



Meffie 3" V2

Carbon frame for a 3" FPV drone
User manual



Read the entire manual before assembly. Always work on the drone without propellers and with the battery disconnected. Keep this manual for future reference.

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1. Product description

1.1 Intended use

The Rotorama Meffie 3" V2 is a lightweight carbon frame for building an FPV drone with propellers of up to 3". It is the successor to the Meffie frame, combines the best of the previous Meffie variants and is adapted to currently available parts. The frame weighs 25 g, which puts it among the lighter classic 3-inch frames. It is designed for flying in smaller spaces – in a gym, in the garden or in a park.

The frame consists of a bottom plate with arms, two side plates and the hardware. It takes motors with a 9 mm mounting hole pattern (1204/1206/1404), a flight controller (FC) with electronic speed controllers (ESC) as a 20 × 20 mm stack or a 25.5 × 25.5 mm AIO board, and a micro-size camera. The product is the frame only – electronics and other drone parts are not included.



Assembled Rotorama Meffie 3" V2 frame

1.2 Technical data and package contents

Parameter	Value
Product designation	Rotorama Meffie 3" V2
Frame weight	25 g
Max. propeller size	3"
Motor mounting	9 mm hole pattern, M2 (1204/1206/1404 motors)
Stack mounting	20 × 20 mm, M3
AIO board mounting	25.5 × 25.5 mm, M2
Free space for the stack	41 mm
Camera	micro size, 2 positions in the side plates
Standoffs between side plates	M2, 20 mm long
LiPo strap slots	2×, 14 mm wide
Bottom plate thickness	3 mm
Side plate thickness	3 mm

► Package contents

- 1× Rotorama Meffie 3" V2 frame – bottom plate, 2× side plate and hardware

► Not included

- motors, flight controller (FC), electronic speed controllers (ESC) or AIO board, receiver, video transmitter (VTX), antenna and camera
- propellers, battery, LiPo strap and tools

Product designation: **Rotorama Meffie 3" V2**. The individual frame parts are also available separately as spare parts (Rotorama Meffie 3" V2 – Parts).

2. Assembly

2.1 What else you need

- 4 motors with a 9 mm mounting hole pattern and M2 threads (size 1204, 1206 or 1404),
- a flight controller (FC) and electronic speed controller (ESC) stack with a 20 × 20 mm pattern (M3), or an AIO board with a 25.5 × 25.5 mm pattern (M2),
- a micro-size camera, a video transmitter (VTX) with antenna and a receiver,
- propellers of up to 3", a battery and a LiPo strap no wider than 14 mm,
- screws for mounting the motors and the stack or AIO board (usually supplied by the manufacturer of these components), hex keys and a soldering iron.

2.2 Assembly procedure

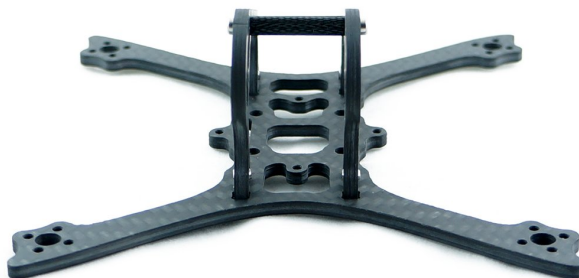
- ① Inspect the parts before assembly. Gently round off any sharp carbon edges that could cut cable insulation or the LiPo strap (see chapter 3).
- ② Mount the motors to the ends of the arms using M2 screws of suitable length. **The screw must not reach into the motor windings** – always check the length before tightening. Route the motor wires along the arms and secure them so that they cannot get into the propellers.
- ③ Mount a stack in the 20 × 20 mm (M3) holes, an AIO board in the 25.5 × 25.5 mm (M2) holes. The bottom plate has a cut-out for the USB connector that some AIO boards have facing downwards – orient such a board with its connector towards the cut-out. Point the orientation arrow on the flight controller forwards, or set the orientation in the FC configuration.
- ④ Solder the motors and the power lead according to the manual of the electronics used.
- ⑤ Mount the camera between the side plates (see 2.3) and attach the side plates to the bottom plate.
- ⑥ Install the receiver and the video transmitter. Place the antennas so that they do not reach into the propeller area.
- ⑦ Thread the LiPo strap through the two slots on the sides of the frame (14 mm wide).
- ⑧ Tighten the screws with care, without force – overtightening will damage the carbon or the standoff thread.
- ⑨ Check that no cables are pinched or touch sharp edges and that nothing reaches into the propeller area.
- ⑩ Carry out the first power-up, the motor direction check and the flight controller setup **without propellers**. Fit the propellers only after you have verified that everything works correctly.



Space for the stack or AIO board between the side plates

2.3 Camera mounting

The side plates are joined by light M2 standoffs 20 mm long, so the frame is designed for **micro**-size cameras. The camera can be mounted in the side plates in one of two positions, depending on whether it has a longer or shorter lens. Choose the position in which the lens does not protrude in front of the frame and neither the propellers nor the frame are visible in the image. The side plate mount (the "canopy lock") is taken from the Meffie 2.5" frame.



Front view – side plates joined by standoffs, camera space

3. Safety and frame care

3.1 Carbon parts

- Carbon is **electrically conductive**. Protect cables, solder pads and electronics from contact with the frame – there is a risk of a short circuit.
- Carbon edges can be sharp and cut cable insulation or the LiPo strap. Round them off gently if necessary.
- Sanding and drilling carbon produces fine dust. Work wet or with a respirator in a ventilated area and do not inhale the dust.
- Inspect the frame after every crash. Do not fly with a cracked or delaminated part – replace the damaged part.
- Regularly check that the screws of the motors, stack and side plates are tight.

3.2 The assembled drone

- Rotating propellers can cause serious injury. Always disconnect the battery and remove the propellers when working on the drone.
- Fit a fully charged battery before flight (Li-Po 4.20 V/cell, LiHV 4.35 V/cell) and end the flight at 3.5 V/cell at the latest. For storage, charge the battery to 3.8 V/cell.
- Charge Li-Po batteries under supervision on a non-flammable surface and never use a damaged or swollen battery.
- Before every flight check the propellers, the mounting of the motors, battery and antennas, and verify that failsafe works.
- Arm (switch on the motors) only at the take-off site at a safe distance from people and Disarm (switch off the motors) immediately after landing.

3.3 Spare parts

The bottom plate, a pair of side plates and the hardware set can be purchased separately as **Rotorama Meffie 3" V2 - Parts** at www.rotorama.com.

4. Operating the assembled drone

4.1 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 state to state – registration portals, minimum pilot age, geographical zones, compulsory insurance, permitted frequency bands and maximum transmit 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 rules of the country in which you fly.

4.2 Basic rules

- A drone built on this frame has no class identification label (C0–C4). In the open category it can be operated as a **privately built unmanned aircraft system** – in subcategory A1 if its maximum take-off mass is less than 250 g and its maximum speed is less than 19 m/s, otherwise in subcategory A3.
- The weight of the finished drone depends on the components used. Before the first flight, **weigh it including the battery** and all accessories.
- If the drone is equipped with a camera, the operator must be **registered** (in the Czech Republic with the Civil Aviation Authority) regardless of the drone's weight, and the registration number must be displayed on the drone.
- Fly no higher than 120 m above ground, within visual line of sight and never over assemblies of people. In subcategory A3 keep a distance of at least 150 m from residential, commercial, industrial and recreational areas.
- When flying with FPV goggles, an **observer** must stand next to the pilot and keep the drone in direct visual line of sight.
- The user is responsible for the transmit power and frequency settings of the video transmitter and the radio system. In the Czech Republic the limit for the 2400–2483.5 MHz and 5725–5875 MHz bands is 25 mW e.i.r.p.; outside the Czech Republic the limits of the respective country apply.
- Liability insurance is not compulsory for a small drone in the Czech Republic, but we recommend it.

5. Information for the EU and Czech Market

5.1 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@rotorاما.cz
Phone	+420 252 252 098
Website	www.rotorاما.com

5.2 Disposal

- The product is not electrical equipment and contains no batteries or accumulators.
- Dispose of damaged or unwanted carbon parts with mixed municipal waste or as instructed by your municipality. Do not burn carbon parts.
- Metal hardware can be taken to metal recycling and the packaging to separated waste collection.
- Dispose of the electronics and batteries you have installed in the frame separately, as instructed by their manufacturers – they belong at a collection point for electrical equipment or batteries.

6. 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 5.1.
- 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.