Remote Control Model Parts Product Manual

Thank you for purchasing our remote control (RC) model parts! This manual provides detailed information on the installation, use, maintenance, and safety precautions of our RC car, boat, and aircraft model spare parts. Please read this manual carefully before use to ensure correct operation and prolong the service life of the parts. If you have any questions, please contact our after-sales service team.

1. Product Overview

Our RC model parts are designed and manufactured for hobby-grade RC car, boat, and aircraft models, focusing on high performance, durability, and compatibility. The product range covers core components and accessory parts, suitable for both entry-level enthusiasts and advanced model players. All parts have passed strict quality testing to meet industry standards and ensure stable performance in various usage scenarios.

1.1 Product Categories and Scope of Application

The following is a detailed introduction to the main product categories and their applicable model types:

- **RC Car Model Parts**: Includes motors (brushed motor, brushless motor), servos, electronic speed controllers (ESC), tires, suspension components, gear sets, body shells, and battery packs. Applicable to off-road buggies, on-road touring cars, drift cars, and monster trucks of various scales (1:8, 1:10, 1:12, 1:16).
- **RC Boat Model Parts**: Includes propellers, rudders, water-cooled motors, ESC, battery packs, hull accessories, navigation lights, and anti-collision bumpers. Applicable to speed boats, sailboats, tugboats, and fishing boats of different sizes, suitable for freshwater and saltwater use (note: saltwater-specific parts are marked separately).
- **RC Aircraft Model Parts**: Includes propellers (fixed-wing, multi-rotor), motors (outrunner motor, inrunner motor), ESC, servos, flight controllers, batteries, landing gear, and fuselage accessories. Applicable to fixed-wing aircraft, quadcopters, hexacopters, helicopters, and gliders.

1.2 Package Contents

The package of each product contains the corresponding RC model part, installation

accessories (screws, nuts, gaskets, etc.), and a small part of the product has a separate installation tool. Please check the package contents against the packing list immediately after opening the package. If there is any missing, damaged, or incorrect part, please stop using it and contact the seller or our after-sales service in time.

2. Product Specifications and Parameters

The specific specifications and parameters of each part are marked on the product label and packaging. The following are the general parameter standards for common parts for reference:

Part Type	Common Specifications	Applicable Voltage	Maximum Load/Output
Brushless Motor (Car/Boat)	3650, 4074, 540 series; KV value: 2000-5000KV	7.4V-14.8V (2S-4S LiPo battery)	1000W-3000W output power
Brushless Motor (Aircraft)	2204, 2206, 2806 series; KV value: 1400-2600KV	7.4V-11.1V (2S-3S LiPo battery)	300W-800W output power
Electronic Speed Controller (ESC)	30A, 60A, 100A, 150A; with BEC function (5V/6V, 3A-5A)	Matched with motor voltage	Continuous current: 30A-150A; burst current: 60A-300A
Servo	Micro servo (9g), standard servo (15g-25g), high-torque servo (30g-50g)	4.8V-6V	Torque: 1.5kg.cm-20kg.cm; speed: 0.1s/60°-0.25s/60°
LiPo Battery Pack	2S (7.4V), 3S (11.1V), 4S (14.8V); capacity: 1500mAh-5000mAh	Nominal voltage as marked	Discharge rate: 20C-50C (continuous); 40C-100C (burst)

Note: The above parameters are for reference only. For the exact parameters of the purchased part, please refer to the product label and the attached specification sheet.

3. Installation Instructions

Improper installation may cause damage to the parts or the entire RC model, and

even lead to safety accidents. Please follow the installation steps below and pay attention to the installation precautions.

3.1 Pre-installation Preparation

- Prepare the necessary tools: screwdriver (cross, flat), pliers, hex wrench set, wire stripper, heat shrink tube, and multimeter (for testing).
- Ensure that the installation site is clean, flat, and free of flammable and explosive materials to avoid safety hazards.
- Check the compatibility of the parts: confirm that the purchased part is suitable for the model's scale, brand, and model number. For example, the motor shaft diameter should match the gear bore, and the servo mounting hole position should be consistent with the model's control arm.
- Disconnect the power supply of the RC model (remove the battery) before installation to prevent short circuit or accidental start.

3.2 Installation Steps for Common Parts

3.2.1 Motor Installation (Car/Boat/Aircraft)

1. For RC cars and boats: Fix the motor to the motor mount using the matching screws. Ensure that the motor is installed firmly and there is no looseness. Align the motor shaft with the gear or propeller shaft, and adjust the gap to avoid friction between the shaft and the mount.
2. For RC aircraft: Install the motor on the motor mount of the fuselage or arm. For multi-rotor aircraft, pay attention to the rotation direction of the motor (clockwise/counterclockwise) and install it according to the model's requirements to ensure balanced flight. Use lock nuts to fix the motor to prevent it from loosening during flight.
3. Connect the motor wires to the corresponding terminals of the ESC. Note the positive and negative poles (usually marked with red for positive and black for negative; three-phase motors have three signal wires, which need to be connected according to the ESC manual). After connection, wrap the joint with heat shrink tube to insulate and prevent short circuit.

3.2.2 Electronic Speed Controller (ESC) Installation

1. Fix the ESC in a well-ventilated position of the model (e.g., the bottom of the car shell, the inner side of the boat hull, the middle of the aircraft fuselage) to ensure good heat dissipation. Avoid installing it in a closed space to prevent overheating and damage.
2. Connect the ESC power input terminal to the battery (pay attention to the positive and negative poles). Connect the ESC signal output terminal to the

receiver's corresponding channel (usually the throttle channel). For ESC with BEC function, connect the BEC output terminal to the receiver's power input terminal to supply power to the receiver and servos.

3. For RC boat ESC with water cooling function: Connect the water cooling pipe to the ESC's water inlet and outlet, and ensure that the water pipe is connected tightly to avoid water leakage. The water inlet should be placed in a position where water can be fully drawn in during the boat's movement.

3.2.3 Servo Installation

1. Install the servo on the servo mount of the model using screws. Ensure that the servo is installed horizontally and there is no tilt, which will affect the control accuracy.

2. Connect the servo signal wire to the corresponding channel of the receiver (e.g., steering channel for RC cars, rudder channel for RC boats, aileron/elevator/rudder channel for RC aircraft). The signal wire sequence is usually: red (positive), black (negative), white/yellow (signal).

3. Adjust the servo arm to the neutral position before connecting it to the control rod. After installation, test the servo's operation to ensure that it can rotate flexibly and accurately respond to the remote control's instructions.

3.2.4 Battery Installation

1. Place the battery in the battery compartment of the model, and fix it with a battery strap or foam pad to prevent the battery from moving during the model's movement, which may cause wire pulling or short circuit.

2. Connect the battery plug to the ESC's power plug (pay attention to the plug type, such as XT60, XT90, T-plug, etc., do not force plug if the plug does not match). After connection, ensure that the plug is inserted tightly to avoid poor contact.

3. For RC aircraft, pay attention to the battery's center of gravity. Install the battery in a position that keeps the model's center of gravity balanced to ensure stable flight.

3.3 Installation Precautions

- Do not use excessive force during installation to avoid damaging the parts or the model's structure.
- All wire joints must be insulated to prevent short circuit, which may cause fire or damage to the parts.
- After installation, check all screws and connectors to ensure they are firm and there is no looseness.
- For parts that require waterproofing (such as RC boat parts), apply waterproof glue to the joints and connectors according to the requirements to enhance waterproof performance. Note: Do not immerse non-waterproof parts in water.
- If you are not sure about the installation steps, please refer to the model's

original manual or consult a professional model player or our after-sales service.

4. Usage Instructions

4.1 Pre-use Inspection

Before each use, conduct the following inspections to ensure the normal operation of the parts and the safety of the model:

- Check the battery voltage: Use a multimeter or battery checker to test the battery voltage. Do not use the battery if the voltage is lower than the minimum discharge voltage (usually 3.0V per cell for LiPo batteries) to avoid over-discharge and damage to the battery.
- Check the connection of all wires: Ensure that there is no loose, broken, or short-circuited wire.
- Test the operation of the parts: Turn on the remote control and the model's power supply, and test the operation of the motor, servo, ESC, etc. Ensure that the motor runs smoothly, the servo responds accurately, and the ESC has no abnormal noise or overheating.
- For RC boats: Check the water cooling system to ensure that water can flow through the ESC and motor normally. For RC aircraft: Check the propeller for damage or looseness, and ensure that the landing gear is firm.

4.2 Normal Usage Steps

1. Turn on the remote control first, and adjust the throttle and control stick to the neutral position.
2. Turn on the model's power supply (connect the battery or turn on the power switch).
3. Wait for the receiver and ESC to initialize (usually 2-3 seconds). After initialization, the model is ready to operate.
4. Operate the remote control stick slowly to control the model's movement. Avoid sudden and violent operation, which may cause the model to lose control or damage the parts.
5. During use, pay attention to the working status of the parts. If you find abnormal noise, overheating, or poor control response, stop using the model immediately, turn off the power supply, and check the parts.
6. After use, turn off the model's power supply first, then turn off the remote control. Disconnect the battery from the model and store it separately.

4.3 Usage Precautions

- Do not use the model in harsh weather conditions (such as strong wind, heavy rain, thunderstorm) to avoid damage to the parts or safety accidents.
- For RC cars: Do not drive on roads with heavy traffic or in crowded places to avoid collisions with people or objects. For RC boats: Do not sail in restricted water areas or near swimmers. For RC aircraft: Fly in open areas away from buildings, power lines, and airports, and comply with local aviation regulations.
- Do not overcharge or over-discharge the LiPo battery. Use a special LiPo battery charger and follow the charging instructions to avoid battery swelling, fire, or explosion.
- During use, keep a safe distance from the model to avoid injury from rotating propellers, moving tires, or high-speed parts.
- Do not modify the parts without authorization. Unauthorized modification may cause the parts to fail or lose safety protection, leading to accidents.

5. Maintenance and Storage

5.1 Daily Maintenance

Regular maintenance can prolong the service life of the parts and ensure their stable performance. The following maintenance work should be done after each use and regularly:

- Clean the parts: Use a soft brush, dry cloth, or compressed air to remove dust, dirt, and debris from the parts. For RC boat parts used in saltwater, rinse them with fresh water after use and dry them thoroughly to prevent corrosion.
- Check for wear and damage: Inspect the parts for wear, cracks, deformation, or other damage. Replace worn or damaged parts in time to avoid affecting the normal operation of the model.
- Lubricate moving parts: Apply a small amount of special model lubricant to the moving parts (such as gear sets, servo shafts, motor bearings) regularly to reduce friction and wear. Do not use excessive lubricant to avoid attracting dust.
- Check the battery: After use, charge the battery in time (do not store the battery in a low-voltage state). Inspect the battery for swelling, leakage, or damage. If any abnormality is found, stop using the battery immediately.
- Inspect the wires and connectors: Check the wires for aging, cracking, or breakage, and the connectors for looseness or oxidation. Replace damaged wires or connectors in time, and clean the oxidized connectors with alcohol.

5.2 Long-term Storage

If the parts are not used for a long time, follow the following storage requirements:

- Clean and dry the parts thoroughly before storage to remove all dirt and

moisture.

- Store the parts in a cool, dry, and well-ventilated place, away from direct sunlight, high temperature, and humidity. The storage temperature is recommended to be 10°C-30°C, and the relative humidity is less than 60%.
- Store the LiPo battery separately in a fireproof battery bag, with the voltage maintained at 3.8V-3.85V per cell (storage voltage). Do not store the battery with metal objects to avoid short circuit.
- Disassemble the parts from the model if necessary, and place them in a sealed box with anti-moisture agent to prevent corrosion and dust accumulation.
- Check the parts and battery regularly (every 1-2 months) during storage to ensure that there is no abnormality.

6. Troubleshooting

If the parts fail to work normally during use, you can refer to the following troubleshooting methods. If the problem cannot be solved, please contact our after-sales service.

Fault Phenomenon	Possible Causes	Troubleshooting Methods
Motor does not run	1. Battery low voltage or no power; 2. Poor connection between motor and ESC; 3. ESC failure; 4. Remote control throttle not in neutral position	1. Charge the battery or replace with a fully charged battery; 2. Check and re-connect the motor and ESC wires; 3. Replace the ESC and test; 4. Adjust the remote control throttle to neutral position and re-initialize
Servo does not respond or responds inaccurately	1. Poor connection between servo and receiver; 2. Low battery voltage; 3. Servo damaged; 4. Remote control channel setting error	1. Check and re-connect the servo signal wire; 2. Charge the battery; 3. Replace the servo and test; 4. Reset the remote control channel according to the manual
ESC overheats or has abnormal noise	1. Poor heat dissipation of ESC; 2. Motor overload; 3. Short circuit in the circuit; 4. ESC internal failure	1. Check the ESC installation position and ensure good ventilation; 2. Reduce the throttle or replace a suitable motor;

		3. Check the circuit for short circuit and repair; 4. Replace the ESC
Battery discharges quickly or cannot be charged	1. Battery aging or damaged; 2. Over-discharge of the battery; 3. Charger failure; 4. Poor connection between charger and battery	1. Replace the battery; 2. Try to charge the battery with a low current (if over-discharged); 3. Replace the charger and test; 4. Check and re-connect the charger and battery plug
RC aircraft cannot maintain stable flight	1. Battery center of gravity offset; 2. Propeller damaged or loose; 3. Servo operation abnormal; 4. Flight controller setting error	1. Adjust the battery position to balance the center of gravity; 2. Replace or tighten the propeller; 3. Check and repair the servo; 4. Reset the flight controller according to the manual

7. Safety Precautions

The use of RC model parts involves certain risks. Please strictly abide by the following safety precautions to avoid personal injury and property damage:

- **Age Restriction**: This product is suitable for users over 14 years old. Minors should use the product under the supervision of adults.
- **Fire Safety**: LiPo batteries are flammable and explosive. Do not expose the battery to high temperature, open flame, or puncture it. In case of battery swelling, fire, or leakage, immediately place it in a fireproof container and do not approach it.
- **Personal Safety**: Keep a safe distance from the rotating propellers, moving tires, and other high-speed parts of the model to avoid being cut or hit. Do not touch the motor, ESC, or other parts that may generate high temperature during use to avoid burns.
- **Environmental Safety**: Do not discard the parts and batteries at will. Dispose of the waste parts and batteries according to local environmental protection regulations to avoid environmental pollution.
- **Electrical Safety**: Do not touch the live parts with wet hands to avoid electric shock. When charging the battery, use a dedicated charger and charge it in a fireproof and well-ventilated place, and do not leave it unattended during charging.

8. After-sales Service

We provide a one-year warranty for our products (from the date of purchase). Within the warranty period, if the product has quality problems due to manufacturing defects, we will provide free repair or replacement services (excluding damage caused by improper use, unauthorized modification, or natural wear).

If you need after-sales service, please prepare the following information:

- Purchase invoice or order number
- Product model and serial number (marked on the product label)
- Detailed description of the problem and photos/videos of the fault phenomenon

After-sales Service Contact Information:

- Email: 651419362@qq.com
- Phone: +86-123-4567-8901
- Website:https://ysidohobby.1688.com
- Working Hours: Monday to Friday, 9:00-18:00 (Beijing Time)

9. Disclaimer

1. The user shall be responsible for any personal injury, property damage, or other losses caused by improper use, unauthorized modification, or failure to abide by the safety precautions in this manual.

2. We are not responsible for any losses caused by the use of the product in violation of local laws and regulations.

3. The product specifications and parameters in this manual are subject to change without prior notice. For the latest product information, please visit our official website.

4. This manual is protected by copyright laws. No part of this manual may be reproduced, copied, or distributed without the written permission of our company.

Thank you again for choosing our RC model parts! We hope you enjoy your model hobby. If you have any suggestions for our products or services, please feel free to contact us.

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