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CUIPPWRJ MN01 2000B

CUIPPWRJ FPV Drone Camera User Manual (Model MN01 2000B)

Comprehensive instructions for installation, operation, and maintenance.

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INTRODUCTION

This manual provides detailed instructions for the CUIPPWRJ FPV Drone Camera, Model MN01 2000B. This camera is designed for racing drones and offers high-quality video capture with a wide field of view. Please read this manual thoroughly before installation and operation to ensure proper use and longevity of your device.

PACKING LIST

Upon opening the package, verify that all components are present and in good condition. The contents may vary slightly depending on the specific variant (Baby Ratel 2, Ratel 2, Caddx Ant, Caddx Ant Lite).

Common Components:

- Camera x1
- Menu Board x1 (for some models)
- 2pin Silicon Cable x1 (for some models)
- 3Pin Silicon Cable x1
- Screw Pack/Set x1
- 1.5mm Allen Wrench x1 (for some models)
- 14mm-19mm Bracket x1 (for some models)
- 19mm Case x1 (for Caddx Ant)

SETUP

1. Physical Installation

Mount the camera securely onto your racing drone frame. Use the provided bracket or case as appropriate for

your drone model. Ensure the camera is oriented correctly, typically with the lens facing forward and level with the drone's flight path.



Image: The CUIPPWRJ FPV Drone Camera, illustrating its compact design suitable for racing drones.

2. Wiring Connections

Connect the camera to your drone's flight controller or video transmitter (VTX) according to the pinout diagram provided with your drone or VTX. Typical connections include:

- **VCC (Power):** Connect to a stable 5V-12V power source from your flight controller or VTX. Refer to your camera's specific voltage requirements.
- **GND (Ground):** Connect to a common ground point on your flight controller or VTX.
- **Video Out:** Connect to the Video In (VI) pin on your VTX.
- **OSD (Optional):** If your camera supports OSD (On-Screen Display) control, connect the OSD pin to a UART TX pad on your flight controller for configuration via Betaflight/INAV, or to the provided menu board.

Caution: Incorrect wiring can damage the camera or other drone components. Always double-check connections before applying power.

OPERATION

1. Powering On

Once wired correctly, power on your drone. The camera will activate and begin transmitting video to your FPV goggles or monitor via the VTX.

2. OSD Menu Navigation (if applicable)

If your camera includes a menu board, connect it to the camera's OSD port. Use the buttons on the menu board to navigate and adjust camera settings such as brightness, contrast, saturation, and WDR (Wide Dynamic Range). Disconnect the menu board after configuration.

For cameras supporting OSD control via flight controller, refer to your flight controller's firmware documentation (e.g., Betaflight OSD) for joystick control commands to access and modify camera settings.

3. Lens Adjustment

The camera lens may require focus adjustment for optimal clarity. Gently rotate the lens clockwise or counter-clockwise until the image in your FPV goggles appears sharp. Secure the lens with the locking ring (if present) once focused.

MAINTENANCE

1. Cleaning

Regularly clean the camera lens using a soft, lint-free cloth and a specialized lens cleaning solution. Avoid abrasive materials or harsh chemicals that could scratch the lens coating.

2. Storage

When not in use, store the camera in a dry, dust-free environment. Protect the lens from direct impact or scratches.

3. Firmware Updates

Periodically check the manufacturer's website for any available firmware updates. Follow the provided instructions carefully if an update is necessary.

TROUBLESHOOTING

Problem	Possible Cause	Solution
No video signal	Incorrect wiring (power/video), VTX not powered, camera faulty.	Verify all wiring connections. Check VTX power and channel. Test camera with a known good setup.
Poor image quality (blurry)	Lens out of focus, dirty lens, damaged lens.	Adjust lens focus. Clean the lens. Inspect for physical damage.
Image flickering/lines	Power interference, loose connection, VTX/RX channel mismatch.	Ensure stable power supply. Check all connections. Verify VTX and RX are on the same channel and band.
OSD not appearing	OSD not enabled, incorrect OSD wiring, menu board not connected.	Check camera settings via menu board or flight controller. Verify OSD wiring.

SPECIFICATIONS

Model: MN01 2000B (Compatible with Ratel 2, Baby Ratel 2, Caddx Ant, Caddx Ant Lite variants)

Resolution: 1200TVL

Field of View (FOV): 165°

Lens Options: 1.8mm / 2.1mm

Item Weight: Approximately 14.1 ounces (400 grams)

Package Dimensions: 1.18 x 0.79 x 0.39 inches

Manufacturer: CUIPPWRJ

WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please contact CUIPPWRJ directly through their official website or the retailer where the product was purchased. Keep your proof of purchase for any warranty claims.