

Ages 14+

UDIR/C®

ARROW



25" Max-Speed:50km/h
· Brushless Motor

UDI005

Operations Guide

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Important Statement

Thank you for buying UDIRC's product. Our product is special control substances and people who under 14 years old must not use the product. Please read this brochure carefully before using the product. You are regarded as accepting all contents in this user manual when using this product.

This product is not an ordinary toy but a piece of complicated remote boat model which is integrated with professional knowledge by mechanic, electronic, air mechanics, high-frequency emission etc. It's supported to play the boat under legal laws and safety water area. The users promise to be responsible for their behavior when using this product.

We undertake no liability for those accidents caused by environment, illegal behavior, improper operation and refitting after sale of the product.

We have entrusted the distributor to provide technology support and after-sale service. If you have any question about use, operation, repair etc., please contact the local distributor.

*** Only use the UDIRC's original or authorized spare parts and accessories, otherwise ,we are not responsible for any injuries or damage(s) that may caused.**

*** Keep the package and user manual so as to refer to the important information whenever.**

Safety Precautions:

This product is suitable for experienced RC model users aged 14 years or above. This product contains small parts, please put it out of child's reach.

(1) Playing field

The playing field must be legally approved by your local government. Do not play the boat in the swimming pool or near the people who is swimming in the water area. Playing field must spacious enough.

(2) Use correctly

For safety elements, please only use UDIRC's spare parts to replace the damaged parts. Improper assembly, broken hull, defective electronic equipment or unskilled operation all may cause unpredictable accidents such as boat damage or human injury. Please pay special attention to safety operation and have good knowledge of accident responsibility that the user may cause.

(3) Keep away from obstacles and crowd

The speed and status of a running RC boat is uncertain and it may cause potential danger. So the user must keep away from crowd, obstacles in the water etc. when operating a running RC boat. Do not play the boat in rainy, storm, thunder and lighting weather for the safety of user, around people and their property.

(4) Keep away from salt water environment

The boat inside is consisted of precise electronic components. Salt water may damage electronic components and cause accident.

(5) Safe operation

Please operate the RC boat in accordance with your physical status and playing skill. Fatigue, listlessness and improper operation may increase the rate of accident. Before playing the boat, please make sure no water plants to avoid propeller from getting tangled as this may cause damage to boat. It's not suggested to play it under this condition.

(6) Keep away from rotating parts

After power on the boat, rotating parts like propellers may cause serious injury and damage. Keep face and body away from rotating parts.

(7) Keep away from heat

The RC boat is made of metal, fiber, plastic, electronic components etc. Keep away from heat and sunshine to avoid distortion and damage.

(8) The boat should be controlled within max control distance. Do not play the boat in place with signal interference. Or may cause signal interruption and the boat will be out of control, which may result in accident.

(9) Do not touch the hot motor to avoid being burnt.

(10) Please use the recommended charger only. Power off the boat before cleaning it.

Check the charger, charging plug etc. regularly to ensure they can work well. If there is any damage, stop using it immediately till it's fixed well.

Safe Notice for Battery

- * Keep the battery away from children and animals.
- * Discontinue charging if you notice the battery is swollen.
- * Do not charge the battery once it is crashed or damaged.
- * Check the battery if any damage after crash.
- * Do not overcharge the battery.
- * Keep the battery away from flammable material or liquid.
- * Do not put the battery on high temperature place, store it in a proper container to avoid damage or explode.
- * Do not put the battery into your pocket or bag to avoid contacting with sharp objects or metal.
- * Do not disassemble, refit and repair the battery.
- * Do not use the battery to crash or hit hard surface.
- * Do not put the battery in water and keep it in dry place at ambient temperature.
- * Do not leave the battery without supervision when charging.
- * Make sure that there is no short circuit of the power wire.
- * Please use the recommended charger only.
- * Check the charger's wire, plug, surface regularly. Do not use any broken charger.
- * If do not fly the drone more than one week, maintain the drone battery with about 50% power to keep its performance and working life.

Charging Instruction for balance charger



Charging operation(Diagram) :



Plug the adapter into the AC power socket AC 100-240V, its output end to connect with balance charger and the red indicator of balance charger keep solid, the green indicator will keep flashing alternatively.



Plug the battery connector into the balance charger port.



When charging, the green indicator will keep solid green.



After fully charged, the green indicator will be off.

Security Warning

1. When charging, the balance charger should be put in dry and ventilated place, keep the battery away from flammable material or liquid.
2. The balance charger only can charge for Lithium polymer batteries. It only can charge a group of 2 strings or 3 strings of batteries, can not charge for 2 or above groups of batteries at the same time, otherwise it will damage the charger or batteries.
3. When charging, you must pick out the battery from the boat. Do not leave the battery without supervision when charging to avoid any accident.
4. Don't charge for the Lipo batteries at once after running, and the battery is still not yet cooling down. Otherwise, it may cause battery to get swollen.
5. Before connecting the battery and charger, please make sure that the polarity is correct.
6. When charging the battery, please make sure no external force impact or fall down, otherwise it may cause internal short circuit and result in danger.
7. In order to make sure your safe usage, please obey the instruction and use original charging configuration(Power adapter and balance charger) and Lipo battery. When the Lipo battery gets aging and bulging, please replace with new one in time.
8. After fully charged the battery, if don't remove it from the charger for some time, then it may cause auto discharge and resulting in battery power loss. When the charger defects the voltage is lower than rating voltage, then it will charge again until full. Long-term repeated charge and discharge may shorten the battery life.



Li-Po Battery Disposal & Recycling

Wasted Lithium-Polymer batteries must not be placed with household trash. Please contact local environmental or waste agency or the supplier of your model or your nearest Li-Po battery recycling center.

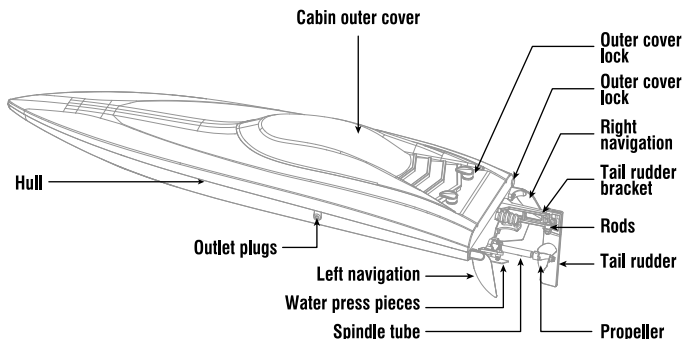


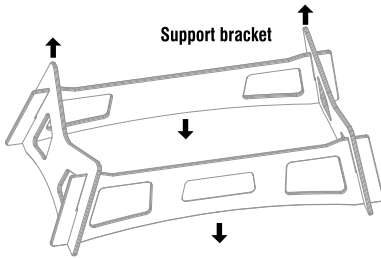
Safety notice before sailing

1. Please make sure the transmitter and boat battery is in full status.
2. Please make sure the transmitter throttle stick and rudder knob can be reset.
3. When power on the equipment, please obey the power on and off order. You need to power on the transmitter first and then power on the boat. When turn off, you need to disconnect the boat power and then turn off the transmitter. Incorrect turn on and turn off order may cause the boat be out of control to affect yourself and other people's safety. Please cultivate correct turn on and turn off habit.
4. Make sure the connection is solid between battery and motor etc. The ongoing vibration may cause bad connection of power terminal to make the drone out of control.
5. Improper operation may cause impact to the boat and damage the hull or propeller, then cause difficult control or unable to control. Please go to the local distributor to buy new parts for replacement so that the boat will return to its best status.

Boat and transmitter instruction

Boat

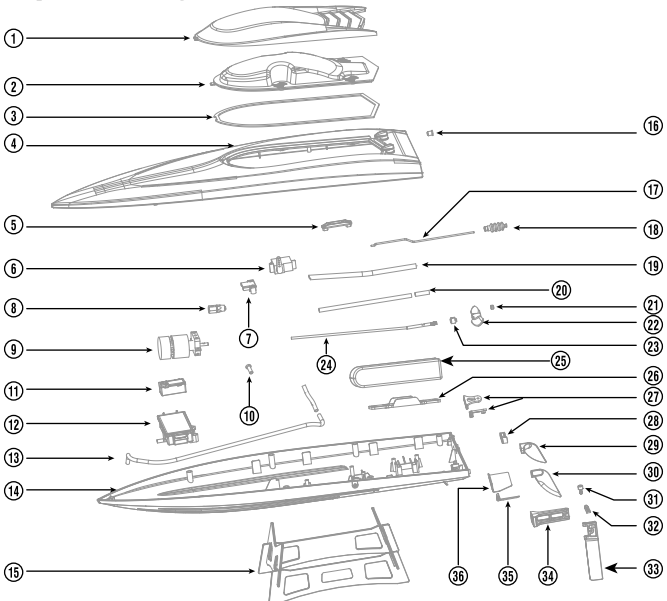




Support bracket

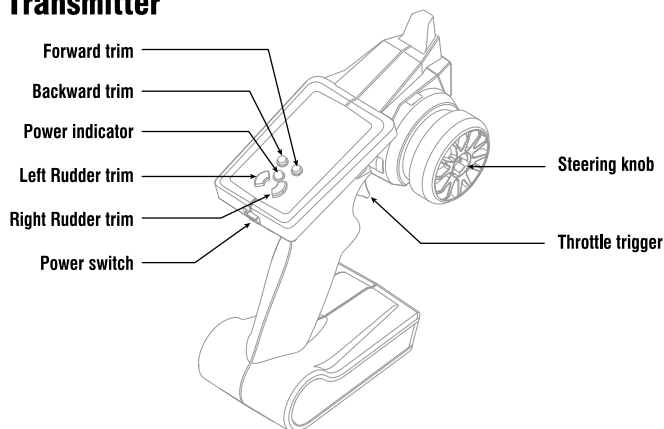
Hull spec	630x170x110mm	Boat battery	2200mAh 11.1V
Hull weight	1233g	Lipo Battery charging time	180~190mins
Propeller diameter	40mm	Control range	120~150 m
Sailing time	4~6mins	Max Speed	35~45Km

Exploded diagram



No.	Name	No.	Name	No.	Name
1	Cabin outer cover	13	Silicon tube	25	Lipo battery
2	Cabin inner cover	14	Hull	26	Battery board holder
3	EVA waterproof ring	15	Support bracket	27	Pressure water pieces
4	Boat surface	16	Rubber stopper	28	O-ring press pieces
5	Steering gear retainer	17	Rod	29	Right navigation
6	Steering gear	18	Rod waterproof ring	30	Left navigation
7	Spindle tube holder	19	Spindle tube	31	Rod retainer
8	Steel rope holder	20	Teflon tube	32	Tail rudder rocker arm
9	Brushless motor	21	Anti-slip nuts	33	Tail rudder
10	Outlet plugs	22	Propeller	34	Tail rudder support bracket
11	Receiver box	23	Propeller holder	35	Left water press
12	ESC case	24	Steel rope	36	Right water press

Transmitter

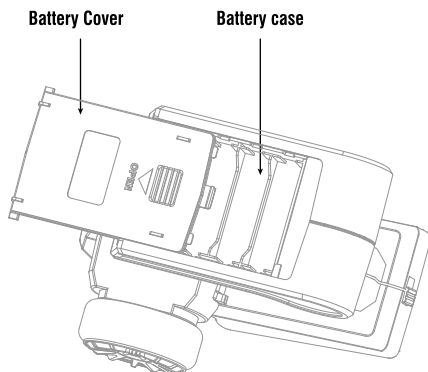


Button Function

Forward trim	Press down this button to adjust the throttle forward deviation.
Backward trim	Press down this button to adjust the throttle backward deviation.
Left Rudder trim	Press down this button to adjust the tail rudder left turning deviation.
Right Rudder trim	Press down this button to adjust the tail rudder right turning deviation.
Power switch	Push left to power on the transmitter, and back to power off.
Steering knob	Twist forward the knob, the boat turns right. Twist backward the knob, then turn left.
Throttle trigger	Pull down the throttle trigger and the boat goes forward. Push up the trigger, then go backward.

Battery installation:

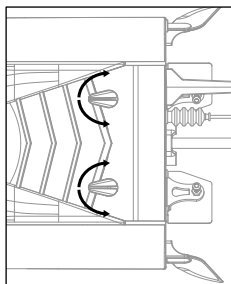
Open the battery cover on the back side of the transmitter and put 4 1.5V alkaline batteries (AA, not included) into the box in accordance with electrode instructions.



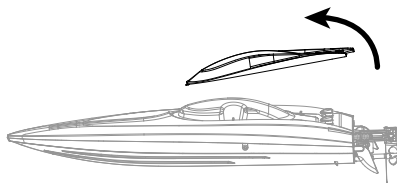
Battery case

Boat battery installation method

1. Twist to left or right to open the outer cover lock(Picture 1), then open up the cabin cover(picture 2).

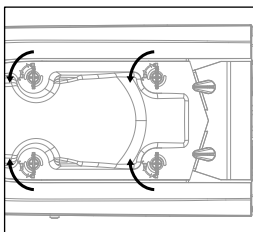


Picture 1

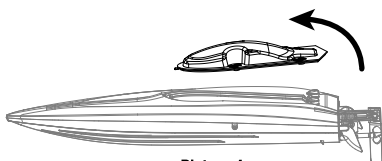


Picture 2

2. Two left cabin inner cover lock twisted to right and open them. And the right two locks turns to left to open (picture 3), then you can take out the inner cabin cover (picture 4).

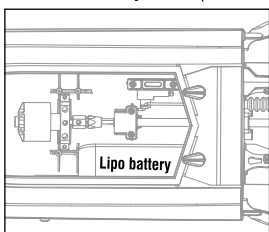


Picture 3

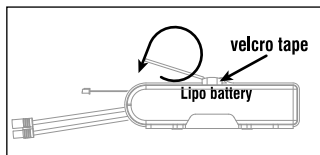


Picture 4

3. Put the Lipo battery into the boat battery holder (picture 5), then use velcro tape to fasten the battery is OK. (Picture 6)



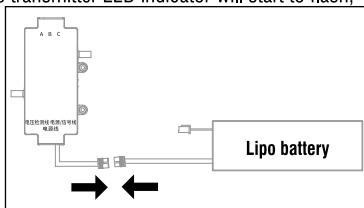
Picture 5



Picture 6

4. Power on the transmitter, then the transmitter LED indicator will start to flash, and it shows ready to code pairing.

5. Connect the Lipo battery socket with ESC power terminal and the transmitter will make a sound dididi, it shows code pairing successfully.



- Notice:**
1. After power on the boat, the motors will make a sound di... Di...
 2. The Lipo battery wires need to put aside of the boat to avoid tangled or broken off by the rudder wheels.
 3. If there is a few boats to play together, you need to code pairing one by one, and can not do it at the same time to avoid improper operation and cause danger.

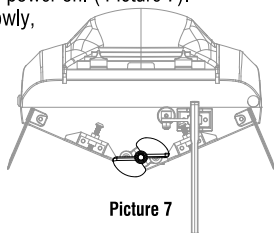
6. After operate above steps, please install the covers as below order:

- ① Install the inner cover to the hull and then tighten the inner cover lock.
- ② Install the outer cover to the hull and then tighten the outer cover lock.

Check before sailing

1. Check the rotation direction of propeller once power on. (Picture 7).

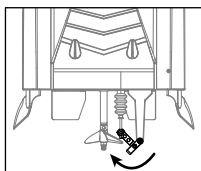
Pull back the throttle trigger of transmitter slowly, the propeller will spin counterclockwise. Push forward the throttle trigger slowly, the propeller will spin clockwise.



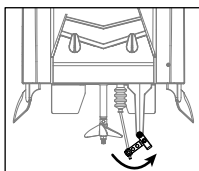
Picture 7

2. Don't fold the water-cooling hose and keep it smooth inside.

3. Twist the rudder knob towards counterclockwise, the steering gear will turn left (Picture 8); Twist the Rudder Knob clockwise, the steering gear will turn right (Picture 9).



Picture 8



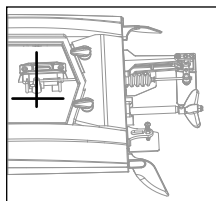
Picture 9

4. Make sure that the boat cover is locked up and buckled. Make sure that the tail rubber stopper is tight to prevent the water from entering.
5. Use the provided screw driver and wrench to fix the screws and ensure that all screws are fixed and tight.
6. Make sure the power plug and battery wire are connected correctly and tightly. Keep the battery wire to the boat side to avoid it touching the motor.

Calibration

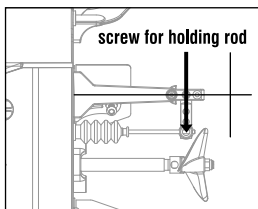
After a period of sailing, it may be difficult in control if the trimming is unavailable in direction. Please carry out the following procedures to calibrate the direction.

1. After pairing the frequency, if the steering gear is not vertically upward (Tolerance within 10° is in the normal range.) (Picture 10) , please refer to the instruction for steering gear replacement on page 14 and then calibrate the steering gear.



Picture 10

2. Check if the tail rubber is perpendicular to the boat, if the angle is not vertical slightly, use the provided hexagon wrench to release the screw for holding rod (Picture 11), then re-calibrate and fix the screw.



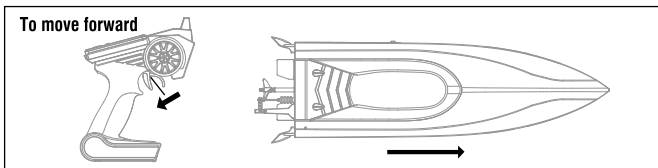
Picture 11

3. If boat slightly yaw during sailing, it can be adjusted by using the trimming button.

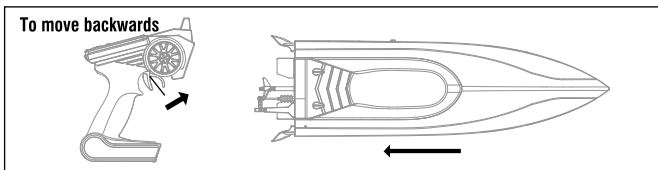
Notice: 1. Keep away from propeller during calibration to avoid injury or damage.

2. The floating waste in water may easy to damage the steering gear or propeller when the boat sailing at high speed. Please replace the damaged steering gear or propeller in time.

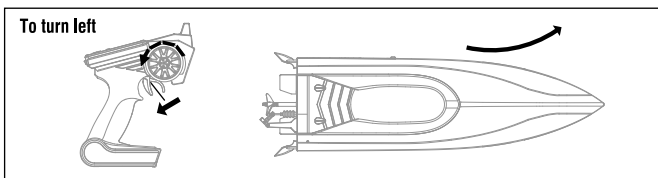
How to operate the boat:



1. Pull back the throttle trigger of the transmitter.

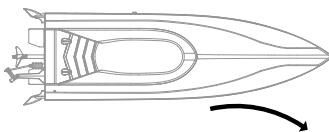


2. Push forward the throttle trigger of the transmitter.



3. Pull back the throttle trigger of the transmitter and move the steering knob counterclockwise

To turn right

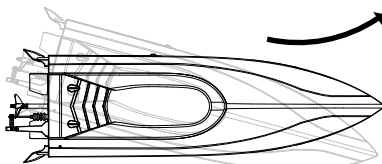
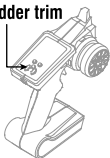


4. Pull back the throttle trigger of the transmitter and move the steering knob clockwise.



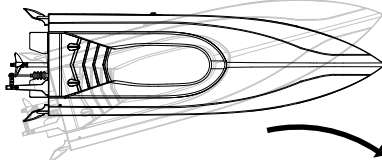
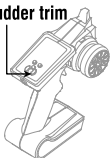
5. If the boat capsizes: Push forward the throttle trigger of the transmitter and then pull back at once. The boat will then return to normal. (The capsize reset function will turn off automatically when the boat is in low battery.)

Left Rudder trim

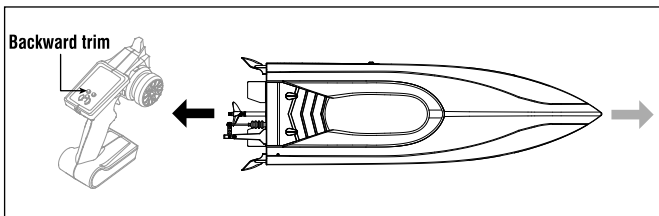


6. If the boat drifts to the right: Press the left rudder trim on the transmitter and the boat will gradually correct the rudder alignment. It will start moving straight.

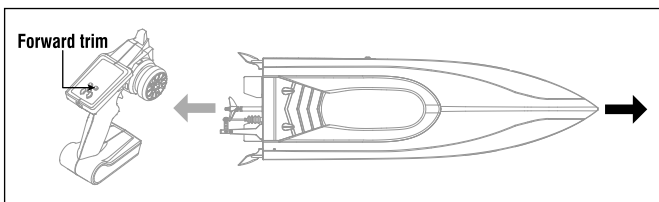
Right Rudder trim



7. If the boat drift to the left: Press the right rudder trim on the transmitter and the boat will gradually correct the rudder alignment. It will start moving straight.



8. If the boat still moves forward when the throttle trigger is in the middle position: Press backward trim until the boat stops going forward.



9. If the boat still moves backwards when the throttle trigger is in the middle position: Press forward trim until the boat stops going backwards.

Boat function introduction

Low Battery Alarm

When the boat in low battery, the transmitter will beep "di.di.di..." constantly to remind the user to remote back the boat as soon as possible. And the boat speed will slow down to half and the battery only can last about 1 minute at such condition. Otherwise the it may cause over discharge to damage the battery or low battery to loose control. The capsized reset function will turn off automatically when the boat in low battery.

When the transmitter in low battery, the transmitter will beep "di...di...di..." to remind the user to remote back the boat to replace the batteries as soon as possible. Or the boat may be out of control.

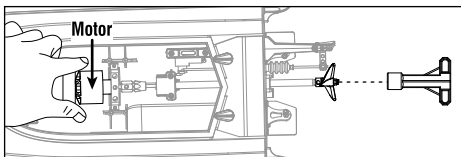
Out of Range Alarm

When the boat is running out of the max remote control distance, the transmitter will Beep "didi...didi...didi..." to alarm the user to remote back the boat immediately. Or the boat may be out of control and run away.

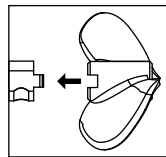
Spare parts replacement instruction diagram

Propeller replacement

1. Squeeze the motor and fix it in position by hand (Picture 12);
2. Use the tool to remove the anti-slip nut in the back of propeller in counterclockwise direction and pull out the propeller;
3. Install the new propeller as picture shown.
4. Use the tool to fix the anti-slip nut in clockwise direction.



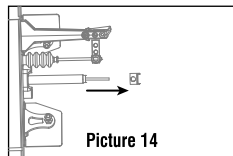
Picture 12

Propeller install direction
Picture 13

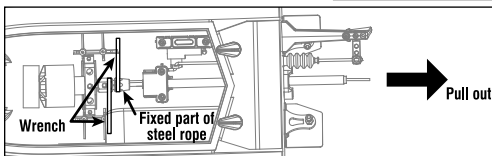
- Notice:**
1. Cut off the power before you replace the propeller.
 2. The side with notch of propeller shall fit toward the fixed part of propeller, otherwise the boat can not sail.

Steel rope replacement instruction

1. Squeeze the motor and fix it in position by hand (Picture 12)
2. Use the tool to remove the anti-slip nut back of propeller in clockwise and pull out the propeller.
3. Use the provided hexagon wrench to remove the fixed part of propeller. (Picture 14)
4. Use 2 provided wrenches to remove the steel rope fixed part in counterclockwise, then pull out the damaged steel rope.
5. The procedure of steer rope replacement is reverse of the disassemble procedure.



Picture 14



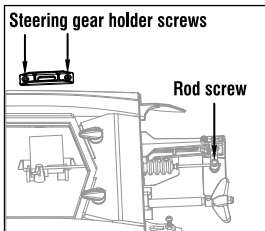
Picture 15

- Notice:** The steel rope will be cut off easily when it gets stuck with waste. Please make sure to avoid the waste in the water. Please cut off the power before you replace the steel rope.

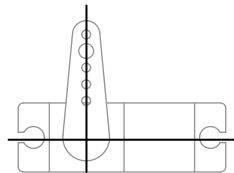
Steering gear replacement

When the steering gear is damaged, you need to take out the steering gear holder, and pick out the defective part, then loose the steering gear arm. When install the new steering gear, power on the boat and install the arm to the steering gear, lock the fasten parts, then it's ok to play.

1. Disassemble the rod screw, and then loose the steering gear press part and take out the steering gear.(Picture 16)
2. When the new steering gear is powered on, install the arm and fasten the screw, please take care of the vertical degree(picture 17).
(There is some tolerance which is normal)



Picture 16

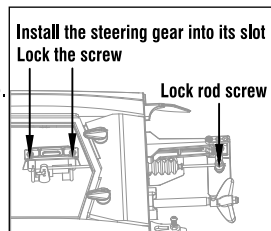


Picture 17

3. Install the rod into the second hole of steering gear arm(picture 18).
4. Install the steering gear into its slot and lock the press pieces and rod screws (picture 19).



Picture 18

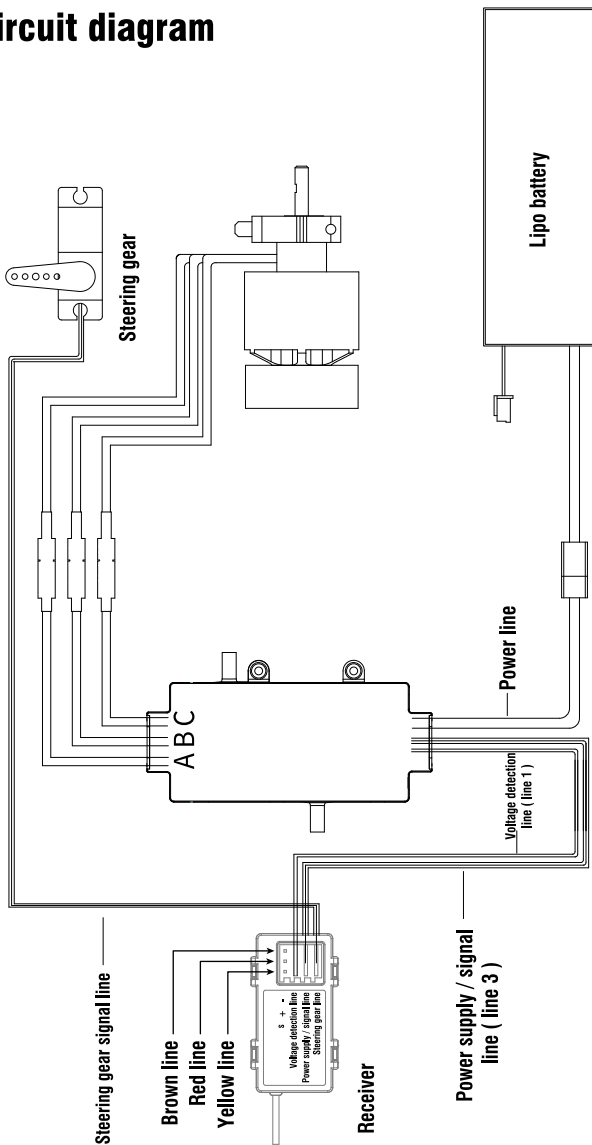


Picture 19

Maintenance and Repair

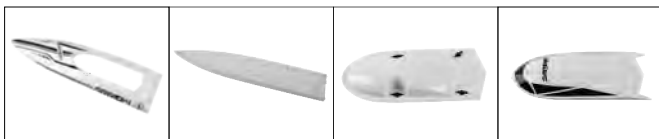
1. When RC boat stops running, the battery must be removed.
2. After playing the boat, if any water inside the hull, then you need to pick out the rubber stopper and tilt the boat to one side to pour out the water. Then put on the rubber stopper and press tightly.
3. To avoid painted surfaces of the boat from getting damaged and long time exposure to the sun. Every time after playing, you need to clean the boat and dry the hull to make sure the boat is in good condition.
4. If the RC boat is not used for a long time, disconnect the boat battery from the terminal and also remove the transmitter batteries to avoid leakage of the battery as this may damage the transmitter or boat.

Circuit diagram



Spare Parts

For convenience, the spare parts are listed for you to choose, which can be purchased from local distributor.



UDI005-01
Cabin cover

UDI005-02
Hull

UDI005-03
Cabin inner cover

UDI005-04
Cabin outer cover



UDI005-05
Left and right navigation

UDI005-06
Propeller

UDI005-07
Propeller holder

UDI005-08
Teflon cushion

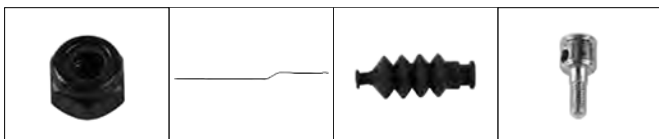


UDI005-09
Steel rope

UDI005-10
Steel rope holder
and wide - angle chuck

UDI005-11
Steel rope Holder
Chuck Cap

UDI005-12
Anti-slip nuts M3.0



UDI005-13
Anti-slip nuts M4.0

UDI005-14
Rods

UDI005-15
Rod waterproof ring

UDI005-16
Rod retainer



UDI005-17
Spindle tube

UDI005-18
Spindle tube holder

UDI005-19
Left and right water press

UDI005-20
Pressure water pieces



UDI005-21
Tail rudder set

UDI005-22
Steering gear part

UDI005-23
EVA Double-sided
adhesive

UDI005-24
EVA waterproof ring

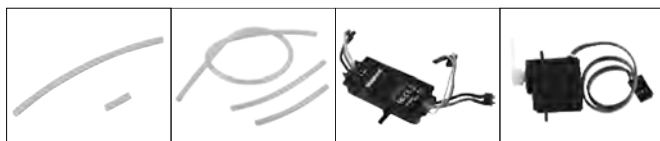


UDI005-25
M3X15 Threaded screws

UDI005-26
2.6X10 Flat screw

UDI005-27
M4X4 Machine screw

UDI005-28
Rubber stopper



UDI005-29
Teflon tube

UDI005-30
Silicon tube

UDI005-31
Electronic speed
controller(ESC)

UDI005-32
Steering gear



UDI005-33
Receiver

UDI005-34
Charger

UDI005-35
Balance charger

UDI005-36
Brushless motor



UDI005-37
Lipo battery

UDI005-38
Support bracket

UDI005-39
Transmitter

UDI005-40
Silicon rubber

Troubleshooting Guide

No.	Problem	Problem Cause	Solution
1	The transmitter indicator light is off	1. Low battery.	1. Replace the transmitter battery.
		2. The battery positive pole and negative pole are in reverse order.	2. Install the battery in accordance with the user manual.
		3. Poor Contact.	3. Clean the dirt between the battery and the battery slice.
2	Fail to pair the drone with transmitter	1. Indicator light is off.	1. The same as above 1.2.3.
		2. There is interfering signal nearby.	2. Restart the drone and power on the transmitter.
		3. Improper operation.	3. Operate the drone step by step in accordance with the user manual.
		4. The electronic component is damaged for frequent crash.	4. To buy spare parts from local seller and replace damaged parts.
3	The boat is under-powered or can not sail.	1. The propeller deformed seriously.	1. Replace the propeller.
		2. Incorrect installation of propeller.	2. Install the propeller in accordance with the user manual.
		3. Low battery.	3. Recharge the drone battery as per instruction.
		4. The battery is expired or over discharge protection.	4. Buy a new battery from local seller to replace the battery.
		5. Poor contact.	5. Disconnect the battery and then connect it with the plug again.
4	The boat tilts to one side.	1. The steering gear arm is not vertical seriously.	1. Calibrate the steering gear arm as per instruction.
		2. The tail rudder is not vertical seriously.	2. Calibrate the tail rudder as per instruction.
		3. The steering gear slips.	3. Replace the new steering gear as per instruction.

Important Statement

Due to the continuous improvement of products, the design or technical parameters will be modified without prior notice.

All content in this user manual have been checked carefully. If there is any question of printing or mistake, the company reserves the rights of final explanation.

Thank you again for your choice and your trust!

FCC Information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide residential protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on the circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC WARNING:

The equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. Modifications not authorized by the manufacturer may void user's authority to operate this device.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.





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