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GoolRC X450

GoolRC WLtoys XK X450 RC Airplane Instruction Manual

Model: X450

INTRODUCTION

This manual provides essential information for the safe operation, setup, and maintenance of your GoolRC WLtoys XK X450 RC Airplane. Please read this manual thoroughly before operating the aircraft to ensure proper function and to prevent damage or injury. This aircraft features a 2.4G remote control, 6 channels, and a brushless motor, designed for vertical takeoff and fixed-wing flight.

The GoolRC WLtoys XK X450 RC Airplane shown with its accompanying 2.4G remote control. The aircraft is white with green, orange, and black accents, featuring three propellers and a sleek design.

Package Contents

Verify that all items listed below are included in your package:

- 1 x GoolRC WLtoys XK X450 RC Airplane
- 1 x 2.4G Transmitter (Remote Control)
- 1 x 11.1V 1000mAh Lithium Polymer Battery
- 1 x USB Charger
- 3 x Propellers (Spare)
- 1 x Instruction Manual (this document)

An overview of the package contents, including the X450 aircraft, remote control, battery, USB charger, and spare propellers.

Technical Specifications

Feature	Detail
Brand	GoolRC
Model Number	X450
Material	Impact-resistant engineering EPO material with built-in carbon fiber rod
Motors	Three 1307 3000KV brushless motors
Servos	Four digital steering servos
Battery	11.1V 1000mAh Lithium Polymer
Flight Time	Approximately 15 minutes or more
Charging Time	Approximately 80 minutes
Control System	2.4G Remote Control, 6-axis gyroscope with air pressure and altitude hold
Flight Modes	Vertical Flight, Horizontal 6G Airplane Flight, Multi-rotor Flight (3D/6G conversion)
Item Weight	3.34 pounds
Recommended Age	14 years and up

The X450 aircraft hovering in 6G airplane flight mode, with propellers oriented for forward thrust.

Setup and First Flight Preparation

1. **Battery Charging:** Connect the provided 11.1V 1000mAh Lithium Polymer battery to the USB charger. Plug the USB charger into a suitable USB power source. The charging time is approximately 80 minutes. Ensure the battery is fully charged before first use.
2. **Transmitter Batteries:** Install 6 AA batteries (not included) into the remote control transmitter.
3. **Aircraft Assembly:** Ensure all components of the aircraft are securely attached. The EPO material is impact-resistant, but proper assembly is crucial for flight stability.
4. **Power On Sequence:**
    - First, turn on the remote control transmitter.
    - Next, connect the aircraft's battery. The aircraft's lights will illuminate.
    - Ensure the throttle stick on the transmitter is at its lowest position.
    - Move the throttle stick straight up to its highest position, then straight back down to its lowest position. This

action will bind the aircraft to the transmitter. The aircraft's lights will stop blinking and remain solid, indicating a successful bind.

5. **Motor Arming:** To arm the motors, toggle both control sticks on the transmitter simultaneously towards the bottom-outer corners. You will hear a confirmation sound, and the propellers will briefly twitch, indicating they are armed.

Images demonstrating how to hold the X450 aircraft for pre-flight checks and hand-launching.

Operating Instructions

The GoolRC WLtoys XK X450 offers three distinct flight modes, providing versatility for both beginners and experienced pilots.

Flight Modes:

1. **Multi-rotor Flight (M-Mode):**

   This mode allows for stable hover flight, similar to a quadcopter. It supports forward, backward, left, and right side flight, as well as spin flight. This mode is ideal for beginners to learn basic controls and for precise maneuvering in confined spaces. It features a one-button take-off and one-button landing function.

The X450 aircraft hovering in multi-rotor flight mode, with propellers oriented vertically for lift.

2. **Vertical Flight (V-Mode):**

   In this mode, the aircraft can fly vertically, similar to a helicopter. It supports forward, backward, left, and right side flight, and spin flight. This mode utilizes the aircraft's unique design for vertical takeoff and landing capabilities.

The X450 aircraft positioned vertically, demonstrating its vertical flight capabilities.

3. **6G Airplane Flight (6G-Mode):**

   This mode allows for one-key conversion to a fixed-height self-stabilization mode, changing vertical flight to horizontal flight. The gyroscope provides self-stabilization and locks the heading, making it suitable for beginners to practice fixed-wing flight skills. The aircraft flies very fast in this mode.

The X450 aircraft in 6G airplane flight mode, showcasing its horizontal flight configuration.

General Flight Tips:

- **Throttle Control:** Gradually increase the throttle to initiate takeoff. For stable flight, adjust the throttle to maintain desired altitude.
- **Stability:** The 6-axis gyroscope with air pressure and altitude hold assists in stable flight. However, external factors like wind will affect stability.
- **Emergency Maneuver:** If you encounter difficulty or lose control in 6G Airplane Flight mode, immediately switch back to Multi-rotor Flight (M-Mode). The aircraft will automatically reorient its propellers to vertical and attempt to stabilize, helping to prevent crashes.
- **Propeller Orientation:** In Multi-rotor and Vertical modes, propellers are vertical. In 6G Airplane Flight mode, they rotate forward for horizontal thrust.

Maintenance

- **Battery Care:** Always use the provided USB charger. Overcharging or using incompatible chargers can damage the battery and pose a fire risk. Disconnect the battery from the aircraft when not in use.

- **Propeller Inspection:** Regularly inspect propellers for any damage (cracks, bends, chips). Damaged propellers can cause instability and reduce flight performance. Replace them immediately if damage is found. Spare propellers are included in the package.
- **Motor and Servo Check:** Ensure the brushless motors and digital steering servos operate smoothly without obstruction. Keep them free from dirt and debris.
- **EPO Material:** The aircraft is made from impact-resistant EPO material. In case of minor damage, suitable foam-safe adhesive can be used for repairs.
- **Storage:** Store the aircraft and components in a cool, dry place away from direct sunlight and extreme temperatures.

Troubleshooting

- **Aircraft Not Responding to Transmitter:**
  - Ensure both the aircraft and transmitter are powered on.
  - Verify the binding procedure (Power On Sequence in Setup section) was followed correctly.
  - Check if the transmitter batteries are low or depleted.
- **Motors Not Arming:**
  - Confirm the throttle stick is at the lowest position before attempting to arm.
  - Ensure both control sticks are moved to the bottom-outer corners simultaneously.
- **Unstable Flight/Drifting:**
  - Perform a calibration of the gyroscope (refer to the original instruction manual for specific steps if needed, typically involves holding sticks in specific positions).
  - Check for any damaged propellers or bent motor shafts.
  - Ensure flight is conducted in calm weather conditions, especially for beginners.
- **Short Flight Time:**
  - Ensure the battery is fully charged before each flight.
  - Battery performance may degrade over time; consider replacing the battery if flight times consistently remain short.

Warranty and Support

For warranty information, technical support, or replacement parts, please contact GoolRC customer service through the retailer where the product was purchased. Keep your proof of purchase for warranty claims.
Additional resources and community forums for RC enthusiasts may also provide helpful tips and support for operating and maintaining your X450 aircraft.

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