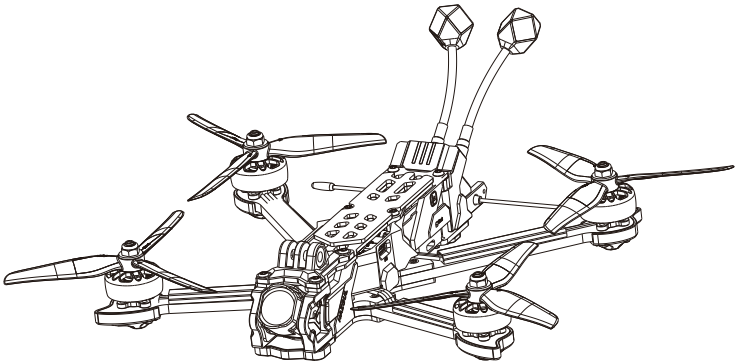
IFLIGHT
Flight Beyond Vision

# Nazgul DC5 ECO

Quick Start Guide
快速入门指南



V1.0

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# 安全飞行条款

1.年龄建议：本产品并非玩具，具有一定的风险性，不适合未满18岁的非专业人士使用。
2.请放置在儿童触碰范围之外，禁止儿童触碰。
3.禁止在饮酒、疲劳、或其他精神状态不佳的情况下进行任何操作。
4.禁止使用飞行器搭载任何违法危险物品。
5.禁止操控飞行器进入法律法规规定的禁飞区和敏感的建筑设施附近。可能包括机场、边境线、主要城市、发电站、水电站、监狱、交通要道、政府大楼及军事设施。
6.在进行遥控器通道校准、固件升级、参数设置前请关闭动力电源或者取下螺旋桨，防止电机高速旋转。
7.禁止在有限定高度的空域上飞行。
8.禁止使用本产品进行任何未经授权的监视活动，侵犯他人隐私权的行为。
9.禁止使用本产品侵犯他人物权。
10.禁止在人口密集地区使用飞行器，这些地区包括但不限于：市区中心、体育比赛场馆、展会、演唱会，车站及临时举行活动区域。如有拍摄需求，请务必在飞行前向相关部门申请许可证。

# 免责声明

1.本产品并非玩具，需要有一定的基础知识才能控制，所以要循序渐进，在开始使用前，请特别留意其中的注意与警告，惠州市翼飞智能科技有限公司(iFlight)保留更新本《免责声明与概要》的权利。
2.在使用本产品前，请务必仔细阅读本文档，以充分了解您的合法权益、责任以及安全须知。未遵守文档中的指导可能导致财产损失、安全事故或人身伤害。通过开始使用本产品，您即表明已完全理解、接受并同意本文档的所有条款与内容，并承诺对自身行为及其所产生的一切后果承担责任。此外，您还承诺仅出于正当目的使用本产品，并同意遵守iFlight可能制定的任何相关政策和准则。
3.iFlight不为本产品提供任何形式的明示或暗示保证，包括但不限于适销性、适合特定用途或非侵权性的保证。根据适用法律的最大限度内，所有必要的服务、维修及修复费用将由您自行承担，而非iFlight。对于因未按照官方文档指导使用产品所造成的任何损失，iFlight概不负责。此外，无论是否事先告知可能发生的损害，iFlight均不对因购买、使用或无法使用本产品而导致的间接、后果性、惩罚性、偶然性、特殊性或惩戒性损害承担责任。在法律允许的最大范围内，不论基于合同还是其他形式，iFlight对您的总责任上限为您实际支付给iFlight的产品购买金额。
4.在遵守相关法律法规的前提下，iFlight保留对上述条款的最终解释权。iFlight有权随时更新修改或终止本注意事项中的条款内容，且无需事先通知。除非本指南的下载服务被终止，否则本注意事项将长期有效。
5.iFlight是惠州市翼飞智能科技有限公司及其关联公司的注册商标。本文中提及的所有产品名称、品牌均为其各自所属公司的商标或注册商标。

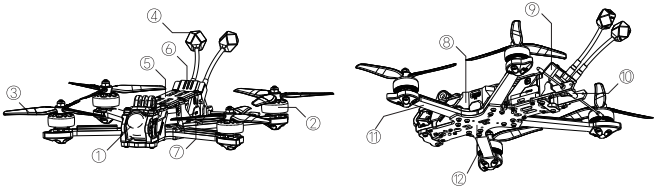
**警告：**在使用本产品之前，请您认真阅读此手册以熟悉产品的功能。此手册包含有关安全、操作及维护的说明概要。如未正确遵循手册的操作流程，可能会造成财产损失、产品损坏或造成严重的人身伤害！

# 一、产品信息

## 飞行器描述

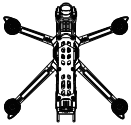
Nazgul DC5 ECO 重新定义 5 英寸标准花飞机性能与价值。搭载大疆 O4 Pro 数字高清系统，无螺旋桨视野设计，带来更出色的 4K*1影像能力。碳纤维框架和CNC 铝合金相机支架，轻且耐用，标配 GoPro 支架，助力自由飞行拍摄，升级飞行体验。

## 外观部件




①摄像头　②电机　③螺旋桨　④天线　⑤防滑垫　⑥XT60接口
⑦图传　⑧侧板+导光件　⑨尾座　⑩接收机天线　⑪机臂　⑫底板

## 产品清单


Nazgul DC5 ECO x1


正转螺旋桨 x2


反转螺旋桨 x2


天线 x2


防滑垫x1


配件包 x1


贴纸 x1


安全提示卡 x1


免责声明 x1


售后返修卡 x1

# 二、首次飞行准备

**1. 飞行眼镜激活与对频**

**注意：进行调试之前，请务必保持无桨 / 卸桨状态。在确保对频以及 Betaflight *2 调试无误之后再安装桨叶。如果操作不当导致人身伤害，责任自负。请务必谨慎操作，确保安全。**

1. 天空端及飞行眼镜激活：Nazgul DC5 ECO 飞行器连接电池，通过 USB-C 接口 [ 图 1-1] 连接对应设备至电脑并运行 DJI Assistant 2（消费机系列）调参软件 *3 进行激活与固件升级详情请参考 DJI O4 Air Unit 用户手册。

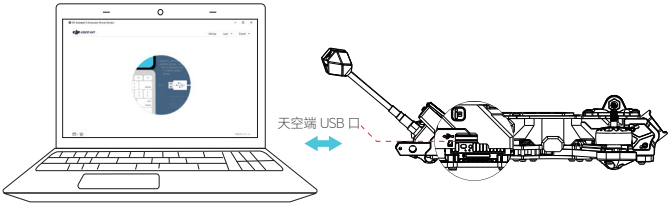



图 1-1

2. 飞行器和眼镜对频 (对频前，请确保天空端，飞行眼镜固件已激活更新至最新版本。)

①分别给飞行器与飞行眼镜通电。
②通电后，按下天空端对频按键 [ 图 1-2]，天空端对频状态指示灯红灯闪烁。
③按下飞行眼镜的对频按键 [ 图 1-3]，飞行眼镜响起嘀 ~ 嘀 ~ 的提示音。
天空端对频按键
④确保天空端与飞行眼镜距离在 0.5 M 以内。对频成功后，天空端对频状态指示灯 [ 图 1-4] 绿灯常亮，飞行眼镜提示音停止并显示图传画面。完成天空端与飞行眼镜的对频。

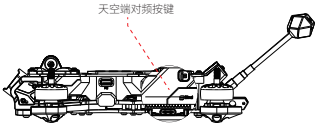



图 1-2

图 1-3

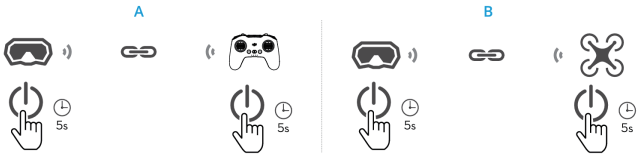
图 1-4

注：此为高清版本专用步骤，若飞行器为模拟版本，请移步第三部分对应接收机对频步骤

- 请避免在静置或无外部降温设备的环境下长时间使用天空端，否则产品温度过高，将导致图传中断。
- 为减少发热，天空端开机后默认处于低功耗状态，此时图传性能未达正常规格。飞行器起桨或开始录像后，天空端将自动退出低功耗状态，图传性能恢复正常。请尽快起飞，或确保天空端通风散热
- 切勿短接电源及GND线，或在天空端模块上电后插拔线材，否则会导致设备损坏。
- 使用前需充分了解并遵守当地的法律法规，避免违规使用。
- 本产品不适合未满18岁的非专业人士使用。

## 1. 遥控器对频

对频前，确保所有设备均已通过 DJI Assistant2（消费机系列）调参软件升级至最新固件。




### 1. 飞行眼镜和遥控器对频（图A）

①分别开启飞行器、飞行眼镜以及遥控器。长按遥控器电源按键直至响起持续的提示音，且电量指示灯循环闪烁。
②长按飞行眼镜电源按键直至响起持续的提示音，且电量指示灯循环闪烁。
③对频成功后，飞行眼镜和遥控器提示音停止，且电量指示灯均显示电量。

### 2. 飞行眼镜和飞行器对频（图B）

①长按飞行眼镜电源按键直至响起持续的提示音，且电量指示灯循环闪烁。
②长按飞行器电源按键直至发出提示音，同时电量指示灯循环闪烁。
③对频成功后，飞行器的电量指示灯显示电量，飞行眼镜提示音停止并显示图传画面。

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·飞行器飞行时只能用一个遥控设备控制，请将已对频但不使用的遥控设备关闭。
·对频时，确保所有设备的距离在0.5米以内。

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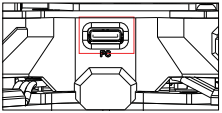
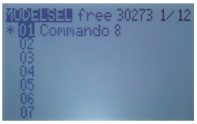
**2.遥控器对频：**接收机对频方式+步骤（ELRS）

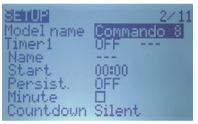
**ELRS对频方式一：**使用传统方式对频 (以 IFLIGHT Commando 8 连接 ELRS900为例，其他遥控器的具体操作请参考对应遥控器的说明书)



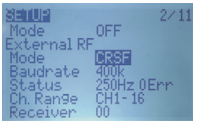

**连续插拔USB口三次：**连续开机关机三次或者在未开机的状态下，通过飞控USB口给接收机通电，连续拔插USB口三次，接收机蓝灯呈持续双闪，此时接收机进入对频状态，下一步再到遥控器对频。




1.上电后，通过长按Model setup按键来到MODELSEL界面



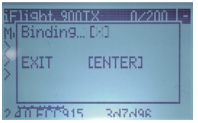

2.短按Next Page来到SETUP界面




3.选择并打开ExternalRF的CRSF协议


4. 长按 System Setings 进入到 TOOLS 界面移动光标至 ExpressLRS 选项长按 Enter 进入下一界面选项


5.光标移动至【Bind】选项，按下Enter进入对频模式




6.对频完成后，接收机的蓝灯双闪会变成蓝灯常亮状态，此时已对频成功

## [注意]

1.由于ELRS对频速度较快，先使接收机进入对频模式，再让遥控器进入对频模式。

2.对频完成后，建议给接收机重新上电。

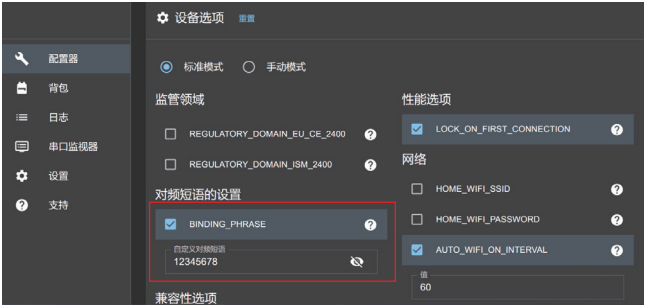
3.对频时，接收机与遥控器距离要在1米以上。

4.接收机固件版本与高频头固件版本需保持一致，如遇到无法对频的情况可尝试把接收机和高频头固件升级到最新的固件，再尝试对频。

5.如遇到无法对频情况，可尝试重启遥控器与接收机。

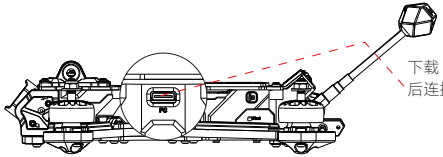
**ELRS对频方式二：**绑定短语对频与传统方式对频

如果你正在刷写接收机与高频头固件，只需要设置好绑定短语即可直接将接收机与高频头绑定，无需使用传统方式对频。在Custom binding phrase中设置你的绑定短语。注意！绑定短语内容必须具有唯一性，不要设置简单的绑定短语，否则在ELRS信号范围内同样绑定短语的设备将会被绑定。



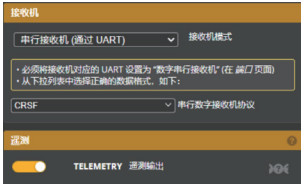

具体操作流程请参考EXPRESSLRS官网中的快速上手教程，或 IFLIGHT 官方哔哩哔哩账号视频教程。

# 三、飞行器设置



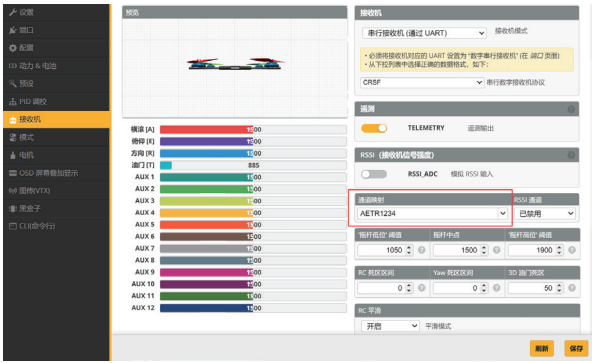

### a. 接收机端口/协议

ELRS/TBS接收机：CRSF


### b. 通道映射设置

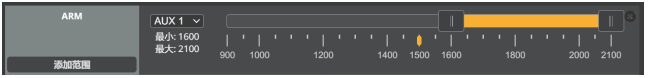
接收机通道映射：“AETR1234” 美国手-左手油门； “TAER1234” 日本手-右手油门



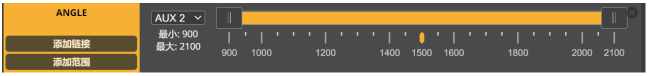
**c. 接收机端口/协议**

飞行器默认出货为自稳，客户也可自行设置其他模式。

ARM：解锁/上锁通道开关，用于飞行器的解锁与上锁，默认出厂设置为AUX1，低位为上锁，高位为解锁。图标亮起表示解锁，图标呈现灰色表示上锁。

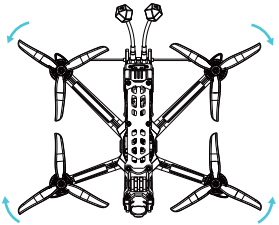



ANGLE：自稳通道开关，用于飞行器开启自稳飞行模式，默认出厂设置为AUX2该模式全程保持开启状态。图标亮起表示开启自稳模式，图标呈现灰色表示非自稳模式。




## 四、螺旋桨安装指南

CW 顺时桨＆CCW 逆时桨，用户需根据桨叶表面的方向标识，区分桨叶方向，安装至飞行器。



**注意** ⚠

◆拆装桨叶时，请确保飞行器处于断电状态。

◆由于桨叶较薄，请小心操作以防意外划伤。

◆ 螺旋桨为易损耗品，如有需要，请另行购买。

◆每次飞行前请检查螺旋桨是否安装正确和紧固。每次飞行前请务必检查各螺旋桨是否完好。如有老化、破损或变形，请更换后再飞行。

◆ 请勿贴近旋转的螺旋桨和电机，以免割伤。

◆ 本产品不适合未满18岁的非专业人士使用。

# 五. 飞行前检查

**警告：**在进行任何调试、维护或故障排除之前，请务必保持无桨 / 卸桨状态。在确保对频以及 Betaflight*[2] 调试无误之后再安装桨叶。如果操作不当导致人身伤害，责任自负。请务必谨慎操作，确保安全。

**每次飞行前，请对以下内容进行检查。**

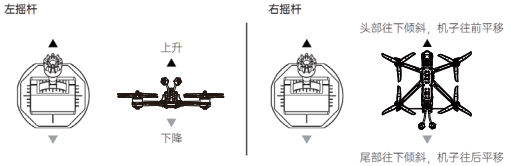
1. 必须正确安装天线才能上电。
2. 检查使用的电池电量是否充足且健康，确保电池无明显破损、变形或泄露现象。
3. 确认电池型号与飞行器兼容，电压规格正确（比如对于 6S 电池，应为 22.2V 左右）。
4. 检查电池插头与飞行器电池插座接触良好，无松动、污物或损坏情况。
5. 遥控器开启并已与飞行器正确对频，确认接收机指示灯正常闪烁或显示已连接。
6. 确保电机旋转方向正确，拆卸桨叶后，在地面站的电机页面推动油门确认。
7. 确认螺旋桨安装方向，确定螺丝螺母不会松动。
8. 确保起飞地点空旷无障碍物，远离人群和贵重物品，以防止意外失控造成的损失。
9. 如果是首次飞行或重大升级后，建议先进行地面测试，确认所有功能正常后再进行空中飞行。

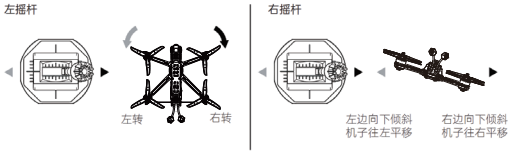
通过以上这些预防性检查，可以有效降低因疏忽导致的飞行事故，保证飞行器的安全运行。

# 六、飞行操作

## 1.遥控器基本操作

使用遥控器摇杆可控制飞行器飞行，遥控器摇杆操控方式主要分为日本手、美国手，下图以美国手 (Mode 2) 为例。更多信息详见遥控器说明书。



## 2.飞行步骤

**注意：**在操作飞行器前，请查询当地的法律和条款。在某些地区，飞行器的使用可能会受到限制或禁止。飞行时需严格遵守当地法律法规，您将对所有违反当地法律法规的飞行行为负责。

**2.1起飞步骤：**

需要目视飞行器同时将油门(throttle)推至最低位置，然后慢慢提升油门，使飞行器离地约10-20厘米。观察飞行器的姿态稳定后，收油门遥控器上锁。确认飞行器工作正常后再带上FPV飞行眼镜，或者使用专用监视设备进行飞行，解锁缓慢提高油门，使其平稳升空。

**2.2降落步骤：**

1. 降低高度，在降落前，先将飞行器逐渐降低至合适高度，保持稳定的飞行速度和姿态。
2.靠近降落点，控制飞行器慢慢接近预先选好的降落区域，尽量采用滑翔方式接近，才能更好控制距离点位。
3. 减小油门，缓慢减少油门输出，让飞行器缓慢下降。
4. 接触地面或距离地面5-10厘米即可上锁，小心周围环境避免硬着陆损坏。
5. 降落地面后请立即对无人飞行器进行断电操作。

**注意事项：**

·电池电量过低，飞行中可通过查看FPV飞行眼镜或监视器中的OSD信息判断电池剩余电量，飞行过程中需自行判断剩余飞行时间并留足冗余作为安全降落电量，当电池单片电芯电压接近3.7V时需要注意返航降落，过度放电会对电池造成不可逆的损坏。
·观察四周，在降落前再次确认周围环境安全，没有人员或动物进入降落区。
·降落地面后优先将无人飞行器设备断电，避免误触遥控器开关使其再次解锁从而避免发生事故和人身伤害。

# 七、 GPS救援功能使用指南（非标配）*4

设置GPS时，请连接飞行器电池，以确保GPS可在Betaflight *2中正常设置。
1. 若本飞行器已预装GPS，GPS救援模式请参考《GPS救援模式注意事项》进行设置。
2. 救援触发操作：
①若飞行器已经自动触发GPS救援，飞回来后想要手动接管仅需拨动左右任意一个摇杆接管，而不是拨打GPS救援开关。
②当飞行器因手动触发救援开关返航，且飞回到可接管范围时，则需再次操作救援开关以重新接管控制。
若自动触发救援模式后，遥控器接管成功再手动拨动开关，会导致GPS救援再打开，若在没有达到救援条件的时候，会导致上锁掉落。

注：在启用GPS救援模式及开始使用飞行器前，请熟读《GPS救援模式注意事项》中所有注意事项。

## 八. 故障排除指南

| 问题 | 可能原因 | 解决方案 |
| --- | --- | --- |
| 遥控器打杆，飞行器无反应 | 接收机协议设置与实际不符 | 检查接收机协议设置是否和接收机所连接的串口一致 |
| | 模式设置有冲突导致解锁失败 | 检查地面站模式设置是否有重复 |
| | 接收机通道预设与和遥控器的通道预设不一致 | 检查并设置使接收机通道映射和遥控器的通道映射一致 |
| | 飞行器在倾斜角度下 | 检查地面站配置页面的最大解锁角度 |
| | 油门通道过高 | 将油门杆拉到最低，或者检查通道序号正不正确 |
| | 已配置GPS救援模式但搜星不成功或所需的卫星数量不足 | 等待GPS定位成功或禁用GPS救援模式 |

| | | |
|---|---|---|
| GPS救援模式不触发 | 飞行距离未超过100米 | 飞行器飞到100米外后才能达到触发条件 |
| 飞行器起飞即翻滚或无法起飞 | 螺旋桨安装错误 | 检查螺旋桨的安装是否正确 |
| 飞行器起飞后电机存在异响 | 螺旋桨松动 | 拧紧螺旋桨的螺母 |
| | 螺旋桨轴心损坏 | 更换螺旋桨 |

## 九、保修政策和服务信息

请浏览 iFlight 官网 https://www.iflight.cn/warranty-policy-info11 以了解最新的售后保修信息。

**惠州市翼飞智能科技有限公司**

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注：
*1：支持 4K 实时录制，4K/120fps 视频不支持 4:3 画幅，仅支持 16:9 画幅。
*2：Betaflight configuration 是飞行器飞控调参软件,请通过以下地址下载。
https://betaflight.com/download
*3：DJI Assistant2（消费机系列）软件支持 DJI 消费无人机系列产品激活与调参，请通过以下地址下载：https://www.dji.com/cn
*4：GPS 为选配产品，需前往 iFlight 翼飞各大官方商城咨询客服，进行选购安装

# Safe Flying Guidelines

1. Age Recommendation: This product is not a toy and has certain risks. It is not suitable for non-professionals under the age of 18.
2. Please keep out of reach of children. Children are prohibited from touching it.
3. DO NOT operate under the influence of alcohol, fatigue, or other impaired mental states.
4. DO NOT use the aircraft to carry any illegal or dangerous goods.
5. DO NOT operate the aircraft in no-fly zones and near sensitive buildings and facilities stipulated by laws and regulations. These may include airports, borderlines, major cities, power plants, hydroelectric stations, prisons, transportation hubs, government buildings, and military facilities.
6. Before performing remote control channel calibration, firmware upgrades, or parameter settings,pleaseturn off the power supply or remove the propellers to prevent the motor from rotating at high speed.
7. DO NOT fly in airspace with limited altitude.
8. DO NOT use this product for any unauthorized surveillance activities or to infringe on the privacy of others.
9. DO NOT use this aircraft to infringe on the property rights of others.
10. DO NOT use the aircraft in densely populated areas, including but not limited to: city centers, sports stadiums, exhibition venues, concert halls, stations, and temporary event areas. If there is a filming requirement, be sure to apply for a permit from the relevant authorities before flying.

# Disclaimer

1. This product is not a toy and requires basic knowledge to control. Therefore, it is important to proceed gradually. Before using the aircraft, thoroughly read this manual and the Disclaimer and Safety Guidelines for important notes and warnings. Huizhou iFlight Innovation Technology Ltd. (iFlight) reserves the right to update this Disclaimer.
2. Before using this aircraft, be sure to read this document carefully to fully understand your legal rights, responsibilities, and safety precautions. Failure to comply with the instructions in the document may result in property damage, safety accidents, or personal injury. By starting to use this product, you indicate that you fully understand, accept, and agree to all the terms and contents of this document, and you undertake to be responsible for your own actions and all consequences arising therefrom. In addition, you also promise to use this aircraft only for legitimate purposes and agree to comply with any relevant policies and guidelines that iFlight may formulate.
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5. iFlight is a registered trademark of Huizhou iFlight Innovation Technology Ltd. and its affiliates. All product names and brands mentioned herein are trademarks or registered trademarks of their respective companies.

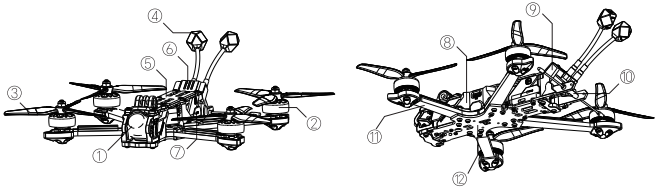
**Warning:** Before using the aircraft, thoroughly read this manual for important notes and warnings. This manual contains important safety, operation, and maintenance instructions. Failure to follow proper usage may result in damage, injury, or product malfunction.

# I. Overview

## Introduction

Nazgul DC5 ECO, a 5-inch freestyle drone that redefines performance and value. Equipped with DJI's O4 Digital HD System for a clear, propeller-free video feed featuring a 1.1/1.3-inch sensor for stunning 4K*[1] stabilized video, even in low light. Its carbon fiber frame with an aluminum camera mount ensures durability while remaining lightweight, and the included GoPro mount adds versatility and elevates your flight experience.

## Appearance Components




①Camera ②Motor ③Propeller ④Antenna ⑤Anti-slip pad ⑥XT60
⑦Air unit ⑧Side panel + LED strip ⑨TPU antenna mount ⑩Antenna
⑪Arm ⑫Bottom plate

## Packing List

Nazgul DC5 ECO x1

CW propeller x2

CCW propeller x2

Antenna x2

Battery pad x1

Accessory pack x1

Sticker x1

Safety warning card x1

Disclaimer x1

After sales service card x1

# II. Air Unit Activation and Binding

**Note: Before activation, please make sure the propellers are removed. The propellers can only be installed after the aircraft binding and Betaflight*2 settings are completed.**

**If improper operation results in personal injury, you will be solely responsible for it. Please operate with caution to ensure safety.**

1. Air Unit Activation: Power on the Nazgul Evoque and DJI Goggles separately, connect the corresponding device to the computer using the USB-C port and then run DJI Assistant 2*3 (Consumer Drones Series) for activation and firmware upgrade. Please refer to the DJI-O3 Air Unit User Manual for details.

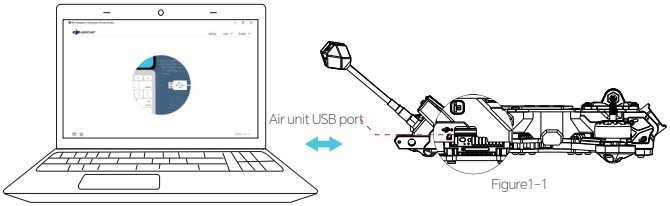



Figure1-1

2. Aircraft and Goggles Binding

(Make sure that all devices have been updated to the latest firmware versions before binding.)

① Power on the aircraft and the goggles separately.
② Press the bind button of the air unit, the binding status indicator of the air unit blinks red.
③ Press the bind button of the goggles and the goggles start to beep continually.
④ Make sure the distance between the air unit and the goggles is within 0.5 m. Once linking is successful, the binding status indicator of the air unit turns solid green. The goggles stop beeping and the image transmission can be displayed normally.

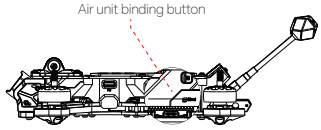



Figure1-2

Figure 1-3

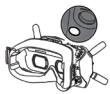


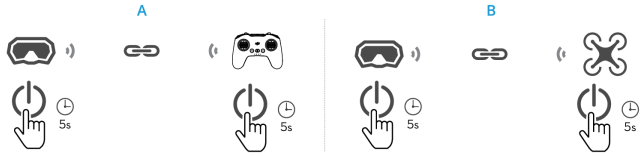
Figure 1-4

Note: This is the procedure for HD version, if the aircraft is analog version, please refer to Part III for the corresponding receiver binding procedure.

◆ DO NOT use the air unit for an extended period in high-temperature environments with poor ventilation. This may lead to overheating and loss of image transmission.
◆ When the air unit is powered on, it automatically enters the low-power state to avoid overheating, which negatively affects image transmission performance. Once the aircraft takes off or the recording starts, the air unit automatically exits the low-power state and resumes normal image transmission performance. Make sure to take off as soon as possible or the air unit is well ventilated.
◆ DO NOT connect the power cable with the power GND cable directly or plug or unplug the cables after the air unit is powered on. Otherwise, the equipment may be damaged.
◆ Make sure you fully understand and abide by local laws and regulations before using this product.
◆ This product is not intended for children.

1. Remote Controller Binding Instruction

Make sure that all the DJI devices are updated to the latest firmware using DJI Assistant 2 (Consumer Drones Series) before linking.




1.Linking Goggles and Remote Controller (Figure A)

① Power on the aircraft, goggles, and remote controller. Press and hold the power button on the remote controller until it starts to beep continually and the battery level LEDs blink in sequence.

② Press and hold the power button on the goggles until it starts to beep continually and the battery level LEDs blink in sequence.

③ Once linking is successful, the goggles and the remote controller stop beeping and both the battery level LEDs turn solid and display the battery level.

2.Linking Goggles and Aircraft (Figure B)

① Press and hold the power button on the goggles until it starts to beep continually and the battery level LEDs blink in sequence.

② Press and hold the power button on the aircraft until it beeps once and the battery level LEDs blinks in sequence.

③ Once linking is completed, the battery level LEDs of the aircraft turn solid and display the battery level, the goggles stop beeping, and the image transmission can be displayed normally.

---

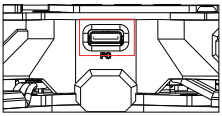
· The aircraft can be controlled with only one remote control device during flight. If the aircraft has been linked with multiple remote control devices, turn off the other remote control devices before linking.

· Make sure the devices are within 0.5m of each other during linking.

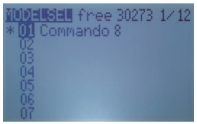
---

**2.Remote Controller Binding Instruction：** Receiver Binding Methods and Steps (ELRS+TBS)

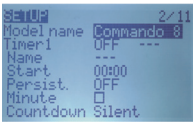
**ELRS Binding Method1:** Traditional Binding Procedure (Example: iFlight ExpressLRS 900TX)



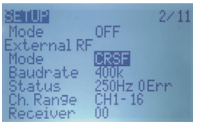
**Plug and unplug the USB port for three times:** Power on and off the aircraft for 3 times，plug and unplug the USB port for 3 times to supply power to the receiver when the aircraft is power off, the blue LED will start to double flash continuously. Bind mode is active.




1. After powerlong press the Model setup to enter MODELSEL



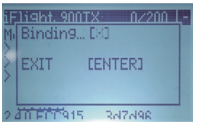

2. Press Next Page to enter the SETUP page.




3. Scroll down to External RF and select CRSF.


4. Press System Settings to TOOLS page and select the ExpressLRS. Press to enter.


5. Scroll down to 【Bind】, press Enter to enter the binding mode Bind mode active.



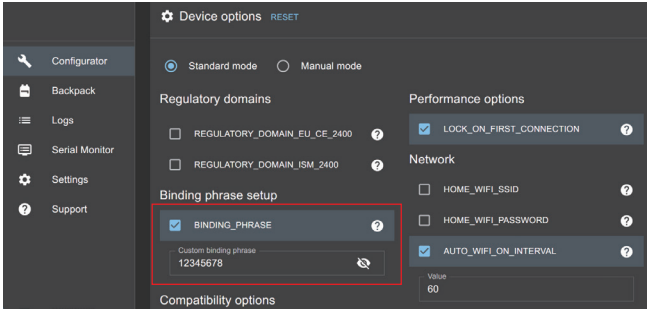

6. After binding, the blue LED on the receiver will turn to solid blue. Binding is successful.

## [Note]

1. Be quick with this process and set the receiver in binding mode first.
2. After the binding process is completed, it's recommended to re-power receiver.
3. The distance of receiver and remote controller should be more than 1m during the process.
4. The receiver firmware version should be consistent with the RF module firmware version. If you can't bind your hardware, please try to update to the latest firmware.
5. If you can't bind your aircraft, please try to reboot and several times if necessary.

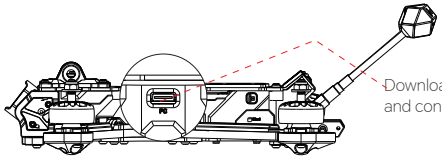
### 2. Using Custom Binding Phrase

When flashing the latest ELRS firmware for Receiver and Transmitter, just set a unique custom binding phrase to automatically bind all your hardware. Do not set a too simple binding phrase, otherwise other pilot's devices with the same binding phrase might link up as well.




For more specific information please refer to the ELRS quick start tutorial on the official website.

# III. Aircraft Setting

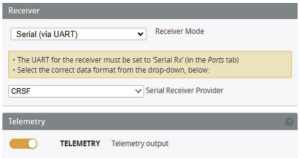


Download Betaflight Configurator*2
and connect to Flight Controller

### a. Receiver Port/Protocol

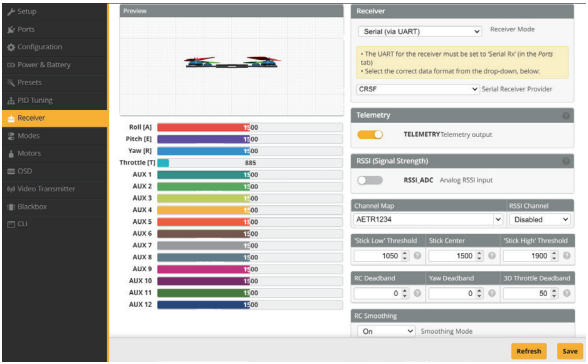
ELRS/TBS Receiver: CRSF

| Identifier | Configuration/MSP | Serial Rx | Telemetry Output |
|---|---|---|---|
| USB VCP | 115200 | | Disabled AUTO |
| UART1 | 115200 | | Disabled AUTO |
| UART2 | 115200 | | Disabled AUTO |
| UART3 | 115200 | | Disabled AUTO |
| UART4 | 115200 | | Disabled AUTO |
| UART5 | 115200 | | Disabled AUTO |
| UART6 | 115200 | | Disabled AUTO |




### b. Channel Map Setting

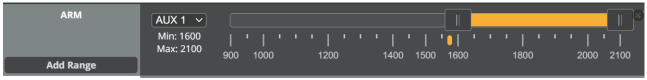
Receiver Channel Map: "AETR1234" Mode 1 Throttle, "TAER1234" Mode 2 Throttle



### c. Mode Switch (Default Angle)

The default mode is Angle, and customers can also switch to other modes.

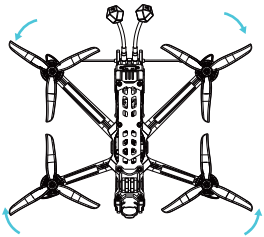
ARM: ARM/DISARM channel switch for arm and disarm the aircraft, default factory setting is AUX1, low range for disarm, high range for arm, The icon is lit to indicate arm, the icon is grey to indicate disarm.




ANGLE: Angle channel switch, used to turn on the Angle flight mode, the default factory setting is AUX 2, this mode remains on throughout the flight. The icon is illuminated to indicate Angle mode is on, the icon is grey to indicate Angle mode.


## IV. Propellers Installation

Identify CW & CCW propellers and install them correctly on the aircraft.



**Caution** ⚠

◆Before removing or installing the propellers, please make sure the aircraft is powered off.

◆ Handle propellers carefully to avoid accidental cuts.

◆ Propellers are consumables; inspect and replace them if worn, damaged, or deformed.

◆ Ensure propellers are installed correctly and securely before each flight.

◆ Avoid close contact with rotating propellers and motors.

◆ This product is not intended for children.

# V. Pre-Flight Check

**Warning:** Before tuning, maintenance, or troubleshooting, always ensure that the propellers are removed or not installed. Only install the propellers after successful binding and proper setup verification. Improper operation may result in personal injury, for which the user assumes full responsibility. Please operate with extreme caution and prioritize safety at all times.

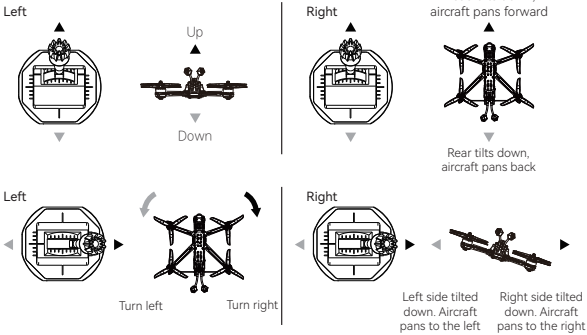
### Please check the following before each flight.

1. Make sure the antenna is installed correctly before powering on the aircraft.
2. Make sure the aircraft batteries are fully charged and there is no obvious damage, deformation or leakage in the battery.
3. Make sure the battery model is compatible with the aircraft and the voltage specification is correct (e.g. for 6S battery, it should be about 22.2V).
4. Make sure the aircraft battery is properly connected and secure, there is no looseness, dirt or damage.
5. Make sure the remote controller is powered on and bind to the aircraft,and verify the receiver indicator light flashes normally or indicates a connection.
6. Make sure the motor rotates in the right direction, take off the propellers and connect the aircraft to Betaflight Configurator, then push the throttle to confirm the rotation on the motor page.
7. Make sure propellers are in good condition and mounted onto the motors correctly and securely.
8. Make sure the takeoff area is open and free of obstacles. Keep a safe distance from people and valuable objects to prevent potential damage in case of loss of control.
9. If it is the first flight or after a major upgrade, it is recommended to conduct a ground test first to make sure all functions are normal before flying in the air. These preventive inspections
can effectively reduce flight accidents caused by negligence and ensure the safe operation of FPV drones.

# VI. Flight Operation

## 1.Basic Remote Controller Operation

The aircraft is controlled via the remote controller sticks. There are two main stick configurations: Mode 1 and Mode 2. The following diagram uses Mode 2 as an example. See the remote controller manual for more information.



## 2.Flight Procedures

**Note:** Before operating the aircraft, please check local laws and regulations. In some areas, the use of aircraft may be restricted or prohibited. Users are solely responsible for complying with all applicable laws and regulations during flight operations, and any violations will be at your own risk.

### 2.1Takeoff Procedure:

Start by pushing the throttle to the lowest position, then gradually increase it to lift the aircraft approximately 10-20cm off the ground. Once the aircraft's attitude is stable, throttle down and disarm the remote controller. Put on FPV goggles or face the monitor (such as a handheld monitor), arm the remote controller and slowly increase the throttle to smoothly ascend.

### 2.2 Landing Procedure:

1. Decrease altitude, before landing, gradually lower the aircraft to an appropriate altitude, maintaining a stable flight speed and attitude.
2. Approach landing spot, control the aircraft to slowly approach the pre-selected landing area, preferably using a gliding approach to better control the distance.
3. Reduce throttle, slowly decrease throttle output to allow the aircraft to land slowly.
4. Disarm the aircraft when it touches the ground or is 5-10cm away from the ground, be careful to avoid hard landings that could cause damage.
5. After landing, immediately unplug the battery to power off the device to avoid injury.

### Precautions:

· Monitor battery level: You can check the remaining battery power by checking the OSD information in the FPV goggles or the monitor during flight. You need to judge the remaining flight time and leave enough redundancy for safe landing. When the voltage of a single battery cell approaches 3.7, you need to pay attention to return and land. Over-discharge will cause irreversible damage to the battery.

· Observe surroundings: Before landing, double-check the surrounding environment for safety, ensuring no people or animals are in the landing area.

· Disconnect battery: After landing, it is important to first power off the aircraft to avoid accidentally triggering the remote controller switch to arm it again, preventing potential accidents and injury.

# VII. GPS Rescue Mode Instruction (Not Standard) *4

When setting up GPS, please connect the battery to ensure that the GPS can be properly configured in Betaflight *2.

If this aircraft is already equipped with GPS, please refer to the GPS Rescue Mode Precautions for setup instructions.

Rescue Trigger Operation:

① If the aircraft has automatically triggered GPS rescue, after it returns, you only need to move either joystick (left or right) to take manual control, do not toggle the GPS rescue switch.

② When the aircraft returns due to manually triggering the GPS rescue switch, and it has returned to within controllable range, you need to toggle the GPS rescue switch again to regain control.

If the GPS rescue switch is manually toggle after the remote controller successfully takes over, it will cause GPS rescue mode to turn on again. If rescue conditions are not met at that time, this may cause the aircraft to lock and fall.

**Note:** Before enabling GPS rescue mode and operating the aircraft, please carefully read all precautions in GPS Rescue Mode Precautions.

# VIII. Troubleshooting Guide

| Issue | Possible Reason | Solution |
|---|---|---|
| **The aircraft does not respond to the remote control stick input.** | Receiver protocol settings do not match the actual configuration. | Check if the receiver protocol settings are consistent with the serial port to which the receiver is connected. |
| **The aircraft does not respond to the remote control stick input.** | Mode settings conflict causing failure to arm. | Check if there are any conflicts or duplicates in the Betaflight Configurator mode settings. |
| | Receiver channel presets do not match the transmitter channel presets. | Verify and configure receiver channel map setting to match the transmitter channel map setting. |
| | Aircraft is at a tilted angle. | Check the maximum arming angle setting on the Betaflight Configurator page. |
| | Throttle channel is too high. | Move the throttle stick to the lowest position or verify if the channel number is correct. |
| | GPS rescue mode configured but GPS acquisition unsuccessful or insufficient satellites. | Wait for GPS fix or disable the GPS rescue mode. |

| | | |
|---|---|---|
| **GPS Rescue Mode not Triggering** | Flight distance has not exceeded 100 meters. | Fly in a straight line for at least 100 meters past your descent distance, make sure the home arrow is pointing at your direction to confirm GPS functionality. |
| **Aircraft Rolls Over Immediately on Takeoff or Cannot Take Off** | Propellers installed incorrectly. | Ensure that the propeller direction matches the motor direction. |
| **Unusual Noise from Motors After Takeoff** | Propellers are loose. | Tighten the propellers. |
| | Propeller shaft is damaged. | Replace the propeller. |

## IX. Warranty Policy and Service Information

Please visit the iFlight official website at https://shop.iflight.com/help-center-aftersales.html to learn the latest aftersales service and warranty information.

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Note：
*1：Betaflight configuration is a flight controller software (firmware) used to configure your aircraft.
Please download at this link: https://betaflight.com/download
*2：DJI Assistant 2 (Consumer Drones Series) supports the consumer drones series products activation and firmware upgrade. Please download at this link: www.dji.com.
*3：GPS is an optional product and needs to be purchased separately.