AlfaRC Fi-115

Frame for a 2.5" FPV drone
User manual



Read the entire manual before building and using the product and keep it for future reference.

www.rotorama.com

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1. Product description

1.1 What it is for

The **AlfaRC Fi-115** is a small carbon fibre composite frame for building an FPV drone with 2.5" (65 mm) propellers. It is designed mainly for freestyle flying in the garden and in the park. The bottom plate is made of 3 mm thick carbon; combined with the triangular arms, this makes the frame stiff and durable.

The frame accepts stacks (flight controller and ESCs) with 25.5 × 25.5 mm, 16 × 16 mm and 20 × 20 mm mounting patterns. Two 20 × 20 mm stacks even fit in the frame one behind the other, so the rear section can comfortably hold, for example, the video transmitter (VTX). The frame is designed for nano-size cameras (14 mm).



AlfaRC Fi-115 – side view

1.2 Specifications and package contents

Parameter	Value
Product designation	AlfaRC Fi-115
Material	carbon fibre composite
Bottom plate thickness	3 mm
Frame weight	25 g
Diagonal motor-to-motor distance	115 mm
Stack mounting holes	25.5 × 25.5 mm / 16 × 16 mm / 20 × 20 mm, M2 screws
Motor mounting holes	9 mm, M2 screws
Propeller size	2.5" (65 mm)
Camera size	nano (14 mm)
Package contents	1× frame

Not included: flight controller (FC), ESCs, motors, propellers, FPV camera, video transmitter (VTX), receiver, antennas, battery and radio transmitter.

2. Use

2.1 What else you need

- motors with a 9 mm mounting pattern for M2 screws, suitable for 2.5" (65 mm) propellers,
- a flight controller (FC) and ESCs, or an AIO board, with a 25.5 × 25.5 mm, 16 × 16 mm or 20 × 20 mm mounting pattern,
- a nano-size FPV camera (14 mm), a video transmitter (VTX) and an antenna,
- a receiver compatible with your radio transmitter,
- 2.5" (65 mm) propellers, a Li-Po battery and a strap to secure it,
- tools: screwdrivers, a soldering iron, cable ties and heat-shrink tubing.

2.2 Building the drone

The manufacturer does not publish assembly instructions for the frame. The procedure below is a general one that corresponds to a typical build of a small FPV drone.

① Before building, check all frame parts. Lightly sand the edges of the carbon parts that cables will run along with fine sandpaper so that the cables do not chafe.

② Screw the motors to the ends of the arms with M2 screws. The screws must not be so long that they touch the motor windings – such a screw will damage the motor.

③ Mount the stack or AIO board on the bottom plate using anti-vibration grommets. The arrow on the flight controller must point forwards, or set the orientation later in the firmware configuration.

④ Mount the nano-size FPV camera at the front and the video transmitter and receiver at the rear.

⑤ Solder the motor wires, the power lead and the signal wires. Insulate the solder joints and secure the wires so that they cannot get into the propellers or chafe against the carbon edges.

⑥ Route and secure the antennas so that they do not reach into the propellers.

⑦ Fit the top plate and tighten all screws.

※ Carbon fibre composite is electrically conductive. No solder pad, stripped wire or component may come into contact with the frame – this risks a short circuit and destruction of the electronics or the battery.

2.3 After assembly

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

- Configure the firmware, check the motor direction and bind the receiver **without propellers**.
- Fit the propellers only after checking the motor direction, and according to the layout selected in the firmware.
- The completed drone is an unmanned aircraft. Its operation is governed by Regulation (EU) 2019/947 and by the rules of the country in which you fly – the law of the country of operation always applies. Because of the camera, operator registration is required in the Czech Republic.

3. Safety and maintenance

- The edges of carbon parts can be sharp. Sanding or drilling produces fine carbon dust – work wet or with dust extraction, wear a respirator and safety glasses and do not inhale the dust.
- The frame is not a toy. Keep it and its small parts out of the reach of children.
- After every crash, check the arms and plates for cracks or delamination. Replace any damaged part – a cracked arm can fail in flight.
- Regularly check that the screws are tight and inspect the wiring where it passes the edges of the frame.
- With the propellers fitted, handle the drone only with the battery disconnected.

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 itself contains no electronic components. At the end of its life, take it to a municipal collection site or dispose of it in accordance with the waste rules of your municipality. Do not burn carbon parts.
- Sort the packaging by material into the appropriate recycling containers.
- If you dispose of the frame as part of a completed drone, first remove the electronics and the battery and take them to a collection point for electrical equipment and batteries. Take-back is free of charge for the end user; collection points in the Czech Republic can be found at www.asekol.cz and www.ecobat.cz.

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.