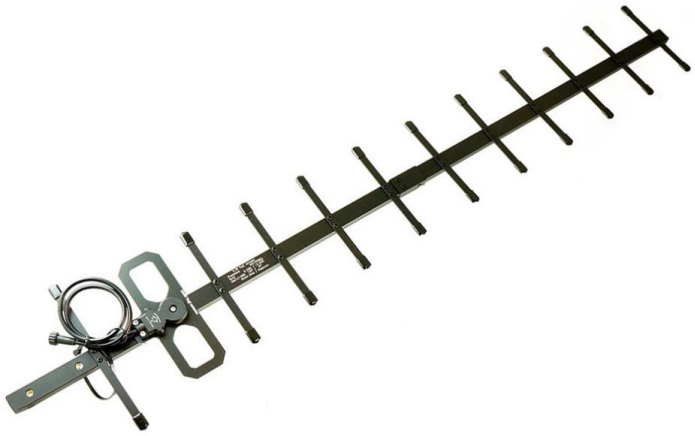
Maple Wireless Yagi

Foldable Yagi directional antenna 868/915 MHz, 14 dBi
Mounting, aiming and maintenance manual



Never switch on the radio without an antenna connected. This product is not a toy – it is intended for persons aged 14 and over.

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Contents

1. Safety instructions

2. Product description

2.1 About the product

2.2 Parts description

2.3 Technical data

2.4 Compatibility

3. Mounting

3.1 Screwing on the antenna

3.2 Unscrewing the antenna

3.3 Assembly and mounting

4. Aiming the antenna

4.1 Frequency bands and power

5. Function check

6. Maintenance and storage

6.1 Pre-flight inspection

6.2 Cleaning, transport and storage

7. Troubleshooting

8. Information for the EU and Czech Market

8.1 Importer and responsible person in the EU

8.2 Product safety and identification

8.3 Disposal of electrical equipment

9. Warranty and rights arising from defective performance

1. Safety instructions

- This product is **not a toy** and is intended for persons aged 14 and over. It contains small parts – keep it out of the reach of small children.
- **Never switch on the radio or the transmitter module without an antenna connected.** Without an antenna the transmitting stage can be permanently damaged. This also applies to switching on briefly and to configuring settings in the menu.
- Always screw the antenna on and off with the **radio switched off** or the module switched off.
- Do not disassemble or shorten the antenna and do not solder anything to it. It is tuned to the operating band and any modification will detune it.
- A directional antenna radiates the signal mainly in one direction. If it is not pointing at the model, the range of the RC link drops considerably. This can result in loss of signal (failsafe) and a crash of the model.

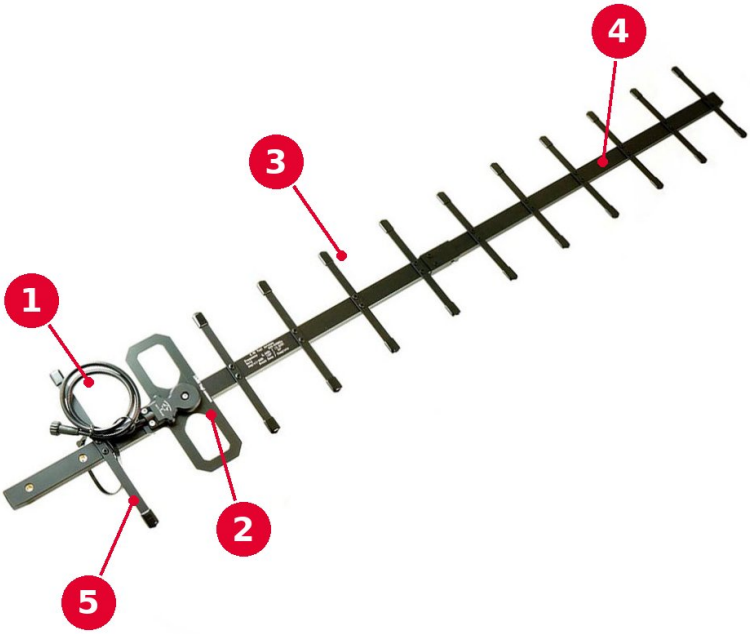
2. Product description

2.1 About the product

The Maple Wireless Yagi is a high-gain directional antenna for the **868/915 MHz** band, for example for ExpressLRS or TBS Crossfire. It concentrates the signal into a narrow beam in the direction of its axis and thereby considerably extends the range of the RC link in that direction. It is designed for a fixed ground station – on a tripod or mast.

The antenna is a passive part without electronics – it needs no power supply and no setup. For easy transport, it can be split into two parts.

2.2 Parts description



Illustrative photo.

① **Cable with connector** – connects the antenna to the transmitter.

② **Driven element** – the element to which the cable is connected.

③ **Boom** – the supporting rod of the antenna, can be split into two parts.

④ **Directors** – short elements in the front part. The antenna radiates along the boom towards the directors.

⑤ **Reflector** – the element behind the driven element in the rear part of the antenna.

2.3 Technical data

Frequency range	850–930 MHz
Gain	14 dBi
Beamwidth	35°
Front-to-back ratio	≥ 15 dB
Polarisation	linear, vertical
Connector	SMA
Max. input power	10 W
Length	980 mm
Construction	splits into 2 parts

Package contents:

- 1× Yagi antenna (2 parts)
- 1× mounting kit (U-bolt bracket with screws and nuts)

2.4 Compatibility

- The band of the antenna must match the band of the transmitter. The antenna is designed for the **868/915 MHz** band. It is not suitable for the 2.4 GHz band.
- The antenna connector must match the connector on the radio or module. **SMA and RP-SMA are not compatible with each other**, even though they have the same thread. The difference is in the centre contact – see the figure.
- If the connectors do not match, use a suitable SMA ↔ RP-SMA adapter. Never force connectors together.
- The antenna is not intended for video transmitters (VTX).



Male – connector with coupling nut, female – connector with external thread. An SMA male has a centre pin, an RP-SMA male a centre socket.

3. Mounting

3.1 Screwing on the antenna

① Switch off the radio or module.

② Check that the antenna connector type matches the connector on the radio (Chapter 2.4).

③ Fit the antenna straight in line with the connector, not at an angle.

④ Turn the coupling nut **clockwise** and tighten it **by hand** until the antenna is held firmly. Do not use pliers or a wrench.

⑤ Switch on the radio only with the antenna screwed on.

Do not tighten the nut with force. Overtightening damages the centre contact or loosens the connector in the radio or module.

3.2 Unscrewing the antenna

Switch off the radio and turn the coupling nut **anticlockwise**. Do not bend the antenna sideways or pull on it while doing so.

3.3 Assembly and mounting

① Join the two parts of the boom and secure the joint so that the boom is straight and firm.

② Attach the antenna by its mounting part to a tripod or mast using the supplied U-bolt bracket. Set up the tripod stably so that the antenna cannot tip over.

③ Turn the antenna so that the **elements are vertical** (Chapter 4).

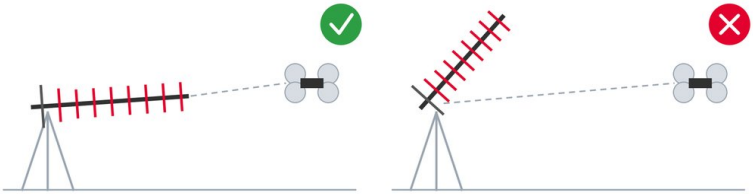
④ Connect the antenna cable to the transmitter as described in Chapter 3.1. If an extension is needed, use a coaxial cable suitable for the band in question – every extension cable slightly attenuates the signal.

The antenna is long and has protruding elements. When handling and setting it up, mind your surroundings and persons nearby. Do not mount it on the model.

4. Aiming the antenna

- The Yagi has a **narrow radiation beam**. The antenna must point with its boom – the front part with the directors – **directly at the model**.
- Outside this beam, to the sides and behind the antenna, the signal is considerably weaker.
- Because of polarisation, turn the antenna so that its **elements are vertical** – the antenna then radiates with vertical polarisation. The receiver antennas on the model should be oriented the same way.
- The antenna is suitable for flying in one direction away from the ground station. During the flight, turn it to follow the model or use it with an antenna tracker.

When flying around yourself, an omnidirectional antenna is more suitable.



Side view: boom pointing at the model, elements vertical ✓, antenna pointing away from the model ✗.

- There should be no obstacles between the antenna and the model.
- Fly within line of sight. Buildings, trees and terrain between the antenna and the model attenuate the signal considerably.

4.1 Frequency bands and power

- In Europe, RC systems use the **2.4 GHz** band and the **868 MHz** band. The 915 MHz band is intended for other regions – the regulations of the country in which you operate the model apply.
- An antenna with higher gain increases the radiated power. The operator is responsible for complying with the permitted radiated power – if necessary, reduce the output power in the transmitter settings.

5. Function check

- Carry out the check with the propellers removed.
- Switch on the radio with the antenna screwed on, then the model, and check that the link is established.
- In the telemetry of the radio, check the signal strength (RSSI) and link quality (LQ).
- After replacing the antenna, start flying close by and keep watching the telemetry. Only fly further away once the link is reliable.

6. Maintenance and storage

6.1 Pre-flight inspection

- Check that the connector is firmly tightened and the cable is not damaged.
- Check that the elements are not bent or loose and the boom is firmly joined.
- When replacing the antenna, check that the thread and the centre contact are not damaged, bent or dirty.

Bent elements detune the antenna. Replace an antenna with a damaged driven element, cable or connector.

6.2 Cleaning, transport and storage

- Clean the antenna with a dry soft cloth. Do not use solvents.
- For transport, split the antenna into two parts and protect the elements from bending.
- Store it in a dry place and do not place other objects on it.

7. Troubleshooting

Problem	Possible cause and solution
Weak signal, short range or failsafe	The connector is not tightened, the antenna is damaged, is not pointing at the model, or its elements are horizontal. Check the mounting (Chapter 3), aiming (Chapter 4) and condition of the antenna (Chapter 6.1).
The link drops out when the model changes direction	The model has flown out of the narrow beam of the antenna. Turn the antenna to follow the model or use an omnidirectional antenna.
The antenna cannot be screwed on	The antenna connector does not match the connector on the radio (SMA × RP-SMA), or you are fitting the antenna at an angle. Check the connector type (Chapter 2.4) or use an adapter.
The antenna screws on but there is no link	Both the antenna and the radio have a socket, or both have a pin (SMA × RP-SMA). The centre contact then does not connect. Use an antenna with the correct connector or an adapter.

8. Information for the EU and Czech Market

8.1 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.cz

8.2 Product safety and identification

- The product is a passive antenna without electronics. It is not subject to the Radio Equipment Directive (RED) or the Electromagnetic Compatibility Directive (EMC). It is placed on the market in accordance with Regulation (EU) 2023/988 on general product safety (GPSR).
- **Product identification:** the manufacturer and type designation can be found on the product page in the e-shop and, for some versions, also on the packaging.
- This product is **not a toy** and is intended for persons aged 14 and over.

8.3 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.

9. 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 8.1.
- 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.