Osprey 60mm RHCP / LHCP

FlyFishRC · 5.8 GHz circularly polarised antenna
User manual



Read this manual before first use. Never power on the video transmitter (VTX) without an antenna connected.

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1. Product description

1.1 Intended use

The FlyFishRC Osprey 60mm is a short circularly polarised antenna for FPV video transmission in the 5.8 GHz band. It screws onto the antenna connector of the video transmitter (VTX) on a drone or onto the connector of FPV goggles or a video receiver. The four-leaf radiating element is protected by a hermetically sealed cover made of impact-resistant polycarbonate; a flexible RG141 coaxial cable with a gold-plated connector leads to the head.

The antenna is supplied in two versions that differ in connector and sense of polarisation: **RHCP** (right-hand) with an **SMA** connector and **LHCP** (left-hand) with an **RP-SMA** connector. The RHCP/SMA version is suited mainly to analogue setups, the LHCP/RP-SMA version to drones with digital video transmission. What always matters, however, is the connector and polarisation of your video transmitter and goggles – see Chapter 2.1.



Osprey antenna (LHCP version) on a drone

1.2 Specifications and package contents

Parameter	Value
Manufacturer	FlyFishRC
Frequency band	5.8 GHz (covers 5.6–6.0 GHz)
Gain	2.82 dBi
VSWR	≤ 1.2 : 1
Radiation efficiency	99 %
Polarisation	RHCP (SMA version) / LHCP (RP-SMA version)
Connector	gold-plated SMA (RHCP) / gold-plated RP-SMA (LHCP)

Parameter	Value
Overall length	60 mm
Length from connector to head	45 mm
Head	diameter 14.1 mm, height 14 mm
Cable	RG141 coaxial
Head cover	polycarbonate, hermetically sealed
Colours	transparent black, cyan
Weight	6.9 g



Dimensions according to the manufacturer

▶ Package contents

- 1× FlyFishRC Osprey 5.8 GHz 60 mm antenna in the ordered version (RHCP/SMA or LHCP/RP-SMA).

▶ Not included

- video transmitter (VTX), FPV goggles or video receiver,
- adapters and extension cables between different connector types,
- antenna mount for the drone frame or cable ties.

▶ Product identification

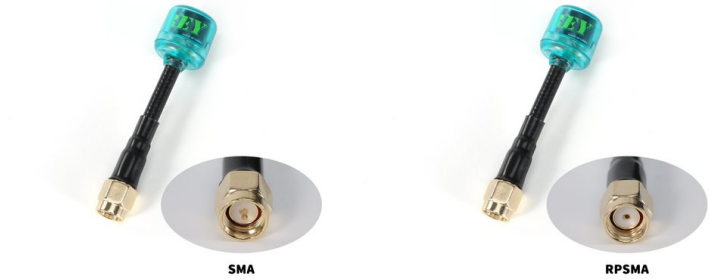
The antenna head is marked with the letter **R** (RHCP) or **L** (LHCP).

Version	Manufacturer code
RHCP, SMA connector	A000186 (transparent black) A000176 (cyan)
LHCP, RP-SMA connector	A000187 (transparent black) A000173 (cyan)

2. Use

2.1 Choosing the right version

- **Connector:** the SMA antenna has a pin in the centre of the connector, the RP-SMA antenna a hole (see figure). Connect the antenna only to a mating connector of the same type – SMA to SMA, RP-SMA to RP-SMA. Both types have the same thread, so a wrong combination can be screwed together, but the centre contact does not connect and the antenna will not work.
- **Polarisation:** the antennas at both ends of the FPV link (on the drone and on the goggles) must have the same sense of polarisation – RHCP with RHCP, LHCP with LHCP. Combining RHCP with LHCP severely degrades reception.
- If the video transmitter or goggles have a different connector, use a suitable adapter (not included). Every adapter adds a small loss to the signal path.



Left: SMA connector (RHCP version) – pin in the centre; right: RP-SMA (LHCP version) – hole in the centre

2.2 Mounting on a drone or goggles

① Disconnect the drone battery or switch off the goggles. Connect and disconnect the antenna only with the power off.

② Check that the antenna connector matches the connector of the video transmitter or goggles (Chapter 2.1) and that neither the thread nor the centre contact is damaged or dirty.

③ Fit the antenna straight onto the connector and tighten the coupling nut by hand. Do not use pliers or a spanner and do not overtighten the nut – you could damage the connector and the video transmitter board.

④ On the drone, secure the antenna cable in a mount or with a cable tie so that the head cannot touch the propellers and the cable does not swing in flight.

⑤ Place the head as high as possible and out of the shadow of the carbon frame, the battery and other metal parts.

2.3 Rules of use

- **Never power on the video transmitter (VTX) without an antenna connected.** The transmitted energy has nowhere to radiate and the transmitter may be permanently damaged.
- Do not bend the cable sharply, especially at the connector and below the head, and do not subject it to tension.
- Do not carry or lift the drone by the antenna.
- Do not use a damaged antenna (cracked cover, bent connector, broken cable) – it degrades video transmission and may damage the video transmitter.

2.4 Transmit power and regulations

The antenna gain adds to the transmitter power. Transmit power limits in the 5.8 GHz band are set as equivalent isotropically radiated power (e.i.r.p.), i.e. including the antenna gain. The user is responsible for setting the power of the video transmitter.

The law of the country in which you operate the transmitter is decisive – permitted frequency bands and maximum transmit powers differ from country to country. In the Czech Republic they are set by the Czech Telecommunication Office (ČTÚ) in its general authorisations. If you operate the transmitter in another country, follow the regulations of that country.

3. Maintenance and troubleshooting

3.1 Maintenance

- After every crash, check the head cover, the cable and the connector.
- Keep the connector clean and dry; protect it from impacts and bending during transport.
- Do not clean the polycarbonate cover with solvents – a dry or slightly damp cloth is sufficient.
- Store the antenna in a dry place, out of direct sunlight and without sharply bending the cable.

3.2 Troubleshooting

Problem	Possible cause and solution
Video is noisy even at short range	Different polarisation of the antennas on the drone and the goggles (RHCP × LHCP) – use the same polarisation. Wrong connector type (SMA × RP-SMA) – the centre contact has not connected. Loose connector nut – tighten by hand.
Video drops out only in some directions	The head is shielded by the frame or the battery – move it higher and away from the frame.
The antenna cannot be screwed on or sits loosely	Different connector type on the transmitter or goggles – use the correct antenna version or an adapter.
Video is worse after a crash	Damaged cable, connector or radiating element – replace the antenna.

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 crossed-out wheeled bin symbol on the product, its packaging or in the documentation means that at the end of its service life the product **must not be disposed of together with mixed municipal waste**.
- Hand it over at a take-back point for electrical equipment – at a collection yard, at a take-back point of a collective system, or at the retailer when purchasing a new equivalent product. Take-back is free of charge for the end user.
- The obligations under Act No. 542/2020 Coll., on end-of-life products, are fulfilled by the importer through a collective take-back system.
- Proper disposal helps prevent negative impacts on the environment and human health and contributes to the reuse of secondary raw materials.

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.

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.