iFlight Nazgul5 V2

iFlight Nazgul5 V2 HD 6S Drone User Manual

Model: Nazgul5 V2

1. Introduction

The iFlight Nazgul5 V2 HD 6S Drone is a high-performance 5-inch Bind-and-Fly (BNF) quadcopter designed for advanced FPV pilots. It integrates the Caddx Polar Vista Digital HD System for superior video transmission and a TBS Crossfire Nano RX for reliable control. This manual provides essential information for the safe and effective use of your drone.

1.1 Product Overview

The Nazgul5 V2 HD features a robust design with a 5mm arm thickness for enhanced durability and an easy-swap arm system for convenient maintenance. It is equipped with XING-E 2207 motors and Nazgul 5-inch propellers, optimized for smooth flight characteristics and power delivery. The drone's frame utilizes a popular True-X configuration and includes TPU crash-guards for protection.

Figure 1: iFlight Nazgul5 V2 HD 6S Drone. This image displays the drone from a top-down perspective, showcasing its four arms, motors, propellers, and central frame structure.

- **Durable Frame:** 5mm arm design for increased resilience.
- **Easy-Swap Arms:** Facilitates quick repairs and component replacement.
- **Digital HD System:** Integrated Caddx Polar Vista for high-definition video feed.
- **Powerful Motors:** XING-E 2207 motors with long-lasting NSK bearings.
- **Propeller Compatibility:** Supports 5-inch and 5.1-inch style propellers.
- **Protection:** TPU crash-guards for impact absorption.

Figure 2: Close-up view of the Caddx Polar camera module integrated into the drone's front section. This camera provides the digital high-definition video feed.

Figure 3: The Caddx Polar Vista Digital HD System unit mounted on the drone's frame. This unit processes and transmits the digital video signal to compatible FPV goggles.

1.2 Intended Use

This drone is intended for recreational and professional FPV flying by experienced adult users. It is designed for outdoor use in open areas, away from people, animals, and obstacles. Users must comply with all local regulations regarding drone operation.

1.3 Safety Information

- Always operate the drone in a safe environment, away from crowds and obstacles.
- Ensure propellers are securely attached and undamaged before each flight.
- Use only recommended batteries (6S 1300mAh/1550mAh LiPo) and charging equipment.
- Keep hands and face clear of rotating propellers.
- Familiarize yourself with local aviation laws and regulations.
- Perform pre-flight checks diligently.

2. Package Contents

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

- 1x Nazgul5 HD Drone (Pre-built and tested)
- 2 sets x Nazgul 5-inch 3-blade Propellers (Set of 4 - color may vary)
- 2x Battery Straps

3. Specifications

Detailed technical specifications for the iFlight Nazgul5 V2 HD 6S Drone:

Figure 4: Dimensional overview of the iFlight Nazgul5 V2 HD Drone, indicating a frame width of 240mm and arm lengths of 170mm.

Figure 5: The iFlight Nazgul5 V2 HD Drone on a scale, showing a weight of 389.2 grams without battery.

Feature	Specification
Brand	iFlight
Model Name	Nazgul5 V2
Flight Controller	SucceX-E F7 45A Flight Stack
Motors	XING-E 2207 1800kv FPV Motor
Video System	Caddx Polar Vista Digital HD System Kit
Receiver	TBS Crossfire Nano RX
Antenna	LHCP RP-SMA 5.8g antenna
Recommended Battery	6S 1300mAh/1550mAh LiPo (not included)
Frame Material	Carbon Fiber, TPU
Video Capture Resolution	1080p
Control Type	Remote Control (Radio Frequency)

Feature	Specification
Skill Level	Professional
Item Weight	Approximately 1.31 pounds (without battery)
Package Dimensions	10 x 9 x 2.02 inches

4. Setup

Follow these steps to prepare your Nazgul5 V2 HD drone for flight.

4.1 Initial Inspection

- Carefully unbox the drone and inspect for any visible damage during shipping.
- Ensure all wires are securely connected and not pinched.
- Check that all screws are tightened appropriately.

4.2 Propeller Installation

The drone comes with two sets of 5-inch 3-blade propellers. Ensure correct orientation for proper flight.

1. Identify the two types of propellers: Clockwise (CW) and Counter-Clockwise (CCW). They are typically marked or identifiable by the leading edge of the blade.
2. Install CW propellers on motors that spin clockwise and CCW propellers on motors that spin counter-clockwise. Refer to the motor rotation diagram, usually found in Betaflight configuration.
3. Securely fasten each propeller to its respective motor using the provided nuts. Do not overtighten.

4.3 Battery Connection

The Nazgul5 V2 HD requires a 6S LiPo battery (1300mAh or 1550mAh recommended, not included).

1. Place the battery on the top plate of the drone.
2. Secure the battery firmly using the provided battery straps. Ensure the battery cannot shift during flight.
3. Connect the battery's XT60 connector to the drone's XT60 power lead. The drone will power on and emit a series of beeps.

4.4 Binding with Remote Controller (TBS Crossfire)

Your drone is equipped with a TBS Crossfire Nano RX. You will need a TBS-compatible remote controller.

1. Power on your remote controller and navigate to the Crossfire module settings.
2. Select the 'Bind' option on your remote controller.
3. Power on the drone. The LED on the TBS Crossfire Nano RX will flash green.
4. Press the bind button on the TBS Crossfire Nano RX (usually a small button on the receiver itself).
5. The LED on the receiver should turn solid green, indicating a successful bind.
6. Verify stick inputs in Betaflight Configurator (Receiver tab) to confirm proper communication.

4.5 Binding with FPV Goggles (DJI FPV System)

The drone features a Caddx Polar Vista Digital HD System, compatible with DJI FPV Goggles (V1 or V2).

1. Power on your DJI FPV Goggles.
2. Power on the drone.

3. Press the bind button on the Caddx Polar Vista unit (a small button next to the USB-C port). The LED will start flashing red.
4. Press the bind button on your DJI FPV Goggles. The goggles will emit a continuous beeping sound.
5. Once bound, the LED on the Caddx Polar Vista will turn solid green, and you will see the video feed in your goggles.

5. Operating Instructions

Safe and responsible operation is crucial for an enjoyable FPV experience.

5.1 Pre-Flight Checklist

- **Battery:** Ensure drone and goggle batteries are fully charged.
- **Propellers:** Check for damage and secure attachment.
- **Antennas:** Verify FPV antenna and receiver antennas are properly connected and oriented.
- **Environment:** Confirm clear flying area, away from people, animals, and obstacles. Check weather conditions.
- **Radio Link:** Power on remote controller and goggles, then the drone. Confirm successful binding and video feed.
- **Arming Switch:** Test arming switch functionality with propellers off.

5.2 First Flight Considerations

- Start with gentle throttle inputs and movements.
- Maintain a safe distance from yourself and others.
- Practice hovering and basic maneuvers before attempting advanced tricks.
- Monitor battery voltage in your FPV display (OSD) and land before it drops too low.

5.3 Flight Controls (General FPV)

FPV drones typically use Mode 2 controls (left stick for throttle/yaw, right stick for pitch/roll). Familiarize yourself with these controls:

- **Throttle (Left Stick Up/Down):** Controls altitude.
- **Yaw (Left Stick Left/Right):** Rotates the drone horizontally.
- **Pitch (Right Stick Up/Down):** Tilts the drone forward/backward.
- **Roll (Right Stick Left/Right):** Tilts the drone left/right.
- **Arming Switch:** Activates/deactivates motors. Always disarm before approaching the drone.

5.4 Post-Flight Procedures

- Disarm the drone immediately after landing.
- Disconnect the battery from the drone.
- Inspect the drone for any damage, especially propellers and frame components.
- Allow motors to cool before storing.

6. Maintenance

Regular maintenance ensures the longevity and performance of your drone.

6.1 Cleaning

- After each flight, especially in dusty or dirty conditions, gently clean the frame and components.
- Use a soft brush or compressed air to remove debris from motors and electronics.
- Avoid using liquids directly on electronic components.

6.2 Propeller Replacement

Damaged propellers can significantly affect flight performance and safety. Replace them immediately if you notice any cracks, bends, or chips.

1. Unscrew the damaged propeller from the motor.
2. Ensure the motor shaft is clean and undamaged.
3. Install a new propeller, ensuring correct CW/CCW orientation.
4. Secure with the propeller nut, but do not overtighten.

6.3 Firmware Updates

Periodically check the iFlight website or Betaflight resources for firmware updates for the flight controller (SucceX-E F7) and Caddx Polar Vista. Firmware updates can improve performance, add features, or fix bugs. Follow official instructions carefully when performing updates.

7. Troubleshooting

This section addresses common issues you might encounter.

- **Drone does not arm:**
  - Check if the remote controller is bound and receiving signals in Betaflight Configurator.
  - Ensure the drone is level; some flight controllers prevent arming if not level.
  - Verify battery voltage is within safe operating limits.
  - Check for any error messages in the OSD or Betaflight Configurator.
- **No video feed in FPV goggles:**
  - Confirm Caddx Polar Vista is powered on and bound to DJI FPV Goggles.
  - Check antenna connections on both the drone and goggles.
  - Ensure the correct channel/frequency is selected in the goggles.
- **Unstable flight or vibrations:**
  - Inspect propellers for damage or imbalance. Replace if necessary.
  - Check for loose motor screws or damaged motor bearings.
  - Verify frame integrity; look for cracks or loose components.
- **Short flight time:**
  - Ensure battery is fully charged and healthy.
  - Check for excessive throttle usage or aggressive flying style.
  - Verify propeller efficiency; damaged props can reduce flight time.

8. Warranty Information

iFlight products are covered by a manufacturer's warranty against defects in materials and workmanship. The

specific terms and duration of the warranty may vary by region and product. Please retain your proof of purchase. For detailed warranty information, refer to the official iFlight website or contact their customer support.

Note: Damage caused by crashes, improper use, unauthorized modifications, or failure to follow instructions in this manual is typically not covered under warranty.

9. Customer Support

If you encounter issues not covered in this manual or require further assistance, please contact iFlight customer support through their official website. Provide your product model, purchase date, and a detailed description of the issue for efficient service.

No official product videos were provided in the product data for embedding in this manual.