RACING S1

Maple Wireless
5.8 GHz directional antennas – set of 2



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

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1. Product description

1.1 Intended use

The Maple Wireless RACING S1 is a set of two flat directional (patch) antennas for receiving FPV video in the 5.8 GHz band. The antennas have a gain of 10.5 dBi, RHCP circular polarization and an SMA connector. They are designed for easy mounting on **HDZero** FPV goggles; the manufacturer states compatibility with HDZero Goggles V1 and V2.

A directional antenna concentrates reception into a narrower sector in front of it, so in the direction it points it picks up a weaker signal at a greater distance than an omnidirectional antenna. The antennas can also be used with conventional analog video transmission. The antennas include a hinge that lets you easily change their angle on the goggles – by up to 90° according to the manufacturer.



RACING S1 antennas mounted on HDZero goggles

1.2 Specifications and package contents

Parameter	Value
Product designation	Maple Wireless RACING S1
Frequency range	5645–5925 MHz
Gain	10.5 dBi
Polarization	RHCP (right-hand circular)
Beamwidth (−3 dB)	75° H-plane, 40° E-plane
Connector	SMA
Dimensions	70 × 45 × 12 mm
Weight	28 g
Angle adjustment	up to 90° (manufacturer data)
Compatibility	HDZero Goggles V1 and V2 (manufacturer data)
Package contents	2× RACING S1 antenna
Not included	FPV goggles, video receiver, VTX

2. Use

2.1 Mounting on the goggles

Each antenna has a hinge with a holder on its back, which fits onto the top edge of the goggles. A short cable with an SMA connector leads out of the antenna.

① Switch the goggles off. Unscrew the original antennas from the connectors to which you want to connect the RACING S1 antennas. Which goggle connectors are intended for directional antennas is stated in the goggles manual.

② Fit the antenna holder onto the top edge of the goggles – one antenna on the left, the other on the right.

③ Screw the SMA connector on the antenna cable onto the antenna connector of the goggles by hand. Tighten finger-tight only, without tools and without force.

④ Route the cable so that it is not taut, sharply bent or pinched in the hinge – even in the end positions of the antenna.

⑤ Switch the goggles on only with the antennas connected.



Antenna fitted on the goggles, cable connected to the antenna connector

2.2 Adjusting the angle and aiming the antennas

The hinge on the back of the antenna lets you change the tilt of the antenna relative to the goggles. Set it so that the front face of the antennas points towards the drone during flight – when flying low over the ground or, conversely, high above the terrain, adjust the tilt accordingly. The angle can also be adjusted between flights without removing the antenna.



Hinge and holder on the back of the antenna

- Directional antennas receive best in a narrow sector in front of them (75° horizontally, 40° vertically). Outside this sector, and especially behind the pilot, video quality drops significantly.
- Keep facing the drone while flying. If the drone circles around the pilot, consider combining the antennas with an omnidirectional antenna on another input of the goggles, if the goggles allow it.
- There should be a direct line of sight between the antennas and the drone – obstacles (buildings, trees, terrain) attenuate the signal.

2.3 Polarization and compatibility

The RACING S1 antennas have **RHCP** circular polarization. For good reception, the antenna of the video transmitter (VTX) on the drone must have **the same polarization**. Combining RHCP and LHCP causes heavy signal loss and significantly reduces range.

- The antennas can be connected to any video receiver or goggles with an SMA antenna connector in the corresponding 5.8 GHz band – digital or analog. The goggle mount is designed for HDZero goggles.
- The frequency range of the antenna (5645–5925 MHz) does not determine which channels you may use. Permitted bands and transmit power are governed by the regulations of the country in which you fly and apply to the video transmitter on the drone.
- SMA connectors exist in two versions (SMA and RP-SMA). Before connecting to another device, check that the connectors match – never force them together.

2.4 Care and troubleshooting

- Protect the SMA connectors from dirt and moisture. When loosening and tightening, hold the connector, not the cable.
- Do not bend the antenna cable at sharp angles or pull on it. A damaged cable or connector impairs reception.
- Protect the antennas from drops and impacts. Fold them down or remove them from the goggles for transport.
- Clean with a dry soft cloth, without solvents.

Problem	Possible cause and solution
Weak or noisy video even at short range	VTX antenna polarization does not match (LHCP / RHCP) – use an RHCP antenna on the drone. Check that the SMA connectors are tightened.
Video breaks up when the drone moves to the side or behind the pilot	The drone is outside the beamwidth of the directional antenna – turn to face the drone or add an omnidirectional antenna.
Video degrades when flying low or high	Adjust the tilt of the antennas in the hinge so that they point at the drone.
Connector will not screw on	SMA / RP-SMA versions do not match or the thread is damaged – do not force it.

3. Information for the EU and Czech Market

3.1 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

3.2 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.

4. 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 3.1.
- 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.