

Flywoo

EXPLORER LR 4 Manual

DJI O3 AIRUNIT Version



video guide

https://www.youtube.com/watch?v=WnEJyleHvb4&t=2s&ab_channel=flywoofpv

1/ drone introduction and Configuration

DJI O3 Air unit supports 4K\60fps recording, and is good at long distances, up to 10KM (FCC). This is the fantastic digital module the Explorer LR 4 has been waiting for!

In addition, we also designed the newest GOKU MINI GPS V3 for Explorer O3, now you can search up to 30 satellites! Now everything you need, the Explorer LR 4 can realize.

- Sub250 (even with battery)
- Support 4K\60fps recording
- up to 10KM long distance
- Super long flight time 30mins (Explorer 18650 battery)
- GPS search up to 30 satellites

Specifications :

Model: Explorer LR 4 HD DJI O3

Brand: FLYWOO

Frame: Explorer LR 4 O3 (Different from OG Explorer LR frame)

FC and ESC : Goku Versatile F405 Pro Mini Stack (F405 FC+ 40A ESC) 8Bit 2-6S 20 x20

Plug&Play plug O3 Air unit

VTX: DJI O3 Air Unit

Camera: DJI O3

Propeller: 4024-2

Antenna: DJI O3 antenna

Motor: Nin V2 1404 2750kv

Weight: 168.4g

Recommended Battery: Explorer 18650 4S \ Explor 900mah 4S \ Explorer 750mah 4S



In the Box :

- 1 x Explorer LR 4 O3
- 8 x Gemfan 4024-2 Balck
- 2 x Battery strap 15x180mm
- 1 x Set of screws



EXPLORER LR O3

---WOOLETS FLY---

Description:

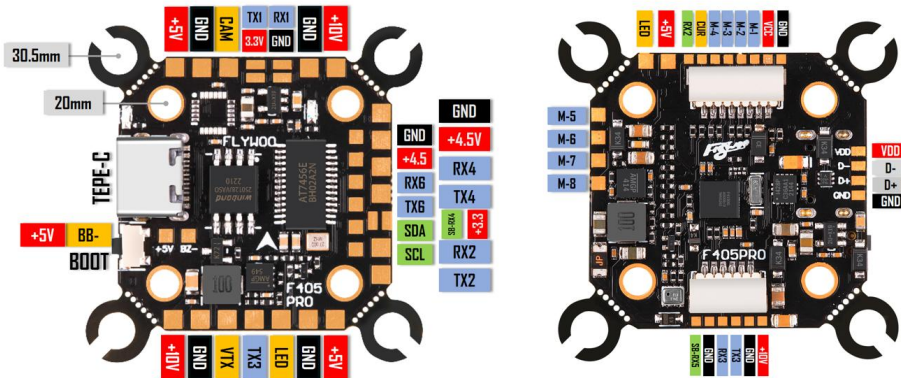
- Co-Brand :Flywoo
- Item Name: Explorer LR 4 Inch Frame Kit (DJI O3 AIRUNIT)
- Material: 100% 3K carbon fiber + 7075 aluminium alloy
- Thickness of arms: 3mm
- Thickness of top plate: 1.5mm
- Thickness of bottom plate: 1.5mm
- Weight: 41g

Accessories:

- M1.6*14: 4pcs
- M2*6: 8pcs
- M2*7: 2pcs
- M2*8: 18pcs
- M2*12: 8pcs
- M2*5 Nylon post: 4pcs
- M2 Locknut: 3pcs
- M2 Press nut: 6pcs
- Aluminum Standoffs M2*20: 4pcs
- Aluminum Standoffs M2*25: 2pcs
- TPU 3D Printed Parts :1 package

www.flywoo.net

2/ Wiring diagram description



UART1: NULL
 UART2: NULL
 UART3: DJI O3 UNIT OSD
 UART4: TBS/ELRS/RXSR/PNP
 UART5: DJI O3 RX SBUS
 UART6: GPS

DJI O3/PNP Version:

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART1	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART2	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART3	<input checked="" type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART4	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART5	<input type="checkbox"/> 115200	<input checked="" type="checkbox"/>	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART6	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	GPS 115200	Disabled AUTO

Receiver

Serial (via UART) | Receiver Mode

The UART for the receiver must be set to 'Serial Rx' (in the Ports tab)

Select the correct data format from the drop-down, below:

SBUS | Serial Receiver Provider

TBS/ELRS Version:

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART1	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART2	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART3	<input checked="" type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART4	<input type="checkbox"/> 115200	<input checked="" type="checkbox"/>	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART5	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART6	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	GPS 115200	Disabled AUTO

Receiver

Serial (via UART) | Receiver Mode

The UART for the receiver must be set to 'Serial Rx' (in the Ports tab)

Select the correct data format from the drop-down, below:

CRSF | Serial Receiver Provider

RXSR/XM+ Version:

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART1	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART2	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART3	<input checked="" type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART4	<input type="checkbox"/> 115200	<input checked="" type="checkbox"/>	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART5	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART6	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	GPS 115200	Disabled AUTO

Receiver

Serial (via UART) Receiver Mode

• The UART for the receiver must be set to 'Serial Rx' (in the Ports tab)

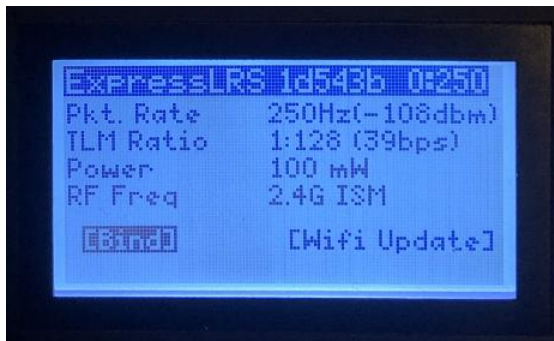
• Select the correct data format from the drop-down, below:

SBUS Serial Receiver Provider

3/ Receiver binding

https://www.youtube.com/watch?v=WnEJyleHvb4&t=2s&ab_channel=flywoofpv

ELRS 2.4G RX:



Bind procedure:

- Supply power to the EL24E/EL24P rx, wait until the LED on the RX is off, immediately turn off the power, and then repeat again the above steps. When the RX is powered on for the third time, the LED light will start to double-flash, which means that the RX enters the binding mode
- Insert the 2.4G ELRS TX to Radio transmitter, and choose External RF mode to CRSF protocol, then you can find ELRS menu from the Radio systems(Need to copy the ELRS.LUA file to the SD-Card tools first), Enter into ELRS and press [Bind], the LED on the RX module will getting to be solid if bind successfully.
- Receiver LED status meanings:

EL24E/EL24P RX: LED solid means bind successful or Connection established; LED double-flash means in bind mode; LED flash slowly means no signal connection from the TX module; LED flash fast means in WIFI hotspot mode, you can connect the WIFI of the RX and upgrade firmware of the RX via visit 10.0.0.1 from the web browser(password: expresslrs)

TBS NANO 915:

When the USB is connected, the green light of the receiver flashes, and then bind according to the picture operation.

https://www.youtube.com/watch?v=-iNKVcOLITM&ab_channel=Danimal3D

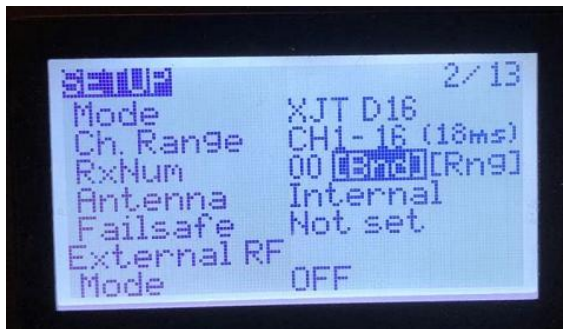


RXSR/XM+ receiver:

FRSKY remote control version

1/ Press the RXSR/XM+ receiver button, USB power supply, the red and green lights are always on

2/ The remote control turns on the binding mode, the green light flashes to indicate successful binding, turn off and restart

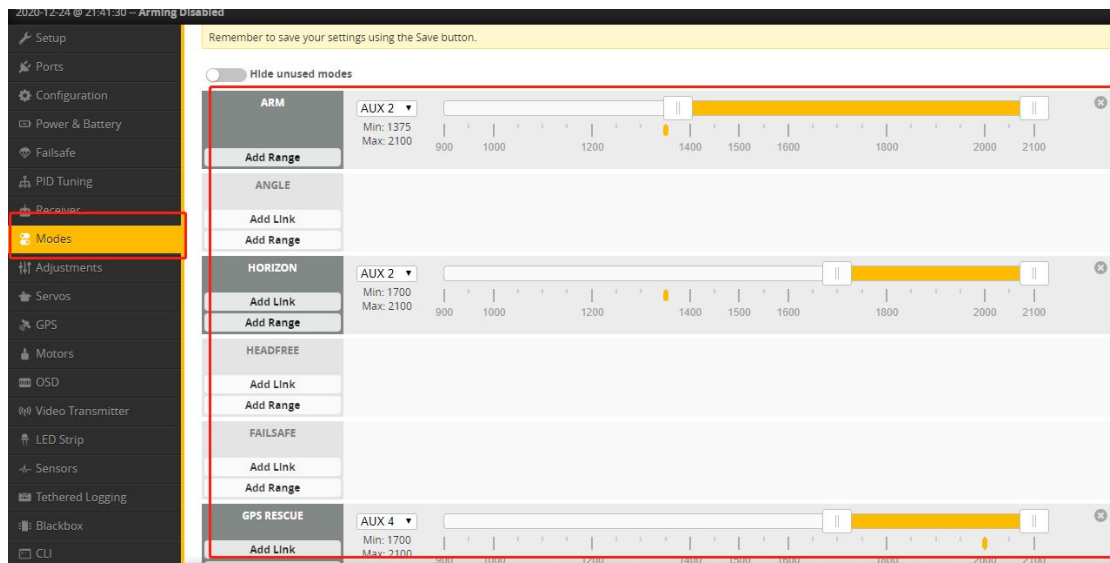


Other Frsky protocol versions



4/ Mode setting:

Set the ARM switch and flight mode switch, AUX* corresponds to the remote control switch, and the yellow area mark is turned on

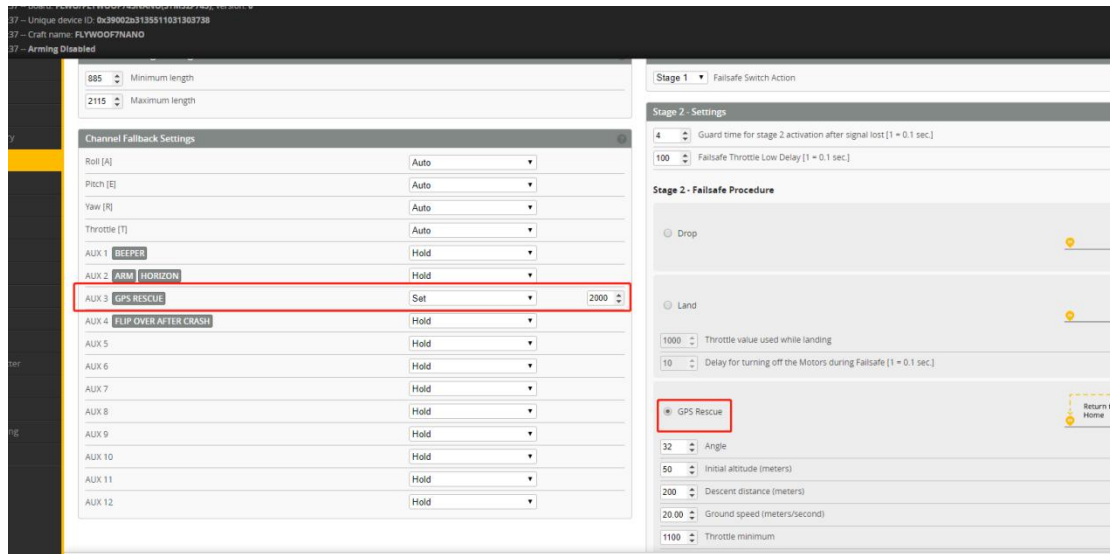


5/ GPS rescue mode

https://www.youtube.com/watch?v=WnEJyleHvb4&t=2s&ab_channel=flywoofpv

- 1/ When GPS finds 5 satellites and locks, it will display latitude/longitude/altitude/distance information.
- 2/ GPS rescue can only be turned on when the flight distance data exceeds 100 meters, otherwise it will fall directly.
- 3/ After the GPS rescue is turned on, DRONE will turn around and rise gradually and return to the home location.
- 4/ DRONE will not automatically land. When the control is restored, you need to control DRONE to land.





6/ Finder BUZZER function



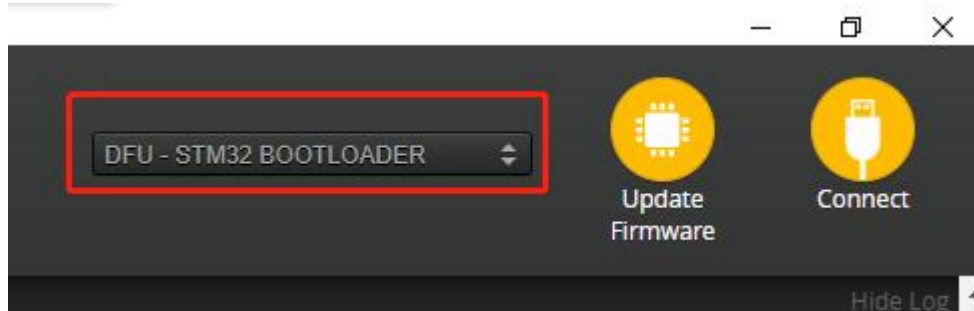
The buzzer has two modes of operation:

1. It is compatible with the functions of the traditional active buzzer and synchronized with the flight control.
2. When the flight control is normally connected, if the main battery in the flight is powered off, it can still automatically emit 100 dB of drip sound after 30 seconds of power failure, and the LED will emit white light.

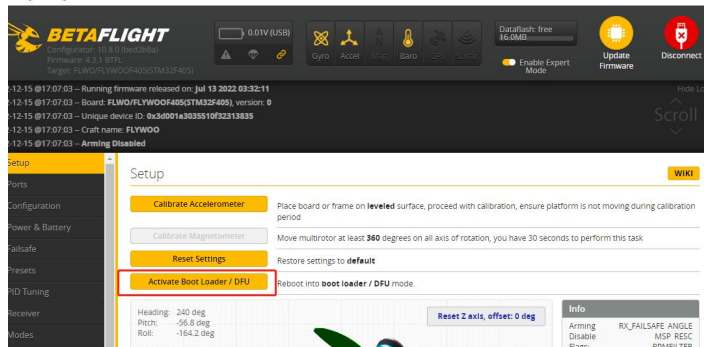
To turn off the buzzer: Press and hold the release button for more than 2 seconds, the Finder turns off the sound.

7/ Flight firmware upgrade and write default CLI

- 1/ Activate DFU mode (Two ways to enter DFU)



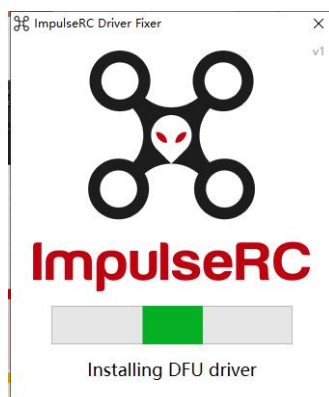
1. Enter the BF configurator, click to Activate BOOT Loader/DFU



2. Press and hold the FC's BOOT button while connecting the USB cable



2/ If it does not enter DFU mode, it may be that the driver is not installed. The driver can be installed using IMPULSE RC software



Driver software:

https://impulserc.blob.core.windows.net/utilities/ImpulseRC_Driver_Fixer.exe

3/ Select F405PRO firmware, after online loading, write the firmware. according to the order of the pictures

The screenshot shows the Betaflight Firmware Flasher interface. At the top, there's a header with the Betaflight logo and version information. Below that, a log shows recent events. The main area contains several settings sections:

- Settings:** Includes options for 'Show unstable releases', 'Enable Expert Mode', 'Release' (set to FLYWOOF405PRO), '13-07-2022 11:13 - 4.3.1', 'No reboot sequence', 'Flash on connect', 'Full chip erase', and 'Manual baud rate' (set to 256000).
- Release info:** Displays details for the selected firmware: Target: FLYWOOF405PRO, Manufacturer ID: FLWO, Version: 4.3.1, Binary: betaflyght_4.3.1_STM32F405.hex, Date: 13-07-2022 11:13, and Unified Target: FLWO-FLYWOOF405PRO.config.
- Buttons:** At the bottom, there are buttons for 'Loaded Online Firmware', 'Exit DFU Mode', 'Flash Firmware', 'Load Firmware [Online]', and 'Load Firmware [Local]'.

Red boxes and numbers 1, 2, 3, and 4 highlight the following elements:

- 1:** The 'DFU - STM32 BOOTLOADER' dropdown menu.
- 2:** The 'FLYWOOF405PRO' firmware selection dropdown.
- 3:** The 'Load Firmware [Online]' button.
- 4:** The 'Flash Firmware' button.

4/ After the connection is entered, it is a blank interface, you need to write CLI commands, Factory CLI LINK: <https://flywoo.net/pages/manual>

