ROTORAMA

Mark5 Standard

Frame for building a 5" freestyle FPV drone
GEPRC GEP-MK5 · Standard version



Read this entire manual carefully before assembly and the first flight, and keep it for future reference.

User manual · www.rotorama.com

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1. Product description

1.1 Intended use

GEPRC Mark5 Standard (manufacturer's designation **GEP-MK5**) is a carbon fibre frame for building a 5" freestyle FPV drone. The frame has a **squashed X** layout with the centre of gravity in the middle, wide arms made of 5 mm thick carbon fibre and a robust camera cage with aluminium alloy side plates. The manufacturer states a design that dampens vibrations and resonance and a separate compartment for the capacitor and buzzer.

The frame is a kit – it is supplied disassembled, without electronics, motors and propellers. It can be used to build a drone with analog video transmission or with the Walksnail Avatar or Caddx Vista digital systems. The top plate is split into two parts, so the whole top does not have to be removed during servicing. The Standard version is supplied **without 3D printed parts**.



GEPRC Mark5 Standard – assembled frame without electronics (illustrative photo)

1.2 Specifications and package contents

Product designation	GEPRC GEP-MK5 (MARK5), Standard version
Manufacturer	GEPRC, www.geprc.com, info@geprc.com
Configuration	squashed X
Motor-to-motor diagonal	225 mm
Dimensions	214 × 168 × 42 mm
Arm thickness	5.0 mm
Top and bottom plate thickness	2.5 mm
Stack (FC/ESC) mounting holes	30.5 × 30.5 mm, M3
VTX mounting holes	30.5 × 30.5 mm / 20 × 20 mm, M2
Motor mounting holes	16 × 16 mm / 19 × 19 mm, M3
Camera width	19–20 mm
Propellers	5"
Frame weight	130 g

▶ Package contents

- 1× frame (carbon fibre parts, aluminium camera cage side plates)
- 2× battery pad
- 2× battery strap
- 1× set of small parts (screws, standoffs and other mounting parts)

▶ Not included

Motors, flight controller (FC), electronic speed controller (ESC), video transmitter (VTX), camera, receiver, antenna, propellers, battery, 3D printed parts, action camera mount, GPS mount and aluminium parts for mounting the DJI O3 camera.



Parts of the Standard version (manufacturer's illustrative photo; the actual contents of the small parts set may differ)

2. Assembly and use

2.1 What else you need

To build a working drone, the frame must be fitted with components that are not included:

- 4 motors with 16 × 16 mm or 19 × 19 mm mounting pattern (M3 thread) and 5" propellers,
- a flight controller (FC) and electronic speed controller (ESC) stack with 30.5 × 30.5 mm mounting pattern,
- a video transmitter (VTX) with 30.5 × 30.5 mm or 20 × 20 mm mounting pattern and a camera 19–20 mm wide,
- a receiver for your radio system, antennas and a Li-Po battery suitable for the chosen power system,
- tools: screwdrivers or hex keys matching the screws, a soldering iron and solder, cable ties and, if needed, medium-strength threadlocker.

Choose components that are compatible with each other (battery voltage, current of the motors and ESC). Voltage and current data can be found in the manuals of these components.

2.2 Assembly procedure

The manufacturer does not publish a detailed assembly guide for the frame. The procedure below is based on the frame design and on general FPV drone building practice. Always do a trial assembly before tightening the screws.

1. **Arms.** The front (① in the picture) and rear (②) pairs of arms differ in shape – insert them between the bottom plate and the centre piece as shown and screw them together. The arms must not wobble in the frame.
2. **FC/ESC stack.** Mount the stack on the 30.5 × 30.5 mm (M3) holes in the centre of the frame. The arrow on the flight controller must point forward, towards the camera.
3. **Motors.** Screw the motors to the ends of the arms using the 16 × 16 mm or 19 × 19 mm holes. Use screws of a length that will not touch the motor windings.
4. **Camera and VTX.** Insert a camera 19–20 mm wide into the cage formed by the aluminium side plates. Mount the VTX in the rear part of the frame on the 30.5 × 30.5 mm or 20 × 20 mm (M2) holes.
5. **Top plate.** Fit both parts of the top plate. The front part carries an optional HD camera mount, the rear part can be removed separately during servicing.
6. **Battery.** Place the battery pad on the top plate and thread the battery straps through.



① front pair of arms, ② rear pair of arms

2.3 Video transmission and accessories

- The frame is designed for **analog video transmission** and for the **Walksnail Avatar** and **Caddx Vista** digital systems.
- The Standard version of the frame is not designed for the **DJI O3 Air Unit**. The manufacturer states that installing the DJI O3 requires purchasing the corresponding aluminium camera mounting parts.
- Neither a GPS mount nor an action camera mount is included; they must be purchased separately.

2.4 Check after assembly

- All screws are tightened; for screws threaded into metal we recommend medium-strength threadlocker.
- No wire may reach into the propeller area or rub against the edges of the carbon fibre parts.
- Wires and solder joints must not touch the carbon fibre – carbon fibre is electrically conductive and may cause a short circuit.
- The propellers spin freely and do not touch the frame, antennas or cables.
- The battery is held firmly by the straps and cannot shift during flight.

3. Safety, operation and maintenance

3.1 Safety instructions

- This product is not a toy. It is not intended for children; the drone should only be built and operated by persons with appropriate knowledge.
- The edges of the carbon fibre parts may be sharp. Take extra care when handling them.
- Do not drill, grind or cut carbon fibre parts without respiratory and eye protection – fine dust is produced that irritates the skin and respiratory tract.
- Carbon fibre is electrically conductive. Insulate the electronics from the frame and protect wires from chafing.
- Rotating propellers can cause serious injury. Disconnect the battery before any work on the drone and remove the propellers for setup and bench tests.
- Handle Li-Po batteries according to their manufacturer's instructions; charge them under supervision and on a non-flammable surface.

3.2 Operating the finished drone

Assembling the frame with electronics creates an unmanned aircraft whose operation is governed by Regulations (EU) 2019/947 and 2019/945. These regulations apply in all EU Member States, but national implementing rules differ from country to country – registration portals, minimum pilot age, geographical zones, compulsory insurance, permitted frequency bands and maximum transmit power. **The law of the country in which you operate the drone always prevails.**

In the Czech Republic, the supervisory authority is the Civil Aviation Authority (www.caa.gov.cz). A drone with a camera requires operator registration and the pilot must hold the appropriate competency. The operator is responsible for complying with the operating rules and for the transmit power settings.

3.3 Maintenance and replacement of parts

- After every flight, and especially after a crash, check the arms and plates for cracks or delamination (peeling carbon fibre layers).
- Replace cracked or delaminated parts immediately – damaged carbon fibre may fail in flight.
- Regularly check that the screws are tight, especially the motor and arm screws.
- Check that the aluminium camera cage side plates are not bent.
- Clean the frame with a dry or slightly damp cloth; protect the electronics from moisture.

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 electronics or batteries and is not electrical equipment.
- Take aluminium parts and steel screws to metal collection; dispose of carbon fibre parts and other residues according to local rules, preferably at a municipal collection point.
- Sort the packaging by material (paper, plastic).
- Dispose of the electronics and batteries fitted to the frame separately according to their manufacturers' instructions – they do not belong in mixed waste.

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.