TrueRC CORE 5.8 u.FL

5.8 GHz omnidirectional circularly polarised antenna
LHCP version, u.FL connector, 85 mm cable



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

www.rotorama.com

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1. Product description

1.1 What it is for

TrueRC CORE 5.8 u.FL is a passive omnidirectional circularly polarised antenna for the 5.8 GHz band made by the Canadian manufacturer TrueRC. It connects via a **u.FL** connector directly to the video transmitter (VTX) of an FPV drone – the manufacturer lists compatibility with Caddx Vista / RunCam Link, DJI O3 Air Unit, DJI O4 Air Unit and Walksnail Avatar HD VTX.

The radiating element is enclosed in a durable polycarbonate housing designed to withstand the usual impacts of crashes. This version has **left-hand circular polarisation (LHCP)** and an 85 mm cable with connector. The antenna is made in several colours (red, grey, teal); the colour has no effect on the antenna's properties.



TrueRC CORE 5.8 u.FL antenna in different colour versions (illustrative photo by the manufacturer)

1.2 Specifications and package contents

Parameter	Value
Product designation	TrueRC CORE 5.8 – U.FL, LHCP, 85 mm
Frequency range	5.5–6.7 GHz
Gain	1.9 dBic
Polarisation	circular, left-hand (LHCP)
Cross-polar rejection	−10 to −20 dB
Radiation efficiency	98 %
SWR	≤ 1.2:1
Antenna head dimensions	16.9 mm diameter × 13.1 mm height
Housing material	polycarbonate
Connector / cable	u.FL / 85 mm
Package contents	1× antenna

※ The package does not include a video transmitter, an antenna mount or mounting material (cable ties, heat-shrink tubing). The manufacturer does not state the weight of this version.

2. Use

2.1 Choosing the polarisation

The transmitting antenna on the drone and the receiving antennas on the goggles or ground station must have the **same polarisation sense** – all LHCP or all RHCP. Neither polarisation is better than the other; what matters is that they match.

According to the manufacturer, combining LHCP with RHCP lets only about 3 % of the signal through – you may still see an image, but with significantly reduced quality and range. Check the polarisation of the antennas on the receiving side before installation.

2.2 Connecting the u.FL connector

① **Switch off** the drone and disconnect the flight battery. Never connect or disconnect the antenna while powered.

② Place the antenna connector perpendicularly, exactly above the u.FL counterpart on the video transmitter.

③ Press it straight down (e.g. with a flat tool or a fingertip) until it audibly and noticeably **clicks** into place.

④ Gently check that the connector sits straight and does not rotate freely to the side.

⑤ When disconnecting, **do not pull the connector by the cable**. Use a u.FL connector tool or carefully lift it straight up from just below the connector body.

※ Never switch on the video transmitter without an antenna connected – it may be damaged.

The connector manufacturer (Hirose) rates the u.FL connector at 30 mating cycles; in the antenna manufacturer's experience, connectors that snap in properly last longer. Nevertheless, avoid unnecessary repeated disconnection.

2.3 Placement and mounting on the drone

- Place the antenna head so that it is obstructed as little as possible by the carbon frame, battery and wiring – carbon and metals block the signal.
- Mount the antenna and cable out of reach of the propellers. In a crash, the propellers must not catch the antenna.
- Route the cable without sharp bends, do not pinch it between frame parts and do not run it over sharp edges.
- Do not put unnecessary tension on the u.FL connector – secure the cable to the frame so that crash forces do not act directly on the connector.
- Use an antenna mount intended for your frame, a cable tie or heat-shrink tubing for mounting.

2.4 Video transmitter operation and regulations

The antenna itself does not transmit anything – the video transmitter it is connected to does. The frequency range of the antenna (5.5–6.7 GHz) is wider than the bands permitted for video transmitters. The user is responsible for the channel selection and power setting of the transmitter.

The law of the country in which the product is operated is decisive. In the Czech Republic, the 5725–5875 MHz band may be used for video transmission without an individual licence with a radiated power of up to 25 mW e.i.r.p. (ČTÚ general authorisation VO-R/10). The antenna gain also counts towards the e.i.r.p. If you operate the product in another country, follow the regulations of that country.

3. Care and troubleshooting

- After a crash, check the antenna housing, cable and connector. A cracked housing, a cut or pinched cable or a loose connector can significantly degrade video transmission.
- Clean the antenna with a dry or slightly damp cloth; do not use solvents.
- Do not modify the cable or connector unless you have the necessary experience in soldering coaxial cables.

Problem	Possible cause and solution
Very short range (tens of metres)	The antenna is not properly connected, or the transmitter and receiver are not on the same channel. Check that the u.FL connector has clicked in and check the channel settings.
Image is visible but noisy, and range is poor	The antenna polarisations do not match (LHCP × RHCP). Use the same polarisation on both sides (Chapter 2.1).
Dropouts when banking or manoeuvring	The antenna head is shadowed by the frame or battery. Adjust the antenna placement (Chapter 2.3).
Connector does not hold, falls off	Worn or damaged connector. The connector must click in clearly when connected.

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

Manufacturer: TrueRC Canada, 410 Av. Murdoch, Rouyn-Noranda, QC J9X 1G8, Canada, contact@truerc.com, www.truerc.com

4.2 Disposal of electrical equipment



- 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.