

UDIRC U31R

UDIRC U31R FPV Racing Drone Navigator User Manual

Model: U31R | Brand: UDIRC

1. INTRODUCTION

This manual provides essential instructions for the safe operation, setup, and maintenance of your UDIRC U31R FPV Racing Drone Navigator. Please read this manual thoroughly before operating the drone to ensure proper function and to prevent damage or injury.

Package Contents

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

- UDI Racecopter FPV 5.8 GHz
- LiPo Flight Battery 7.4 V 350 mAh
- USB Charger
- UDI Transmitter (Remote Control) 2.4 GHz
- FPV Screen 5.8 GHz
- VR3 FPV Goggles
- Propeller Set
- Instruction Manual
- Small Tools

Note: A 4 GB Micro SD card and 4x 1.5 V AA batteries for the transmitter are required and not included.

2. SAFETY INFORMATION

WARNING: Failure to follow these safety instructions may result in injury, damage to the drone, or property

damage.

- Always operate the drone in open areas, away from people, animals, buildings, and power lines.
- Do not fly in strong winds or adverse weather conditions.
- Keep hands and face away from rotating propellers.
- Ensure the battery is fully charged before each flight.
- Do not attempt to modify the drone or its components.
- Supervise children during operation.
- Adhere to local regulations and laws regarding drone operation.
- Avoid flying near airports or restricted airspace.
- The drone is designed for users aged 14 and above.

3. SETUP

3.1 Battery Charging

Charge the LiPo flight battery using the provided USB charger. Connect the battery to the charger and the charger to a USB power source. The charging time is approximately 60 minutes. Do not overcharge the battery.

3.2 Transmitter Battery Installation

Open the battery compartment on the back of the 2.4 GHz transmitter. Insert 4x 1.5 V AA batteries (not included), ensuring correct polarity. Close the compartment securely.

3.3 Propeller Installation

Attach the propellers to the motor shafts. Ensure that each propeller is correctly oriented (clockwise or counter-clockwise) as indicated in the drone's manual or markings. Use the small tools provided if necessary. Propeller guards can be attached for added protection.



Image: UDI U31R Drone with propeller guards attached, viewed from an angle.



Image: Top-down view of the UDI U31R Drone, showing the four propellers and attached guards.

3.4 FPV Screen and VR3 Goggles Setup

The 5.8 GHz FPV screen can be mounted on the transmitter or used with the VR3 FPV Goggles. Ensure the FPV screen is charged. Insert the FPV screen into the VR3 Goggles if you intend to use them for an immersive flight experience.



Image: VR3 FPV Goggles with the FPV screen inserted on the side, ready for use.

3.5 Micro SD Card Installation

Insert a 4 GB Micro SD card (not included) into the drone's camera slot to record videos and photos. Ensure the card is inserted correctly until it clicks into place.

4. OPERATING INSTRUCTIONS

4.1 Power On and Pairing

1. Place the drone on a flat, level surface.
2. Connect the flight battery to the drone. The drone's indicator lights will flash.
3. Turn on the transmitter. Move the left joystick (throttle) all the way up, then all the way down. The drone's lights will become solid, indicating successful pairing.
4. Turn on the FPV screen and ensure it receives the video feed from the drone.

4.2 Flight Controls

The UDI U31R features a 6-axis gyro for stable flight. Basic flight controls include:

- **Throttle (Left Joystick Up/Down):** Controls altitude (rise/sink).
- **Yaw (Left Joystick Left/Right):** Rotates the drone left or right.
- **Pitch (Right Joystick Up/Down):** Moves the drone forward (nick) or backward.
- **Roll (Right Joystick Left/Right):** Moves the drone sideways (roll) left or right.

4.3 Special Features

- **One-Key Take-off/Landing:** Press the designated button on the transmitter for automatic take-off or landing.
- **Altitude Hold Mode:** The drone maintains a stable altitude, allowing for easier control of horizontal movement.
- **Headless Mode:** In this mode, the drone's orientation is relative to the pilot, regardless of the drone's actual front direction. Activate this feature before flight.
- **Low Voltage Warning:** The drone's indicator lights will flash, and the transmitter may beep to alert you when the battery is low. Land the drone immediately.

4.4 FPV and Recording

The drone is equipped with a 720P HD camera (1280x720p, 30 fps, 120° wide-angle) for FPV live video and photo capture. The FPV screen displays the video feed at 800x480p.

- **Live Video:** The 5.8 GHz FPV screen automatically displays the live feed once powered on and connected.
- **Photo/Video Recording:** Use the dedicated buttons on the transmitter to start/stop video recording or take photos. Files are saved to the Micro SD card (JPEG for photos, MP4 for videos).



Image: UDI U31R Drone without propeller guards, highlighting the front-facing camera.

5. MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to clean the drone and FPV screen. Avoid water or harsh chemicals.
- **Propeller Replacement:** If propellers are damaged, replace them with new ones from the propeller set. Ensure correct orientation.
- **Battery Care:** Store LiPo batteries in a cool, dry place. Do not store fully charged or fully discharged for extended periods.
- **Storage:** When not in use, store the drone and accessories in a safe, dry environment, away from direct sunlight and extreme temperatures (-10 °C to 40 °C operating temperature).

6. TROUBLESHOOTING

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Drone does not respond to transmitter.	Not paired; low battery (drone or transmitter); out of range.	Ensure proper pairing sequence; charge batteries; operate within 50-80m range.
Drone flies erratically or drifts.	Not calibrated; damaged propeller; strong wind.	Recalibrate the drone (refer to full manual); replace damaged propellers; fly in calm conditions.
No FPV video feed.	FPV screen not powered on; drone camera not active; interference.	Ensure FPV screen is charged and on; check drone power; move away from other 5.8 GHz devices.
Cannot record video/photos.	No Micro SD card; SD card full or corrupted; incorrect card format.	Insert a 4GB Micro SD card; format the card; ensure sufficient space.

7. SPECIFICATIONS

Feature	Detail
Model Name	U31R
Brand	UDIRC
Rotor Diameter	Approx. 66 mm
Length	Approx. 199 mm
Width	Approx. 183 mm
Height	Approx. 43 mm
Weight	Approx. 88.5 g
Motor Type	4x Electric Motors
Flight Time	6-8 minutes
Charging Time	Approx. 60 minutes
Transmitter Frequency	2.4 GHz
Video Signal Frequency	5.8 GHz
Range	50-80 meters
Operating Temperature	-10 °C to 40 °C
Camera Resolution	1280 x 720p, 30 fps, 120° wide-angle
FPV Screen Resolution	800 x 480p
FPV Screen Size	5 inches
Memory	Supports Micro SD card (up to 4 GB recommended)
Gyro	6-Axis

Feature	Detail
Battery Capacity	350 mAh (LiPo)
Video Recording Format	MP4
Image Format	JPEG
Skill Level	Advanced Beginner
Material	Plastic

8. WARRANTY AND SUPPORT

Specific warranty information for the UDIRC U31R FPV Racing Drone Navigator is typically provided with the product packaging or on the manufacturer's official website. Please refer to those resources for detailed warranty terms and conditions.

For technical support, troubleshooting assistance beyond this manual, or spare parts inquiries, please contact UDIRC customer service or your authorized dealer. Contact information can usually be found on the product packaging or the official UDIRC website.

