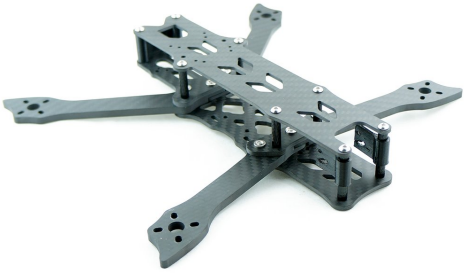
Buddy 5" Deadcat

Carbon freestyle FPV quadcopter frame
User manual



Read this manual before building the quadcopter and keep it for future reference.

www.rotorama.com

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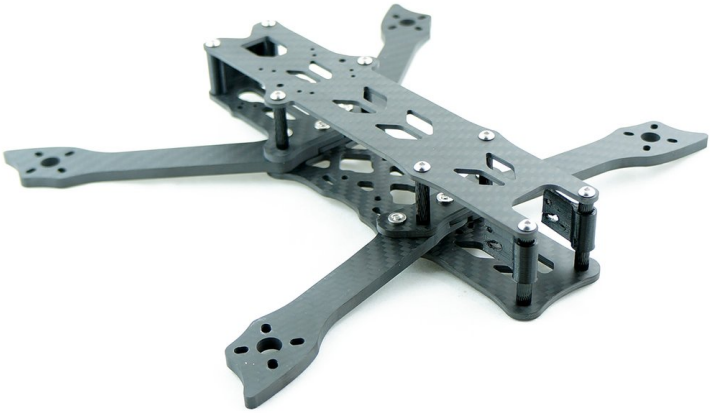
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1. Product description

1.1 Intended use

The Rotorama Buddy 5" Deadcat is a carbon freestyle frame for building your own FPV quadcopter. The frame is designed to be **very durable, practical and to fly well**, and it accommodates propellers up to **5.5"**. It suits beginners as well as experienced pilots, especially those who fly with a heavier HD camera.

The **Deadcat** variant has the front arms spread further to the sides. Thanks to this, the propellers are not visible in the FPV camera image, even with 5.5" propellers. The frame is therefore well suited for cinematic flying. Unlike most freestyle frames, the stack (flight controller and ESC) is mounted between the front and rear arms directly on the bottom plate – the frame is lower and its centre of gravity is closer to the propeller plane.



Rotorama Buddy 5" Deadcat

1.2 Specifications and package contents

Product designation	Rotorama Buddy 5" Deadcat
Type	freestyle FPV quadcopter frame, Deadcat variant
Max. propeller size	5.5"
Weight	135 g (including 3D printed parts)
Arms	15 mm wide, 5 mm thick carbon; each arm attached separately with three screws
Bottom / top plate	3 mm carbon / 2 mm carbon
Distance between front and rear arms	55 mm
Stack mounting	20×20 mm M3, 30.5×30.5 mm M3 (slots for larger stacks)
VTX mounting (rear section)	20×20 mm M2, 25.5×25.5 mm M2, 30.5×30.5 mm M3
Holes in the top plate	20×20 mm and 25.5×25.5 mm M2
Camera size	Mini
Digital video	Caddx Vista, Walksnail Avatar; DJI O3 and DJI Air Unit with a separate set of 3D printed parts
HD camera mounts	compatible with the Alien frame (same spacing of the four front standoffs)

Package contents

Part	Qty
Deadcat 5.5" arm – front	2×
Deadcat 5.5" arm – rear	2×
Bottom plate	1×
Middle plate	1×
Rear plate	1×
Top plate	1×
Hardware	1 set
SMA antenna mount (3D printed)	1×
Mini camera mount (3D printed)	1×

Not included: motors, flight controller and ESC (stack), receiver, FPV camera, video transmitter, antenna, propellers, battery, battery strap, 3D printed sets for DJI O3, DJI Air Unit and DJI O4 Pro, GoPro mount and Micro camera mount. Parts not included can be purchased separately as *Rotorama Buddy – Parts*.

2. Use

2.1 What you need for the build

- four motors for propellers up to 5.5" (with common 2207 motors the propeller is usually level with the top plate),
- a stack – flight controller (FC) and electronic speed controller (ESC) with 20×20 mm or 30.5×30.5 mm mounting pattern,
- a Mini size FPV camera, a video transmitter (VTX) with antenna and a receiver for your radio,
- propellers no larger than 5.5", a battery with XT60 connector and a battery strap,
- tools: hex screwdrivers, soldering iron and solder, optionally threadlocker for screws.

※ The frame is a kit. Assembling it, wiring the electronics and configuring the flight controller require basic knowledge of building FPV quadcopters. When wiring and configuring the electronics, follow the manuals of their manufacturers.

2.2 Frame assembly and electronics installation

① **Arms:** the Deadcat front arms are spread further to the sides than the rear arms – do not swap the front and rear arms. Attach each arm to the frame with all three screws from the hardware set. Thanks to the three screws, the arm sits firmly and does not wobble.

② **Motors:** mount the motors on the ends of the arms. The motor screws must not be so long that they touch the windings – after tightening, check that the motor spins freely and smoothly.

③ **Stack:** place the stack on the bottom plate between the front and rear arms (20×20 mm M3 or 30.5×30.5 mm M3 pattern). Thanks to the slots, a larger stack can be shifted slightly to one side or the other to gain space, e.g. for a capacitor or a power cable.

④ **Video transmitter:** mount the VTX in the rear section of the frame using the prepared mounting holes (Chapter 2.3).

⑤ **Camera and antenna:** insert the Mini size camera into the 3D printed camera mount and fix the antenna SMA connector in the SMA antenna mount.

⑥ **Top plate:** pass the cable with the XT60 connector through the opening in the rear part of the top plate and fit the top plate. A cable routed through the plate is less likely to get caught in the propellers, and the top plate can easily be removed for servicing.

⑦ **Check:** make sure all screws are tightened, that no cable touches the carbon edges or can get into the propellers, and that the fitted propellers spin freely without rubbing anywhere.

2.3 Space for electronics

- The **stack** is mounted on the bottom plate between the arms. The distance between the front and rear arms is 55 mm, so most commonly available stacks will fit.
- The **rear section of the frame** has 20×20 mm M2, 25.5×25.5 mm M2 and 30.5×30.5 mm M3 mounting holes. It is a suitable place for the video transmitter – for example a Caddx Vista or Walksnail Avatar unit can be mounted in these holes.
- The **top plate** has holes with 20×20 mm and 25.5×25.5 mm M2 spacing.
- **DJI O3** and **DJI Air Unit** units fit into the frame using the corresponding set of 3D printed parts, sold separately. A separate set is available for the DJI O4 Pro.



Buddy 5" Deadcat frame – top view

2.4 3D printed accessories

Both the camera and the antenna are held in the frame by 3D printed mounts; the Mini camera mount and the SMA connector mount are included. The Buddy has the same spacing of the four front standoffs as the popular Alien frame, so HD camera mounts designed for the Alien can be used as well – at the front, rear or bottom. The 3D print models are freely available for download at www.thingiverse.com/thing:5205381.

3. Safety and maintenance

3.1 Safety instructions

- **Carbon is electrically conductive.** Make sure that cable insulation cannot chafe against the carbon parts and that no exposed solder pads can touch them – risk of short circuit. Route cables away from sharp edges and protect them with heat shrink if necessary.
- Do not drill, sand or cut carbon parts without protection. Fine dust is produced that irritates the skin and respiratory tract; wear a respirator and do not inhale the dust.
- Spinning propellers can cause serious injury. When working on the assembled quadcopter, keep the propellers removed unless necessary and connect the battery only after all checks are completed.
- The frame and its small parts are not a toy. Keep them out of the reach of children; screws and small parts pose a choking hazard.

3.2 Inspection after a crash and part replacement

- After every crash, inspect the arms and plates. Replace any part with a crack, a chipped or delaminated edge – it may fail in flight.
- Regularly check that all frame screws are tight, especially the three screws of each arm and the motor screws.
- A damaged arm can be replaced individually: remove the propeller, unscrew the motor, loosen the three arm screws, insert the new arm and attach it with all three screws. Re-mount the motor and check that it spins freely.
- Spare arms, plates, hardware and 3D printed accessories are available separately as *Rotorama Buddy – Parts*. When ordering arms, select the type *Deadcat 5.5*" – front or rear respectively.

3.3 Operating the finished quadcopter

The assembled quadcopter is an unmanned aircraft. In the European Union its operation is governed by Regulations (EU) 2019/947 and 2019/945, but national rules differ from country to country – operator registration, pilot competency, geographical zones, mandatory insurance, as well as permitted frequency bands and 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.gov.cz).

Responsibility for the compliance of the finished quadcopter with the regulations, including the radio equipment used, lies with the person who built and operates it.

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 is not electrical equipment and contains no batteries, so the take-back of electrical equipment does not apply to it. However, dispose of the electronics installed in the frame separately at a collection point for electrical equipment.
- Dispose of unneeded or damaged parts according to your municipality's waste system: carbon and plastic (3D printed) parts as mixed municipal waste, metal hardware with scrap metal. Do not burn carbon parts.
- Sort the packaging by material (paper, plastic).
- Outside the Czech Republic, follow the waste regulations of the country in which you use the product.

5. Warranty and rights arising from defective performance

5.1 Rights of the buyer under Czech law

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.