HQProp 40mmX2 Ultralight Whoop

Two-blade 1.6" (40 mm) propellers for a 1.5 mm shaft
User manual



Read this manual before mounting the propellers and before the first flight. Rotating propellers can cause injury.

www.rotorama.com

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1. Product description

1.1 Intended use

HQProp 40mmX2 Ultralight Whoop are lightweight two-blade propellers with a diameter of 1.6" (40 mm) and a pitch of 1.2", made of polycarbonate. They are designed for motors with a **1.5 mm** shaft and are suitable for 75mm Tinywhoops or small Toothpicks.

The package contains two CW and two CCW propellers, i.e. one complete set for a four-motor drone. The propellers are pushed directly onto the motor shaft.



HQProp 40mmX2 (grey)

1.2 Specifications and package contents

Manufacturer	HQProp
Product designation	U40MMX2-PC-1.5MM
Propeller diameter	1.6" (40 mm)
Pitch	1.2"
Number of blades	2
Material	polycarbonate (PC)
Weight	0.2 g (manufacturer's figure per propeller)
Hub diameter	4 mm
Hub height	5 mm
Shaft hole	1.5 mm
Adapter rings	no
Colour	grey
Package contents	2× CW propeller (marking 1.6X1.2R) 2× CCW propeller (marking 1.6X1.2)
Not included	motors, drone, protective duct, propeller removal tool, adapter rings

2. Use

2.1 Safety instructions

- Always mount, remove and inspect the propellers **with the battery disconnected**. Treat a drone with a connected battery as ready to start its motors.
- Never reach into rotating propellers. Even a small propeller at high speed can cut skin or injure eyes.
- When testing the motors with propellers fitted, place the drone on the ground in an open area and keep your face and hands out of reach of the propellers.
- Never fly with a cracked, bent, melted or otherwise damaged propeller – it may break or come loose in flight.
- Propellers are small parts. Keep them out of the reach of children and animals.

2.2 Direction of rotation – CW and CCW propellers

A four-motor drone has two motors that rotate clockwise and two that rotate counter-clockwise (viewed from above). Each motor needs a propeller with the correct direction of rotation:

- **CW** (clockwise) – propeller for a motor rotating **clockwise**. The marking on the propeller contains the letter **R** (1.6X1.2R).
- **CCW** (counter-clockwise) – propeller for a motor rotating **counter-clockwise** (marking 1.6X1.2).

You can find the direction of rotation of the individual motors in the drone's documentation, or verify it in the configuration software of the flight controller (FC), e.g. Betaflight on the *Motors* tab – spin the motors **without propellers fitted**. When fitted correctly, the higher, leading edge of the blade goes first as it rotates.

※ If CW and CCW propellers are swapped or fitted upside down, the drone will not produce correct thrust and will flip over on take-off after Arm (starting the motors).

2.3 Mounting the propellers

① Disconnect the drone's battery.

② Using Chapter 2.2, determine which propeller (CW or CCW) belongs on which motor.

③ Hold the propeller top side up (towards the sky) and fit it onto the motor shaft with the centre hole of the hub.

④ Push the hub onto the shaft evenly, straight and without levering. Support the motor from below with your fingers so that the force is not transferred to the frame, the protective duct or the motor bearings.

⑤ Turn the propeller by hand. It must rotate freely, must not wobble and must not touch the protective duct, the frame or any cables.

⑥ Fit the remaining propellers in the same way and check once more that each motor carries a propeller with the correct direction of rotation.

2.4 Inspection, removal and replacement

Inspect the propellers before every flight and always after an impact or crash:

- Replace a propeller with a crack, a broken or bent blade tip, melting or burrs. Also replace it if it sits loosely on the shaft – it could come off in flight.
- When replacing one propeller, check the others as well; for balanced flight it is advisable to replace the whole set.
- Remove a propeller by pulling it straight up off the motor, ideally with a propeller removal tool (not included). Do not pull on the motor bell and do not lever the propeller against the frame or the duct.
- After a crash, check the motor shaft as well. A bent shaft causes vibrations and a new propeller will not run true on it.

2.5 Cleaning and storage

- Clean the propellers with a dry or damp cloth. Do not use solvents (e.g. acetone), as they damage polycarbonate.
- Store them in a dry place, away from direct sunlight and heat sources, so that the blades do not bend.
- Take spare propellers with you every time you fly.

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

- The propellers and their packaging **are not electrical equipment** and contain no batteries – take-back of electrical equipment does not apply to them.
- Dispose of worn or damaged polycarbonate (PC) propellers according to the rules of your municipality (separately collected plastics or mixed municipal waste).
- Sort the product packaging according to the material it is made of.
- Do not burn the propellers or discard them in the open countryside.

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.