AOS Cine35 V5

FPV cinewhoop frame with prop guards, props up to 3.5"
Assembly and user manual



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

Manufacturer: iFlight · Importer: Rotorama, s.r.o. · www.rotorama.com

Contents

1. Safety instructions
2. Product description
3. Legal requirements for operation in the Czech Republic and the EU
4. Preparing for assembly
5. Assembly
6. Setup and first flight
7. Maintenance and troubleshooting
8. Information for the EU and Czech Market
9. Warranty and rights arising from defective performance

1. Safety instructions

1.1 Before you start

The AOS Cine35 V5 is a **frame kit** for an FPV drone, not a finished drone. The frame is intended for users with experience in building and flying FPV drones. The product is not a toy.

- Before assembly, read this entire manual and the manuals of all components you are going to install in the frame.
- The kit contains **small parts** (screws, nuts, standoffs) – choking hazard if swallowed. Keep them out of the reach of children and animals.
- Assemble the frame on a clean, well-lit workbench using tools of the correct size.

1.2 Carbon parts and assembly

- The edges of the carbon plates may be sharp. Be careful not to cut yourself and always route cables so that they cannot rub against the edges.
- **Carbon fibre composite is electrically conductive.** Electronics, solder joints and stripped wires must not touch the carbon plates – risk of short circuit and battery fire.
- Do not sand or drill the carbon plates. The dust produced is harmful to health. If machining is unavoidable, work wet and wear a respirator and safety glasses.
- Tighten the screws with care – the threads in the aluminium standoffs strip easily when overtightened. Use thread locker only on metal-to-metal joints, never on plastic (nylon, TPU) parts.

1.3 Operating the finished drone

- **Rotating propellers can cause serious injury.** The prop guards reduce this risk but do not eliminate it. Carry out all work on the drone with the battery disconnected and always test the motors without propellers.
- Charge Li-Po and LiHV batteries only under supervision, on a non-flammable surface and with a charger designed for the cell type. Do not use a damaged, swollen or overheated battery.
- Do not fly over people or animals, near roads, in rain, in strong wind or near high-voltage power lines.
- After a crash, disconnect the battery and inspect the frame, propellers, motors and battery mounting before the next flight.

2. Product description

2.1 Intended use

The AOS Cine35 V5 is a cinewhoop frame – an FPV drone frame with integrated carbon fibre prop guards – designed for filmmaking. According to the manufacturer, it offers a powerful and stable platform for propellers up to **3.5"**.

- **Flexible battery mounting** – lengthwise or vertical (“toilet tank”). The battery can be positioned so that the centre of mass matches the camera used. Captive battery straps allow quick battery swaps.
- **155° field of view** for the FPV camera with no props in view – ideal for DJI O3 and O4.
- **Carbon fibre prop guards** with reinforced screw holes and optimised airflow around the propeller.
- **7075 aluminium camera cage** for 19–20 mm cameras; integrated soft mount for DJI O3, support for O4 including ND filters. Hard mounting for analog, Walksnail Avatar, HDZero and DJI cameras. 14 mm cameras with a 3D-printed mount.
- **GoPro mounting** facing forward or backward (shots ahead of the drone as well as chase shots).

2.2 Specifications

Parameter	Value
Wheelbase	153 mm
Dimensions (L × W × H)	223 × 203 × 36.5 mm
Frame weight	145 g
Max. propeller size	3.5"
Top plate thickness	3 mm
Bottom plate thickness	2 mm
Battery plate thickness	2 mm
Flight stack mounting	20 × 20 mm, Φ2 mm / 25.5 × 25.5 mm, Φ2 mm
Max. flight stack height	25 mm
VTX mounting	20 × 20 mm, Φ2 mm / 25.5 × 25.5 mm, Φ2 mm
Max. VTX height	25 mm
Motor mounting	9 × 9 mm / 12 × 12 mm, Φ2 mm
FPV camera width	19–20 mm (14 mm with a 3D-printed mount)
Camera cage	7075 aluminium
Compatibility	DJI O4 Air Unit Pro, DJI O3 Air Unit, HD Vista, BLITZ Whoop 1.6W VTX

※ Manufacturing tolerance: part thickness ±0.2 mm, hole diameter ±0.1 mm.

2.3 Package contents

Frame, set of TPU parts, screw bag, 2 battery straps and 2 anti-slip battery pads. Detailed list according to the manufacturer’s assembly guide (item numbers correspond to Fig. 1):

No.	Part	Qty
1	Bottom plate	1
2	Top plate	1
3	Prop guard	2
4	Battery plate	1
5	Cam mount plate	2
6	CNC camera side plate	2
7	O4 Pro bracket, TPU	2
8	O4 vibration dampers, TPU	2
9	Antenna mount, TPU	1

No.	Part	Qty
10	GPS bracket, TPU	1
11	M2×6 hex screw	12
12	M3×8 hex screw	10
13	M2×6 countersunk hex screw	5
14	M2×4 countersunk hex screw	5
15	M3×8 countersunk hex screw	5
16	M3×25 aluminium standoff	5
17	M2 nut, stainless steel	3
18	3.2×5×2 dual-pass nylon standoff	5
19	M2×20 aluminium standoff	1
20	M2×8 hex screw with washer	2
21	M2×8 hex screw	18

▶ Additional parts (box “Additional parts” in the original, items 1–9)

No.	Part	Qty
A1	Anti-slip battery pad	2
A2	Battery strap 15 × 250 mm, microfibre leather	2
A3	Sticker V4	1
A4	M2 lock nut	5
A5	M2×12 hex screw	5
A6	Analog camera side plate	2
A7	Silicone camera side plate	2
A8	O4 Pro bracket (ND filter), TPU	2
A9	O4 bracket, TPU	2

The package does NOT include electronics, motors, propellers, FPV camera, video transmitter, receiver, battery, action camera, 3D-printed mount for 14 mm cameras or tools.

2.4 Assembly diagram

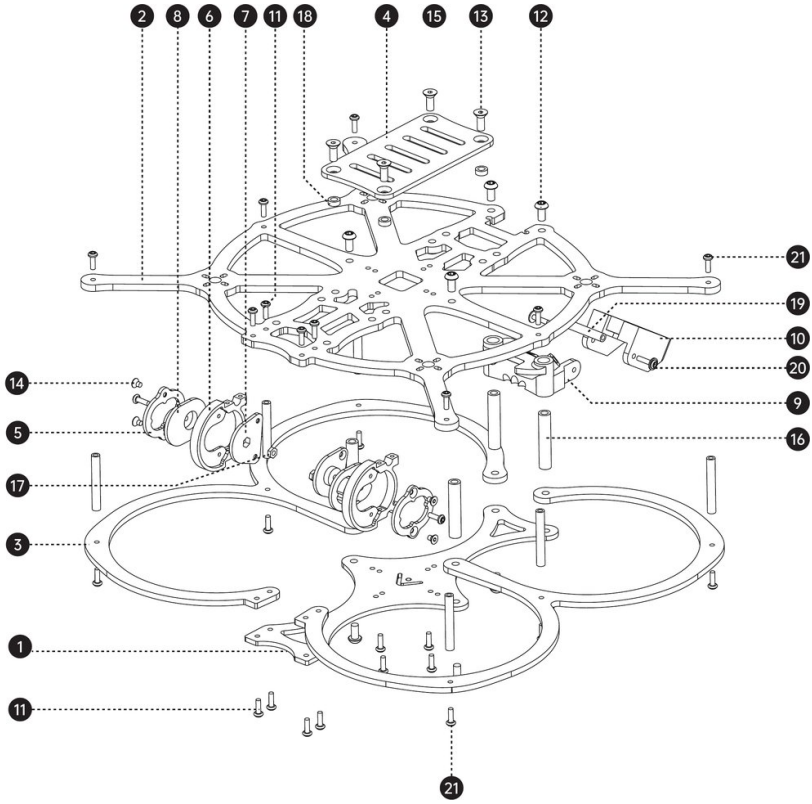

Fig. 1 – Manufacturer's assembly diagram; numbers correspond to the items in table 2.3

2.5 Manufacturer

Manufacturer	iFlight Intelligent Technology Ltd.
Address	F6, Building B2, Galaxy IMC, Beixin Road, No. 6, Zhongkai Avenue, Huizhou 516006, Guangdong, China
E-mail	support@iflight.com
Web	shop.iflight.com

The importer and responsible person in the EU are given in Chapter 8.1.

3. Legal requirements for operation in the Czech Republic and the EU

3.1 The law of the country where you fly applies

Regulations (EU) 2019/947 and 2019/945 apply in all EU member states, but national implementing rules differ from country to country – registration portals, minimum pilot age, geographical zones, mandatory 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 regulations of the country in which you fly.

3.2 Drone classification and category of operation

- A drone built on this frame has no C0–C4 class label. In the open category it can be operated as a **privately built UAS**: in subcategory **A1** if its maximum take-off mass is less than 250 g and its speed does not exceed 19 m/s, otherwise in subcategory **A3**. Subcategory A2 is not available.
- The take-off mass includes everything: frame, electronics, propellers, battery and action camera. Always **actually weigh** the finished drone.
- Alternatively, the drone can be operated within a model aircraft club or association under Article 16 of Regulation (EU) 2019/947. In case of doubt, contact the Civil Aviation Authority (ÚCL).

3.3 Registration and pilot competency

- A drone equipped with a camera requires **operator registration** with the ÚCL regardless of its weight. The operator registration number must be visibly displayed on the drone.
- The pilot must hold a valid certificate for the subcategory of operation (ÚCL online training and test for A1/A3).

3.4 Operating limits and flying with FPV goggles

- Maximum flight height 120 m above ground; do not fly over assemblies of people.
- In subcategory A3, keep at least 150 m from residential, commercial, industrial and recreational areas and do not fly over uninvolved persons.
- The drone must remain within visual line of sight (VLOS). When flying with FPV goggles, an **unmanned aircraft observer** must stand next to the pilot and watch the drone directly, without optical aids.
- Respect geographical zones and people’s privacy. We recommend liability insurance.

3.5 Radio equipment

The frame itself does not transmit. The video transmitter and receiver that you install in it must be operated in accordance with the general authorisations of the Czech Telecommunication Office (ČTÚ). The user is responsible for the frequency and power settings; outside the Czech Republic, the limits of the respective country apply.

Band	Limit in the Czech Republic	Source
2400–2483.5 MHz	25 mW e.i.r.p.	VO-R/10, Art. 3(j)
5725–5875 MHz	25 mW e.i.r.p.	VO-R/10, Art. 3(k)
5150–5250 MHz	indoor use only; UAS must not be operated in 5150–5170 MHz	VO-R/12, item b1)

4. Preparing for assembly

4.1 What else you need

- **Flight controller (FC) and ESCs** – a stack with 20 × 20 mm or 25.5 × 25.5 mm mounting (Φ2 mm holes), max. 25 mm high.
- **Four motors** with 9 × 9 mm or 12 × 12 mm mounting pattern (M2 screws).
- **Propellers** up to 3.5".
- **FPV camera and video transmitter (VTX)** – camera width 19–20 mm (14 mm with a 3D-printed mount), VTX with 20 × 20 mm or 25.5 × 25.5 mm mounting and max. 25 mm height. The manufacturer lists compatibility with DJI O4 Air Unit Pro, DJI O3 Air Unit, HD Vista and BLITZ Whoop 1.6W VTX.
- **Receiver** for your radio system, **battery** and charger.
- Tools: hex drivers for M2 and M3 screws, wrench or pliers for M2 nuts, soldering equipment, cable ties, medium-strength thread locker.

4.2 Checking the parts

- Before assembly, check the package contents against the table in Chapter 2.3.
- Inspect the carbon plates and prop guards – they must show no cracks or delamination (peeling layers).
- Sort the TPU parts and the accessories for different cameras; you will not need all of them for your build.

5. Assembly

5.1 Assembly procedure

Assemble the frame according to the assembly diagram in Fig. 1. Item numbers (“item”) correspond to the table in Chapter 2.3. The manufacturer has not published a more detailed assembly procedure; the recommended order of work is given below.

① Prepare the bottom plate (item 1) and the prop guards (item 3) and fit the M3×25 standoffs (item 16) that carry the top plate (item 2) according to the diagram.

② Mount the motors. **The motor screws must not reach into the windings** – after tightening, the rotor must turn freely without rubbing.

③ Fix the stack (FC/ESC) in the selected mounting pattern. The underside of the boards and the solder joints must not touch the carbon.

④ Assemble the camera cage from the parts for your camera type (Chapter 5.2) and fix the camera in it.

⑤ Mount the video transmitter (VTX), the receiver and, as needed, the antenna mount (item 9) and the GPS bracket (item 10) with the M2×20 standoff (item 19) and the M2×8 screws with washer (item 20).

⑥ Screw on the top plate (item 2) and the battery plate (item 4) on top of it according to the diagram.

⑦ Thread the battery straps and stick on the anti-slip pads (Chapter 5.3).

⑧ Carry out the post-assembly check (Chapter 5.5).

5.2 Choosing parts for the camera

The 7075 aluminium camera cage accommodates 19–20 mm cameras. It has an integrated soft mount for DJI O3 and also supports DJI O4 including ND filters. Analog, Walksnail Avatar, HDZero and DJI cameras are hard mounted. Choose the parts according to your camera type (manufacturer's designation):

Part	Item
CNC camera side plate	6
O4 Pro bracket, TPU	7
O4 vibration dampers, TPU	8
Analog camera side plate	A6
Silicone camera side plate	A7
O4 Pro bracket (ND filter), TPU	A8
O4 bracket, TPU	A9

※ A 3D-printed mount is available for 14 mm cameras – the STL file can be found on the manufacturer's product page in the *3D Prints* section. The mount is not included.

5.3 Battery mounting

- The battery can be mounted **lengthwise** or **vertically** ("toilet tank"). Choose the position so that the centre of mass of the finished drone is as close as possible to the centre of the frame – especially with an action camera.
- Use the supplied 15 × 250 mm straps and the anti-slip pads. The battery must be held firmly and must not shift during flight.
- Route the battery lead so that it cannot get into the propellers.

5.4 Action camera

The frame supports mounting a GoPro camera facing forward or backward. Secure the camera against loosening and make sure it does not reach into the propellers or into the field of view of the FPV camera. An action camera shifts the centre of mass considerably – adjust the battery position (Chapter 5.3).

5.5 Post-assembly check

- All screws are tightened and none is missing.
- The propellers turn freely and touch neither the prop guards nor any cables.
- Antennas, cables and straps are clear of the propellers.
- No electronics or wires touch the carbon parts.
- The camera is firmly mounted and no propellers are visible in the image.

6. Setup and first flight

6.1 Setting up the electronics

- Set up the electronics according to the manuals of the flight controller, ESC, video transmitter and receiver manufacturers.
- In the configurator (e.g. Betaflight), check the flight controller orientation and the order and direction of rotation of the motors – **always without propellers**.
- Only after the check, fit the propellers in the correct direction of rotation.

6.2 Arm, Disarm and failsafe

- Assign **Arm** (motors on) and **Disarm** (motors off) to a switch on the radio, never to a stick movement.
- Before the first flight, check the **failsafe**: when the radio is switched off, the motors must stop reliably or the drone must perform the configured procedure.

6.3 Pre-flight check and battery

- Before flight, insert a **fully charged** battery: Li-Po 4.20 V/cell, LiHV 4.35 V/cell.
- Check the frame, prop guards, propellers, battery and camera mounting.
- End the flight at a voltage of **3.5 V/cell** (under load) at the latest. For storage, bring the battery to 3.8 V/cell.
- Make the first flight in an open area and at low height.

7. Maintenance and troubleshooting

7.1 After every flight

- Disconnect the battery and let the motors cool down.
- Inspect the carbon plates and prop guards for cracks, delamination and broken-out holes. Replace any damaged part.
- Tighten loose screws, check the TPU parts and the camera damping. Replace worn TPU parts.
- Clean the frame of dust, grass and sand; dry a wet drone before further use.

7.2 Storage

Store the drone in a dry place, out of direct sunlight and with the battery disconnected. Store batteries separately, charged to 3.8 V/cell, in a fireproof bag.

7.3 Troubleshooting

Problem	Possible cause and solution
Vibration, image wobble (“jello”)	Loose frame or motor screws – tighten. Damaged propeller – replace. Cracked plate – replace. Worn camera damping – replace the TPU parts.
Propeller rubs against the prop guard	Deformed guard, loose motor or oversized propeller (max. 3.5"). Replace the guard, tighten the motor.
Battery shifts during flight	Loose strap or missing anti-slip pad. Tighten the strap, add the pad.
Drone tilts, is unstable	Centre of mass off the frame centre – move the battery or choose a different battery position.
Short circuit, burning smell	Electronics or a wire in contact with carbon. Disconnect the battery immediately, insulate the spot and replace damaged parts.

8. Information for the EU and Czech Market

8.1 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

8.2 Product conformity and identification

- The product is a mechanical frame kit without any electrical or radio components. Its safety is assessed under Regulation (EU) 2023/988 on general product safety (GPSR).
- Electronic and radio components that you install in the frame (flight controller, ESCs, motors, video transmitter, receiver) must comply with the regulations applicable to them and come with their own documentation and EU declaration of conformity from their manufacturer.
- **Product identification:** the type designation **AOS Cine35 V5 Frame Kit** (manufacturer iFlight) is stated on the proof of purchase and in this manual. Manufacturer details are given in Chapter 2.5.

8.3 Disposal

- Neither the frame nor its accessories are electrical equipment. Hand in the aluminium parts (camera cage, standoffs), steel screws and nuts for metal recycling; dispose of the carbon plates and the TPU and nylon parts according to the rules of your municipality. Sort the packaging.
- Electronic components and batteries that you have installed in the frame are electrical equipment and batteries: **they must not be disposed of together with mixed municipal waste**. Remove them before disposing of the frame and hand them in at a take-back point. Take-back is free of charge for the end user.

Through its contractual partner **ASEKOL a.s.**, the company ensures the take-back of waste electrical equipment from households and the separate collection of waste electrical equipment, batteries and accumulators in accordance with the applicable legislation. The customer is entitled to hand over old electrical equipment or a battery or accumulator at any collection point of the above contractual partner. The addresses of these take-back points are listed at www.asekol.cz, www.ecobat.cz and also https://visoh2.mzp.cz/RegistrMistZO/RegistrMistZOPublic/MapaMistZpetOdberu.

9. 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 8.1.
- 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.