Mark4-8

GEPRC · frame for building an 8" FPV drone
User manual



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

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Contents

1. Product description

1.1 Intended use

1.2 Specifications and package contents

2. Assembly and use

2.1 What else you need

2.2 Build procedure

2.3 Before the first flight

3. Safety and maintenance

3.1 Safety during building and operation

3.2 Frame inspection and maintenance

4. Information for the EU and Czech Market

4.1 Importer and responsible person in the EU

4.2 Disposal

5. Warranty and rights arising from defective performance

1. Product description

1.1 Intended use

The GEPRC Mark4-8 (also referred to as the Mark4 LR8) is a carbon fibre frame for building a larger long-range FPV quadcopter with propellers of up to 8 inches. Compared with common 7" long-range drones, a larger quadcopter offers better efficiency and a higher payload. The frame is supplied as a kit without electronics – you choose and install the motors, flight controller (FC), electronic speed controllers (ESC), camera, video transmitter (VTX) and receiver yourself.

The arms are cut from 6 mm thick carbon fibre and are positioned in front of and behind the stack, so the stack is mounted directly on the bottom plate. This makes the frame lower, with a better positioned centre of gravity. The frame is designed for analogue video transmission; more experienced builders can fit a digital video transmitter without major difficulty.



GEPRC Mark4-8 frame (illustrative photo)

1.2 Specifications and package contents

Product designation	GEPRC Mark4-8 (Mark4 LR8)
Type	carbon fibre FPV quadcopter frame
Maximum propeller size	8"
Motor-to-motor diagonal	338 mm
Frame weight	163 g
Arm thickness	6 mm
Top / bottom plate	3 mm / 3 mm
Stack mounting holes	30.5 × 30.5 mm M3 / 20 × 20 mm M2
VTX mounting holes (rear)	30.5 × 30.5 mm M3 / 20 × 20 mm M2
Motor mounting holes	16 mm / 19 mm spacing, M3
Camera size	Micro (19 mm)
Package contents	1× frame
Not included	electronics (motors, FC, ESC, camera, VTX, receiver), props, battery, charger, radio, FPV goggles, tools

2. Assembly and use

2.1 What else you need

To complete the build you will mainly need:

- 4 motors with M3 mounting holes at 16 mm or 19 mm spacing, rated for 8" propellers,
- a stack (flight controller and speed controllers) with 30.5 × 30.5 mm or 20 × 20 mm hole spacing,
- a Micro size (19 mm) FPV camera and a video transmitter with 30.5 × 30.5 mm or 20 × 20 mm hole spacing,
- an RC receiver and radio transmitter, FPV goggles,
- propellers with a diameter of no more than 8",
- a Li-Po or Li-Ion battery suitable for the chosen electronics and a strap to secure it,
- tools: hex and socket drivers, a soldering iron, medium-strength thread locker, cable ties and heat-shrink tubing.

※ The manufacturer does not specify recommended components for the 8" version of the frame. Choose motors, ESC and battery so that they match each other and are designed for 8" propellers.

2.2 Build procedure

① Before assembly, inspect all frame parts – carbon edges, cracks, delamination and the completeness of screws and standoffs.

② Mount the stack (FC and ESC) on the bottom plate with arms using the 30.5 × 30.5 mm M3 or 20 × 20 mm M2 holes. Use rubber dampers and do not overtighten the stack.

③ Mount the video transmitter in the rear part of the frame (30.5 × 30.5 mm M3 or 20 × 20 mm M2 holes).

④ Screw the motors to the arm ends with M3 screws. **The screws must not be so long that they touch the motor windings** – check their length before tightening. Apply thread locker to the threads.

⑤ Route the motor wires along the arms, secure them with heat-shrink tubing or tape and solder them to the ESC. Check the motor rotation direction.

⑥ Mount the Micro size (19 mm) camera and the receiver, connect the antennas and position them out of reach of the propellers.

⑦ Fit the top plate, tighten all screws and check that no wire touches the sharp carbon edges or the propellers.

⑧ Secure the battery with a strap so that it cannot shift in flight, and check the position of the centre of gravity.

❊ Carbon fibre is electrically conductive. No solder pad, wire or connector may touch the frame – there is a risk of a short circuit and damage to the electronics or the battery.

2.3 Before the first flight

- Set up the flight controller in the configuration software according to the electronics manufacturer's instructions (board orientation, receiver, failsafe, motor direction).
- Carry out the first motor test **without propellers**. Fit the propellers only after checking the rotation direction and the Arm (motor start) and Disarm (motor stop) functions.
- Before each flight, check that the motor and frame screws are tight, the condition of the propellers and the battery mounting. Always insert a fully charged battery (Li-Po 4.20 V/cell).
- End the flight at the latest when the voltage drops to 3.5 V/cell; store batteries at 3.8 V/cell.

A completed quadcopter is an unmanned aircraft and its operation is governed by Regulations (EU) 2019/947 and 2019/945. EU regulations apply in all member states, but national implementing rules differ from country to country – operator registration, pilot competency, geographical zones, insurance, permitted frequency bands and maximum transmit power. **The law of the country in which you fly always applies.** In the Czech Republic, information is provided by the Civil Aviation Authority (www.caa.cz).

3. Safety and maintenance

3.1 Safety during building and operation

- This product is not a toy. It is not intended for children; building and operation should be carried out by persons experienced with FPV equipment.
- The edges of carbon parts can be sharp. Sanding or drilling carbon produces fine dust that irritates the skin and respiratory tract – work wet, wear a mask and gloves and do not inhale the dust.
- Rotating propellers can cause serious injury. Always remove the propellers when working on the quadcopter with a battery connected.
- Do not fly with a damaged frame – a cracked or delaminated arm may break off in flight.
- Charge Li-Po batteries under supervision on a non-flammable surface and never charge a damaged or swollen battery.

3.2 Frame inspection and maintenance

- After every flight, and especially after a crash, check the arms and plates for cracks or delamination and replace damaged parts.
- Regularly check that the screws of the motors, arms and standoffs are tight.
- Check the condition of the wire insulation where wires run past carbon edges.
- Clean the frame with a dry or slightly damp cloth, without solvents. Protect the electronics from water.

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

Product identification: GEPRC Mark4-8 (Mark4 LR8), manufacturer GEPRC.

4.2 Disposal

- The frame contains no electronics or batteries. At the end of its service life, take it to a municipal collection point or dispose of it in accordance with local waste regulations.
- Do not burn carbon parts – burning produces harmful fumes.
- Sort the packaging material by type (paper, plastic).
- The electronics you install in the frame and the batteries belong to the take-back scheme for electrical equipment and batteries – follow the instructions for those products.

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.