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Helidirect S2 Ultra

Helidirect GooSky Legend S2 Ultra 200 Size RC Helicopter Instruction Manual

Model: S2 Ultra (BAF08001)

1. Introduction

This manual provides essential information for the assembly, operation, and maintenance of your Helidirect GooSky Legend S2 Ultra 200 Size Electric RC Helicopter. Designed for adults and advanced pilots, this model features a Rotorflight Flight Controller, full metal cyclic servos, and support for various radio protocols. Please read this manual thoroughly before operating the helicopter to ensure safe and correct usage.

2. Safety Information

Warning: This product is intended for users aged 15 years or older. It is not a toy and requires careful handling and understanding of RC helicopter operation.

- Always operate the helicopter in open areas, away from people, animals, and obstacles.
- Ensure the battery is fully charged and properly secured before each flight.
- Never attempt to fly in adverse weather conditions, including strong winds or rain.
- Keep hands and loose clothing away from rotating blades.
- Familiarize yourself with local regulations regarding RC aircraft operation.
- Always disconnect the battery after use and store it safely.

3. What's in the Box

Your GooSky Legend S2 Ultra package includes the following components:

- GooSky Legend S2 Ultra Electric RC Helicopter (BNF Kit)
- Required accessories for assembly and operation (e.g., battery, receiver, tools, spare parts as specified by the manufacturer).



Image: The GooSky S2 Ultra helicopter and its included components, such as the battery, tools, and various parts, laid out for inspection.

4. Setup and Assembly

The GooSky Legend S2 Ultra is a Bind-N-Fly (BNF) kit, meaning it comes largely pre-assembled but requires final setup and binding to your remote control.

4.1 Initial Inspection

Upon unpacking, carefully inspect all components for any signs of damage during transit. Ensure all parts listed in the packaging are present.



Image: The GooSky S2 Ultra helicopter nestled securely within its custom-fit foam packaging, indicating safe transport.

4.2 Battery Connection

Connect the provided Lithium-Ion Polymer battery to the helicopter's power system. Ensure the connection is secure and polarity is correct. Refer to the battery's specific instructions for charging and handling.

4.3 Radio Receiver Setup and Binding

The S2 Ultra supports DSMX, SBUS, and ELRS receivers for solder-free plug-and-play installation. Follow your specific radio transmitter's instructions to bind it with the helicopter's receiver. The integrated flight controller is powered by STM32F405 + CM42688P with Rotorflight 2.2 tuning, offering advanced control capabilities.



Image: A detailed view of the GooSky S2 Ultra's flight controller, highlighting the ports for DSMX, SBUS, and ELRS receiver connections, and the 'BOOT' button.

4.4 Pre-Flight Checks

Before your first flight, ensure all moving parts operate freely, servos respond correctly to control inputs, and blades are securely fastened. Verify the flight controller settings using the Rotorflight 2.2 software, if necessary.

5. Operating Instructions

The GooSky Legend S2 Ultra is designed for aggressive 3D flight and precise control. Always operate with caution and within your skill level.

5.1 Basic Flight Controls

Familiarize yourself with the basic controls of your remote transmitter: throttle, collective pitch, aileron, elevator, and rudder. Practice gentle take-offs and landings before attempting advanced maneuvers.

5.2 Advanced Flight Capabilities

The Rotorflight 2.2 tuning provides ultra-fast response and precise stabilization, enabling demanding 3D aerobatic flights. The 128MB Black Box stores over 60 flight logs, useful for tuning and performance review.



Image: The GooSky S2 Ultra helicopter, with its green and white canopy, positioned on a patch of mossy ground outdoors, under a cloudy sky, awaiting flight.

6. Maintenance

Regular maintenance ensures the longevity and optimal performance of your GooSky Legend S2 Ultra.

6.1 Post-Flight Inspection

After each flight, check for loose screws, damaged blades, or any signs of wear on the carbon fiber frame and mechanical components. The lightweight carbon fiber side panels provide a rigid yet durable airframe.

6.2 Servo and Drive System Care

The helicopter is equipped with full-metal digital cyclic servos and a split-type ESC for durability and precise control. Inspect these components periodically for smooth operation and any signs of damage. Lubricate moving parts as recommended by the manufacturer.



Image: A detailed view of the GooSky S2 Ultra's metal cyclic servo (labeled DS15MG) and the intricate rotor head assembly, showcasing the precision engineering.

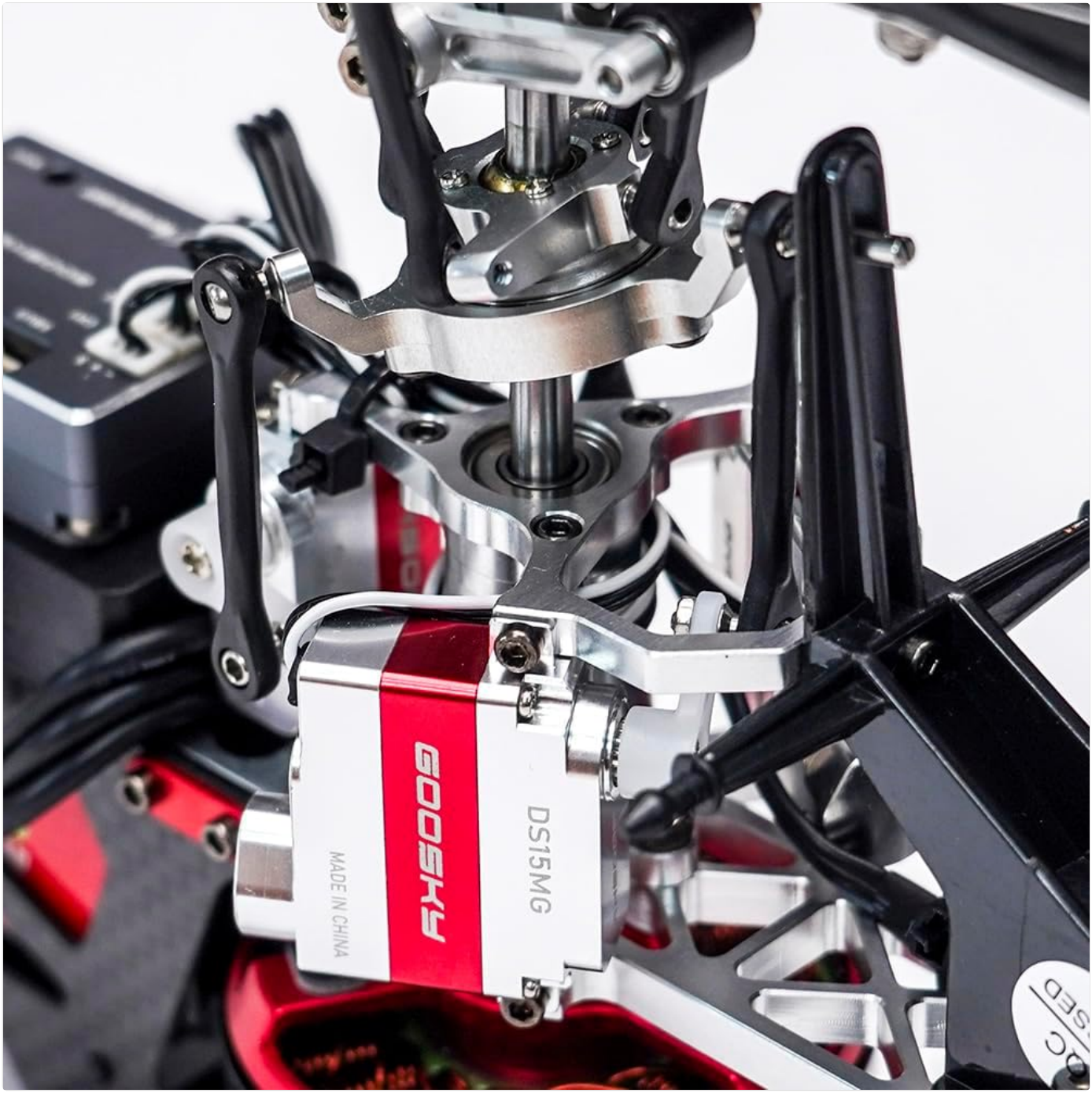


Image: A close-up of the GooSky S2 Ultra's brushless motor, prominently featuring the 'GOOSKY' branding, and its connection to the main gear, emphasizing the powerful drive system.

6.3 Canopy Care

The premium Flow Ink Phantom canopy provides a striking appearance. Clean it with a soft cloth and mild cleaner to maintain its finish.

7. Troubleshooting

This section addresses common issues you might encounter with your GooSky Legend S2 Ultra.

7.1 Helicopter Not Responding to Controls

- Ensure the remote control is powered on and fully charged.
- Verify that the helicopter's battery is connected and charged.
- Check if the remote control is properly bound to the helicopter's receiver. Re-bind if necessary.

- Inspect all wiring connections for looseness or damage.

7.2 Unstable Flight

- Check for any physical damage to the main or tail blades. Replace if bent or cracked.
- Ensure all servos are functioning correctly and linkages are free from obstruction.
- Verify flight controller settings. If you have made changes, consider reverting to default or a known stable configuration.
- Check for vibrations. Loose components can cause instability.

7.3 Reduced Flight Time

- Ensure the battery is fully charged before flight.
- Check the battery for signs of swelling or damage, which may indicate degradation.
- Aggressive 3D flying consumes more power; adjust flight style for longer duration.

8. Specifications

Detailed technical specifications for the GooSky Legend S2 Ultra RC Helicopter.



Image: A diagram illustrating the key features and dimensions of the GooSky S2 Ultra, including its Rotorflight FC, split-type ESC, carbon fiber frame, and canopy design.

Feature	Detail
Brand Name	Helidirect (Manufacturer: GooSky)
Model Name	Legend S2 Ultra
Model Number	BAF08001
Toy Vehicle Form	Helicopter
Size	200 Class
Item Dimensions (LxWxH)	17.32 x 3 x 5.4 inches
Item Weight	12.8 ounces
Material Type	Carbon Fiber

Feature	Detail
Color	Green
Power Source	Battery Powered
Battery Type	Lithium-Ion Polymer (1 included)
Flight Controller	Rotorflight FC (STM32F405 + CM42688P, Rotorflight 2.2 tuning)
Data Logging	128MB Black Box (60+ flight logs)
Receiver Support	DSMX, SBUS, ELRS (solder-free)
Servos	Full-metal digital cyclic servos
ESC	Split-type ESC
Recommended Age	15+ years

9. Warranty and Support

For warranty information, technical support, or replacement parts, please contact Helidirect or GooSky directly through their official websites or customer service channels. Keep your purchase receipt as proof of purchase.

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