# Osprey 90mm MMCX 90°

FlyfishRC – antenna for 5.8 GHz video transmitters
RHCP · MMCX 90° · 90 mm cable



**Read this manual before use and keep it for future reference.**

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

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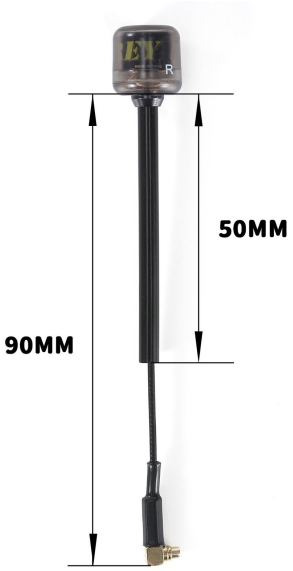
# 1. Product description

## 1.1 What it is for

The FlyfishRC Osprey is a small, lightweight circularly polarised **RHCP** (right-hand) antenna for video transmitters (VTX) in the 5.8 GHz band. Thanks to its **MMCX 90°** connector (right-angle) and low weight, it is particularly suitable for smaller FPV drones and racing quads whose video transmitter has an MMCX connector.

The antenna elements are enclosed in a hermetically sealed housing made of impact-resistant polycarbonate. Below the head there is a 50 mm long rigid plastic section (the “leg”) by which the antenna is held in a mount on the frame, ideally a 3D-printed one. The rest is a flexible RG141 coaxial cable terminated with a gold-plated MMCX connector.




*Osprey 90mm MMCX 90° – length from the bottom of the head to the connector 90 mm, rigid section 50 mm*

## 1.2 Specifications and package contents

| Parameter | Value |
|---|---|
| Product designation | FlyFishRC Osprey 5.8Ghz 90mm MMCX Antenna – RHCP |
| Frequency range | 5.6–6.0 GHz (FPV 5.8 GHz band) |
| Gain | 2.82 dBi |
| VSWR | ≤ 1.2 : 1 |
| Radiation efficiency | 99 % |
| Polarisation | RHCP (right-hand circular) |
| Connector | MMCX, gold-plated, right-angle 90° |
| Cable | RG141 coaxial |
| Head dimensions | diameter 14.1 mm, height 14 mm |
| Cable length (head to connector) | 90 mm, of which 50 mm rigid section |
| Overall length | 104 mm |
| Weight | 3.77 g |
| Head housing | polycarbonate, transparent black |
| Package contents | 1× Osprey 90mm MMCX RHCP antenna |

**Not included in the package:** video transmitter, antenna mount and fastening material (cable ties, heat-shrink tubing).

# 2. Use

## 2.1 Compatibility check

- **Connector:** the antenna connects directly to the MMCX connector on the video transmitter. It cannot be connected to a video transmitter with an SMA, RP-SMA or U.FL (IPEX) connector without a suitable adapter.
- **Frequency:** the antenna is designed for the 5.6–6.0 GHz band. Do not use it on bands outside this range (e.g. 1.2 GHz, 2.4 GHz or 3.3 GHz).
- **Polarisation:** the antennas on the transmitter and receiver side (FPV goggles, monitor) must have the **same polarisation**. Use RHCP antennas on the receiving side with this antenna. Combining RHCP with LHCP significantly reduces signal strength and range.
- **Right-angle connector:** the MMCX 90° connector leads the cable perpendicularly away from the video transmitter. Before mounting, check that there is enough space in the frame for the angled connector and the cable routing.

## 2.2 Connecting to the video transmitter

**Never power the video transmitter without an antenna connected. Transmitting without an antenna can permanently damage the video transmitter.**

① Disconnect the drone battery – the video transmitter must be unpowered.

② Place the antenna connector squarely on the MMCX connector of the video transmitter and press until it clearly clicks into place.

③ Turn the antenna to the desired direction. The MMCX connector can rotate when snapped in, so the cable direction can be adjusted after connecting.

④ Pull gently to check that the connector holds. Only then connect the battery.



*Gold-plated right-angle MMCX 90° connector*

When disconnecting, grip the connector, not the cable, and pull it straight off its counterpart. Pulling on the cable or levering it sideways can damage the connector or tear it off the video transmitter board.

## 2.3 Mounting on the drone

- Hold the antenna by the rigid plastic section below the head – ideally in a 3D-printed mount, or fix it to the frame with cable ties or heat-shrink tubing.
- Position the head so that it protrudes above or behind the frame and is not covered by carbon parts, metal or the battery – these block the signal.
- Neither the head nor the cable may reach into the propeller area. Check this in all antenna positions, including after any bending of the cable.
- Route the cable without sharp bends and so that it is not under tension and does not pull on the connector. The MMCX connector is mechanically sensitive; secure the cable to the frame so that vibration and impacts do not act directly on the connector.
- Do not route the cable over sharp edges of the frame and protect it against chafing.

**※ The radiated power (e.i.r.p.) depends on both the video transmitter output power and the antenna gain. The user is responsible for setting the video transmitter power in accordance with the regulations of the country in which the drone is operated.**

# 3. Care and troubleshooting

## 3.1 Safety and care

- Before each flight, check that the head is intact, the cable is undamaged and the connector is firmly snapped in.
- After a crash, inspect the head housing. A cracked or deformed housing can change the antenna's characteristics – replace the antenna.
- Do not repeatedly bend the cable at one point or crush it; a damaged coaxial cable reduces signal strength.
- Clean the antenna only with a dry or slightly damp cloth, without solvents.
- The antenna is not a toy. Keep small parts out of the reach of children.

## 3.2 Troubleshooting

| Problem | Possible cause and solution |
|---|---|
| Weak or noisy image, short range | Mismatched antenna polarisation – use RHCP antennas on the receiving side. Check that the head is not covered by the frame, battery or metal parts. |
| Video dropouts during vibration or impacts | Loose connector – snap it back in and secure the cable to the frame so that it does not pull on the connector. |
| Image got worse after a crash | Damaged head, cable or connector – inspect the antenna and replace it if damaged. |
| Connector will not fit | The video transmitter does not have an MMCX connector – check the connector type (SMA, RP-SMA, U.FL). |

# 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.