

Blade BLH1300

Blade Nano S2 Ultra Micro RC Helicopter Instruction Manual

Model: BLH1300 | Brand: Blade

1. INTRODUCTION AND OVERVIEW

The Blade Nano S2 Ultra Micro RC Helicopter is designed for both beginners and experienced pilots, offering a path to 3D aerobatic expertise. It features a redeveloped stabilizing system that simplifies challenging maneuvers such as flips and inverted flight. The Nano S2 is engineered for enhanced control and dazzling performance, capable of gentle hovering to advanced aerobatics.

Key features include SAFE Technology with SAFE angle demand, panic recovery, and SAFE Z altitude control. Powerful coreless motors and a 45C LiPo flight battery provide ample power for 3D flight. Its lightweight design and low disc loading contribute to advanced aerobatics, while linear servos ensure faster response and precise control authority. The helicopter also boasts a carbon-fiber main shaft and tail boom for durability.



Figure 1: The Blade Nano S2 Ultra Micro RC Helicopter, showcasing its compact design and vibrant blue and black color scheme.

2. WHAT'S IN THE BOX

Your Blade Nano S2 Ready-To-Fly (RTF) package includes the following components:

- Nano S2 Micro RC Helicopter (factory-assembled)
- Spektrum MLP6 6-Ch 2.4GHz DSMX Radio Transmitter
- Spektrum 2.4GHz DSMX Receiver (integrated)
- 150mAh 1S LiPo battery
- USB LiPo battery charger
- 4x AA transmitter batteries
- Product Manual



Figure 2: All components included in the Blade Nano S2 RTF package.

3. SETUP

3.1 Battery Charging

The included 150mAh 1S LiPo battery must be fully charged before its first flight. Use only the provided USB LiPo battery charger. Connect the battery to the charger, then plug the charger into a compatible USB power source. The charger's indicator light will show charging status (typically red for charging, green for charged). Do not leave charging batteries unattended.

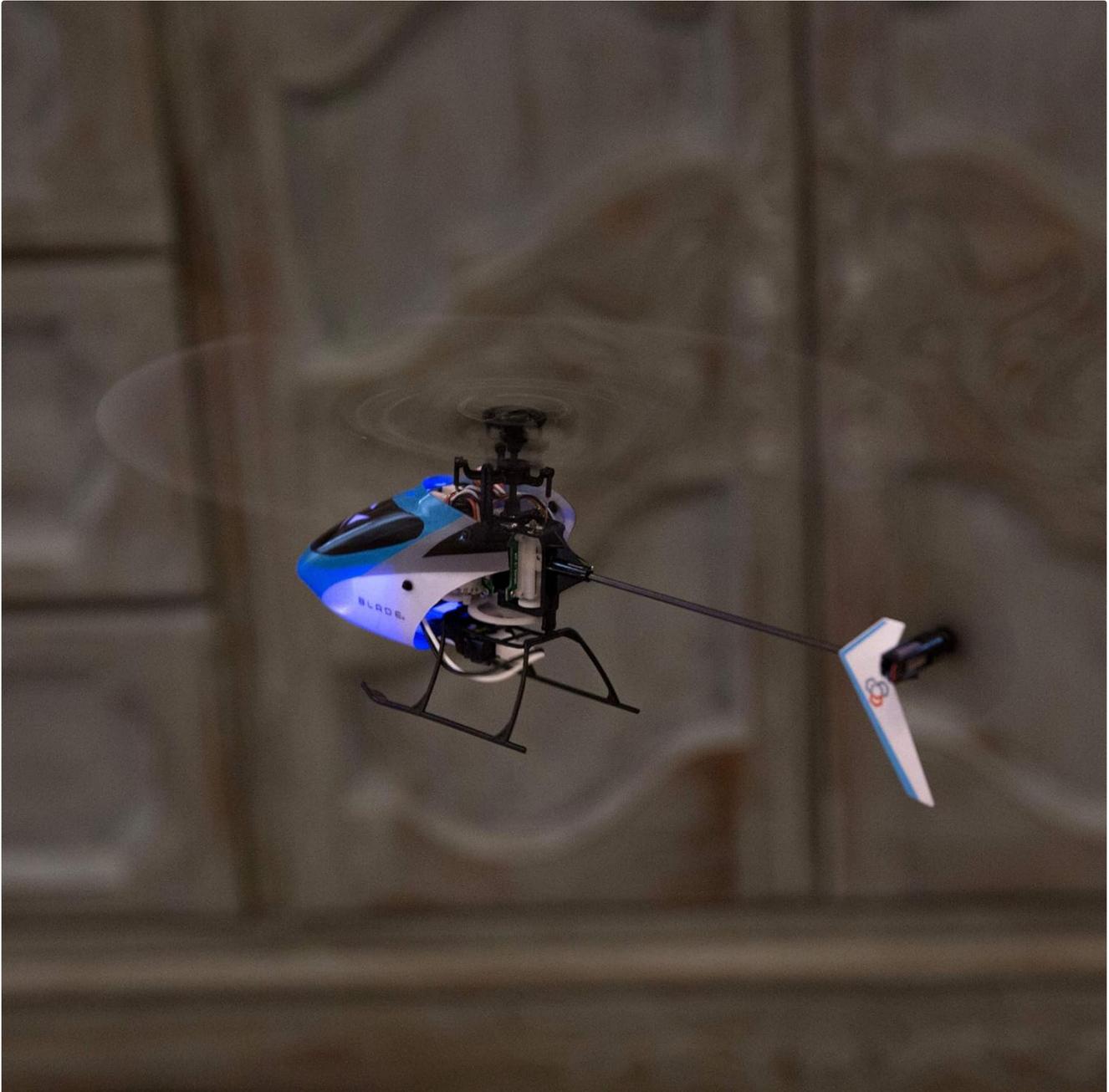


Figure 3: The 150mAh 1S LiPo flight battery.

3.2 Transmitter Batteries

Install the four (4) AA batteries into the Spektrum MLP6 6-Ch 2.4GHz DSMX Radio Transmitter. Ensure correct polarity as indicated inside the battery compartment. Secure the battery cover.

3.3 Binding and Calibration

The helicopter and transmitter should be pre-bound from the factory. If re-binding is necessary, follow these general

steps:

1. Ensure the helicopter battery is disconnected and the transmitter is off.
2. Turn on the transmitter while holding the bind button (refer to your transmitter manual for exact location).
3. Connect the flight battery to the helicopter. The helicopter's LED should flash rapidly, indicating bind mode.
4. Once bound, the helicopter's LED will become solid, and the transmitter will confirm successful binding.
5. For calibration, ensure the throttle stick is at its lowest position. Pull both control sticks to their outermost corners (e.g., left stick down-left, right stick down-right) simultaneously for a few seconds until the helicopter blades twitch, indicating calibration is complete.

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Video 1: General beginner instructions for RC helicopter setup, including battery connection and remote calibration. Note: This video features a different model (WLtoys K110S) but demonstrates common setup procedures.

4. OPERATING

4.1 Flight Controls

The Spektrum MLP6 transmitter provides precise control over the Nano S2. The left stick typically controls throttle (up/down for altitude) and rudder (left/right for yaw rotation). The right stick controls cyclic movements (forward/backward for pitch, left/right for roll). Familiarize yourself with these controls in a safe, open area.



Figure 4: The Spektrum MLP6 6-Ch 2.4GHz DSMX Radio Transmitter.

4.2 SAFE Technology and Flight Modes

The Nano S2 incorporates SAFE Technology to assist pilots:

- **SAFE Angle Demand:** Limits the helicopter's bank angles, making it easier to maintain control and prevent over-correction.
- **Panic Recovery:** A feature that, when activated, will automatically return the helicopter to a stable, level flight attitude.
- **SAFE Z Altitude Control:** Utilizes an on-board accelerometer to help maintain a consistent altitude, reducing the need for constant throttle adjustments.

The helicopter supports collective pitch, allowing for a wide range of flight capabilities from stable hovering to advanced 3D aerobatic maneuvers. Beginners should start in a more stable mode (if available on the transmitter) and gradually progress to more advanced modes as skills improve.



Figure 5: The Nano S2 in stable flight.

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Video 2: Demonstrates various flight actions and features of an RC helicopter, including stable hover and high-speed transfers. Note: This video features a different model (GoolRC C129) but illustrates general RC helicopter operation.

5. MAINTENANCE

Regular maintenance is crucial for the longevity and performance of your Blade Nano S2 helicopter. Always inspect the helicopter before and after each flight for any signs of damage or wear.

- **General Inspection:** Check all blades, linkages, and the main frame for cracks or damage. Ensure all screws are tight.
- **Tail Rotor Motor:** Some users have reported that tail rotor motors may have a shorter lifespan. If the helicopter experiences difficulty controlling its tail, consider inspecting or replacing the tail motor and boom

assembly.

- **Swashplate Bearing:** The plastic swashplate bearing may occasionally pop out or wear over time. An upgraded aluminum swashplate is available from third-party vendors and can significantly improve performance and durability.
- **Cleaning:** Keep the helicopter free from dirt, dust, and debris. Use a soft, dry cloth for cleaning.

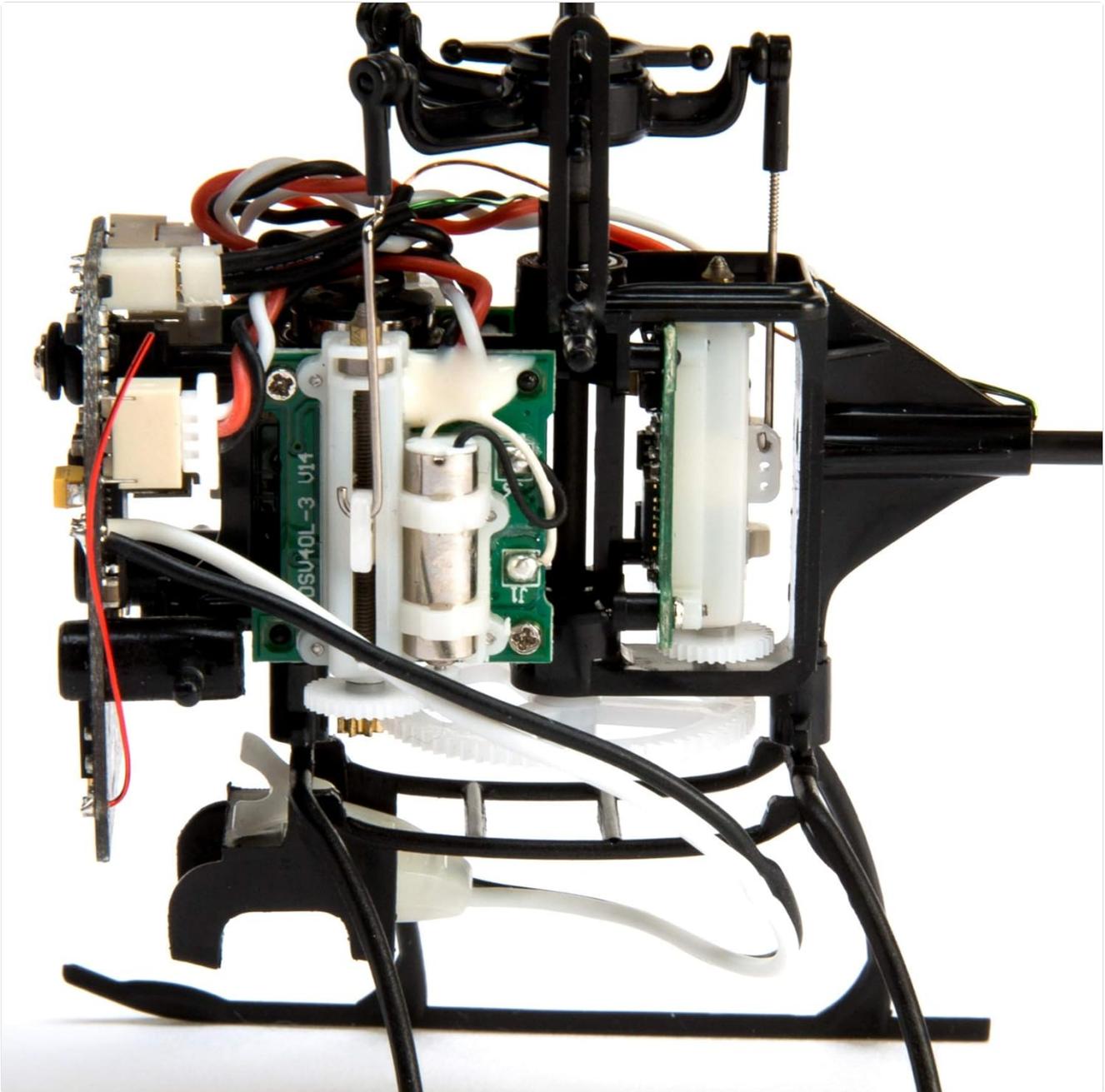


Figure 6: Internal view of the Nano S2, highlighting its compact electronics.

6. TROUBLESHOOTING

If you encounter issues with your Blade Nano S2, refer to the following common problems and solutions:

- **Helicopter not pairing with transmitter:** Ensure both the helicopter and transmitter are fully charged/have fresh batteries. Follow the binding procedure outlined in Section 3.3. Sometimes, multiple attempts may be required for successful pairing.

- **Helicopter not taking off or losing power:** Verify the flight battery is fully charged. Check for any obstructions to the main or tail rotors. Ensure the throttle stick is pushed fully up for takeoff.
- **Unresponsive or erratic controls:** Re-calibrate the transmitter and helicopter (Section 3.3). Check for any physical damage to the control linkages or servos. Ensure the transmitter batteries are not low.
- **Tail instability or loss of tail control:** Inspect the tail rotor motor and propeller for damage or wear. A worn tail motor may need replacement.
- **Helicopter leaning or drifting:** Perform a trim adjustment on the transmitter to correct any unwanted drift. If the issue persists, re-calibrate the helicopter.
- **Charger not working:** If the included USB charger fails, a separate compatible LiPo charger may be used. Ensure the replacement charger is suitable for 1S LiPo batteries.

For persistent issues, consult the full product manual or contact Blade customer support.

7. SPECIFICATIONS

Feature	Detail
Product Dimensions	7.9 x 3.1 x 3.1 inches
Item Weight	1.74 pounds
ASIN	B07NQLK5Y9
Item Model Number	BLH1300
Manufacturer Recommended Age	15 years and up
Batteries	1 Lithium Polymer battery required (included)
Release Date	September 6, 2019
Manufacturer	Horizon Hobby

8. SAFETY INFORMATION

WARNING: Read the ENTIRE instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property, and cause serious injury.

This is a sophisticated hobby product. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision.

Do not use with incompatible components or alter this product in any way outside of the instructions provided by Horizon Hobby, LLC. The product manual contains instructions for safety, operation, and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup, or use, in order to operate correctly and avoid damage or serious injury.

9. WARRANTY AND SUPPORT

For warranty information, technical support, or replacement parts, please refer to the official Blade or Horizon Hobby website, or contact their customer service directly. Keep your purchase receipt as proof of purchase for any warranty claims.