Volador VX3 O4

Freestyle frame for an FPV drone with 3" propellers
FlyFishRC · user manual



Read this entire manual before building and before the first flight. The frame is a kit – electronics, motors, propellers and battery are not included.

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1. Product description

1.1 Intended use

The **FlyFishRC Volador VX3 O4** is a freestyle frame kit for an FPV drone with 3" propellers. The frame, in a *Squashed X* configuration, is made of T700 carbon fibre plates and CNC-machined aluminium alloy parts. It is complemented by TPU parts that make a neat installation of the electronics easier and protect the arms and the camera. The edges of the carbon plates are chamfered so that they do not damage cables or battery straps.

The frame is designed for the DJI O4 digital video system. A silicone damping part is intended for the camera of the DJI O4 Air Unit; it reduces the transmission of vibrations into the recorded video (so-called jello). Analogue and other digital systems with a 19 mm or 20 mm camera can also be installed. The frame is a kit – you build the drone yourself from your own components.



Top view (yellow version shown)

1.2 Specifications and package contents

Product designation	FlyFishRC Volador VX3 O4 Pro Freestyle Frame Kit
Manufacturer code	FF02385 (black version) FF02378 (yellow version)
Configuration	Squashed X
Propeller size	3"
Material	T700 carbon fibre plates, CNC aluminium alloy parts, TPU parts
Part thickness	arms 3.5 mm · top plate 2 mm middle plate 2.5 mm · bottom plate 2.5 mm keystone 3.5 mm CNC side plates 5 mm
Overall dimensions	118 × 135 mm
Wheelbase (motor diagonal)	144 mm
Weight	68.3 g (including TPU parts)
Stack mounting (FC + ESC)	20 × 20 mm / 25.5 × 25.5 mm (M2)
Video transmitter (VTX) mounting	20 × 20 mm / 25.5 × 25.5 mm (M2)
Motor mounting	9 × 9 mm / 12 × 12 mm (φ 2 mm holes)
Camera format	19 mm / 20 mm
Colour versions	black, yellow

Data provided by the manufacturer FlyFishRC.

▶ Package contents

- 1× frame (carbon plates, arms and CNC parts)
- 1× anti-slip battery pad
- 2× battery strap
- 1× set of 3D-printed TPU parts
- 1× hardware set

※ Motors, flight controller (FC), electronic speed controllers (ESC), video transmitter (VTX), camera, receiver, propellers, battery and tools are not included.

2. Building and use

2.1 Safety

- **Carbon fibre is electrically conductive.** Cables, solder pads and electronic boards must not touch the carbon plates or screws – a short circuit can destroy the electronics or cause a battery fire. Route cables away from plate edges and mount the electronics on the damping grommets supplied with it.
- **Carbon dust is harmful to health.** Do not sand, drill or cut the plates. If modification is unavoidable, work wet, wear a respirator and work in a well-ventilated area.
- **Rotating propellers can cause serious injury.** Always disconnect the battery when working on the drone. Fit the propellers only after checking the function and direction of rotation of the motors.
- Charge **Li-Po batteries** under supervision with a charger designed for the cell type. Do not use damaged or swollen batteries.
- This product is not a toy. Building and operating a drone requires technical knowledge; keep the product away from children.

2.2 Building procedure

The manufacturer has not published detailed assembly instructions for this frame. Follow the general principles of FPV drone building and the manuals of the components you use:

① Lay out all parts and check them against the package contents. The screws come pre-coated with thread-locking adhesive (Loctite).

② Assemble the lower part of the frame – arms, keystone and bottom plate. Tighten the screws evenly and with care; threads in aluminium parts and standoffs can be stripped.

③ Mount the motors on the 9 × 9 mm or 12 × 12 mm hole pattern (M2 screws). The screw must not reach into the motor windings – check its length.

④ Install the stack (FC + ESC) on the 20 × 20 mm or 25.5 × 25.5 mm (M2) mounting holes. The video transmitter (VTX) mounts on separate 20 × 20 mm or 25.5 × 25.5 mm (M2) holes.

⑤ Fit the 19 mm or 20 mm camera between the CNC parts at the front of the frame. Seat the DJI O4 Air Unit camera in the silicone damping part.

⑥ Secure the receiver and antennas in the TPU holders. Route the antennas so that they cannot reach the propellers.

⑦ Fit the top plate with the anti-slip pad and thread the battery straps through.

⑧ Before connecting a battery for the first time, use a multimeter to check that there is no short circuit between the positive and negative power terminals. Make the first connection through a smoke stopper.

※ Flight controller setup, receiver and video transmitter binding and firmware updates are described in the manuals of the components used.



Bottom view (yellow version shown)

2.3 Securing the battery

The battery is secured to the top plate with two battery straps. The anti-slip pad increases friction between the frame and the battery and reduces the risk of the battery slipping out in a crash. Tighten the straps so that the battery cannot move. Always fit a fully charged battery before flying; end the flight no later than when the voltage drops to 3.5 V/cell.

2.4 Inspection and maintenance

- Before every flight, check that the arms and plates are not cracked and that all screws are tight.
- Cracked or delaminated carbon parts cannot be reliably repaired – replace them.
- After a crash, check especially the arms, the CNC camera parts and the TPU parts. Replace damaged battery straps and the anti-slip pad.
- A screw that has been loosened loses the effect of the original thread-locking adhesive. When reassembling into metal parts, use medium-strength threadlocker; do not use it in plastic parts.
- Clean the frame with a dry brush or cloth. Do not use solvents on the TPU parts.
- Store batteries at 3.8 V/cell, outside the drone.

3. Operating the finished drone

3.1 The law of the country where you fly applies

Regulations (EU) 2019/947 and 2019/945 apply in all member states of the European Union, but national implementing rules differ from country to country – registration portals, minimum pilot age, geographical zones, mandatory insurance, permitted frequency bands and maximum transmitting power. The information in this chapter describes the situation in the Czech Republic. If you operate the drone in another country, you must follow the regulations of the country in which you fly.

3.2 Drone classification and operator obligations

- A drone built on this frame has no C0–C4 class marking. It is operated as a privately built unmanned aircraft system in the open category – in subcategory A1 with a maximum take-off mass below 250 g and a speed below 19 m/s, otherwise in subcategory A3 – or within a model aircraft club or association under Article 16 of Regulation (EU) 2019/947. Subcategory A2 is not available.
- Weigh the actual take-off mass of the finished drone including the battery, camera and accessories.
- **Operator registration** is mandatory if the drone is equipped with a camera, regardless of its mass. Display the registration number on the drone. In the Czech Republic, registration is handled by the Civil Aviation Authority (ÚCL).
- Fly no higher than 120 m above ground and within visual line of sight, never over assemblies of people. In subcategory A3, keep a distance of 150 m from residential, commercial, industrial and recreational areas.
- Flying with FPV goggles is permitted only with an unmanned aircraft observer standing next to the pilot and watching the drone directly, without optical aids.
- Radio bands and transmitting power are determined by the components used. In the Czech Republic, the 2400–2483.5 MHz and 5725–5875 MHz bands are limited to 25 mW e.i.r.p. (ČTÚ general authorisation VO-R/10). The user is responsible for the power setting.
- Liability insurance is not mandatory for a small drone in the Czech Republic, but we recommend taking it out.

4. Information for the EU and Czech Market

4.1 Importer and responsible person in the EU

The product is placed on the European Union market by the importer stated below, who is at the same time the responsible person within the meaning of Article 16 of Regulation (EU) 2023/988 of the European Parliament and of the Council on general product safety (GPSR).

Importer / responsible person in the EU	Rotorama, s.r.o.
Company ID (IČO)	051 57 692
VAT ID (DIČ)	CZ05157692
Registered office	Okrajová 1351, 674 01 Třebíč, Czech Republic
E-mail	info@rotorama.cz
Phone	+420 252 252 098
Website	www.rotorama.com

4.2 Disposal

- The frame contains no electrical or electronic components and is therefore not subject to the take-back of electrical equipment.
- At the end of its service life, take the carbon, metal and plastic parts to a collection point in accordance with the rules of your municipality. Do not burn carbon parts.
- Before disposing of the frame, remove the electronics and battery you installed in it and hand them in separately at a take-back point for electrical equipment and batteries, as described in the manuals for these components.
- Sort the packaging according to the type of material.

5. Warranty and rights arising from defective performance

The rights and obligations of the contracting parties are governed by Czech law, in particular by Act No. 89/2012 Coll., the Civil Code, and Act No. 634/1992 Coll., on consumer protection.

- The seller is liable to the buyer for the product being free of defects on receipt. If the buyer is a consumer, a defect may be notified **within two years of receipt** of the product (Section 2165 of the Civil Code).
- If a defect appears within **one year** of receipt, the product is deemed to have been defective already at the time of receipt (Section 2161(5) of the Civil Code).
- When purchasing online, a consumer has the right to **withdraw from the contract within 14 days** of receiving the goods without giving a reason (Section 1829 of the Civil Code).
- Claims should be made with the retailer from whom you purchased the product. The importer's contact details are given in Chapter 4.1.
- The competent body for out-of-court settlement of consumer disputes is the **Czech Trade Inspection Authority**, Štěpánská 796/44, 110 00 Prague 1, www.coi.cz.