Linear monopole antenna

Happymodel 5.8G Linear Antenna · u.FL connector
User manual



Read the entire manual before use. Never power on the video transmitter without an antenna connected.

Rotorama, s.r.o. · www.rotorama.com · info@rotorama.cz

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1. Product description

1.1 What it is for

The Happymodel linear monopole antenna is a miniature replacement antenna for a 5.8 GHz video transmitter (VTX). The manufacturer lists it as a spare part for the **Mobula6 HDZero** and **Mobula ECO 2024** drones; thanks to its u.FL (IPX) connector it can also be connected to other small video transmitters with this connector, typically on the smallest tinywhoop-class drones.

The antenna is linearly polarised, weighs 0.23 g and is 42 mm long. It is suited to builds where every gram counts and where a larger antenna would not fit on the frame. Plug the antenna into the video transmitter connector, place the radiating end as far as possible from carbon and metal parts, and the drone is ready to fly.



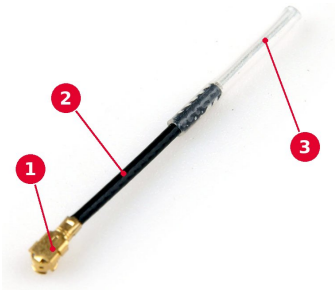
Happymodel linear monopole antenna with u.FL connector

1.2 Technical data and package contents

Product designation	Happymodel 5.8G Linear Antenna (monopole)
Antenna type	linear monopole, linear polarisation
Connector	IPX / u.FL
Frequency range	4900–5900 MHz
SWR	≤ 2.5 at 5700–5900 MHz
Gain	≤ 3 dBi
Impedance	50 Ω
Cable	RG137
Length	42 mm
Weight	0.23 g
Package contents	1× antenna
Not included	video transmitter, drone, tools, mounting material

2. Use

2.1 Parts of the antenna



Parts of the antenna

① **u.FL (IPX) connector** – plugs onto the mating connector on the video transmitter board.

② **Coaxial cable** – carries the signal from the transmitter to the radiating section.

③ **Radiating section** – the end of the antenna in the transparent sleeve. This part transmits the signal and must not be covered by carbon or metal.

2.2 Connecting to the video transmitter

※ Never power on the video transmitter without an antenna connected. Transmitting without a load can permanently damage the transmitter.

- Disconnect the battery from the drone before connecting.
- Place connector ① **vertically from above**, exactly centred on the mating connector on the video transmitter board, and press with a finger or a flat tool until it clicks into place.
- Do not press at an angle or use excessive force – the u.FL connector is very small and its mating part on the board can easily be torn off.
- After plugging in, check that the connector sits straight and does not pop off when the cable is pulled lightly.
- Route the cable so that it is not under tension and cannot be caught by a propeller.

2.3 Positioning the antenna on the drone

- Place the radiating section ③ as far as possible from carbon parts, metal screws, the battery and wires – these materials shield the signal.
- Do not bend or shorten the radiating section; bending or shortening changes the properties of the antenna.
- Secure the antenna so that it cannot get into a propeller, for example in an antenna mount on the frame, with a cable tie or a piece of heat-shrink tubing.

Secure the cable so that the connector cannot be pulled off in a crash.

- The antenna is linearly polarised. Best reception is achieved when the antennas on the drone and in the goggles have the same polarisation. The antenna also works with a circularly polarised antenna in the goggles, but part of the signal is lost.

2.4 Disconnecting and replacing

- Disconnect the battery from the drone before disconnecting the antenna.
- Never pull the connector off by the cable. Lever it up with a flat tool (e.g. a small flat screwdriver or a dedicated u.FL removal tool) right at the board and lift it **vertically upwards**.
- When replacing, always check that the mating connector on the video transmitter board is not damaged.
- Replace a damaged antenna (broken cable, bent or loose connector, damaged radiating section) with a new one.

2.5 Frequencies and operating rules

The antenna itself does not transmit anything – the video transmitter it is connected to does. The operator is responsible for the choice of channel and the transmit power setting. The antenna gain counts towards the radiated power (e.i.r.p.).

- **The law of the country in which you operate the product is decisive.** Permitted frequency bands and maximum transmit powers differ from country to country. The information below describes the situation in the Czech Republic; in another country, follow its regulations.
- In the Czech Republic, under the ČTÚ general authorisation **VO-R/10**, video transmission in the **5725–5875 MHz** band is permitted at a maximum of **25 mW e.i.r.p.**
- The frequency range of the antenna (4900–5900 MHz) is wider than the band permitted in the Czech Republic. Do not use channels outside the permitted band.

2.6 Care and troubleshooting

Problem	Possible cause and solution
The image in the goggles is noisy or drops out even at a short distance	The connector is not seated correctly – disconnect the battery and plug the connector in again. The radiating section is covered by carbon or the battery – reposition it. Check that the goggles are set to the same channel as the video transmitter.
The connector pops off after plugging in	The connector or its mating part on the board is damaged or bent – replace the antenna and check the mating connector on the board.
The signal suddenly weakened after a crash	Check whether the cable is broken or the radiating section is damaged. Replace a damaged antenna.

Keep the antenna dry and clean, protect it from fire and do not bend the cable excessively. When not on the drone, store it in its packaging so that the connector is not damaged.

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.