、主板变形等;
- 4.未按使用说明书要求安装、使用、维护、保管导致的产品故障或损坏;
- 5.无法提供合法有效的购买凭证或单据,或对单据进行了伪造或涂改;
- 6.标签、机器序列号、防水防拆标记及其他标示被撕毁或涂改,模糊不清无法识别;
- 7.由于不可抗因素(如火灾、地震、水灾等)而造成的故障或损坏;
- 8.发生人为的非产品本身质量问题导致的碰撞、烧毁、飞丢等事故;
- 9.与非零零科技认证的第三方部件同时使用时发生可靠性及兼容性问题导致的损坏;
- 10.联系零零科技确认保修服务后,没有在7个自然日内寄出相应物件;
- 11.其他经零零科技认定为非产品自身质量问题导致的性能故障。

### 其他须知

若客户提供的收件地址错误,或存在收件人拒绝接收的情况,由此产生的损失须由客户承担。产品寄修前,请您妥善处理原有产品上附着的个性化物品和装饰(包含但不限于产品装饰性贴纸、UAS 贴纸、涂料喷漆等),零零科技对个性化物品和装饰的破损与遗失概不负责。为确保您的正常权益,在签收产品时,请您检查产品是否完好(如是否存在因物流等原因造成的损坏等)。如产品存在异常,请于签收日起的7日内反馈我们;否则将视您默认产品无损坏且性能正常。

维修(包括付费维修)过程中被维修更换下来的产品配件,将由零零科技回收并享有所有权。对于超过保修期限和免费维修服务范围的产品,零零科技将根据实际情况报价,您须对属于有偿服务范围的服务支付相应费用;如果您拒绝付费,在您未付清服务费前,零零科技有权暂时终止对您的服务,由此造成的后果由您自行承担。



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## Charging Hub User Guide

### Using the Charging Hub

The Charging Hub is recommended to be used with the official 65W PD charger and data cable; third-party accessories may lead to slow charging, stopped charging, or safety hazards.

Steps:

1. Insert the battery into the Charging Hub.
2. Connect the USB-C cable to the charger.
3. Charging will begin automatically, and the indicator lights will display the current status.
4. Once fully charged, unplug the charger and remove the battery.



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## Charging Logic

The Charging Hub prioritizes charging batteries with higher remaining capacity. For example, if Battery A has one bar of remaining charge and Battery B has three bars, Battery B will be charged first.

1. Adequate power (official 65 W PD): Dual-channel fast charging.
2. Insufficient power or excessive temperature: Alternating charging; one channel completes first, and then the other channel begins to charge automatically.

**Note:** Third-party chargers may provide insufficient current, resulting in slow charging or charging interruptions. Use the official PD charger whenever possible.







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## Charging Irregularities

1. Leaving the Charging Hub connected to the power adapter for extended periods may prevent the battery from activating when inserted. Once charging is complete, disconnect the Charging Hub from the adapter.
  2. If the battery does not begin charging after insertion, unplug and reconnect the USB cable or power adapter. Wait until the Charging Hub's indicator light turns on.
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## Charging Hub Indicator Lights

Each battery slot corresponds to one set of status indicator lights. All lights solid, Battery fully charged.

Behavior	LED Indicator Lights	Explanation
During charging	The indicator lights show the current battery level	The indicator light turns on automatically upon battery insertion.
Battery fully charged		4 lights solid: Battery $\geq$ 98%
Battery fully charged for more than 30 minutes.		4 lights off.
Recoverable battery fault		4 lights slow blink: Please wait for the battery to recover automatically.
Non-recoverable battery fault		4 lights fast blink: Please change the battery.
Battery firmware upgrade required		Insert the battery into the aircraft and upgrade the firmware.
Charging Hub water ingress		Charging Hub has a fault. Please replace the Charging Hub.

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## Product Specifications

Model: ZZ-H-4-005

Input: 5V  $\approx$  3A; 9V  $\approx$  3A; 12V  $\approx$  3A; 15V  $\approx$  3A; 20V  $\approx$  3.25A

Waterproof rating: IPX4

Operating temperature: 5°C to 40°C (41°F to 104°F). Charging at 25°C (77°F) is recommended to extend battery life and improve charging speed.

At an ambient temperature of 25°C (77°F), using the official adapter and charging cable, the fastest single-channel charging time will be within 80 minutes.

If the temperature is below 5°C (41°F) or above 40°C (104°F), charging will slow down or stop. Ensure an appropriate ambient temperature before charging.

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## Usage Precautions

1. When charging an AQUA battery, always use the official PD charger and data cable. Third-party accessories may cause slow charging, charging interruptions, or safety risks.
2. Place the Charging Hub on a stable, dry, ventilated, insulated, and fire-safe surface during use.
3. Do not touch the metal terminals with your hands or conductive objects.
4. If any liquid gets on the terminals, disconnect power and wipe clean with a dry cloth.
5. Do not disassemble, puncture, strike, crush, short-circuit, or burn the Charging Hub.
6. Do not use the Charging Hub if it has been exposed to water.
7. Slight heating during charging is normal. If the battery temperature is high, the Charging Hub will pause charging and resume once it cools down.
8. After use in a wet environment, process the battery according to the AQUA Battery Safety Instructions before charging with the Charging Hub.

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## Disclaimer

Before using the HOVERAir AQUA Charging Hub (hereinafter referred to as the "Charging Hub") to charge or operate the battery, carefully read this manual and strictly follow all instructions.

Shenzhen Zero Zero Infinity Technology Co., Ltd. (hereinafter referred to as "Zero Zero Technology") is not responsible for any accidents caused by using the Charging Hub to charge the battery under conditions not specified in this manual.

## AQUA Charging Hub Warranty Card

Product Name : \_\_\_\_\_ User Name: \_\_\_\_\_

Product SN : \_\_\_\_\_ Contact Tel.: \_\_\_\_\_

Distributor : \_\_\_\_\_ Purchase Date : \_\_\_\_\_

### Apply for Warranty Service

If you experience issues with your product during the warranty period, please follow these steps to request service:

Parts	Warranty Period	Service Method
Mainboard	12 months	Customer Return for Repair
External Parts	No warranty	Customer Return for Repair

The warranty period for this product begins on the day you receive it. If you cannot provide valid proof of purchase, the warranty start date will be 90 days after the manufacturing date shown on the device, or as otherwise specified by Zero Zero Technology. If the last day of the warranty period falls on a statutory holiday, the warranty will extend to the next business day. Within the warranty period described above, if Shenzhen Zero Zero Infinity Technology Co., Ltd. ("we" or "Zero Zero Technology") confirms that any of the components listed above have performance failures caused by quality issues, the user is entitled to free repair services. For issues occurring after the warranty period, or during the warranty period but not caused by component quality issues, users may request paid repair services. Zero Zero Technology is responsible only for the shipping cost of returning the repaired product to the user's designated address after free repairs.

### The following are not covered by the free warranty:

1. Damage or malfunction caused by transportation or handling after purchase.
2. Any modification, disassembly, or repair not authorized by Zero Zero Technology.
3. Damage caused by accidental factors or improper human operation, such as liquid ingress, drops, incorrect voltage input, excessive pressure, or motherboard deformation.
4. Malfunction or damage caused by installation, use, maintenance, or storage not in accordance with the user manual.
5. Inability to provide valid proof of purchase, or forged/altered purchase documents.
6. Labels, serial numbers, waterproof or tamper-evident marks, or other identifiers that are torn, altered, or illegible.

7. Damage or malfunction caused by force majeure (e.g., fire, earthquake, flood).
  8. Accidents caused by non-product-quality factors such as collisions, burns, or loss of the device.
  9. Damage caused by reliability or compatibility issues when used with third-party components not certified by Zero Zero Technology.
  10. Failure to send in the required items within 7 calendar days after Zero Zero Technology confirms warranty service.
  11. Other performance failures determined by Zero Zero Technology not to be caused by product quality issues.
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## Other notes

If the customer provides an incorrect delivery address, or if the recipient refuses to accept the package, the resulting losses must be borne by the customer.

Before sending the product for repair, please remove any personalized items or decorations attached to the device (including but not limited to decorative stickers, UAS stickers, paint, etc.). Zero Zero Technology is not responsible for any damage to or loss of such personalized items.

To protect your rights, please inspect the product for any damage (including possible shipping damage) when you receive it. If you find any issues, notify us within 7 days of receipt; otherwise, it will be considered that the product was received intact and functioning normally.

Any components replaced during repair (including paid repairs) will be retained by Zero Zero Technology and become the property of Zero Zero Technology.

For products outside the warranty period or not eligible for free repair service, Zero Zero Technology will provide a quotation based on the actual condition. You must pay the applicable fees for paid services. If you refuse to pay, Zero Zero Technology may temporarily suspend service until payment is completed, and any consequences arising from such suspension are your responsibility.