# Mark4 8" V2

Readytosky

Carbon frame for an 8" FPV drone – assembly manual



**Read this entire manual carefully before assembly. This product is not a toy – it is intended for persons aged 14 and over.**

*www.rotorama.com*

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# 1. Safety instructions

## 1.1 Before you start

This product is a carbon frame for building an 8" FPV drone. It cannot fly on its own – only once it is fitted with motors, electronics, propellers and a battery does it become an aircraft, and the builder and operator are responsible for building and flying it safely.

- Read this entire manual and the manuals of all components you will install in the frame before assembly.
- This product is not a toy. It is intended for persons aged 14 and over.
- Keep small parts (screws, nuts) out of the reach of small children – they could be swallowed.

## 1.2 Carbon parts

- The edges of carbon parts can be sharp. Work carefully and lightly sand the edges if necessary.
- Dust from sanding, cutting or drilling carbon irritates the skin, eyes and airways. Sand wet or wear a respirator, in a well-ventilated area, and do not inhale the dust.
- Carbon fibre is electrically conductive. A sharp edge can wear through wire insulation and cause a short circuit. Route wires so that they cannot rub against the frame edges, and insulate the electronics from the frame.
- After every crash, check the parts for cracks or delamination. Replace a damaged part – do not try to glue it.

## 1.3 The finished drone

- A spinning 8" propeller can cause serious injury. Fit the propellers only after the build and setup are complete, never while working on the drone at the bench.
- Charge Li-Po and LiHV batteries only under supervision, on a non-flammable surface and with a suitable charger. Do not use a damaged, swollen or overheated battery.
- A finished drone on a frame of this size is heavy and fast. Fly only in accordance with the regulations of the country of operation and away from people, animals and property.

# 2. Product description

## 2.1 Parts overview

The Mark4 8" V2 is an X-layout frame for a larger 8" long-range quadcopter. For extra stiffness, the arms on each side are connected to each other by a brace. The camera sits between carbon side plates that protect it; the rear of the frame provides space for the video transmitter.




*Assembled frame (front view)*

① Top plate – the battery is mounted on it; below it is the bottom plate, which carries the stack

② Arm tip with motor mounting holes (4 arms)

③ Brace – connects the front and rear arm on each side of the frame

④ Carbon camera side plates at the front of the frame

⑤ Rear part of the frame – space for the video transmitter (VTX)

## 2.2 Package contents

- 1× Readytosky Mark4 8" V2 frame

※ Motors, flight controller, ESCs, camera, video transmitter, receiver, antennas, propellers and battery are **not** included. Before assembly, check against the picture that you have all frame parts.

## 2.3 Specifications

| Parameter | Value |
|---|---|
| Material | 3K carbon fibre |
| Diagonal motor distance | 367 mm |
| Frame weight | 220 g |
| Arm thickness | 6 mm |
| Top plate | 2 mm |
| Bottom plate | 3 mm |
| Stack mounting | 30.5 × 30.5 mm M3<br>20 × 20 mm M2 |
| VTX mounting | 30.5 × 30.5 mm M3<br>20 × 20 mm M2 |
| Motor mounting | 16 mm / 19 mm, M3 |
| Camera | Micro (19 mm) |
| Propeller size | 8" |

The frame is designed for analog video transmission. A digital video transmitter (VTX) can be fitted, but requires a more careful component layout.

# 3. Frame assembly

## 3.1 Tools and assembly principles

- Hex drivers matching the frame screws
- A wrench or nut driver for the nuts
- Medium-strength threadlocker
- Fine sandpaper for smoothing edges
- Cable ties and heat-shrink tubing for routing wires

Follow these principles during assembly:

- Lay out the parts and check them against Chapter 2. Sort the screws by length – this makes it easier to pick the right screw.
- A screw must pass through all layers and engage the nut with its full thread. It must not, however, protrude into the space where wires will run.
- First tighten the screws only lightly; only when all parts sit without tension, tighten them firmly, step by step and crosswise.
- Do not apply threadlocker to screws you will loosen later (top plate). Use threadlocker only on joints that are not normally taken apart.

## 3.2 Build procedure

**▶ Step 1 – Lower part of the frame**

Join the arms to the bottom plate and the braces ③ so that the arms sit symmetrically and the braces are not under tension. Check that the arms have no play.

**▶ Step 2 – Electronics**

Before fitting the top plate, install the motors, stack, camera and video transmitter as described in Chapter 4. The top plate limits access to the inside of the frame. If the frame is already assembled, remove the top plate to install the electronics.

**▶ Step 3 – Top plate**

Fit the top plate ① and screw it down. Make sure no wire is pinched between the plates.

# 4. Installing the electronics

## 4.1 Motors

- Screw the motors to the arm tips ② using the 16 mm or 19 mm hole pattern and M3 screws.
- A screw may only reach as deep as the motor's thread. A screw that is too long will damage the motor windings.
- Route the motor wires along the arms and secure them with cable ties or heat-shrink tubing.

## 4.2 Stack – flight controller (FC) and ESCs

- The frame accepts a stack with a mounting hole pattern of 30.5 × 30.5 mm (M3) or 20 × 20 mm (M2).
- The arrow on the flight controller (FC) must point forward, towards the camera.
- Mount the stack on rubber dampers; the electronics must not touch any carbon parts – risk of a short circuit.

## 4.3 Camera

- The frame is designed for Micro-size cameras (19 mm). Place the camera between the side plates ④ and fix it with the screws supplied with the camera.
- Set the camera tilt to suit your flying style and, before tightening, check that the propellers do not appear in the image.

## 4.4 Video transmitter, receiver and antennas

- Place the video transmitter (VTX) at the rear of the frame ⑤. Mounting holes with 30.5 × 30.5 mm M3 and 20 × 20 mm M2 spacing are provided.
- Route the video transmitter and receiver antennas away from the propeller path.
- Never power the video transmitter without an antenna connected.

## 4.5 Battery

- Secure the battery to the top plate ① with a battery strap (not included).
- The centre of gravity of the finished drone should be roughly in the middle of the frame.
- Always insert a fully charged battery before flight (Li-Po 4.20 V/cell, LiHV 4.35 V/cell). End the flight at 3.5 V/cell at the latest; for storage, leave the battery at 3.8 V/cell.

# 5. Pre-flight check and operation

## 5.1 Before the first flight and before every flight

- All frame and motor screws are tight and the arms have no play.
- No wire reaches into the propeller path or rubs against a carbon edge.
- The motor direction has been verified in the configurator – without propellers fitted.
- The propellers are fitted in the correct orientation and firmly tightened.
- The battery is fully charged and firmly secured.

## 5.2 Operating the finished drone

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 transmit power. When operating a drone, you must comply with the regulations of the country in which you are flying.

- A drone with a camera requires operator registration; the registration number must be displayed on the drone.
- A drone built on this frame has no C0–C4 class. In the Czech Republic, consult the Civil Aviation Authority (www.caa.gov.cz) on the categories and subcategories in which you may operate it.
- When flying with FPV goggles, an observer who watches the drone directly must be present next to the pilot.

# 6. Maintenance

**▶ After a crash**

- Check all arms, braces and plates for cracks or delamination.
- Check that no screws or standoffs have come loose.
- Replace damaged parts. Spare parts are available at www.rotorama.com.

**▶ Regular maintenance**

- Every few flights, check that the screws are tight – vibration can loosen them.
- Replace worn or damaged screws and nuts with new ones.
- Clean the frame with a dry cloth or a soft brush.

# 7. Information for the EU and Czech Market

## 7.1 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 |

## 7.2 Product identification

- Product: Readytosky Mark4 8" V2 carbon frame.
- Manufacturer: ShenZhen ReadytoSky Technology Co., Ltd., Shenzhen, Guangdong 518109, China, info@readytosky.com, www.readytosky.com.
- The frame is a mechanical part without any electrical components. It is not covered by any EU legislation requiring the CE marking and therefore does not bear it.

## 7.3 Disposal

- The frame contains no electrical components. It is not electrical equipment and is not subject to take-back of electrical equipment.
- Dispose of carbon parts with mixed waste or at a collection yard according to your local rules. They do not belong in sorted plastic waste.
- Dispose of the metal standoffs, screws and nuts as metal waste.
- Do not burn, crush or grind carbon parts – this produces harmful dust.
- Dispose of the electronics and batteries of the finished drone according to their own manuals – they belong to take-back schemes for electrical equipment and batteries.

# 8. 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 7.1.
- The competent body for out-of-court settlement of consumer disputes is the **Czech Trade Inspection Authority (Česká obchodní inspekce)**, Štěpánská 796/44, 110 00 Praha 1, www.coi.cz.