Linear Dipole 5.8 GHz

Happymodel – linear dipole antenna for video transmitters

U.FL connector · length 60 mm · pack of 2



Read this manual before installation. Never power on a video transmitter without an antenna connected.

User manual · www.rotorama.com

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1. Product description

1.1 What it is for

The Happymodel Linear Dipole is a lightweight, linearly polarised dipole antenna for the 5.8 GHz band. It connects to a video transmitter (VTX) with a U.FL (IPEX) connector and is intended mainly for the smallest FPV drones of the tinywhoop type. The manufacturer lists this antenna series, supplied in several lengths, as a spare part for its Mobula6 2024, Mobula7 1S and Mobula8 models. This product is the 60 mm version.

The dipole radiates omnidirectionally, so the video link holds even while the drone turns. Use the antenna to replace a damaged or torn-off antenna on your drone, or as a replacement for an antenna of a different type. The polarisation is linear: you get the best results when the antenna on the receiving side (FPV goggles, video receiver) is also linearly polarised. The link also works with a circularly polarised antenna (RHCP/LHCP), but with a smaller signal margin.



Pack contents: two antennas.

1.2 Specifications and package contents

Product designation	Happymodel Linear Dipole 5.8 GHz, length 60 mm
Manufacturer	Happymodel (www.happymodel.cn)
Antenna type	linearly polarised dipole, omnidirectional
Frequency range	4900–5900 MHz
VSWR	≤ 2.0 in the 5700–5900 MHz range
Gain	2 dBi
Impedance	50 Ω
Connector	U.FL (IPEX / IPX)
Cable	RG113
Length	60 mm
Package contents	2× antenna
Not included	video transmitter (VTX), drone, tools

2. Use

2.1 Before you start

- Make sure your video transmitter operates in the 5.8 GHz band and has a **U.FL** connector. The antenna cannot be connected to SMA, RP-SMA or MMCX connectors without an adapter.
- **Disconnect the battery from the drone** before handling the antenna in any way.
- **Never power on a video transmitter without an antenna connected.** The transmitted power has nowhere to radiate and the VTX may be permanently damaged.
- The U.FL connector is very small and delicate and withstands only a limited number of mating cycles. Never pull on the cable and never lever the connector sideways.

2.2 Replacing the antenna

① Disconnect the battery. If the connector is covered, remove the camera canopy or another part so that you can see the connector on the VTX clearly.

② Disconnect the original antenna: lift the connector **straight up** from the board, ideally with a flat tool (tweezers, plastic pry tool) inserted under its edge.

③ Place the connector of the new antenna exactly over the mating connector on the board and press it **straight down** (with the flat end of a tool or a fingernail) until it clicks into place.

④ Check that the connector sits flat over its whole surface. Pull on it gently – it must not come loose.

⑤ Route the cable out of reach of the propellers and secure it, e.g. with a cable tie, heat-shrink tubing or an antenna mount if the drone has one.

⑥ Refit the canopy, connect the battery and check the video in your goggles.



Detail of the U.FL connector at the end of the antenna cable.

2.3 Antenna placement and orientation

- The radiating element of the antenna is the thicker black part with a protruding wire at its end. Leave it free, as far as possible from the frame, carbon and metal parts and the battery – these block the signal.
- With linear polarisation, the link is best when the antenna on the drone and the antenna on the goggles point in the same direction (usually both vertically).
- Do not bend the radiating element or the wire, and do not kink the cable at a sharp angle.
- Do not shorten or extend the antenna – its length is tuned to the 5.8 GHz band.

2.4 Care and troubleshooting

After every crash, check the antenna: the cable must not be cut or pinched, the radiating element must not be broken and the connector must hold firmly. Replace a damaged antenna with the second one from the pack.

Problem	Possible cause and solution
Grainy or weak video even at short range	The connector is not clicked in, or the cable or radiating element is damaged. Check the connection and replace the antenna if necessary.
Video drops out only at certain drone orientations	The antenna is shielded by the frame or battery, or the polarisation of the drone and goggle antennas differs. Re-route the antenna; consider a linear antenna on the goggles.
Connector is loose or falls off	The connector is worn. Use the second antenna from the pack. If the mating connector on the VTX is damaged, contact a service centre.

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.