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› EIELEDIY DIY Quadcopter Drone Kit Instruction Manual - Model EU-QD-F120

EIELEDIY EU-QD-F120

EIELEDIY DIY Quadcopter Drone Kit Instruction Manual

Model: EU-QD-F120

1. INTRODUCTION

This manual provides comprehensive instructions for the assembly, operation, and maintenance of your EIELEDIY DIY Quadcopter Drone Kit, Model EU-QD-F120. This kit is designed as an engaging STEM project, offering a unique opportunity to understand drone technology from the ground up. It features advanced components and multi-functional flight capabilities.

Important Note: This is a highly challenging DIY project requiring manual assembly of the drone's shell and motor components. It is recommended for users aged 14 and above. Patience and attention to detail are crucial for successful completion. Full technical support is available to assist you throughout the process.

2. SAFETY WARNINGS

Read all safety warnings and instructions before assembly and operation to avoid injury or damage.

- Always operate the drone in open, clear areas, away from people, animals, and obstacles.
- Do not attempt to fly the drone in strong winds or adverse weather conditions.
- Ensure all components are securely fastened before each flight.
- Keep fingers and loose clothing away from rotating propellers.
- Never fly the drone near airports or restricted airspace.
- Adult supervision is recommended for users under 18 years of age.
- Do not modify the drone's components or wiring beyond the instructions provided.
- Use only the provided batteries and charging equipment.
- In case of an emergency, immediately press the emergency stop button on the remote control.

3. PACKAGE CONTENTS

Before beginning assembly, verify that all components are present in your kit. Refer to the image below for a visual representation of the included parts.



Figure 3.1: Overview of the EIELEDIY DIY Quadcopter Drone Kit, showing the assembled drone and all individual components including motors, propellers, frame parts, circuit boards, batteries, and remote control parts.

The kit includes:

- Drone frame components (carbon fiber rods, plastic connectors)
- Brushless motors (4 units)
- Propellers (main and spare sets)
- Flight control module
- Optical flow positioning module
- Video transmission module
- Remote control circuit board and joysticks
- Lithium-polymer batteries (2 units)
- USB charging cable
- Screws, nuts, and small assembly tools

- LED light strips
- Detailed instruction manual (paper)

Quadrocopter - Drohnen - Kit

Auf die Bedürfnisse von DIY - Enthusiasten und der Ausbildung für Einsteiger in der Drohrentechnik zugeschnitten



Charakteristisches Kit
Die Erkundung realisieren



Figure 3.2: Detailed view of key components: a brushless motor (showing rotor, stator, winding), high-strength carbon fiber rods for the frame, and the flight control module.

4. ASSEMBLY INSTRUCTIONS

Assembly of the EIELEDIY DIY Quadrocopter Drone Kit is a challenging but rewarding process, estimated to take approximately 1.5 hours. Follow the detailed steps in the included paper manual carefully. The difficulty level for assembly is rated 5 out of 5 stars.

4.1 Tools Required (Not Included)

- Small Phillips head screwdriver (precision set recommended)
- Small pliers or tweezers
- Wire cutters (optional, for zip ties)
- Clean, well-lit workspace

4.2 General Assembly Steps

1. **Frame Construction:** Assemble the carbon fiber rods and plastic connectors to form the quadcopter frame. Ensure all connections are secure.
2. **Motor Installation:** Attach the brushless motors to the frame arms. Pay attention to motor orientation and wiring.
3. **Flight Control Module:** Mount the flight control module onto the center of the frame. Connect motor wires and other sensor cables as indicated in the manual.
4. **Propeller Attachment:** Securely attach the propellers to the motors. Note the rotation direction for each propeller (clockwise/counter-clockwise).
5. **Battery and Wiring:** Install the battery holder and connect the battery to the flight control module. Route all wires neatly and secure them with zip ties if necessary.
6. **Remote Control Assembly:** Assemble the remote control unit, installing the joysticks and connecting the necessary wires to the circuit board.
7. **Final Checks:** Before powering on, double-check all connections, screw tightness, and component orientation.

Ein äußerst herausforderndes DIY-Projekt

Allerdings, keine Sorge!
Wir bieten ein detailliertes Handbuch sowie
umfassende Erklärungen zur Drohnenkenntnis.



Enthalten Sie
PPT-Kursmaterial

Papier-Instruktionshandbuch

Vollständige Erklärung
der Bauteilinstallation

Umfassende
Drohnenkenntnisse
Ideal für Curriculum-Design
und Lernen

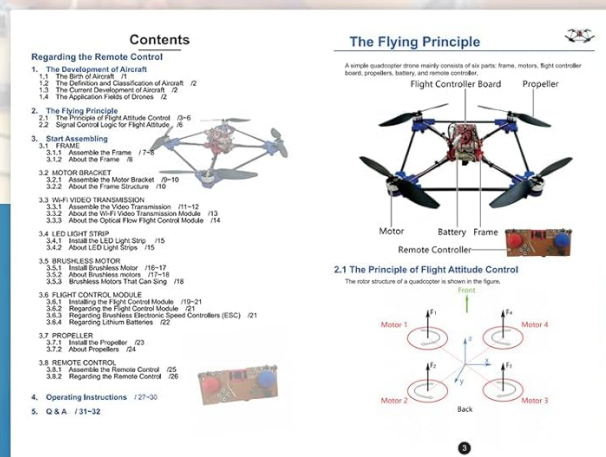


Figure 4.1: Excerpts from the detailed paper instruction manual, illustrating steps for propeller assembly, flight control module installation, and the basic principles of drone flight and attitude control.

Bauen Sie Ihren eigenen coolen Drohnen

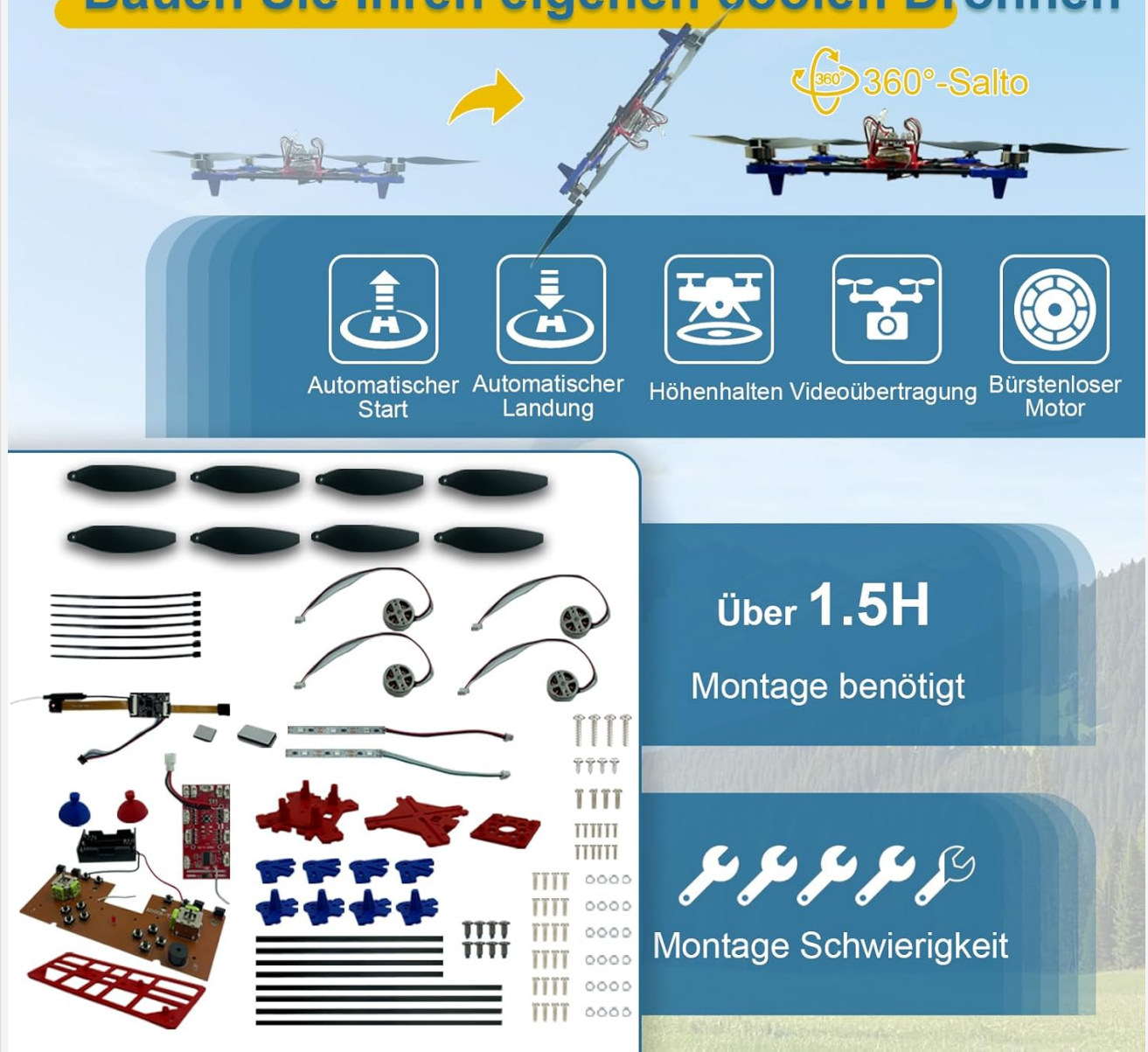


Figure 4.2: Visual representation of the assembled drone highlighting key flight features such as 360-degree flips, automatic start and landing, altitude hold, real-time video transmission, and brushless motors. The image also indicates an assembly time of over 1.5 hours and a high assembly difficulty.

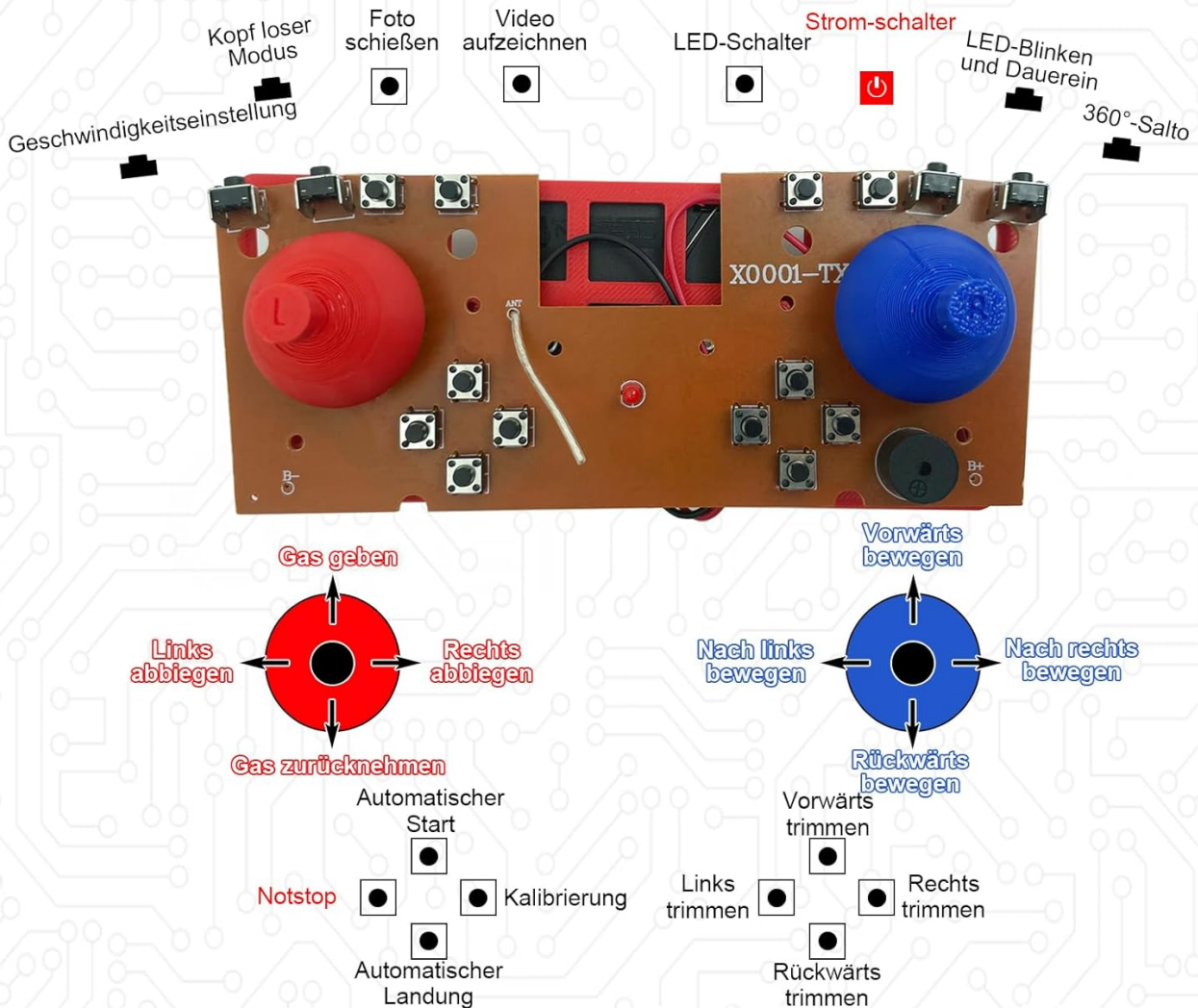
5. OPERATING INSTRUCTIONS

The EIELEDIY Quadcopter offers a multi-functional flight experience. The ability to fly proficiently requires practice. The operating difficulty is rated 5 out of 5 stars.

5.1 Remote Control Overview

Familiarize yourself with the remote control layout and functions before your first flight.

Vielseitig ausgestattet und einfach zu bedienen



Lange Drücken Sie die "Notstop"-Taste, um die Flugleistung abzuschalten!
VERSUCHEN SIE ES NICHT IN GRÖßEREN HÖHEN, um das Verlust, Absturz des Drohns
sowie mögliche PERSONENVERLETZUNGEN UND SACHENSCHÄDEN zu vermeiden.

Figure 5.1: Detailed layout of the drone's remote control. It shows the left joystick for throttle (up/down) and turning left/right, and the right joystick for moving forward/backward and left/right. Buttons include Headless Mode, Photo, Video Record, LED Switch, Power Switch, 360° Flip, Automatic Start, Automatic Landing, Calibration, Emergency Stop, and trim adjustments.

5.2 Pre-Flight Checklist

- Ensure the drone battery is fully charged.
- Ensure the remote control batteries are installed and functional.
- Verify all propellers are securely attached and undamaged.
- Choose an open, clear area for flight, free from obstacles and people.
- Power on the drone, then the remote control.
- Calibrate the drone as per the manual's instructions (usually by moving joysticks in specific patterns).

5.3 Basic Flight Functions

- **One-Click Takeoff/Landing:** Press the designated button for automatic takeoff or landing.
- **Throttle Control:** Use the left joystick (up/down) to control altitude.
- **Directional Control:** Use the right joystick (forward/backward, left/right) to control horizontal movement.

- **Turning/Yaw:** Use the left joystick (left/right) to rotate the drone horizontally.
- **Headless Mode:** Activates a mode where the drone's orientation is relative to the pilot, simplifying control.
- **Speed Control:** Adjust flight speed settings for different skill levels or environments.
- **360° Rolls:** Execute aerial acrobatics with a dedicated button (ensure sufficient altitude).
- **Optical Flow Positioning:** Helps maintain stable hovering, especially indoors or at low altitudes.
- **Real-time Video Transmission:** Connect your smartphone to view live footage from the drone's camera.

5.4 Post-Flight Procedures

- Land the drone safely using the one-click landing function or manual control.
- Power off the drone, then the remote control.
- Remove the drone battery for charging and storage.
- Inspect the drone for any damage after each flight.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your EIELEDIY Quadcopter Drone Kit.

- **Propeller Inspection:** Regularly check propellers for cracks, bends, or damage. Replace damaged propellers immediately using the included spare sets.
- **Cleaning:** Gently clean the drone's frame and components with a soft, dry cloth. Avoid using liquids directly on electronic parts.
- **Battery Care:**
 - Charge batteries fully before storage if not used for an extended period.
 - Do not overcharge or over-discharge batteries.
 - Store batteries in a cool, dry place, away from direct sunlight and extreme temperatures.
 - If a battery appears swollen or damaged, discontinue use immediately and dispose of it properly.
- **Motor Check:** Ensure motors spin freely and are free from debris.
- **Screw Tightness:** Periodically check all screws and fasteners to ensure they remain tight.

7. TROUBLESHOOTING

This section addresses common issues you might encounter. For more complex problems, refer to the detailed paper manual or contact technical support.

Problem	Possible Cause	Solution
Drone does not power on.	Battery not charged or connected; power switch off.	Charge battery, ensure it's connected correctly, turn on power switch.
Drone does not respond to remote control.	Remote control not paired; low remote control battery; interference.	Re-pair drone and remote control (refer to manual); replace remote control batteries; move to an area with less interference.
Drone drifts during flight.	Not calibrated; uneven propeller wear; wind interference.	Perform calibration; check and replace worn propellers; fly in calmer conditions.

Problem	Possible Cause	Solution
One or more motors not spinning.	Loose motor wire connection; damaged motor; damaged flight control board.	Check motor wire connections; contact technical support for motor or board replacement.
Short flight time.	Battery not fully charged; aging battery; excessive payload.	Ensure battery is fully charged; consider replacing old batteries; remove unnecessary weight.

If you encounter issues not listed here or require further assistance, please contact EIELEDIY technical support. Remember that careful and meticulous assembly is key to avoiding many operational problems.

8. SPECIFICATIONS

Feature	Detail
Brand	EIELEDIY
Model Number	EU-QD-F120
Item Weight	400 grams
Product Dimensions (L x W x H)	30 x 30 x 6 cm
Assembled Dimensions (approx.)	22cm (width) x 17cm (length) x 13cm (height, excluding propeller height of 5cm)
Battery Type	1 Lithium-polymer (included)
Max Flight Duration	Up to 30 minutes (per battery)
Special Features	Optical flow positioning, one-click takeoff/landing, 360° rotation, real-time video transmission, headless mode, speed control
Video Recording Resolution	1080p
Connectivity Technology	Wi-Fi
Included Components	DIY Kit (all parts for drone and remote control)
Recommended Age	14+ years (Adult)
Assembly Difficulty	5 out of 5 stars
Operating Difficulty	5 out of 5 stars (requires practice)

Abmessungen des Projekts nach der Installation

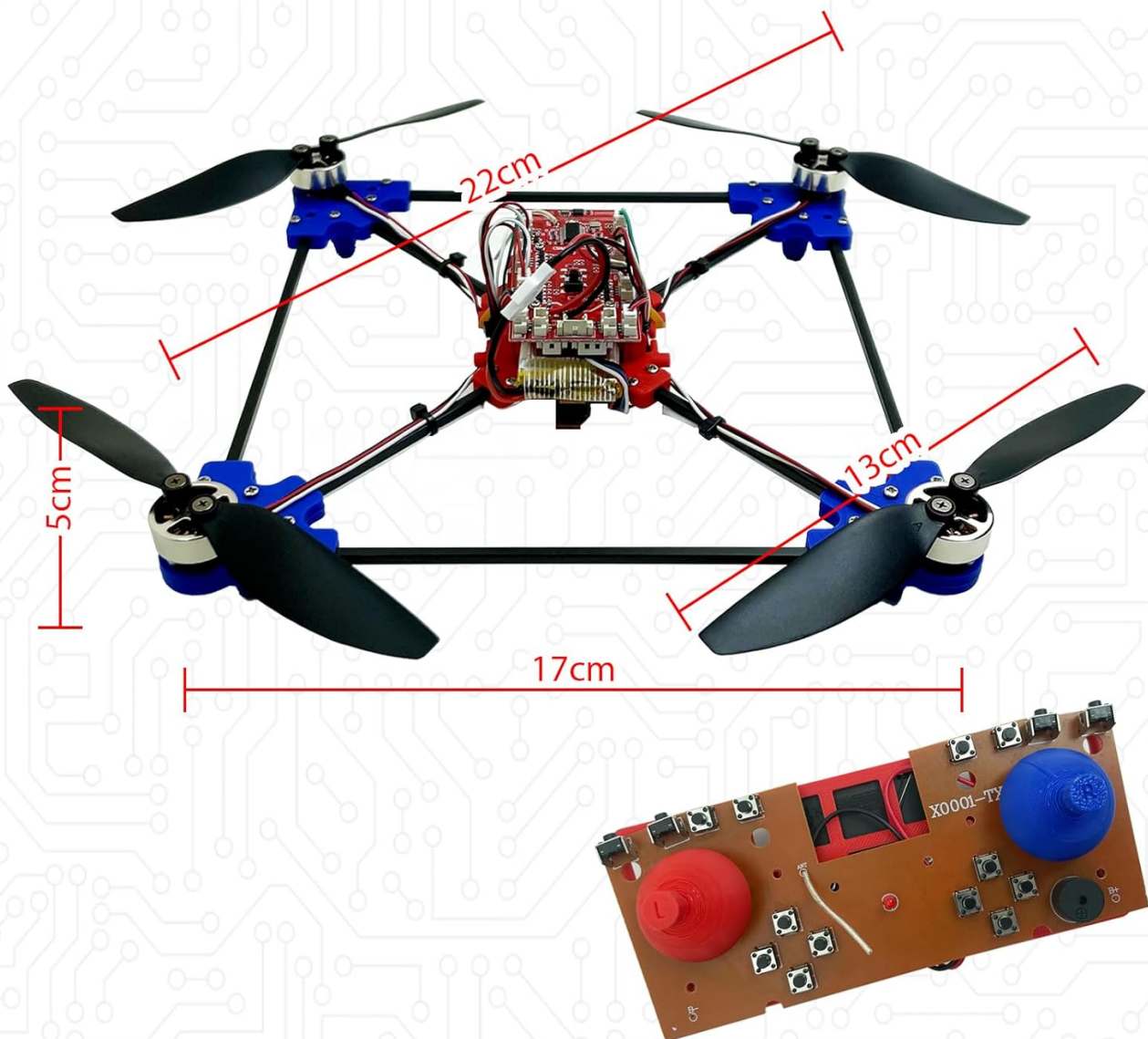


Figure 8.1: Dimensions of the assembled EIELEDIY DIY Quadcopter Drone Kit, showing approximate measurements of 22cm width, 17cm length, 13cm height, and 5cm propeller height.

9. WARRANTY AND SUPPORT

EIELEDIY provides comprehensive technical support for your DIY Quadcopter Drone Kit. If you encounter any issues during assembly or operation, or have questions regarding the product, please do not hesitate to contact our support team.

While specific warranty details are not provided in this manual, please retain your proof of purchase for any potential warranty claims. Our technical support team is dedicated to helping you successfully complete your project and enjoy your drone.

