iFlight Defender 16 HD Version

快速入门指南
Quick Start Guide

1、拆卸飞机电池
Removing the battery

2、电池充电
Charging the battery

3、装飞机电池
Installing the battery

4、开关机及调节灯光操作
Power button and LED adjustment

5、状态指示灯及描述
Indicator status description

6、飞机和遥控器对频
Binding the aircraft and remote control

7、天空端激活
Activation

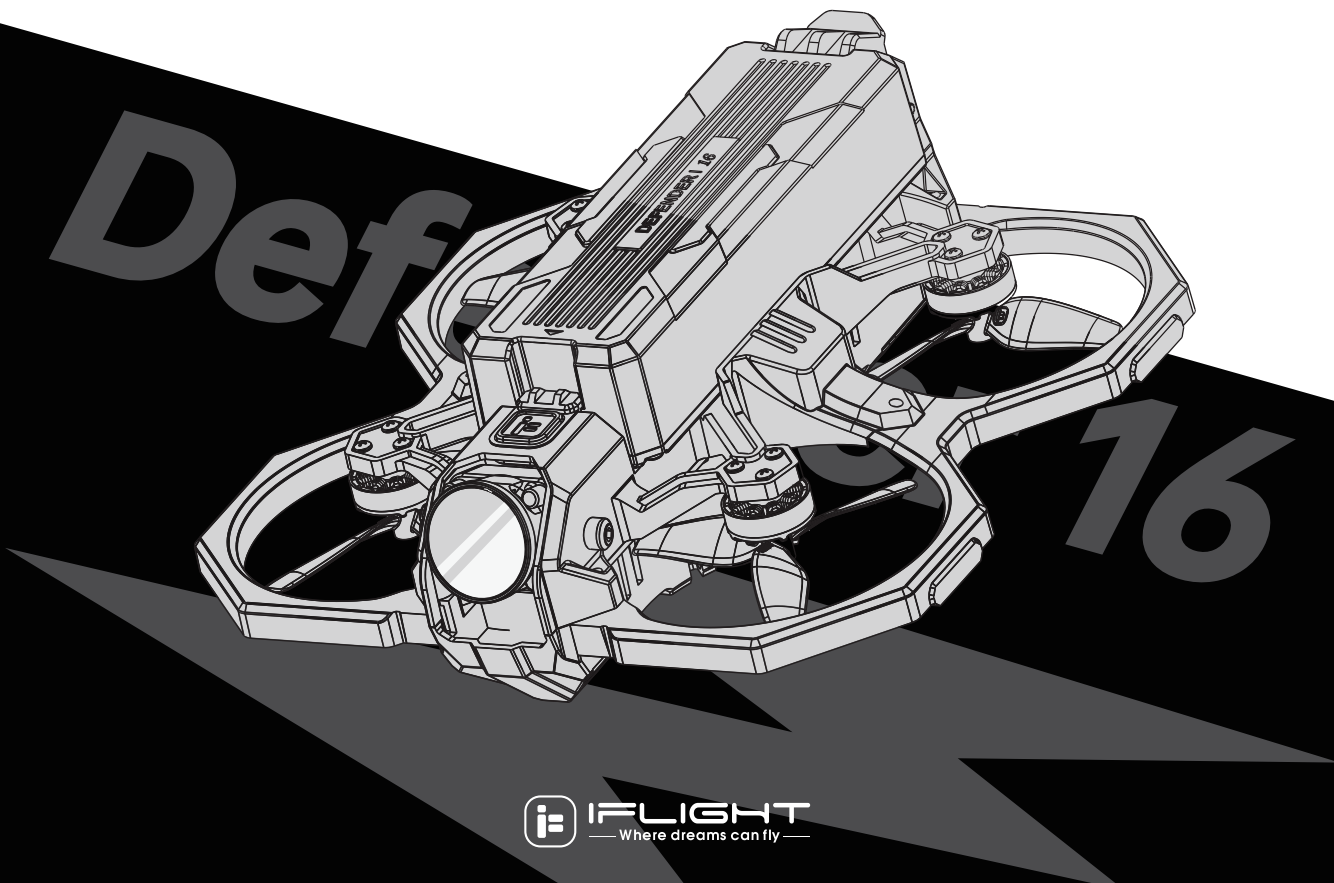
8、飞机和眼镜对频
Binding the aircraft and goggles

9、起飞前检查
Pre-flight check

10、模式开关
Mode switch

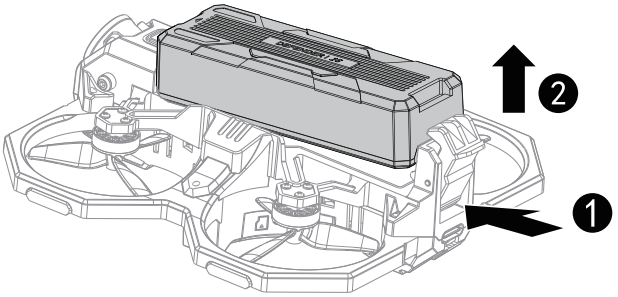
11、基础飞行操作说明
Basic flight instruction

12、售后服务/联系方式
After-sales service

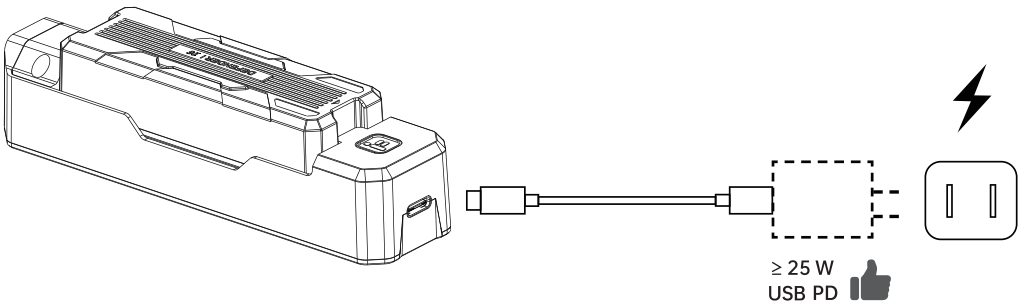


IFLIGHT
Where dreams can fly

一、拆卸飞机电池

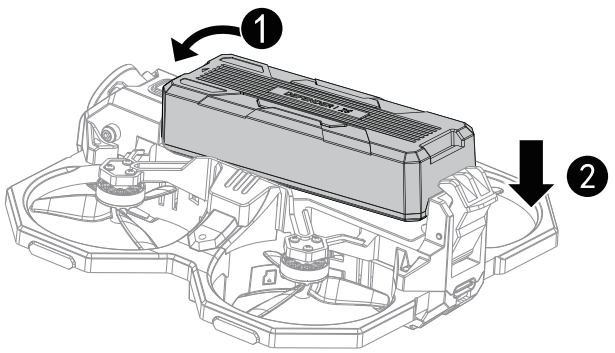


二、电池充电



三、装飞机电池

先将电池排针口对准排针插入并对上头部卡位，再将电池尾部落下。



免责声明

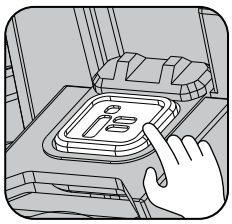
1. 本产品为多旋翼飞行器，配备了动力强劲的电机和锋利的螺旋桨，具有极快的飞行速度，同时具有一定的危险性，操作时需要谨慎使用。

2. 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。

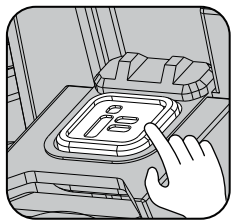
3. 一旦开始使用本产品，即视为您已理解、认可和接受本文档的全部条款和内容，使用者承诺对自己的行为及因此而产生的所有后果负责，使用者承诺仅处于正当目的的使用本产品并且同意本文档全部条款和内容及iFlight可能制定的任何相关政策或者准则。

四、开关机及调节灯光操作

开机和关机流程:

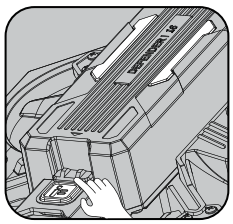


❶ 短按(约1秒) (状态灯开始慢闪), 然后长按(约3秒),飞机进入开机状态。

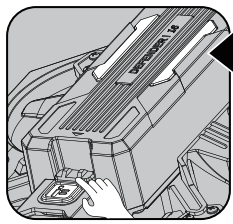


❷ 短按(约1秒)(状态灯开始慢闪), 然后长按(约3秒),飞机进入关机状态。

顶部电池氛围灯调节:



❶ 开机状态下长按(约3秒)按键灯变成白色便进入调节灯光模式。

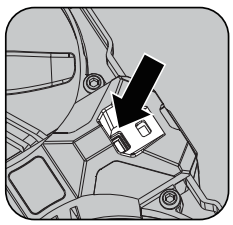


❷ 短按切换灯光颜色及模式, 调好颜色后(等待约5秒)自动保存并退出调节灯光模式。

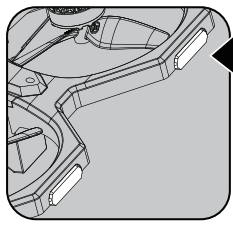
可调节喜欢的灯光

模式:
呼吸灯
幻彩灯
单色常亮

保护圈氛围灯调节:



❶ 使用附送螺丝刀短按尾部按键切换灯光颜色及模式。



可调节喜欢的灯光

模式:
呼吸灯
幻彩灯
单色常亮

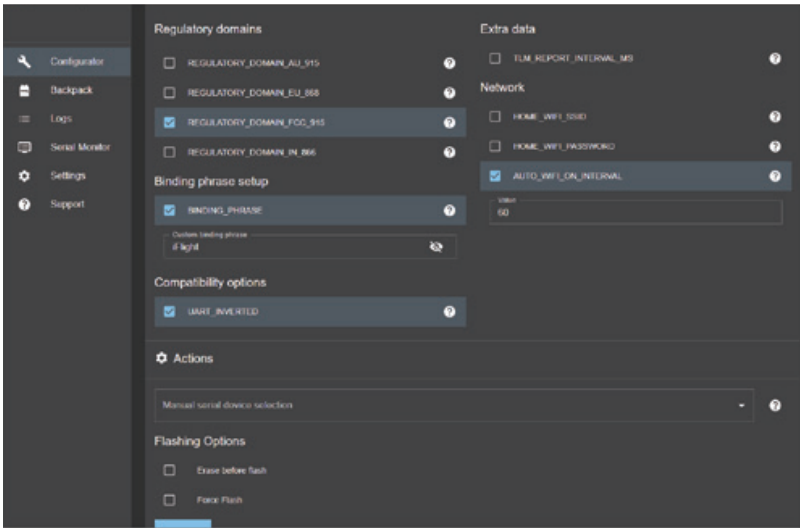
五、状态指示灯及描述

指示灯颜色及闪灯方式	描述
绿灯常亮	电量充足, 约70%-100%
黄灯常亮	电量不充足, 约30%-70%
红灯常亮	低电量报警, 约10%-30%

六、飞机和遥控器对频 以IFLIGHT ELRS 900TX为例

ELRS存在两种对频方式: 绑定短语对频与传统方式对频

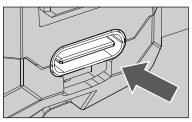
1、使用绑定短语对频



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。

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。

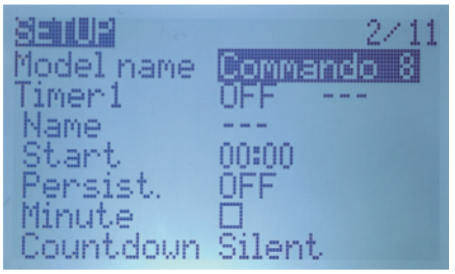
2、使用传统方式对频



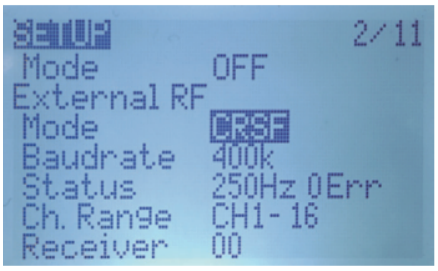
连续插拔USB口三次

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。

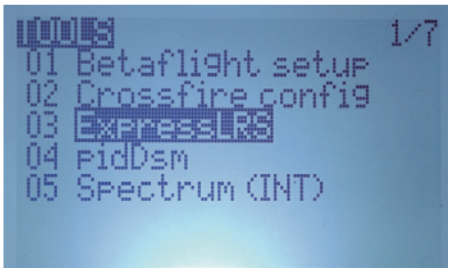
❶上电后，通过长按Model setup按键来到MODELSEL界面



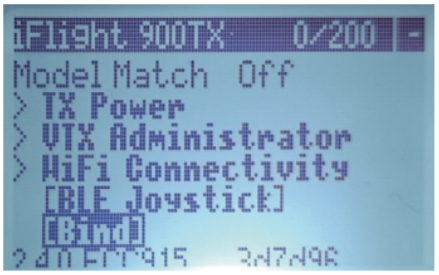
❷短按Next Page来到SETUP界面



❸选择并打开Extermal RF的CRSF协议



❹长按System Settings来到TOOLS界面移动光标至ExpressLRS选项长按Enter进入下一界面\选项



❺ 把光标移动至【Bind】 选项，按下Enter进入对频模式。对频前需要先让接收机进入对频模式。

❻ 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!

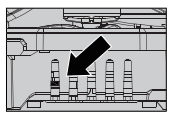
1.由于ELRS对频速度较快, 先使接收机进入对频模式,再让遥控器进入对频模式。
2.对频完成后，建议给接收机重新上电。
3.对频时，接收机与遥控器距离要在1m以上。
4.接收机固件版本与高频头固件版本需保持一致，如遇到无法对频情况可尝试把接收机和高频头固件升级到最新固件，再尝试对频。
5.如遇到无法对频情况，可尝试重启遥控器与接收机。
6.绑定短语内容必须具有唯一性，不要设置简单的绑定短语，否则在ELRS信号范围内同样绑定短语的设备将会被绑定。

七、天空端激活

分别开启Defender 16飞行器、DJI Goggles2眼镜的电源，通过 USB-C接口连接对应设备至电脑并运行 DJI Assistant 2（消费机系列）调参软件进行激活与固件升级详情参考DJI-O3-Air-Unit-用户手册。

八、飞机和眼镜对频

Defender 16飞行器, DJI Goggles2眼镜; 对频前, 请确保天空端,飞行眼镜固件已更新至最新版本。


对频按键位置

1、分别给飞行器与飞行眼镜通电。
2、通电后，按下天空端的对频按键，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，飞行眼镜响起嘀~嘀~的提示音。
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绿灯常亮，飞行眼镜提示音停止并显示图传。完成天空端与眼镜的对频。

九、起飞前检查

1、飞行眼镜电池、遥控设备、智能飞行电池以及移动设备是否电量充足。
2、螺旋桨是否正确、稳固安装。
3、电池是否安装并连接稳固，飞行眼镜电池是否正确连接。
4、开机后电机是否能正常启动。
5、飞行眼镜是否正常运行并显示相机图传画面。
6、确保飞行眼镜天线安装稳固，遥控器天线已展开。

十、模式开关

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。

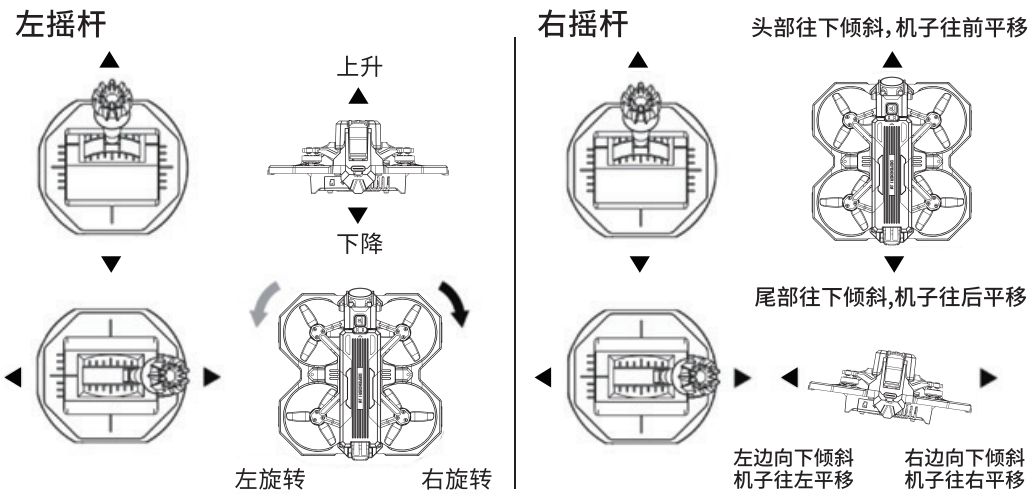
ANGLE：自稳通道开关，用于飞行器开启自稳飞行模式，默认出厂设置为AUX2，该模式全程保持开启状态。图标亮起表示开启自稳模式，图标呈现灰色表示非自稳模式。

VTX_ON_OFF：图传供电开关，用于飞行器图传供电电路的通断，默认出厂设置为AUX8，该模式全程保持开启状态。图标亮起表示开启图传供电，图标呈现灰色表示断开供电。

RX2_Inverted：接收机接口切换功能，该通道默认出货为关闭状态，关闭状态下为R2模式，此时输出的是CRSF协议信号。开启状态下为R2i模式，此时输出的便是SBUS协议信号。

十一、基础飞行操作说明

基础飞行操作说明 遥控器摇杆操控方式以Mode 2为例，如下图所示



⚠ 打杆图示仅做示意，打杆操作时勿将摇杆迅速地打满，应缓慢有效地进行打杆。

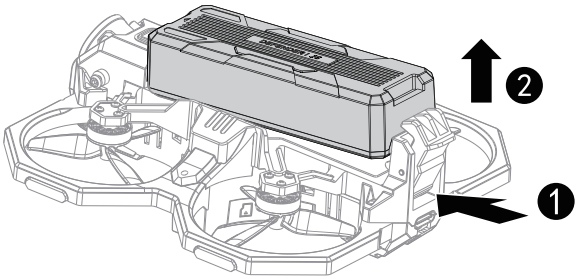
十二、售后服务/联系方式

https://www.iflight-rc.com

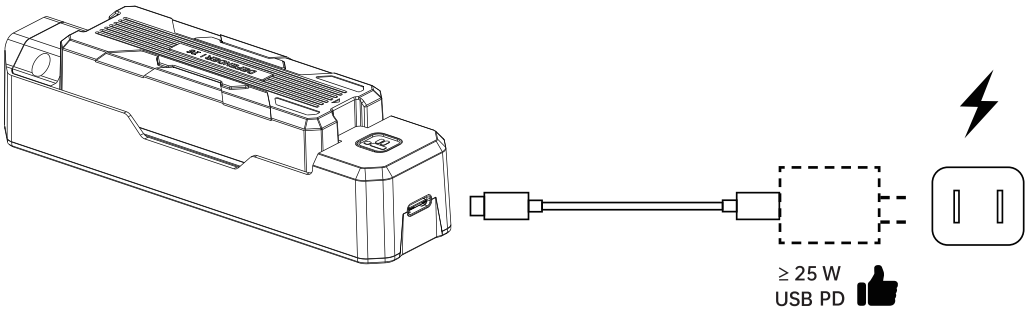
关注iFlight官方账号，获取更多技术支持

惠州市翼飞智能科技有限公司 www.iflight-rc.com
惠州市仲恺高新区盛华路3号5楼 0752-3866695

1、Removing The Battery

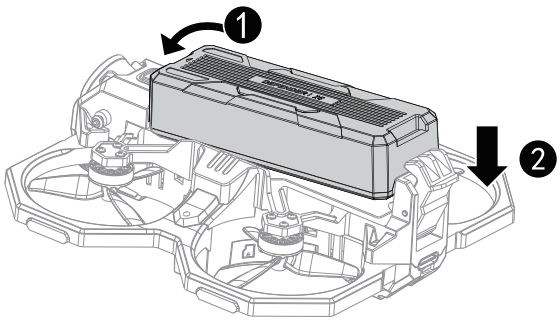


2、Charging The Battery



3、Installing The Battery

Align the battery pin with the pin socket and insert it, aligning it with the head slot. Then press the whole battery down until you hear the click. Ensure the battery is securely installed and connected.

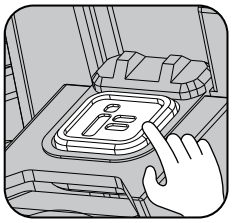


Disclaimer

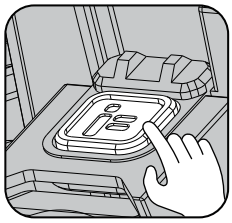
1. This product is a multi-rotor aircraft, equipped with powerful motors and sharp propellers, has fast flight speed, but also has a certain hazard when operating, need to be used with caution.
2. This product is not a toy and requires some basic knowledge to control, so please pay special attention to the warnings and cautions before you start using it. iFlight reserves the right to update this Disclaimer.
3. By using this product, you are deemed to have understood, acknowledged and accepted all of the terms and conditions of this document and you undertake to be responsible for your own actions and all consequences arising therefrom. You undertake to use this product only for legitimate purposes and agree to all of the terms and conditions of this document and any related policies or guidelines that iFlight may establish.

4、Power Button and LED Adjustment

Power Button

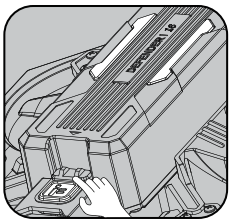


❶ Press the power button once, the status light starts flashing slowly, then press again and hold for three seconds to power the aircraft on.

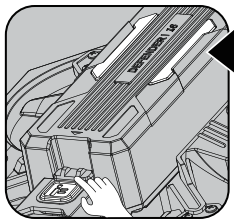


❷ Press the power button once, the status light starts flashing slowly, then press again and hold for three seconds to power the aircraft off.

Battery RGB light adjustment:



❶ Power on the aircraft, press and hold the power button until the LED turns white. Battery light adjustment mode active.

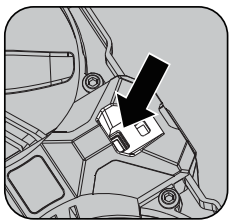


❷ Press the power button once to switch the LED color and mode. After the adjustment is confirmed, wait for 5 seconds to save automatically and exit the light adjustment mode.

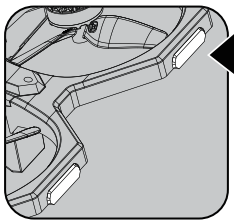
Mode:
Breathing
Dynamic
Solid light

Adjust your favorite lighting

Prop guards RGB light adjustment:



❶ Use the supplied screwdriver to short press the button on the tail to switch the light colour and mode.



Mode:
Breathing
Dynamic
Solid light

Adjust your favorite lighting

5、Indicator Status Description

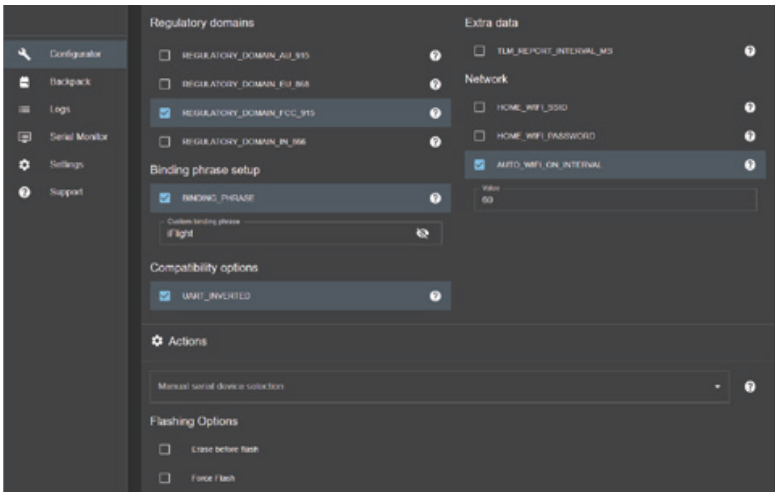
Light color and flashing mode	Description
● Solid Green	Approx 70%-100% power
● Solid Yellow	Approx 30%-70% power
● Solid Red	Approx 10%-30% power, low battery alarm

6、Binding the Aircraft and Remote Control

Example: iFlight ExpressLRS 900TX

There are two Binding Procedures for ExpressLRS: Custom Binding Phrase and Traditional

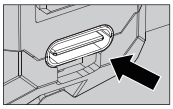
1、Using Custom Binding Phrase



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

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.

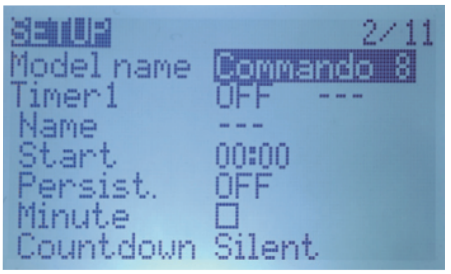
2、Traditional Binding Procedure



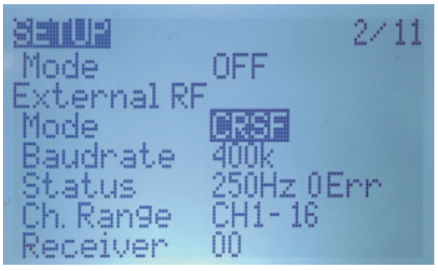
Plug and unplug the USB port for three times

Power on and off the aircraft for three times, or 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 active.

❶ Once you power on the radio, hold the left menu button to the right to enter the MODELSEL page.

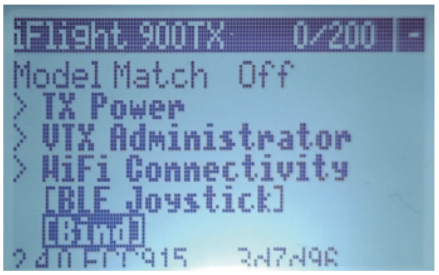


❷ Push the right menu button to the right to go to the next page SETUP (2/11)



❸ Scroll down to External RF and select CRSF.

❹ Select the ExpressLRS LUA script (latest version installed). Press the right 5-Axis Button to enter.



❺ Scroll down to Bind, press the right 5-Axis button to enter. BIND mode active.

❻ Binding screen appears. The blue LED on the receiver will turn to solid blue. Bind was successful.

⚠Caution:

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 and transmitter.
3. The distance of receiver and transmitter should be more than 1m during the process.
4. The receiver firmware version should be consistent with the transmitter firmware version. If you can't bind your hardware, please try to update to the latest firmware.
5.If you can't bind your equipment, please try to reboot and several times if necessary.
6. please note that the Binding Phrase content must be unique. Do not set a simple Binding Phrase, otherwise devices with the same Binding Phrase will be bound within the ELRS signal range.

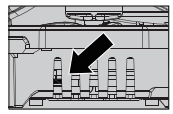
7、Activation

Defender 16 must be activated before using for the first time. Please power on the Defender 16 and DJI Goggles 2 separately, connect to the USB-C port of the devices and then run DJI Assistant 2 (Consumer Drone Series) to update. Refer to DJI-O3-Air-Unit-User-Manual for details.

8、Binding the Aircraft and Goggles

Before binding the Defender 16 and DJI Goggles 2 please make sure that the firmware of the air unit and the goggles are updated to the latest version.

1. Power on the aircraft and the goggles separately.
2. After power on, press the binding button on the air unit, the status indicator on the air unit blinks red.


binding button

3. Press the binding button of the goggles, the goggles will start to beep continuously.
4. Make sure the distance between the air unit and the goggles is within 0.5m. Once binding is completed, the status indicator on air unit will turn solid green, the goggles stops beeping, and image transmission can be displayed normally.

9、Pre-Flight Check

1. Make sure the goggles battery, remote control devices, aircraft battery are fully charged.
2. Make sure the propellers are mounted correctly and securely.
3. Make sure the aircraft battery and goggles battery are properly connected and secure.
4. Make sure that there is nothing obstructing the motors and that they are functioning normally.
5. Make sure that the goggles are functioning normally and display the video transmission.
6. Make sure that the goggles antennas are installed securely and the remote controller antenna is lifted.

10、Mode Switch

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

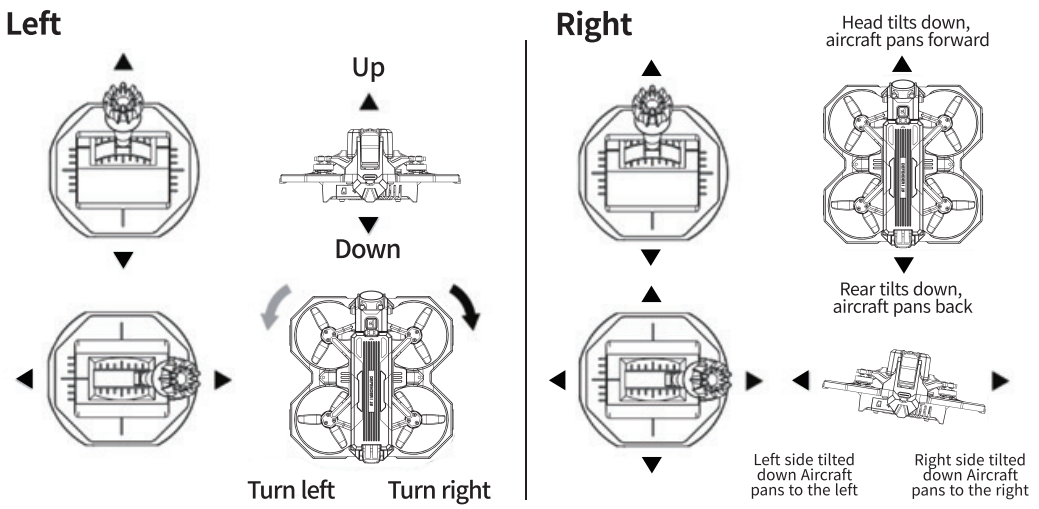
ANGLE: Self-level channel switch, used to turn on the self-level flight mode, the default factory setting is AUX 2, this mode remains on throughout the flight. The icon is illuminated to indicate self level mode is on, the icon is grey to indicate non-self-level mode.

VTX_ON_OFF: Video transmitter power supply switch, used to manually turn off the VTX when idle to safe power and prevent overheating. The default factory setting is AUX8, this mode is always on. To adjust please access the Betaflight Modes tab and define the active or inactive range with the yellow slider.

RX2_Inverted: Receiver interface switching function, default factory setting is closed. The R2 mode is in the off state, and the output is CRSF protocol in this mode. The R2i mode is in the on state, and the output is SBUS protocol in this mode.

11、Basic Flight Instructions

Basic flight operation instructions The remote control throttle control method is shown in Mode 2 as an example, as shown below.



⚠ The diagrams are for illustration purposes only. When control the throttle, do not pull it quickly, but slowly and efficiently.

12、After-Sales Service

https://www.iflight-rc.com

Follow us for more information and support

iFlight InnovationTechnology Ltd.
F5, NO.3 Sheng Hua Rd, Zhong Kai, Huizhou
516006,Guangdong,CHINA

www.iflight-rc.com
0752-3866695