Matchstick 5.8 Carbon

Antenna for 5.8 GHz video transmitters
TrueRC · length 200 mm · RHCP (SMA) / LHCP (RP-SMA)



Never switch on the video transmitter without an antenna connected.

Contents

1. Product description

1.1 Intended use

1.2 Specifications and package contents

2. Use

2.1 Choosing polarisation and connector

2.2 Mounting on the drone

2.3 Switching on and checking

3. Maintenance and troubleshooting

3.1 Inspection and maintenance

3.2 Troubleshooting

4. Information for the EU and Czech Market

4.1 Importer and responsible person in the EU

4.2 Disposal of electrical equipment

5. Warranty and rights arising from defective performance

1. Product description

1.1 Intended use

TrueRC Matchstick 5.8 Carbon is an omnidirectional, circularly polarised antenna for the 5.8 GHz band. It connects to the video transmitter (VTX) of a drone or aircraft and radiates the analogue or digital video signal to the pilot's FPV goggles or receiver.

The radiating element is based on the TrueRC Singularity antennas. It sits in the hardened case of the Stubby version and is connected by a coaxial cable reinforced with carbon fibre. The manufacturer describes it as its most durable antenna ever. The flexible cable with an overall length of 200 mm lets you place the radiating element away from the frame – typically on long-range drones and cinelifters.



Matchstick 5.8 Carbon, 200 mm

1.2 Specifications and package contents

Parameter	Value
Manufacturer	TrueRC (Canada), www.truerc.ca
Product designation	TrueRC Matchstick 5.8 Carbon, 200 mm
Variants (polarisation – connector)	circular RHCP – SMA connector circular LHCP – RP-SMA connector
Frequency band	5.6–6.0 GHz
Gain	1.9 dBic
Cross-polar rejection	−15 to −30 dB
Radiation efficiency	99 %
SWR	≤ 1.5:1
Dimensions	12.7 × 200 mm
Cable	100% carbon fibre reinforced
Package contents	1× antenna not included: video transmitter, antenna mount, connector adapters, cable ties

2. Use

2.1 Choosing polarisation and connector

Polarisation. The antenna on the drone and the antennas of the FPV goggles or receiver must have the **same polarisation** – RHCP with RHCP, LHCP with LHCP. If they do not match, the signal is attenuated by the cross-polar rejection value (see Chapter 1.2) and the range drops significantly. Conversely, different polarisations can be used to separate pilots flying at the same time.

Connector. The RHCP variant has an **SMA** connector, the LHCP variant an **RP-SMA** connector. Both types have the same thread but differ in the centre contact – an SMA antenna has a centre pin, an RP-SMA antenna a centre socket. Make sure the connector matches your video transmitter and never force an incompatible one. Every adapter adds losses and stresses the transmitter's connector.

2.2 Mounting on the drone

① Disconnect the drone's battery – handle the antenna only with the video transmitter switched off.

② Screw the connector's coupling nut onto the transmitter's connector by hand. Tighten gently; overtightening damages the transmitter's connector.

③ Route the radiating element (antenna head) outside the frame – vertically if possible, and so that it is not covered by carbon parts, the battery, motors or cables.

④ Fasten the cable to the frame with a suitable mount or cable ties so that it cannot reach the propellers, even when it bends in flight or in a crash.

⑤ Do not bend the cable sharply right next to the connector. Leave a short straight section behind the connector to protect the joint.

2.3 Switching on and checking

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

- After installation, switch on the drone and goggles and check the picture quality at short range. Only then take off.
- Channel and transmit power are set in the video transmitter, not in the antenna. The antenna gain is included in the radiated power (e.i.r.p.).
- In the Czech Republic, a maximum of 25 mW e.i.r.p. is permitted in the 5725–5875 MHz band (CTU general authorisation VO-R/10). The antenna covers the wider 5.6–6.0 GHz band – do not use channels outside the permitted range.
- The law of the country in which you operate the product is decisive. Outside the Czech Republic, follow the frequencies and power limits applicable in that country. The user is responsible for the transmitter settings.

3. Maintenance and troubleshooting

3.1 Inspection and maintenance

- After every crash, inspect the antenna head, cable and connector. Do not use an antenna with a cracked head, damaged cable or loose connector.
- Check that the connector is still tight – vibration can gradually loosen it.
- Do not use the antenna as a handle and do not pull on the cable.
- Wipe off dirt with a dry or slightly damp cloth, without solvents. Water and dirt must not get into the connector.
- Store in a dry place, out of the reach of children.

3.2 Troubleshooting

Problem	Possible cause and solution
Weak or noisy picture, short range	Different polarisation of the antennas on the drone and in the goggles – use the same polarisation. Check that the connector is tight and the position of the radiating element (it must not be covered by the frame or battery).
Picture drops out in certain drone positions	The radiating element is shadowed by parts of the drone – adjust its position and mounting.
Connector cannot be screwed on or does not hold	SMA / RP-SMA mismatch or damaged thread – check the transmitter's connector type, never use force.
Picture degraded after a crash	Mechanical damage to the head, cable or connector – inspect the antenna and replace it if damaged.

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 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.