

Multifunction Combined Retract Controller

User Manual

1. Overview

The Multifunction Combined Controller is an advanced control unit designed for managing retractable landing gear, brake systems, and door servos in RC aircraft. It supports automatic sequence control between doors and retracts, offers two operational modes (V1 and V2), and provides diagnostic LED indicators for easy troubleshooting. Compatible with JP hobby ER-005, ER-120, and ER-150 retract units.

2. Specifications

- **Power Supply:** 2S Lipo (8.4V)
- **Current:** Auto-detection
- **Retract Signal Input:** From receiver retract channel (On/Off switch), output $\pm 100\%$
- **Brake Signal Input:** From receiver brake channel (On/Off switch), output $\pm 135\%$
- **Door Servo Outputs:** 3 channels, each configurable for direction and mode (V1/V2)
- **Brake Output:** 2 channels, output voltage equals input voltage
- **Compatibility:** JP hobby ER-005, ER-120, ER-150, and similar retract systems

3. Setup & Configuration

3.1. V1/V2 Mode Selection

Long-press the mode button for 5 seconds until the first channel LED flashes. Click to toggle between V1 (red) and V2 (blue). Wait 2 seconds to proceed to the next channel. Repeat for all three channels.

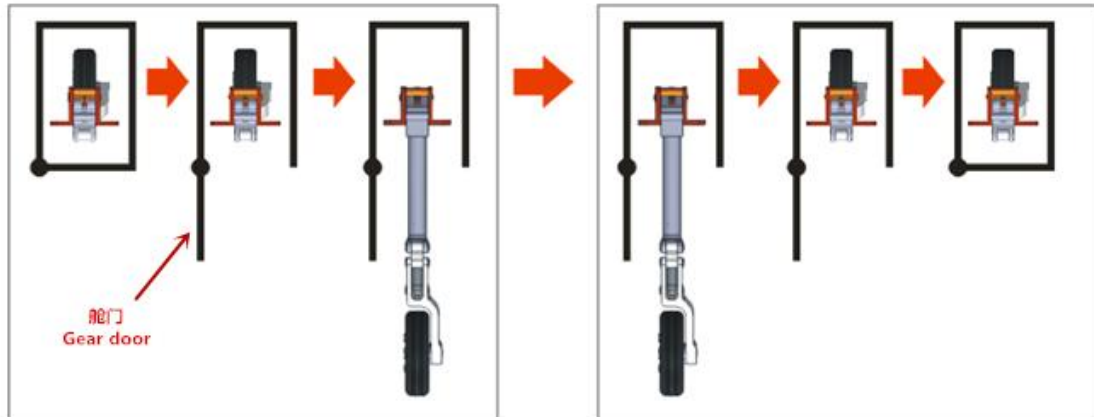
3.2. Servo Direction Setting

Long-press the mode button for 10 seconds until the first LED flashes rapidly. Click to reverse servo direction. Wait 2 seconds to move to the next channel. Repeat for all three.

4. Operational Modes

4.1. V1 Mode

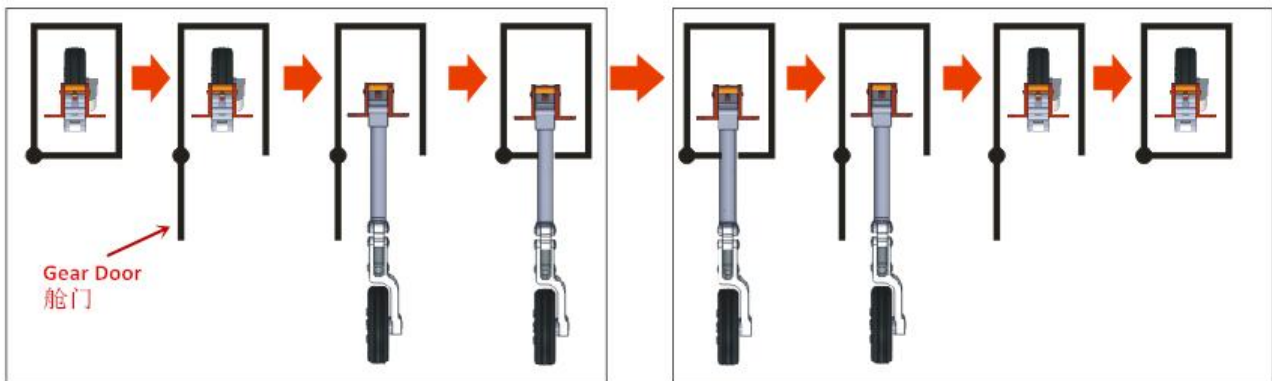
Activating the gear system opens the doors fully → landing gear extends.
Deactivating retracts the gear → doors close automatically after retraction.



V1 model

4.2. V2 Mode

Activating the gear system opens doors → gear extends → doors close automatically. Deactivating opens doors → gear retracts → doors close again.



V2 model

5. Troubleshooting

Problem	Solution
Retracts not moving	Check signal wiring; verify transmitter signal; set channel to $\pm 100\%$; charge battery
Door not responding	Check servo wiring; replace faulty servo
Door sequence reversed	Reconnect servo to correct channel

6. Important Notes

- Do not power retracts directly. Always use the controller.
- Do not hot-plug connectors while powered on.
- If LED remains lit after operation, power off immediately and check for issues.

7. Product Diagram

