

# REDCAT-RACING

*1/8 4WD ELECTRIC-POWERED  
BRUSHLESS MONSTER TRUCK  
MODEL NO : EARTHQUAKE 8E  
3-DIFF TRANSMISSION*



*Product Size:*

*Length: 504mm*

*Width: 385mm*

*Height: 188mm*

*Wheelbase: 335mm*

*Tires size: 145\*70mm*

*Ground clearance: 46mm*

*Motor: RC 540 KV: 2230*

*ESC: EZRUN-80A*

## Instruction Manual

### Highlights:

- 4 Wheel Drive System
- Ready Assemble Ready to Run
- High Performance RC 540 KV: 2230 Type Brushless Motor, More Power!
- Brushless ESC EZRUN-80A
- 3200 Mah 2x7.4V 20C Li-Po battery
- Assembled Chassis(3mm 6061 T6 Aluminum)
- Full Function Control
- Colored Coil Spring Damped Suspension System
- Waterproof and Dustproof Sealed Gearbox
- Fast and Easy Assembly and Disassembly of Receiver and Battery Cover
- Quality Differential with Four Bevel Gears
- Precise Sealed Ball Bearing for the Whole Model
- Aluminum Alloy Drive shafts

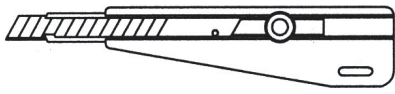
### ⚠ SAFETY PRECAUTIONS

- This radio controlled racing vehicle is not a toy!
- This high-performance R/C vehicle is recommended for ages 14 and older.
- First-time builders should seek the advice of experienced modellers before commencing assembly.
- Take enough safety precautions prior to operating this vehicle.  
You are responsible for this R/C vehicle's assembly and safe operation!

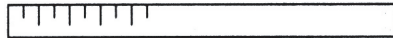
**[www.redcatracing.com](http://www.redcatracing.com)**

# Required equipment for operation

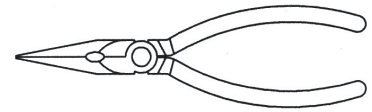
## 1. Tools required for building and maintenance:



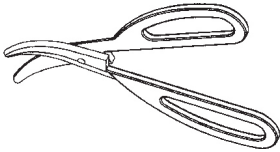
● Hobby knife



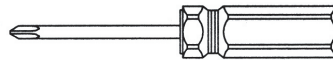
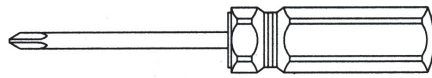
● Precision ruler



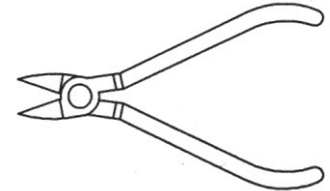
● Needle nose pliers



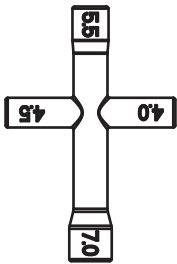
● Lexan scissors



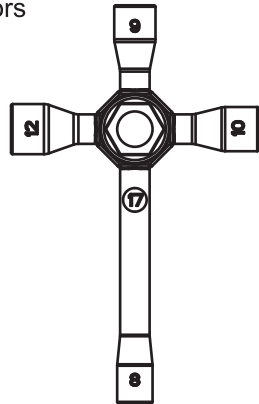
● Flat and Philips screwdriver



● Wire cutters



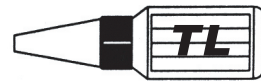
● Cross wrench



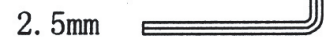
● Cross wrench



● CA glue&rubber cement



● Thread locking compound

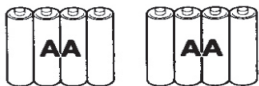


● Hex wrench

## WARNING!

Do not use a power screw driver to install screws into nylon or plastic materials. The fast locking may heat up the screws being installed that may break the molded parts or strip the threads during installation.

## 2. Additional items needed for operation:



8pcs AA alkaline batteries for transmitter



BS803-031  
Lipo battery charger

## IMPORTANT!

Check all the screws are tight before playing the vehicle!  
Use thread lock on all screws that work loose.

# Please read the instruction carefully before starting the assembly.


1. Please assemble and install this R/C vehicle without children's reach, as it includes small and sharp parts.
2. Do not run the vehicle on public streets or highways, as it might cause serious accidents, personal injuries and property damage etc.
3. During racing and after operation, the motor and ESC will become HOT. Therefore please do not touch them before cooling down.
4. Please make sure everyone is using different frequencies while racing the vehicle in the same area.


## 2.4GHz radio instructions

### Special symbols

Please pay attention to the following symbols, and read them carefully.

 **Danger:** If the operator does not operate according to the instructions, it may lead to serious injuries, even mortal danger.

 **Warning:** If the operator does not operate according to the instructions, it may lead to serious injuries, even mortal danger.

 **Attention:** If the operator does not operate according to the instructions, it may lead to serious injuries, even mortal danger. but generally it will not cause serious injuries to the operator.

### Safety guidelines

Don't drive the truck at night, bad weather such as rainy or thundering days. It will interfere the transmitter signal. Thereby it will cause out of control and unexpected accident.

Before you drive, please make sure the movement of servo corresponds with the direction of joysticks. If inconsistent, please adjust before drive.

You need to turn the throttle channel(ch2) and inching switch to the lowest before use. Then switch on the transmitter power, finally connect the receiver.

The sequence to shutdown is to turn off the receiver power first, and then the transmitter power.

If the above operations are reversed, it might lead to out of control and cause accident.

## Battery charging



If your transmitter, receiver use a nickel-cadmium, nickel-metal hydride rechargeable battery, you have to check it before use. If lack of electricity, it could cause inadequate control or out of control, resulting in accident. So please charge it immediately when the battery power is low.

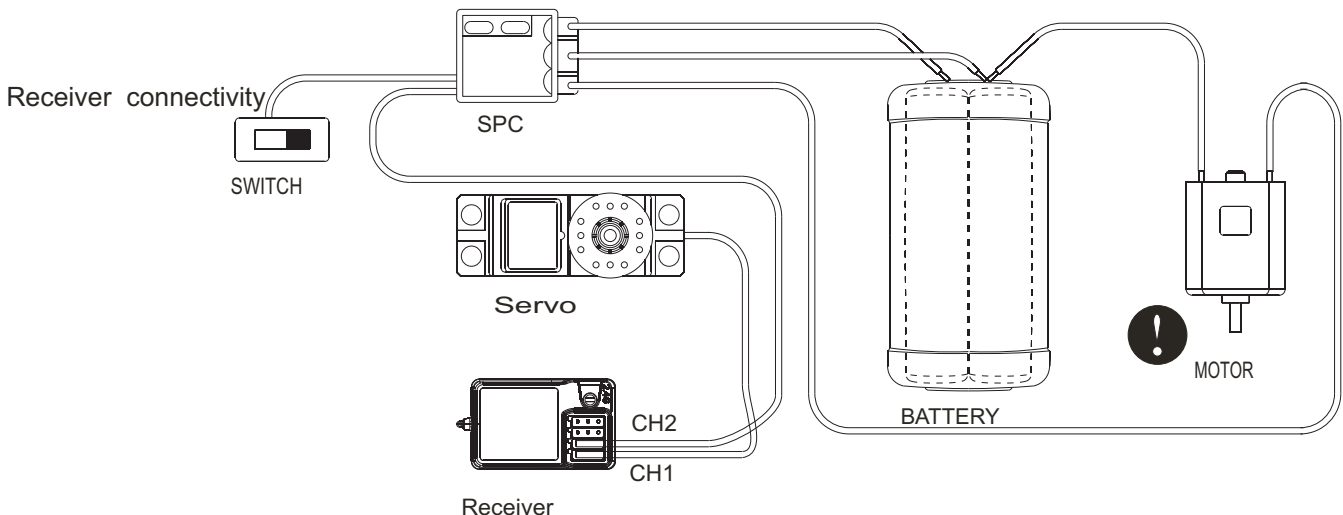
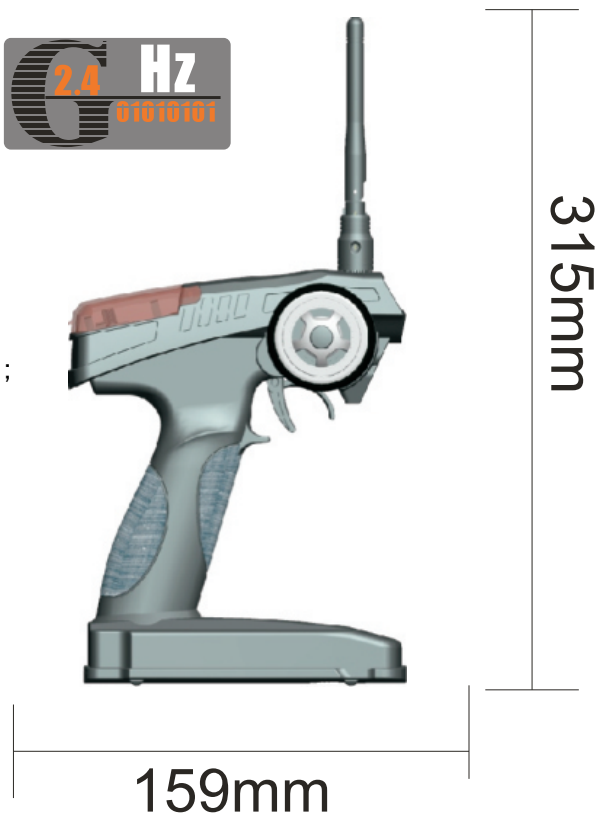


If you are using a nickel-cadmium, nickel-metal hydride batteries for recharging, please use a proper charger. If the electrical current is too large, it may lead to temperature over-heat and cause fire burning accident. Please cut off the power supply immediately after recharging. Please take out the battery from the transmitter when you are not using it within a period, because the battery may get damaged, thus being exposed.

### Transmitter specifications:



- A. Channels: 2 channels;
- B. Model type: car/boat;
- C. RF power: less than 20dbm
- D. Modulation: GFSK;
- E. Code type: digital;
- F. Sensitivity: 1024;
- G. Low voltage warning: yes (less than 9V);
- H. DSC port: yes (3.5mm);
- L. Charger port: yes;
- J. Power: 12vdc (1.5AA\*8);
- K. Weight: 328g;
- L. ANT length: 26mm;
- M. Size: 159\*99\*315mm;
- N. Color: black;
- O. Certificate: CE FCC;





**Note:**  
Place the antenna of the receiver vertically with the truck!  
Don't put it close to the metal thing for assuring its sensitivity. (See Figure 1)

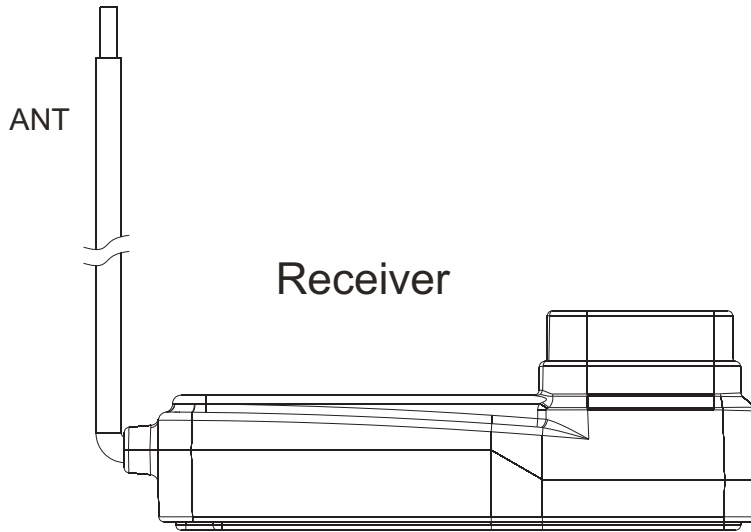


Figure 1

## 2. 4G Operation notes

### Matching (code)

The transmitter and the receiver are well matched in the factory, you do not need to match them. But if you are going to match the receiver with another transmitter, or if you need to change a new receiver or transmitter, please follow these steps:

- A. Install the battery to 2.4G transmitter and shut it down.
- B. Insert the bind cable to the channel BIND/CH3 port of the receiver. (Figure.1)
- C. Connect the receiver battery to VCC port of the receiver, at the same time the two LEDs are flashing, this means the receiver is going to the matching status.
- D. Press and hold the button on the transmitter, and then switch on the power supply.
- E. Observe the LED on the receiver, if the LED does not flash anymore, that means the matching is successful. (This takes about 5s)
- F. Release the match button on the transmitter, take out the bind cable.
- G. Install the server and then test.
- H. If the test fails, please repeat the actions above.
- I. If the test succeeds, then insert the power supply port into VCC, match complete.

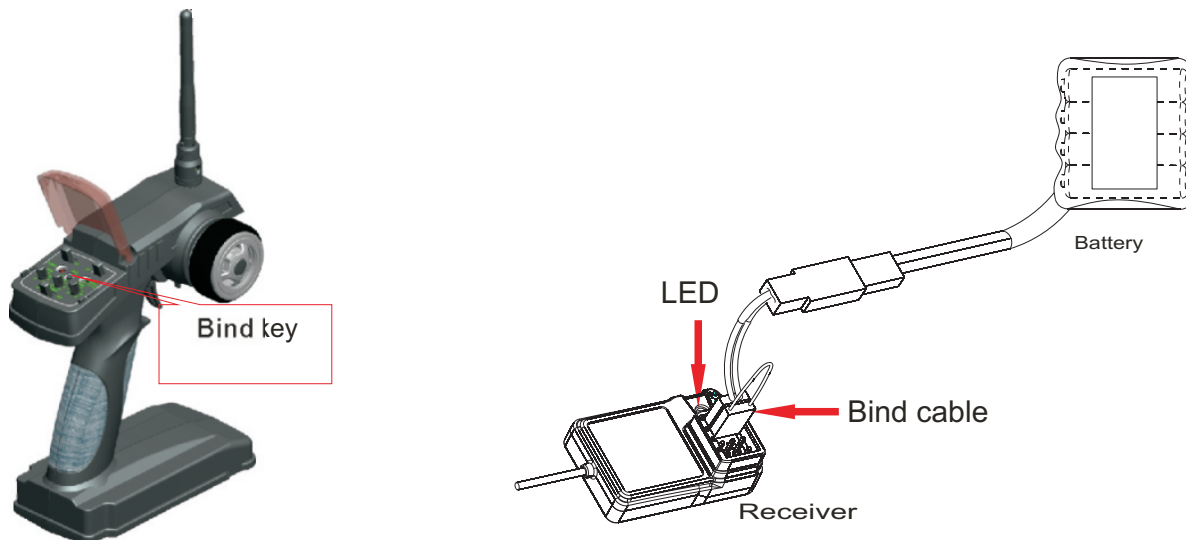


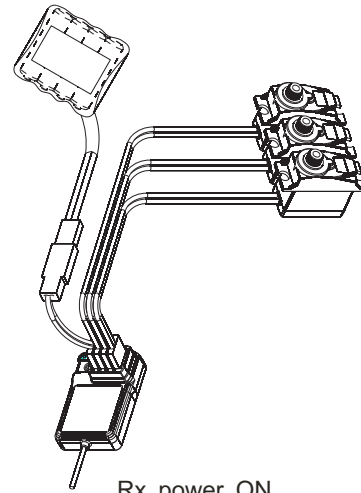
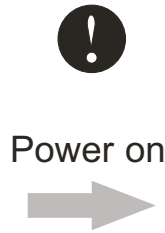
Figure 1

## Connecting to the power

- A. Connect every part.
- B. Switch on the power supply of the transmitter.
- C. Connect the power supply of the receiver.
- D. Receive LED light solid.
- E. Finish and use.



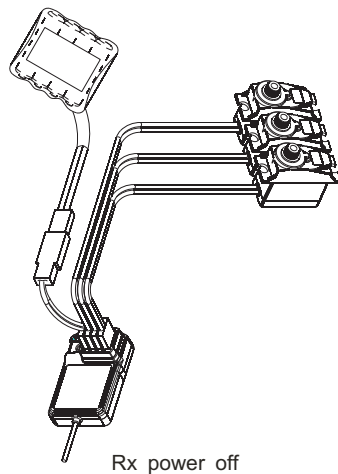
Tx power ON



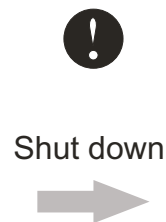
Rx power ON

## Shut down:

- A. Cut off the receiver power supply.
- B. Cut off the transmitter power supply.

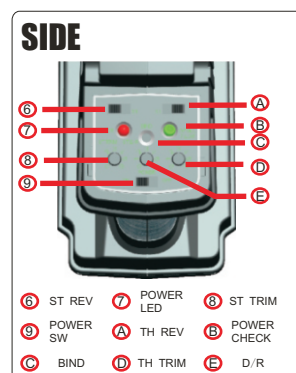
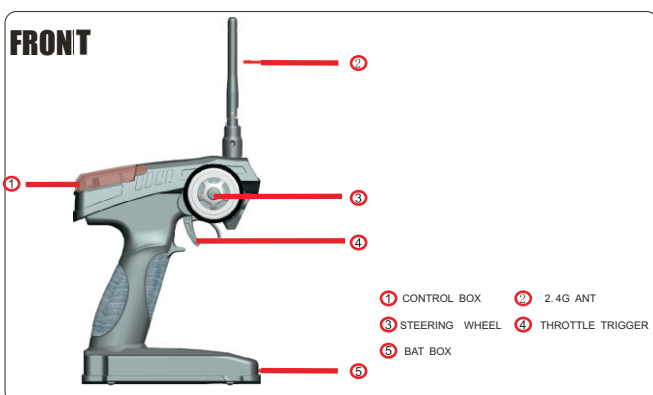


Rx power off

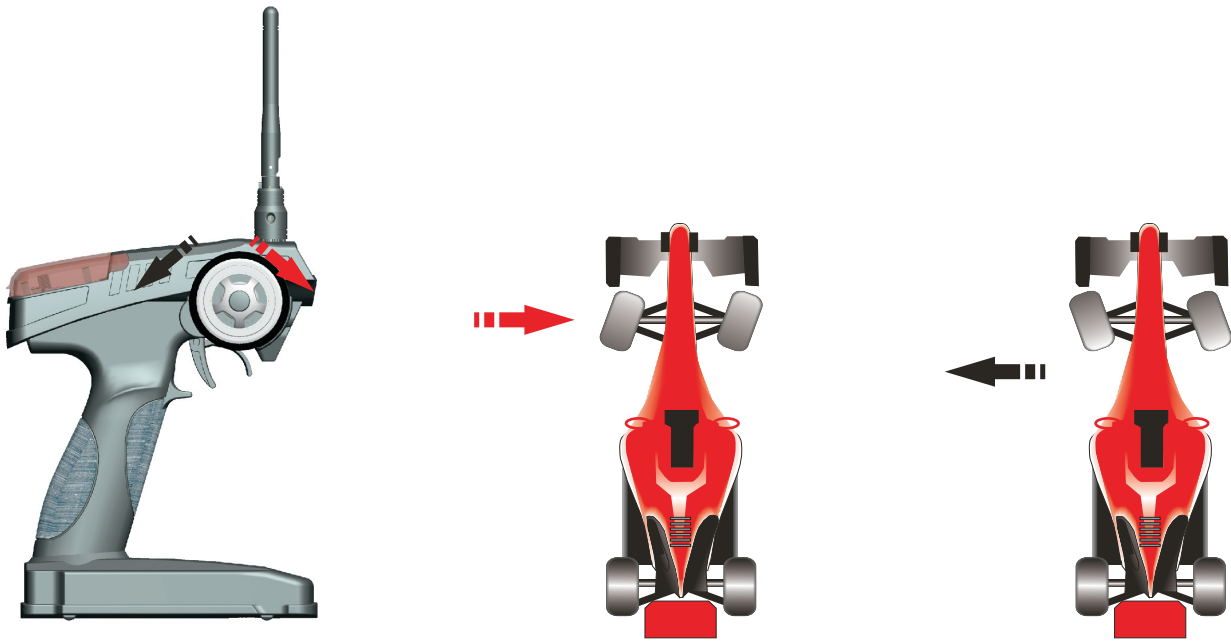


Tx power off

## 2.4G transmitter view angles



## Transmitter function notes

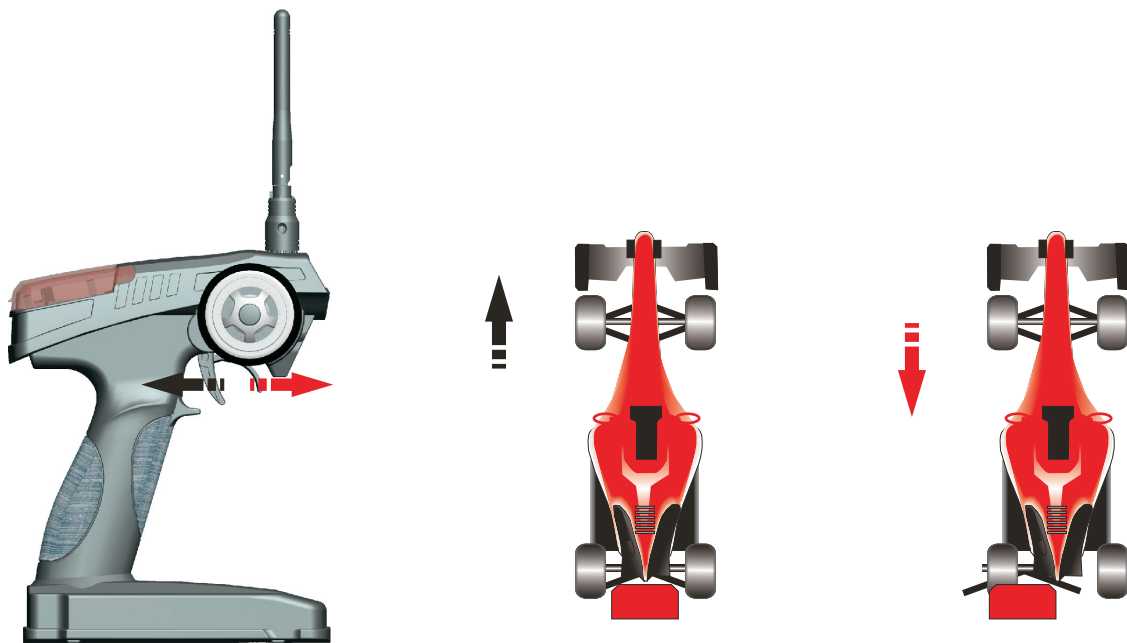


### Function Introduction:

This function is to control the direction, when the steering turn to right then the front wheel will turn to right (as picture), when the steering turn to left then the front wheel will turn to left (as picture).

### Operation Method:

Adjust the dual rate of the steering by adjusting the D/R knob.



### Function Introduction:

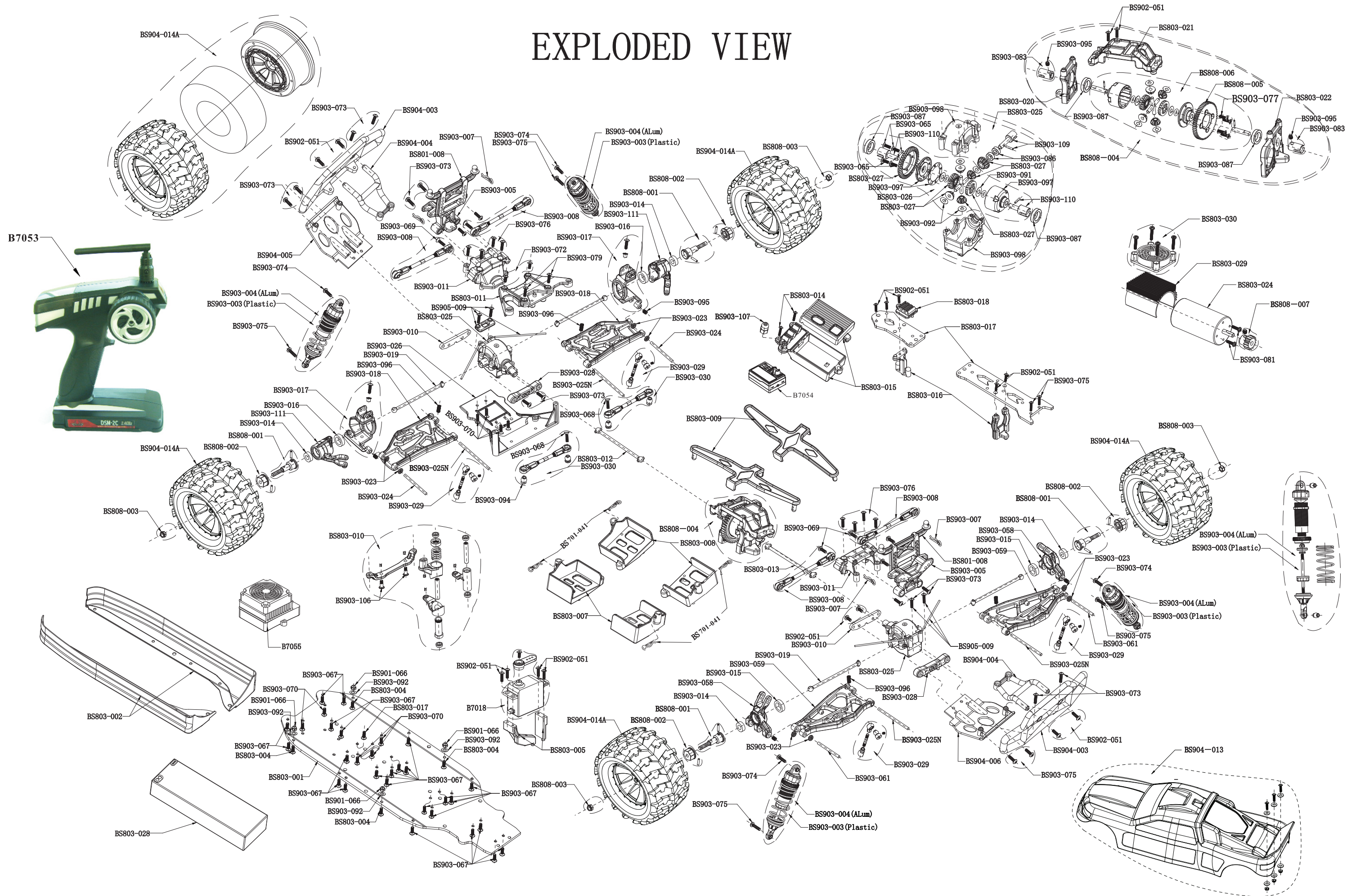
This function is to control the throttle speed, when pull the throttle trigger back, car will accelerate forward (see the picture), when push the throttle trigger, the car will put on the brakes or double ring astern (according to the different ESC) (see the picture).

### Operation Method:

To control it by pushing and pulling back the throttle trigger after power on.



# EXPLODED VIEW



# PARTS LIST

Item No.	Description	Item No.	Description		
BS903-004	Shock absorber unit(Alum.)	2pcs	BS904-003 Bumper	2pcs	
BS903-005	Shock tower	1pcs	BS904-004	Bumper brace	1pc
BS903-007	Body Pin	6pcs	BS904-005	Fr. bumper	1pc
BS903-008	Upper susp. arm set		BS904-006	Rr. bumper	1pc
BS903-010	Suspension arm mount block	2pcs	BS904-013	Silk-screened body	1pc
BS903-011	Upper susp. arm mount-Fr/Rr		BS904-014A	Tire unit(Chromed rim)	2pcs
BS903-014	Ball bearing(6*12*4)	2pcs	BS905-009	Rear anti-roll bar set	
BS903-016	Ball bearing(10*15*4)	2pcs	BS801-008	Fr/Rr body post	
BS903-017	C-Hub w/screw-L/R		BS901-066	M3 locknut	5pcs
BS903-018	Fr.lower susp.arm-L/R		BS901-067	Antenna pipe w/Cap	
BS903-019	Transverse driver shaft set		BS902-051	(BT3*10)B-head cross screw	12pcs
BS903-023	O-washer	4pcs	BS803-001	Chassis	1pc
BS903-024	Front suspension arm pin-short	4pcs	BS803-002	Side guard plate-L/R	
BS903-025N	Suspension arm pin-long	4pcs	BS803-004	(ISO3*8) Flat cross screw	12pcs
BS903-026	Fr. Chassis		BS803-005	Steering servo mount-A/B	
BS903-028	Lower susp. mount block-Fr/Rr		BS803-007	Battery base-L	
BS903-029	Anti-roll bar fixation set	2pcs	BS803-008	Battery base-R	
BS903-030	Steering linkage set		BS803-009	Left/right battery cover	
BS903-058	Hub rear carrier		BS803-010	Servo saver unit	
BS903-059	Rr.lower susp.arm-L/R		BS803-011	Upper deck-Fr	
BS903-061	Rear suspension arm pin-short		BS803-012	Centre drive shaft-Fr	1pc
BS903-065	(TPF2.6*10) Flat cross screw	12pcs	BS803-013	Centre drive shaft-Rr	1pc
BS903-067	(TPF3*10) Flat cross screw	12pcs	BS803-014	(BM3*14) B-head cross screw	12pcs
BS903-068	(TPF3*14) Flat Cross Screw		BS803-015	Receiver cover-Upper/Lower	
BS903-069	(TPF3*16) Flat cross screw	12pcs	BS803-016	Front/rear upper deck mount	
BS903-070	(ISO3*10) Flat cross screw	12pcs	BS803-017	Upper deck-Fr/Rr	
BS903-072	(BT3*8) B-head cross screw	12pcs	BS803-018	Wire mount	
BS903-073	(BT3*12) B-head cross screw	12pcs	BS803-020	Gear mount	
BS903-074	(BT3*14) B-head cross screw	12pcs	BS803-021	Centre diff cover	
BS903-075	(BT3*16) B-head cross screw	12pcs	BS803-022	Motor mount	
BS903-076	(BT3*20) B-head cross screw	12pcs	BS803-024	Brushless motor KV:2230	
BS903-079	(BM3*10) B-head cross screw	12pcs	BS803-025	Diff. gearbox unit	
BS903-081	(HM3*10) Cap head hexagon screw	6pcs	BS803-026	Diff. Unit	
BS903-083	Diff.outdrive D/set screw		BS803-027	Driving/driven gear, Diff.gear/bevel gears	
BS903-086	Ball bearing(5*10*4)	2pcs	BS803-028	7. 4V/20C Lipo battery	
BS903-087	Ball bearing(12*18*4)	2pcs	BS803-036	Steering servo horn linkage 1 set	



# PARTS LIST

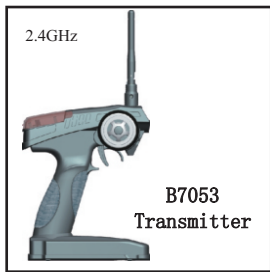
Item No.	Description
BS903-089	Pin(2*9.5) 12pcs
BS903-091	Washer A(5.2*10*0.2) 12pcs
BS903-092	Washer B(4.2*8*0.2) 12pcs
BS903-094	Double way ball end 6pcs
BS903-095	(M4*4) Set Screw 6pcs
BS903-097	Diff. Gearbox
BS903-098	Diff. Gearbox bulkhead-Upper /Lower
BS903-106	Screw Pin (M3*9.5) 12PCS
BS903-107	Antenna mount 3PCS
BS903-109	Diff.outdrive A/Pin(2*10)
BS903-110	Diff.outdrive B/Pin(2*10)
BS903-111	Kunckle Arm-L/R(metal)
BS701-041	Pin 1.2 6 pcs
B7018	Servo (9Kg)
B7053	Transmitter
B7054	R eceiver
B7055	Brushless ESC 80A

Item No.	Description
BS808-001	Axle w/pin 2pcs
BS808-002	Rim hub w/pin2*10 4pcs
BS808-003	M5 locknut 6pcs
BS808-004	Centre diff.Unit
BS808-005	Spur gear(49T)
BS808-006	Centre diff.Diff
BS808-007	Motor gear 12T/M4 Grub screw

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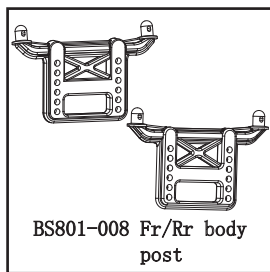
## Optional parts/Upgrade parts

BS903-003	Shock absorber unit(Plastic) 2pcs
BS903-096	(M4*8) Set Screw 6pcs
BS803-029	Motor heat sink
BS803-030	Motor cooling fan
BS803-031	LiPo battery charger
MPO-02	C hub / C hub with pin
MPO-03	Knuckle arm set
MPO-04	Rear hub set
MPO-05	Shock stay mount
MPO-06	Front suspension mount
MPO-07	Rear suspension mount
MPO-011	Steering link
MPO-019	Metal spur gear(49T)

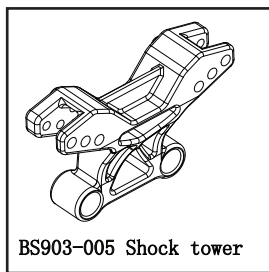


2.4GHz

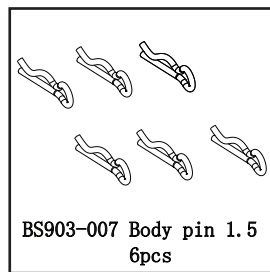
**B7053**  
Transmitter



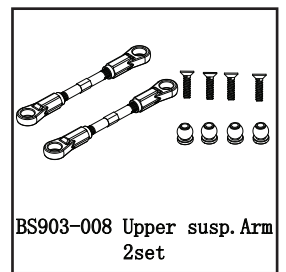
**BS801-008** Fr/Rr body post



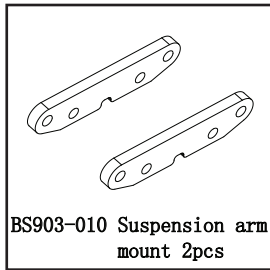
**BS903-005** Shock tower



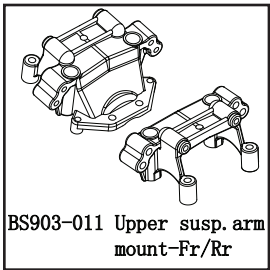
**BS903-007** Body pin 1.5  
6pcs



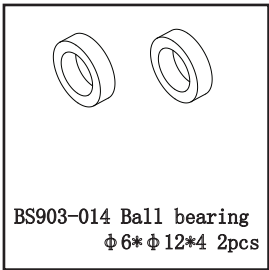
**BS903-008** Upper susp. Arm  
2set



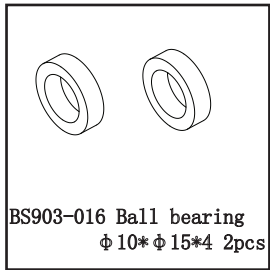
**BS903-010** Suspension arm  
mount 2pcs



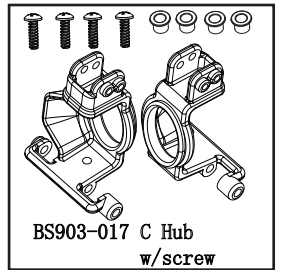
**BS903-011** Upper susp. arm  
mount-Fr/Rr



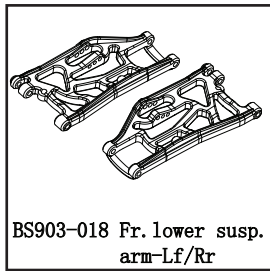
**BS903-014** Ball bearing  
 $\phi 6*\phi 12*4$  2pcs



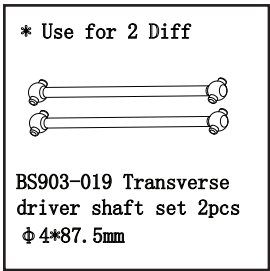
**BS903-016** Ball bearing  
 $\phi 10*\phi 15*4$  2pcs



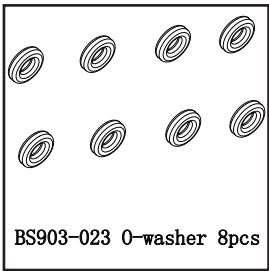
**BS903-017** C Hub  
w/screw



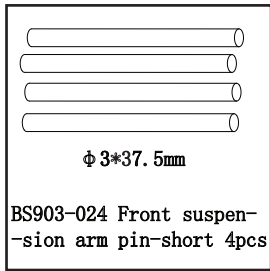
**BS903-018** Fr. lower susp.  
arm-Lf/Rr



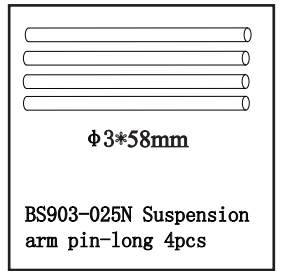
\* Use for 2 Diff  
**BS903-019** Transverse  
driver shaft set 2pcs  
 $\phi 4*87.5\text{mm}$



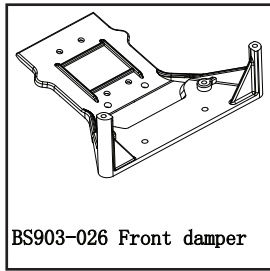
**BS903-023** O-washer 8pcs



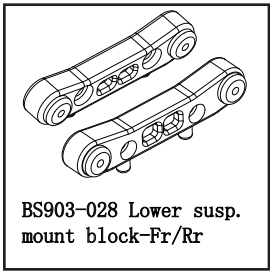
**BS903-024** Front suspen-  
sion arm pin-short 4pcs  
 $\phi 3*37.5\text{mm}$



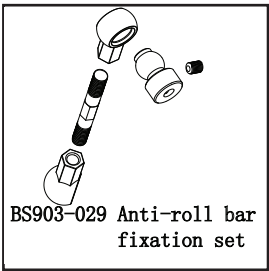
**BS903-025N** Suspension  
arm pin-long 4pcs  
 $\phi 3*58\text{mm}$



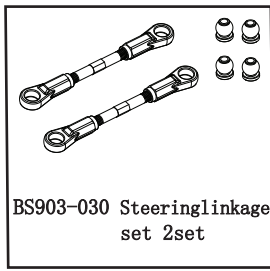
**BS903-026** Front damper



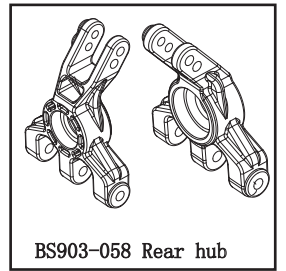
**BS903-028** Lower susp.  
mount block-Fr/Rr



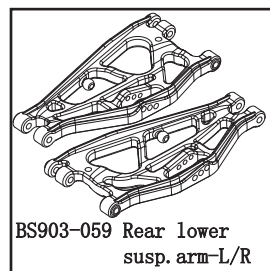
**BS903-029** Anti-roll bar  
fixation set



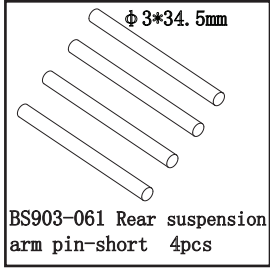
**BS903-030** Steeringlinkage  
set 2set



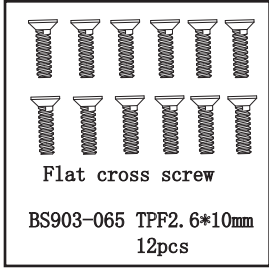
**BS903-058** Rear hub



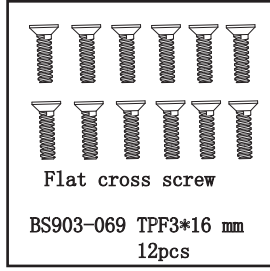
**BS903-059** Rear lower  
susp. arm-L/R



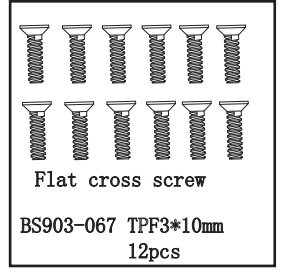
$\phi 3*34.5\text{mm}$   
**BS903-061** Rear suspension  
arm pin-short 4pcs



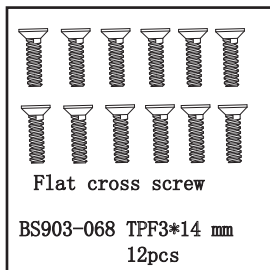
Flat cross screw  
**BS903-065** TPF2. 6\*10mm  
12pcs



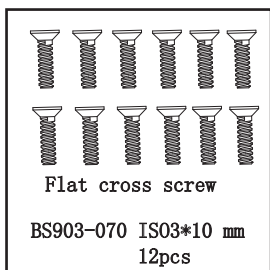
Flat cross screw  
**BS903-069** TPF3\*16 mm  
12pcs



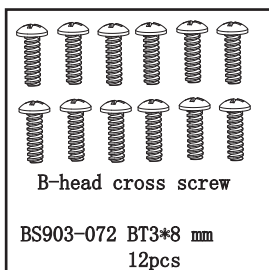
Flat cross screw  
**BS903-067** TPF3\*10mm  
12pcs



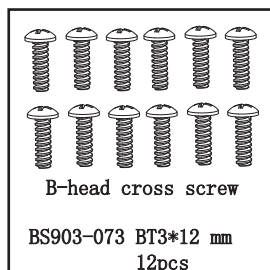
Flat cross screw  
**BS903-068** TPF3\*14 mm  
12pcs



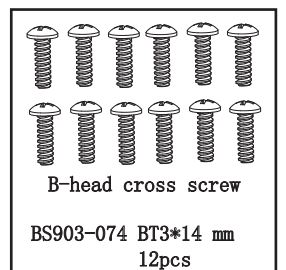
Flat cross screw  
**BS903-070** IS03\*10 mm  
12pcs



B-head cross screw  
**BS903-072** BT3\*8 mm  
12pcs



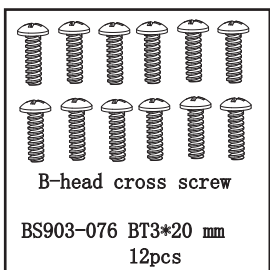
B-head cross screw  
**BS903-073** BT3\*12 mm  
12pcs



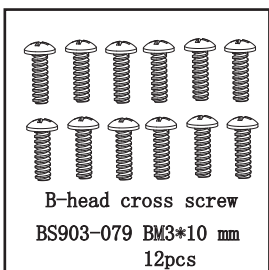
B-head cross screw  
**BS903-074** BT3\*14 mm  
12pcs



B-head cross screw  
**BS903-075** BT3\*16 mm  
12pcs



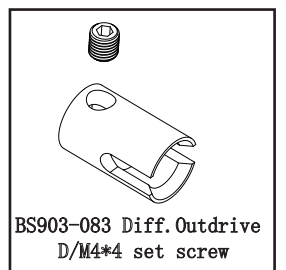
B-head cross screw  
**BS903-076** BT3\*20 mm  
12pcs



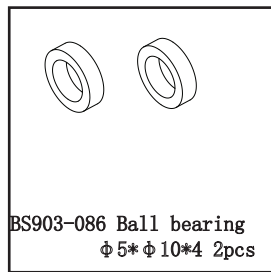
B-head cross screw  
**BS903-079** BM3\*10 mm  
12pcs



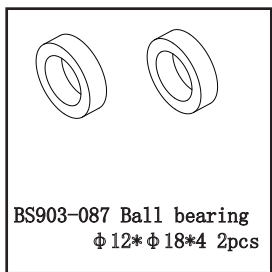
Socket head cap screw  
**BS903-081** M3\*10 mm 6pcs



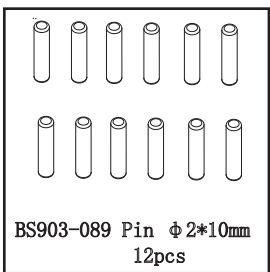
**BS903-083** Diff. Outdrive  
D/M4\*4 set screw



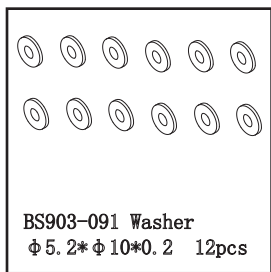
BS903-086 Ball bearing  
φ 5\*φ 10\*4 2pcs



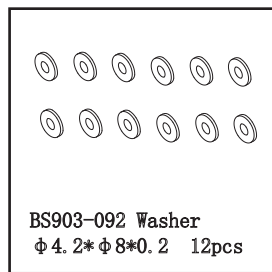
BS903-087 Ball bearing  
φ 12\*φ 18\*4 2pcs



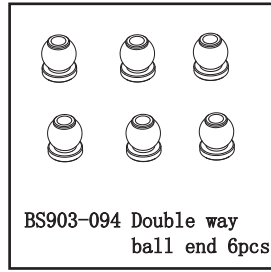
BS903-089 Pin φ 2\*10mm  
12pcs



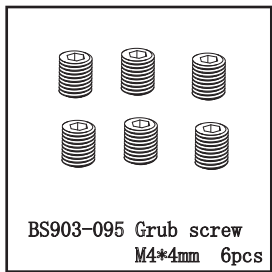
BS903-091 Washer  
φ 5.2\*φ 10\*0.2 12pcs



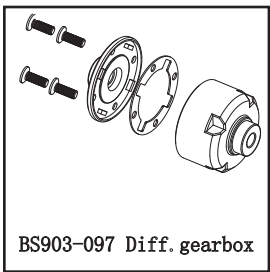
BS903-092 Washer  
φ 4.2\*φ 8\*0.2 12pcs



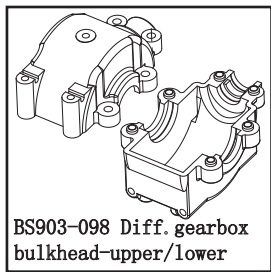
BS903-094 Double way  
ball end 6pcs



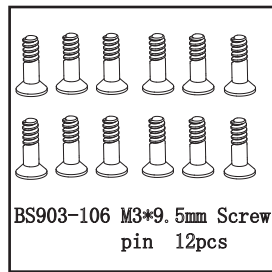
BS903-095 Grub screw  
M4\*4mm 6pcs



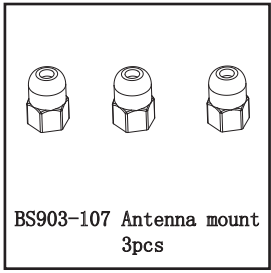
BS903-097 Diff. gearbox



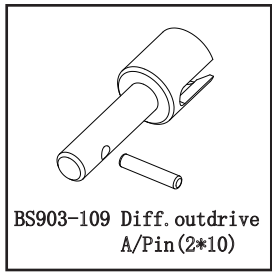
BS903-098 Diff. gearbox  
bulkhead-upper/lower



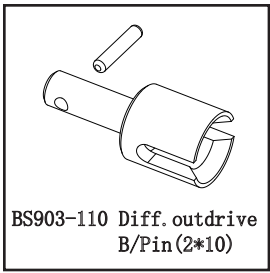
BS903-106 M3\*9.5mm Screw  
pin 12pcs



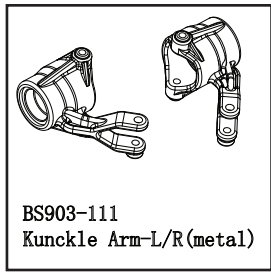
BS903-107 Antenna mount  
3pcs



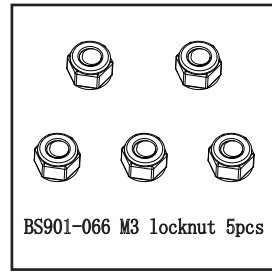
BS903-109 Diff. outdrive  
A/Pin(2\*10)



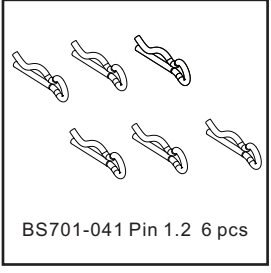
BS903-110 Diff. outdrive  
B/Pin(2\*10)



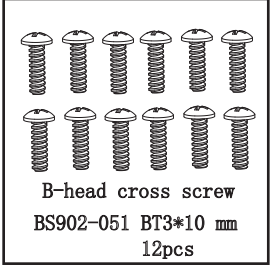
BS903-111  
Kunckle Arm-L/R(metal)



BS901-066 M3 locknut 5pcs



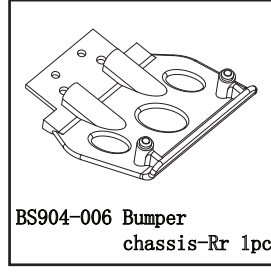
BS701-041 Pin 1.2 6 pcs



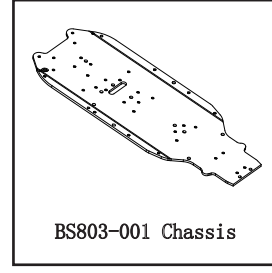
B-head cross screw  
BS902-051 BT3\*10 mm  
12pcs



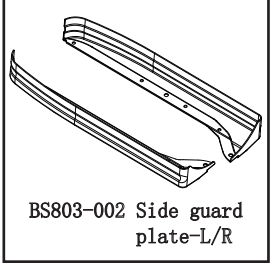
BS904-014 Tire unit  
(chromed)2pcs



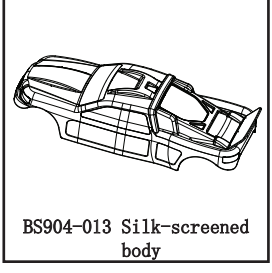
BS904-006 Bumper  
chassis-Rr 1pc



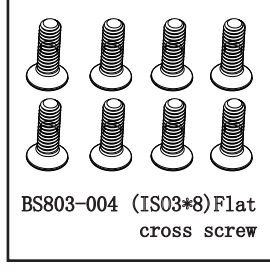
BS803-001 Chassis



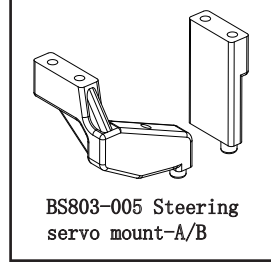
BS803-002 Side guard  
plate-L/R



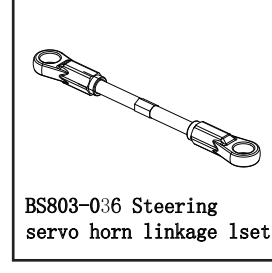
BS904-013 Silk-screened  
body



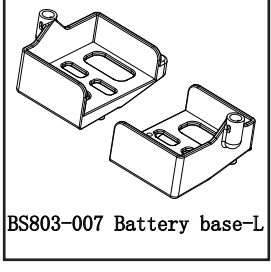
BS803-004 (IS03\*8)Flat  
cross screw



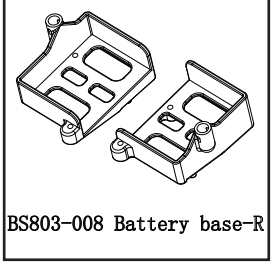
BS803-005 Steering  
servo mount-A/B



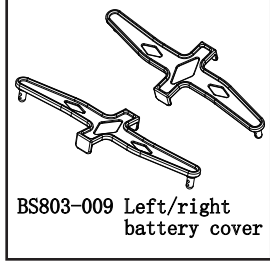
BS803-036 Steering  
servo horn linkage 1set



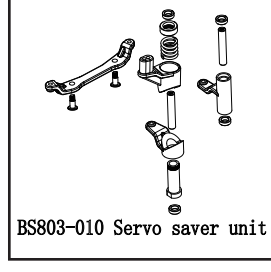
BS803-007 Battery base-L



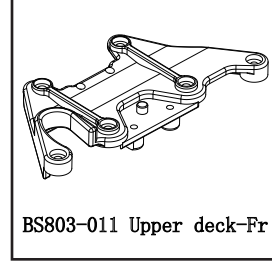
BS803-008 Battery base-R



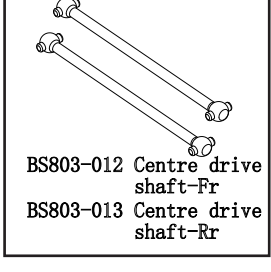
BS803-009 Left/right  
battery cover



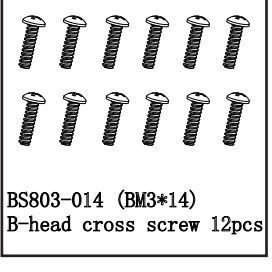
BS803-010 Servo saver unit



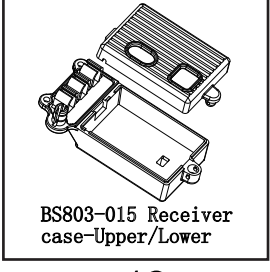
BS803-011 Upper deck-Fr



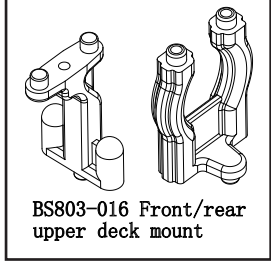
BS803-012 Centre drive  
shaft-Fr  
BS803-013 Centre drive  
shaft-Rr



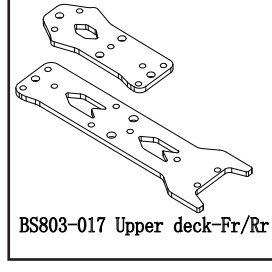
BS803-014 (BM3\*14)  
B-head cross screw 12pcs



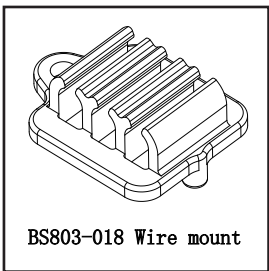
BS803-015 Receiver  
case-Upper/Lower



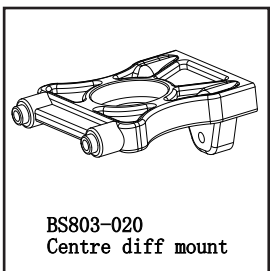
BS803-016 Front/rear  
upper deck mount



BS803-017 Upper deck-Fr/Rr



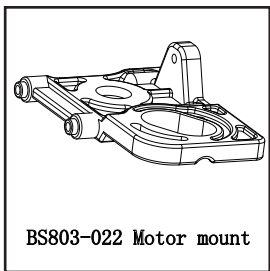
BS803-018 Wire mount



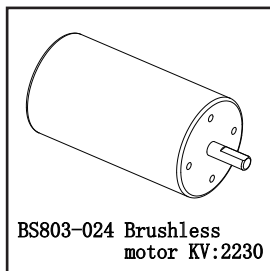
BS803-020  
Centre diff mount



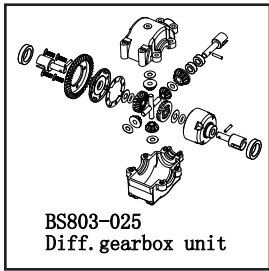
BS803-021  
Centre Diff Cover



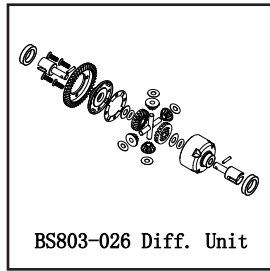
BS803-022 Motor mount



BS803-024 Brushless  
motor KV:2230



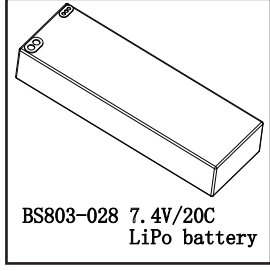
BS803-025  
Diff. gearbox unit



BS803-026 Diff. Unit



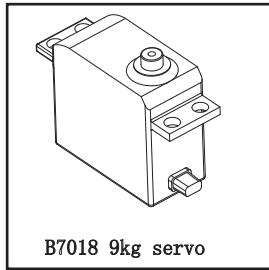
BS803-027 Driving/Driven  
Gear, Diff. Gear/Bevel gears



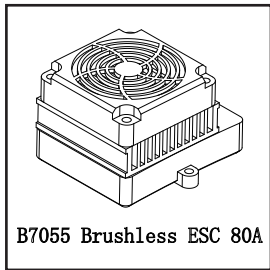
BS803-028 7.4V/20C  
LiPo battery



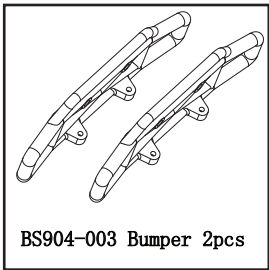
2.4GHz  
B7054 Receiver 1pc



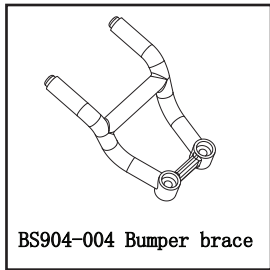
B7018 9kg servo



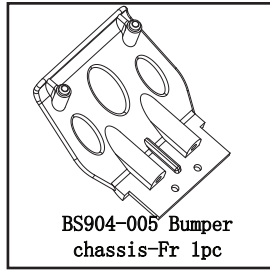
B7055 Brushless ESC 80A



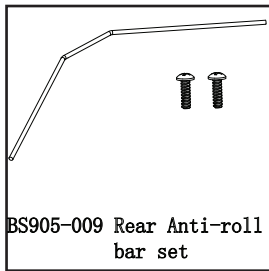
BS904-003 Bumper 2pcs



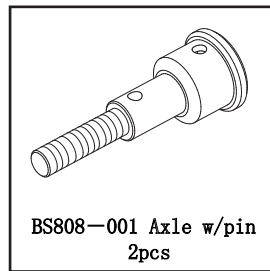
BS904-004 Bumper brace



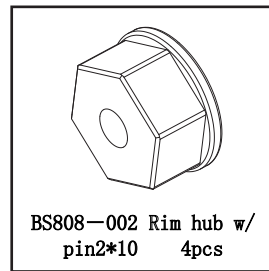
BS904-005 Bumper  
chassis-Fr 1pc



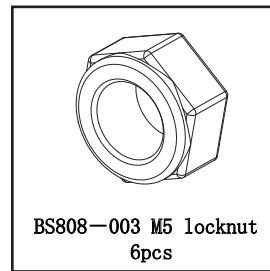
BS905-009 Rear Anti-roll  
bar set



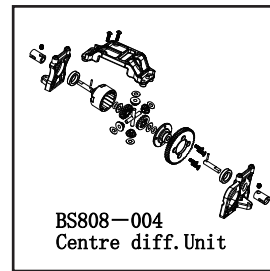
BS808-001 Axle w/pin  
2pcs



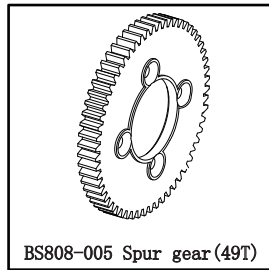
BS808-002 Rim hub w/  
pin2\*10 4pcs



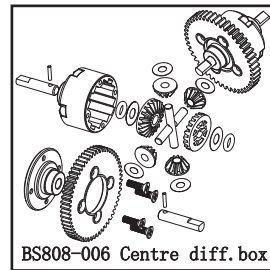
BS808-003 M5 locknut  
6pcs



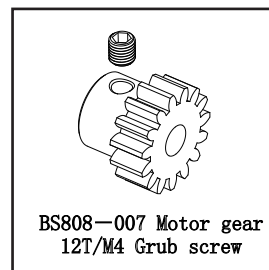
BS808-004  
Centre diff. Unit



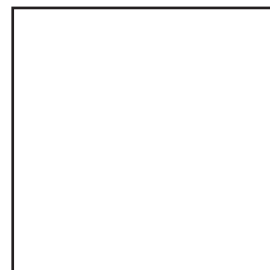
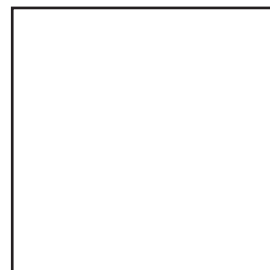
BS808-005 Spur gear (49T)



BS808-006 Centre diff. box

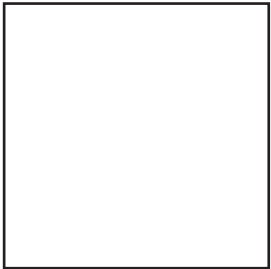
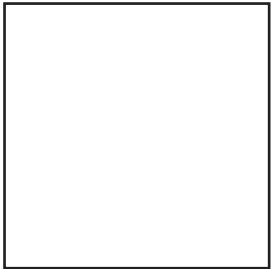
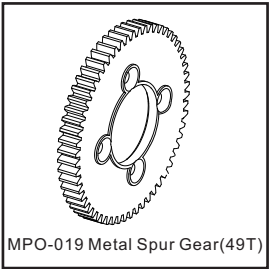
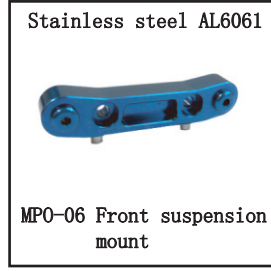
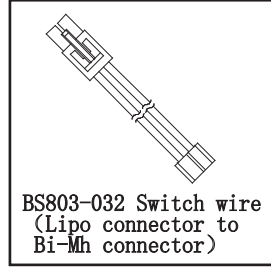
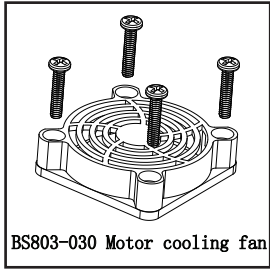
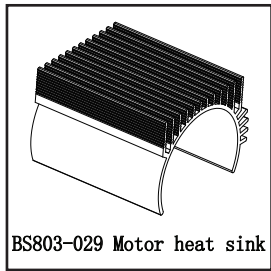
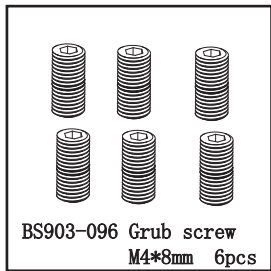


BS808-007 Motor gear  
12T/M4 Grub screw





# OPTIONAL PARTS/UPGRADE PARTS





# Precautions and Warnings for Use and Handling of Lithium Polymer Battery

## Preface

In order to get the optimum performance and reliable safety, consumers shall read and take the following instructions and precautions when use and handle the Lithium Polymer (Li-Po) batteries.

## 1. Charging

1-1 Charging current should not be more than the maximum charge current specified in the Product Specification (normally 0.5C-1.0C or lower). Charging with higher current may damage the cell or even lead to safety problem, e.g. overheating or leakage.

1-2 Charging voltage shall not be more than that specified in the Product Specification (4.2V/cell). 4.25V is the maximum charging voltage for each cell. Never charge the battery in series and be sure that each single cell has a separated charging circuit with a max. charging voltage of 4.25V. Or the battery may be overcharged, and lead to fire or explosion. The user is fully responsible to the result of misusing the battery.

1-3 Charging temperature: The cell should be charged within the range of temperatures specified in the Product Specification. Stop charging immediately when the surface temperature of the battery is over 50°C.

1-4 Reverse charging: Please make sure the polarities of cells are connected properly before charging. Reverse charging is strictly prohibited. Reverse charging cannot charge the cells but will deteriorate their charging/discharging and safety characteristics, or even lead to fire or explosion.

## 2. Discharging

2-1 Discharging current: The cell shall be discharged at the current no more than the maximum discharging current specified in the Product Specification. Over current discharging may damage the battery and cause over-heat.

2-2 Operation temperature: Use the battery within the temperature range specified in the Product Specification. Stop using when temperature is over 70°C.

2-3 Over-discharging: Over-discharging will deteriorate the cell's performance and characteristics. Do not over-discharge a battery below 2.75V/cell.

## 3. Storage

If you intend to keep the battery for a long time (3 months or longer), it is strongly recommended that the battery shall be stored under the environment with temperature 10-25°C, low humidity and without corrosive gas. The battery should be charged every six months to ensure that each cell's storage voltage is 3.6~3.9V.

## Others

>The aluminum packing foil is very soft that it will be easily left scratches. Please do not hit the cell with any sharp edge parts.

>Don't fall, hit or bend the battery. It may cause fire or explosion.

>Short circuit the battery is strictly prohibited, it may damage the battery seriously.

>Never disassemble the battery. It may cause fire.

>Never dispose of the battery in fire. It is very dangerous and strictly prohibited.

>To place the battery into liquid such as water is strictly prohibited.

>Always remove battery from car when charging. Charging the battery in a car is forbidden and is dangerous.

>Avoid vibration, shock or extruding the battery. Handle carefully when moving it.

# **Redcat Racing**

**<http://www.redcatracing.com>**