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› Helidirect Goosky Legend S2 Ultra Helicopter User Manual

Helidirect S2 Ultra

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Model: S2 Ultra

1. INTRODUCTION

This manual provides essential information for the safe and effective operation, setup, and maintenance of your Helidirect Goosky Legend S2 Ultra Helicopter. Please read this manual thoroughly before operating the helicopter to ensure proper function and to prevent damage or injury.



Figure 1.1: Helidirect Goosky Legend S2 Ultra Helicopter (Amber)

The S2 Ultra features a brushless direct drive motor system, independent flight controller and ESC units, and a robust

CNC aluminum flight controller housing. Its design incorporates carbon fiber side panels and full metal servos for enhanced durability and precise control. The streamlined canopy and high-strength carbon fiber fuselage contribute to its performance and ease of maintenance.

2. SAFETY INFORMATION

Important Safety Warnings:

- This product is intended for users aged 15 years or older. It is not a toy and requires careful handling and operation.
- Always operate the helicopter in open areas, away from people, animals, buildings, and other obstacles.
- Never fly near power lines, roads, or water bodies.
- Ensure the battery is fully charged and properly secured before each flight.
- Always turn on your transmitter first, then the helicopter. When finished, turn off the helicopter first, then the transmitter.
- Inspect the helicopter for any damage before and after each flight. Do not fly if any parts are damaged.
- Keep hands, face, and loose clothing away from rotating parts (main and tail rotors).
- Do not modify the helicopter or its components. Use only genuine replacement parts.

3. PACKAGE CONTENTS

The Helidirect Goosky Legend S2 Ultra Helicopter package includes the following items:

- (1) S2 Ultra BNF Electric Helicopter
- (1) EPP Box
- (1) 3S LiPo Battery (11.1V/750mAh)
- (1) Radiomaster ELRS 2.4GHz Receiver
- (1) Spare Main Shaft
- (1) Spare Horizontal Axis
- (3) Spare Servo Arms
- Spare Hardware
- Instruction Manual (this document)

Needed To Complete (Sold Separately):

- (1) 6+ Channel ELRS 2.4GHz Compatible Transmitter
- (1) Compatible Battery Charger

4. SETUP

4.1 Battery Charging and Installation

Before first use, fully charge the included 3S LiPo battery using a compatible LiPo battery charger (sold separately). Always follow the charger's instructions and safety guidelines for LiPo batteries.

1. Ensure the helicopter is powered off.
2. Carefully slide the charged 3S LiPo battery into the designated battery compartment. The S2 Ultra features tool-free battery access for quick swaps.
3. Secure the battery to prevent movement during flight.
4. Connect the battery's power connector to the helicopter's ESC.

4.2 Transmitter Binding

The S2 Ultra supports DSMX, SBUS, and ELRS protocols. The included receiver is a Radiomaster ELRS 2.4GHz Receiver. Refer to your transmitter's manual for specific binding procedures. Generally, the steps involve:

1. Power on your 6+ Channel ELRS 2.4GHz Compatible Transmitter.
2. Put the transmitter into binding mode.
3. Power on the helicopter. The receiver will typically enter binding mode automatically or require a button press.
4. Observe the receiver's LED indicator for successful binding.
5. After successful binding, power cycle both the transmitter and helicopter to confirm the connection.



Figure 4.1: Flight Controller and Receiver Unit

4.3 Pre-Flight Checks

Before every flight, perform the following checks:

- Ensure all main and tail rotor blades are securely attached and free from damage.
- Verify that all servo linkages move freely and are correctly connected.
- Check the battery charge level on both the helicopter and transmitter.
- Confirm that the helicopter responds correctly to all transmitter inputs (collective, cyclic, rudder).
- Ensure the flight area is clear of obstacles and people.

5. OPERATING INSTRUCTIONS

5.1 Basic Flight Controls

Familiarize yourself with the basic controls of your 6+ channel transmitter. The primary controls for a collective pitch helicopter typically include:

- **Throttle/Collective:** Controls the main rotor speed and blade pitch for altitude control.
- **Aileron (Roll):** Tilts the helicopter left or right for lateral movement.
- **Elevator (Pitch):** Tilts the helicopter forward or backward for longitudinal movement.
- **Rudder (Yaw):** Controls the tail rotor for rotating the helicopter left or right on its vertical axis.

5.2 First Flight Tips

For your initial flights, choose a calm day with minimal wind. Start with small, controlled movements and gradually increase your confidence.

1. Place the helicopter on a flat, level surface in your chosen flight area.
2. Slowly increase the collective stick to lift off gently. Aim for a stable hover at eye level.
3. Practice maintaining a stable hover before attempting forward, backward, or sideways movements.
4. If you lose control, immediately reduce the collective stick to zero to cut power and minimize damage.
5. Monitor battery voltage during flight and land safely when the voltage drops to a predetermined safe level (refer to battery manufacturer guidelines).



Figure 5.1: S2 Ultra Helicopter in Flight

6. MAINTENANCE

Regular maintenance is crucial for the longevity and performance of your S2 Ultra helicopter.

6.1 Post-Flight Inspection

- Check all screws and fasteners for tightness.
- Inspect main and tail rotor blades for cracks, chips, or deformation. Replace if damaged.

- Examine the landing gear for any stress fractures or bends.
- Verify smooth operation of all servos and linkages.
- Check motor and ESC for excessive heat after flight.

6.2 Cleaning

Use a soft, dry cloth to wipe down the helicopter after each flight. Avoid using solvents or harsh chemicals that could damage the canopy or electronic components.

6.3 Part Replacement

The S2 Ultra comes with spare parts such as a main shaft, horizontal axis, and servo arms. Replace worn or damaged components promptly to maintain flight performance and safety. Refer to the assembly diagrams (if provided separately) for detailed replacement procedures.



Figure 6.1: Rotor Head and Servo Detail

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Helicopter does not power on	Battery not connected or discharged; faulty ESC/flight controller.	Ensure battery is charged and connected correctly. Check connections. If problem persists, contact support.
Loss of control/unresponsive	Transmitter not bound; radio interference; damaged receiver/servos.	Re-bind transmitter. Fly in an open area away from interference. Inspect receiver and servo connections.
Excessive vibration	Damaged or unbalanced main/tail blades; loose components.	Inspect and replace damaged blades. Ensure all screws are tight. Balance blades if necessary.
Helicopter drifts during hover	Improper trim settings; uneven weight distribution; wind.	Adjust transmitter trims. Ensure battery is centered. Fly in calmer conditions.

8. SPECIFICATIONS

Feature	Detail
Model Name	Goosky Legend S2 Ultra
Model Number	BAF08001
Power Source	3S LiPo (11.1V)
Length	17.3in (440mm)
Width	2.9in (74mm)
Height	5.4in (137mm)
Weight	12.7oz (360g)
Main Rotor Diameter	17.4in (443mm)
Main Blade Length	7.7in (195mm)
Tail Rotor Diameter	3.5in (89mm)
Supported Protocols	DSMX/SBUS/ELRS
Recommended Age	15+ years
Color	Amber

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official Helidirect website or contact your retailer. Keep

your proof of purchase for any warranty claims.

No official product videos were provided in the product data. Please check the manufacturer's website for any available video tutorials or demonstrations.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question