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HGLRC Wind5 Lite V2 Frame

HGLRC Wind5 Lite V2 Frame Kit Instruction Manual

Model: Wind5 Lite V2 Frame

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1. Product Overview

The HGLRC Wind5 Lite V2 Frame Kit is a lightweight racing frame specifically engineered for FPV drone competitions. Its design features a positive X structure with a shortened 195mm wheelbase, contributing to enhanced flight characteristics and responsiveness.

Constructed from high-strength Toray-T700 carbon fiber and reinforced with 7075 aviation-grade aluminum columns, this frame is built for durability and resistance to impact. It incorporates an arm protection rod design and supports quick-disassembly of the arms for convenient maintenance.



Figure 1: Assembled HGLRC Wind5 Lite V2 Frame Kit. This image illustrates the frame's carbon fiber arms, central body with distinctive red accents, and the integrated camera mount, providing a visual reference for the product's overall design.

Key Features:

- High-strength Toray-T700 carbon fiber material for durability.
- Customized high-strength 7075 aviation-grade limit aluminum parts to prevent empty space.
- Customized high-strength 7075 aviation-grade aluminum columns for enhanced protection of cameras and electronic stacks.
- Arm quick-release design, requiring only one screw for rapid arm removal and easy maintenance.
- Top plate includes 20x20*M3 holes for straightforward installation of HDZero digital VTX.
- Standard arm protection bar to minimize drone damage.
- Includes a new design simulated RHCP mini hammer antenna.
- Comes with a 15*250mm non-slip battery strap for secure battery mounting.

2. Setup and Assembly

The HGLRC Wind5 Lite V2 Frame Kit requires assembly. Due to the intricate nature of FPV drone components and the precision required for assembly, it is recommended that users possess prior experience with building FPV drones or consult detailed assembly guides provided by HGLRC.
While specific step-by-step instructions are not included in this manual, the following general guidelines apply:

1. **Component Identification:** Familiarize yourself with all included frame components, such as carbon fiber plates (top, middle, bottom), arms, aluminum columns, screws, and included accessories like the camera mount and antenna.
2. **Arm Attachment:** Utilize the quick-release arm design for attaching the 5mm thick carbon fiber arms to the main frame. Ensure all screws are securely fastened to prevent vibration and structural instability during flight.
3. **Flight Controller and VTX Mounting:** The frame provides 20x20*M3 mounting holes for both the flight controller and video transmitter (VTX). Carefully align and secure these components, paying attention to proper insulation and cable management.
4. **Motor Installation:** Motors are mounted using the 16x16*M3 mounting holes on the arms. Ensure motors are oriented correctly and screws do not interfere with motor windings.
5. **Camera and Antenna Installation:** Install the FOXEER predator 5NANO 45-degree camera mount and the analog RHCP mini hammer antenna as per the frame's design. Note that the frame antenna mount is specifically compatible with the new HGLRC mini hammer antenna.
6. **Battery Strap:** Secure the 15*250mm non-slip battery strap to the frame to ensure the flight battery is firmly held in place during operation.

For detailed assembly diagrams and specific instructions, including adapter printouts for Runcam Nano4 camera and HDZero Nano 90 camera, please refer to the official HGLRC resources, such as their official WeChat account or website.

3. Operation Considerations

This manual pertains to the HGLRC Wind5 Lite V2 Frame Kit, which serves as the structural foundation for an FPV racing drone. The operational aspects of the complete FPV drone (flight, controls, video transmission) are governed by the electronic components installed within the frame, such as the flight controller, ESCs, motors, camera, and VTX.
The frame's design, including its 195mm wheelbase and positive X structure, is optimized to provide a responsive and agile flying experience, crucial for FPV racing. Users should ensure all electronic components are correctly installed, configured, and calibrated according to their respective manufacturer's instructions before attempting flight.
Always perform pre-flight checks to ensure all frame components are secure, free from damage, and that propellers are correctly mounted and tightened. Adherence to local regulations for drone operation is mandatory.

4. Maintenance

Regular maintenance of your HGLRC Wind5 Lite V2 Frame Kit is essential to ensure its longevity and optimal performance. The frame's design facilitates easy maintenance, particularly with its quick-disassembly arm feature.

- **Post-Flight Inspection:** After each flight, visually inspect the entire frame for any signs of damage, such as cracks in the carbon fiber, bent aluminum columns, or loose screws. Pay close attention to the arms and mounting points.
- **Screw Tightness:** Periodically check and tighten all screws, especially those securing the arms, flight controller, VTX, and motors. Vibrations during flight can cause screws to loosen over time.
- **Cleaning:** Clean the carbon fiber and aluminum components with a soft, dry cloth. Avoid using harsh chemicals that could degrade the material or finish. Remove any dirt, dust, or debris that may accumulate, especially around electronic components.
- **Arm Replacement:** In case of damage, the quick-release arm design allows for easy replacement. Simply remove the single screw securing the damaged arm, replace it with a new one, and re-secure the screw.
- **Component Protection:** Ensure the arm protection rod and aluminum columns are intact and providing adequate protection to the frame and internal components. Replace if damaged.

Proper maintenance helps prevent unexpected failures and ensures the structural integrity of your FPV racing drone.

5. Troubleshooting

This section addresses common issues related to the HGLRC Wind5 Lite V2 Frame Kit. Note that this manual focuses on the frame itself; issues related to electronic components (flight controller, ESC, motors, etc.) should be troubleshooted according to their respective manuals.

Problem	Possible Cause	Solution
Arms feel loose or vibrate excessively.	Loose arm mounting screws.	Check and tighten the single screw securing each arm. Ensure the arm protection rod is correctly seated.
Frame components do not align during assembly.	Incorrect orientation of parts; manufacturing tolerance variations.	Double-check the orientation of all carbon fiber plates and aluminum columns against assembly diagrams (if available from HGLRC). Apply gentle, even pressure during assembly. If parts are significantly misaligned, contact HGLRC support.
Damage to carbon fiber plates or arms.	Impact during flight or handling.	Replace damaged components immediately. The quick-release arm design facilitates easy arm replacement. Do not fly with compromised structural components.
Camera mount or antenna feels unstable.	Loose mounting screws or incorrect installation.	Ensure the camera mount and antenna are securely fastened to their designated points. Verify compatibility of the antenna with the frame's mount.

6. Technical Specifications

Attribute	Detail
Model	Wind5 Lite V2 racing frame

Attribute	Detail
Material	Toray-T700 spray paint carbon fiber
Frame Wheelbase	195mm
Installation Space	26mm
Flight Control Mounting Hole	20x20*M3
VTX Mounting Hole	20x20*M3
Motor Mounting Hole	16x16*M3
Frame Size (L*W*H)	172.5mm × 169mm × 70mm (6.79"L x 6.65"W x 2.75"H)
Frame Thickness	Top plate 2mm / Middle plate 3mm / Bottom plate 2mm / Arm 5mm / Protective rod 3mm
Single Frame Weight	69.5g (including printed parts/aluminum column/screws) / 2.45 ounces
Included Components	FOXEER predator 5NANO 45-degree camera mount, analog RHCP mini hammer antenna, 15*250mm non-slip battery strap

Recommended Parts (Not Included):

- **ESC:** SPECTER 60A
- **Flight Controller:** SPECTER F722 MINI
- **Motor:** SPECTER 2306.5-1900KV
- **Camera:** FOXEER predator 5NANO / Runcam Nano4
- **Propeller:** Gemfan 51466

7. Warranty and Support

Warranty Information:

Specific warranty terms for the HGLRC Wind5 Lite V2 Frame Kit are provided by the manufacturer, HGLRC. Please refer to the official HGLRC website or contact their customer service directly for detailed warranty coverage, duration, and claim procedures.

Customer Support:

For technical assistance, assembly guidance, or any inquiries regarding the HGLRC Wind5 Lite V2 Frame Kit, please contact HGLRC customer support through their official channels. You may also find additional resources, such as adapter printouts and updated information, on their official WeChat account or website.
You can visit the official HGLRC store on Amazon for product information and potential support links:**HGLRC Amazon Store**.

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