

# REDCAT-RACING

**1/10 4WD BRUSHLESS BUGGY**  
**MODEL NO.: CALDERA XB 10E**



**Product Size:**

**Length: 428mm**

**Width: 321mm**

**Height: 150mm**

**Wheelbase: 305mm**

**Front tire size: 100 \* 40mm**

**Rear tire size: 100 \* 50mm**

**Ground clearance: 27mm**

**Gear Ratio: 11.25:1**

**Standard Motor**

**(RC 550 8515) and ESC**

**Brushless Motor**

**(RC 540 KV: 3570) and**

**Brushless ESC**

## Instruction Manual

### Highlights:

- 4 Wheel Shaft-Drive System.
- Ready Assemble Ready to Run.
- High Performance RC-550 8515 Type Electric Motor, More Power!
- 7.2v Ni-Mh 3800mAh Rechargeable Battery, Long Running Time!
- Assembled Chassis.
- Colored Coil Spring Damped Suspension System.
- Full Function Radio Controlled.
- Waterproof and Dustproof Sealed Gearbox.
- Fast Easy Assembly and Disassembly Receiver and Battery Cover.
- Quality Differential with Four Bevel Gears.
- Precise Sealed Ball Bearing for the Whole Model.
- Aluminum Alloy Driveshafts.

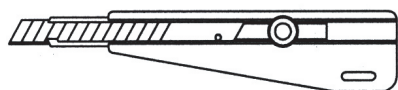
### ⚠ SAFETY PRECAUTIONS

- This radio controlled racing car is not a toy!
- This high-performance R/C model 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 model.  
You are responsible for this model's assembly and safe operation!

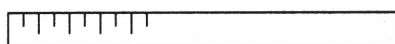
**[www.redcatracing.com](http://www.redcatracing.com)**

# Required equipment for operation

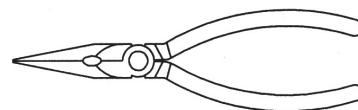
## 1. Tools required for building and maintenance:



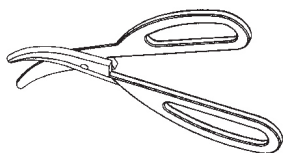
● Hobby knife



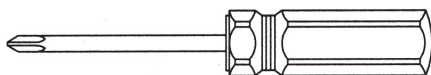
● Precision ruler



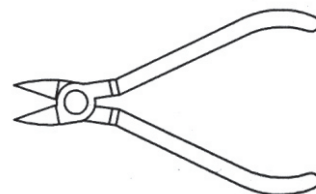
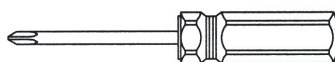
● Needle nose pliers



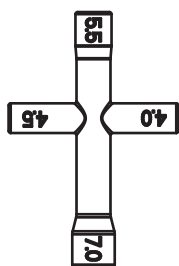
● Lexan scissors



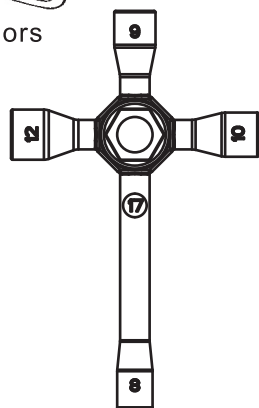
● Flat and Philips screwdriver



● Wire cutters



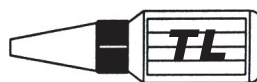
● Cross wrench



● Cross wrench



● CA glue & rubber cement



● Thread locking compound



1.5mm



2.0mm



2.5mm

● 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.

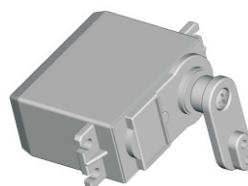
## 2. Additional items needed for operation:



**B7053**  
Transmitter



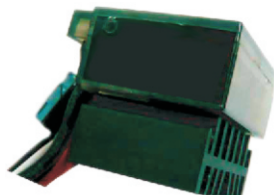
**B7054**  
Receiver



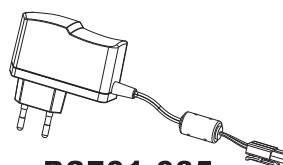
**B7014**  
3Kg Servo



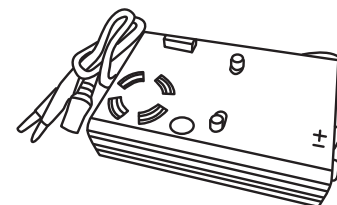
8pcs AA alkaline  
batteries for  
transmitter



**B7003**  
ESC



**BS701-035**  
Charger



**B7004-D**  
Quick charger

## IMPORTANT!!!

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

# Please read the instruction carefully before starting the assembly.

1. Please assemble and install this car without children's reach. As it includes small and sharp parts.
2. Do not run the car on public streets or highways. As it might cause serious accidents, personal injuries and property damage etc.
3. During the middle of racing and after operation, the engine and exhaust will become HOT. Therefore please do not touch them before cooling down.
4. Please make sure everyone is using different frequencies while racing the car 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

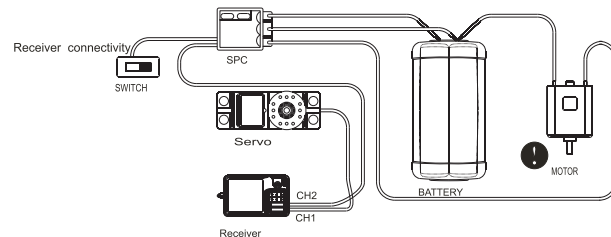
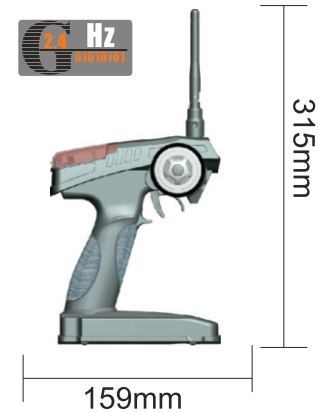
 If your transmitter, receiver use a nickel-cadmium, nickel-metal hydride rechargeable battery, you have to check it before use. If lack of electricity, it could cause inadequate control or out of control, resulting in accident. So please charge it immediately when the battery power is low.



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)

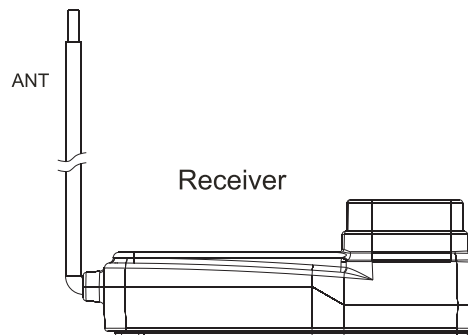


Figure 1

## 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.

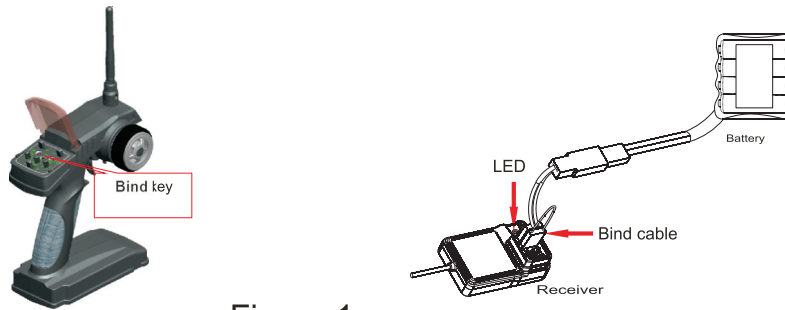
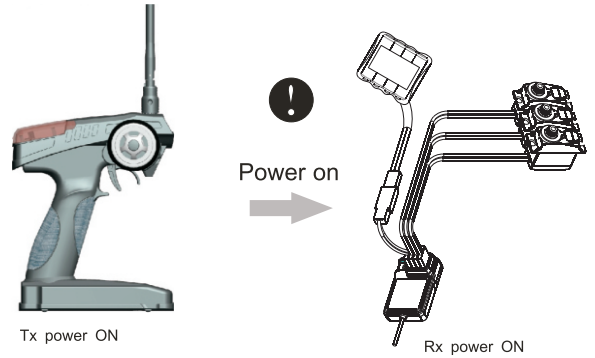


Figure 1

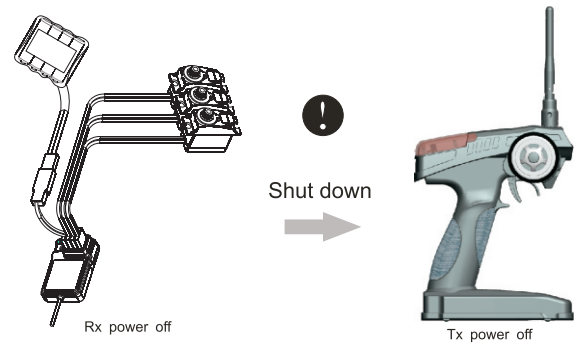
## Connecting to the power

- 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.

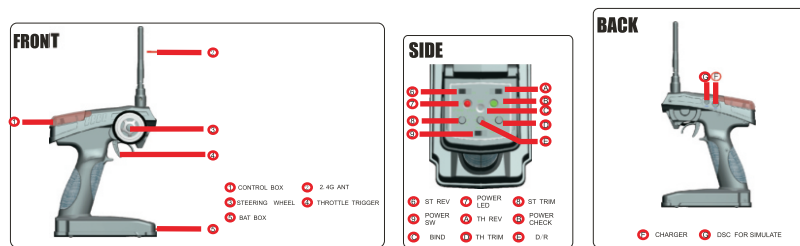


## Shut down:

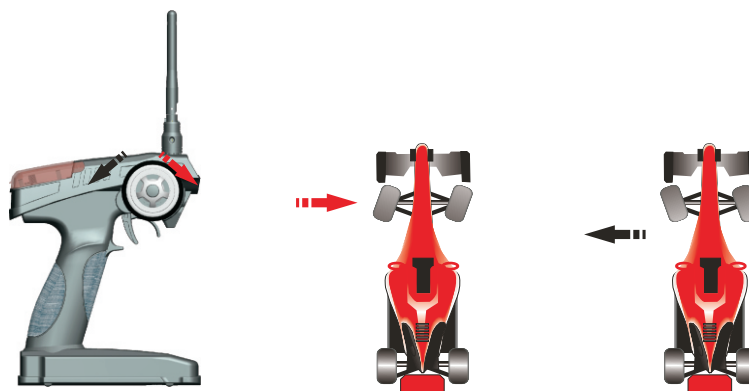
- A. Cut off the receiver power supply.
- B. Cut off the transmitter power supply.



## 2.4G transmitter view angles



## Transmitter function notes

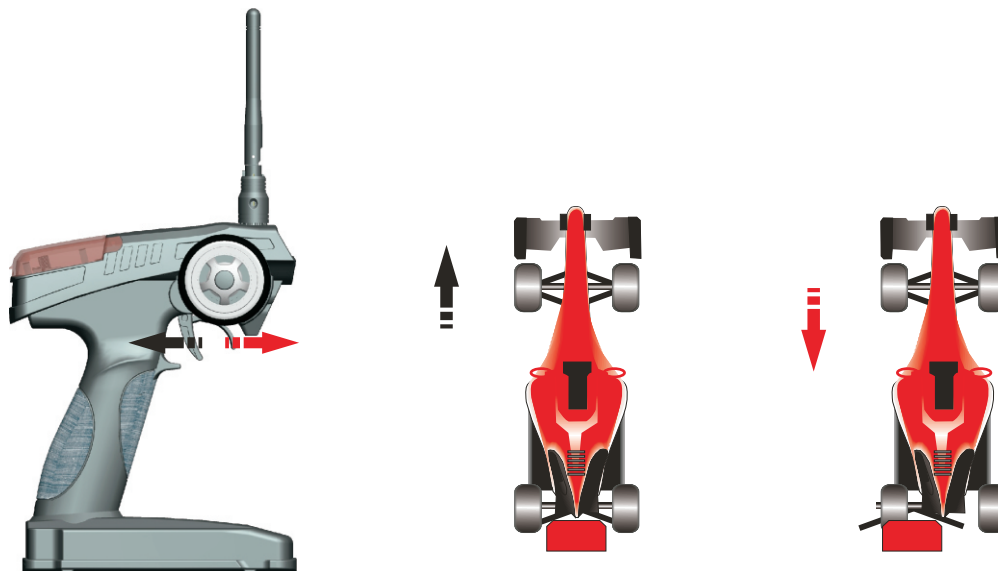


**Function Introduction:**

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).

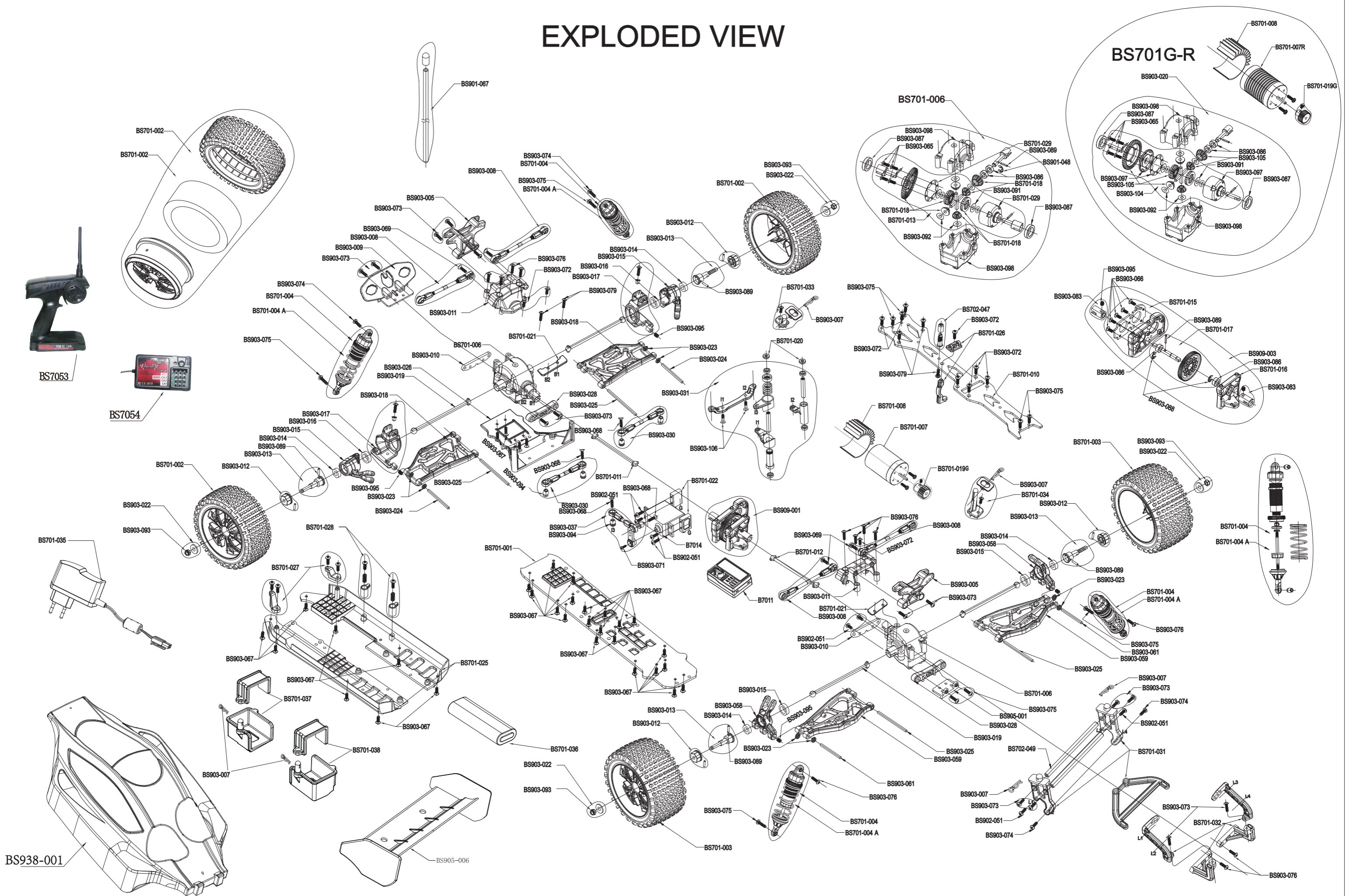
**Operation Method:**

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

## RC OPERATING PROCEDURES

1. Load the battery on the transmitter.
2. Install the charged battery on the car.
3. Turn on the power switch first, before turning on the receiver.
4. Please raise the tires off the ground and check if the control is responding.
5. Hold the throttle trigger to let the car run. If it doesn't work, please adjust the throttle servo and trim.
6. Please replace the battery, when the speed drops down.
7. When you finish the racing, please switch off the receiver first, and then the transmitter.
8. Please make sure the battery is disconnected and remove the battery after finishing the racing.

# EXPLODED VIEW



# PARTS LIST

Item No.	Description	Item No.	Description		
BS701-001	Chassis	1pcs	<b>BS938-001 silk-screened body</b>	1pcs	
BS701-002	Tire Unit-Fr	2pcs	BS701-031	Tail wing mount	1pcs
BS701-002A	Tire Unit-Fr (chromed)	2pcs	BS701-032	Rollcage post set	1pcs
BS701-003	Tire Unit-Rr	2pcs	BS701-033	Body post-Fr	1pcs
BS701-003A	Tire Unit-Rr (chromed)	2pcs	BS701-034	Body post-Rr	1pcs
BS701-004	ShockAbsorberUnit(plastic)	2pcs	BS701-035	Charger	1pcs
BS701-004A	Shock Absorber Unit (alun)	2pcs	BS701-036	7.2V1800mah Ni-Mh battery	1pcs
BS809-010	Tail wing	1pcs	BS903-005	Brace	1pcs
BS701-006	Diff.gearbox Unit	1pcs	BS903-007	Body Pin	6pcs
BS701-007	550Motor	1pcs	BS903-008	Upper Susp. Arm Set	2pcs
BS701-008	Motor heat sink	1pcs	BS903-009	Fr. Bumper	1pcs
BS701-009	7.2V battery pack	1pcs	BS903-010	Suspension Arm Mount Block	2pcs
BS701-010	Upper deck	1pcs	BS903-011	Upper susp. Arm Mount-Fr/Rr	1pcs
BS701-011	Front drive shaft	1pcs	BS903-012	Rim Hub W/Pin( $\phi$ 2*10)	4pcs
BS701-012	Rear drive shaft	1pcs	BS903-013	Axle W/Pin	2pcs
BS701-013	Diff gear Unit	1pcs	BS903-014	Ball Bearing( $\phi$ 6* $\phi$ 12*4)	2pcs
BS909-001	Spur gear unit	1pcs	BS903-015	Fr/Rr Steering Arm	1pcs
BS701-015	Gear mount/Fr,		BS903-016	Ball Bearing( $\phi$ 10* $\phi$ 15*4)	2pcs
	screws/motor mount	1pcs	BS903-017	Fr/Rr C-Carrier	1pcs
BS701-016	Gear mount/Rear	1pcs	BS903-018	Fr.Lower Susp.Arm-Lf/Rt	1pcs
BS909-003	Central drive shaft/main		BS903-019	Drive shaft set	2pcs
	gear	1pcs	BS903-022	M4 Self-lock Nut W/Washer	4pcs
BS701-018	Diff gear/pinion gear/		BS903-023	O-washer	8pcs
	driving /driven gear	1pcs	BS903-024	Front suspension arm	
BS701-019G	Motor gear 15T/M3 screw	1pcs		pin-short	4pcs
BS701-020	Washer	4pcs	BS903-025	Suspension arm pin-long	4pcs
BS701-021	Upper deck /Front		BS903-026	Fr.chassis	1pcs
	upper deck	1pcs	BS903-028	Lower susp.mount block-Fr/Rr	1pcs
BS701-022	Steering servo mount	1pcs	BS903-030	Steering linkage set	2pcs
BS701-025	Side guard plate L/R	1pcs	BS903-031	Servo saver unit	1pcs
BS701-026	Upper deck	1pcs	BS903-037	Steering servo horn	
BS701-027	L/R mount block/screws	1pcs		and linkage	1pcs
BS701-028	Wireclipmount/Spring/Screws	2pcs	BS903-058	Hub rear carrier	1pcs
BS701-029	Diff. Gearbox	1pcs	BS903-059	Rr.lower susp.arm-L /R	1pcs



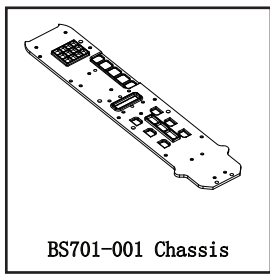
# PARTS LIST

Item No.	Description	Item No.	Description
BS903-061	Rear suspension arm pin-short 4pcs	BS903-098	Diff.gearbox bulkhead-upper/lower 1pcs
BS903-065	TPF2.6*10 flat cross screw 12pcs	BS903-106	Screw pin (M3*9.5) 12pcs
BS903-067	TPF3*10 flat cross screw 12pcs	BS901-048	E-Clip( $\phi$ 3*0.6) 12pcs
BS903-068	TPF3*14 flat cross screw 12pcs	BS901-066	M3 locknut 5pcs
BS903-069	TPF3*16 flat cross screw 12pcs	BS901-067	Antenna pipe w/cap 3pcs
BS903-072	BT3*8 B-head cross screw 12pcs	BS902-051	BT3*10 B-head cross screw 12pcs
BS903-073	BT3*12 B-head cross screw 12pcs	BS702-047	Antenna mount 1pcs
BS903-074	BT3*14 B-head cross screw 12pcs	BS702-049	Main frame shaft 1pcs
BS903-075	BT3*16 B-head cross screw 12pcs	BS905-001	Rear chassis 1pcs
BS903-076	BT3*20 B-head cross screw 12pcs	B7053	Transmitter complete 1pcs
BS903-079	BM3*10 B-head cross screw 12pcs	B7054	Receiver 1pcs
BS903-083	Diff.Outdrive B/M4*4 set screw 1pcs	B7014	Servo (3Kg) 1pcs
BS903-086	Ball bearing (5*10*4) 2pcs	B7003-R	ESC 1pcs
BS903-087	Ball bearing (12*18*4) 2pcs		
BS903-088	E -clip (4*0.6) 12pcs		
BS903-089	Pin (2*10) 12pcs		
BS903-091	Washer A (5.2*10*0.2) 12pcs		
BS903-092	Washer B (4.2*8*0.2) 12pcs		
BS903-093	M4 nylon lock nut 6pcs		
BS903-094	Double way ball end 6pcs		
BS903-095	M4*4 Grub screw 6pcs		

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## EXTRA SPARE PARTS FOR BS701T-R

BS701-007R	Brushless 540 motor kv: 3570	1pcs
B7003-R	Brushless ESC 35A-SL	1pcs
MPO-01	Wheel Hex set	1pcs
MPO-02	C Hub W/pin	1pcs
MPO-03	Knuckle Arm set	1pcs
MPO-04	Rear Hub set	1pcs
MPO-05	Shock Stay Mount	1pcs
MPO-06	Front Suspension Mount	1pcs
MPO-07	Rear Suspension Mount	1pcs
MPO-11	Steering Linkage	1pcs



BS701-001 Chassis



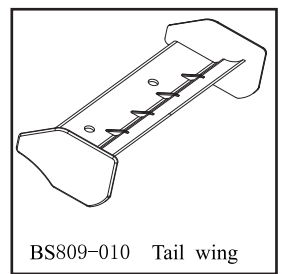
BS701-002 Tire Unit-Fr 2pcs  
BS701-002A Tire Unit-Fr  
(chromed) 2pcs



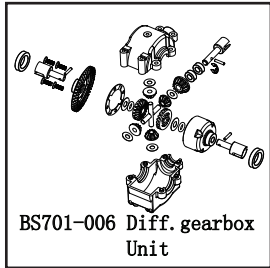
BS701-003 Tire Unit-Rr 2pcs  
BS701-003A Tire Unit-Rr  
(chromed) 2pcs



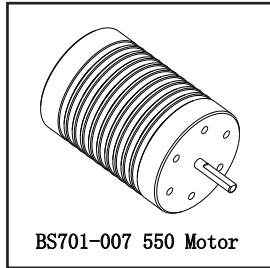
BS701-004 Shock Absorber  
Unit(plastic) 2pcs  
BS701-004A Shock Absorber  
Unit(alun) 2pcs



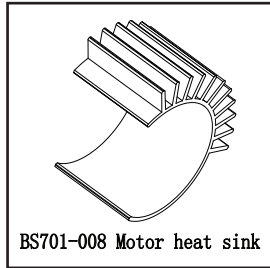
BS809-010 Tail wing



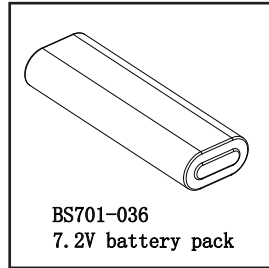
BS701-006 Diff. gearbox  
Unit



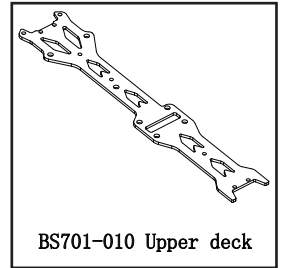
BS701-007 550 Motor



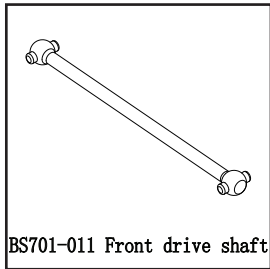
BS701-008 Motor heat sink



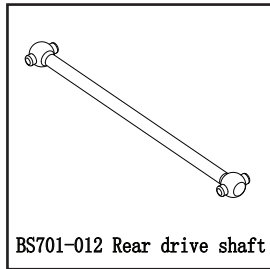
BS701-036  
7.2V battery pack



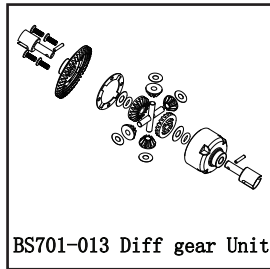
BS701-010 Upper deck



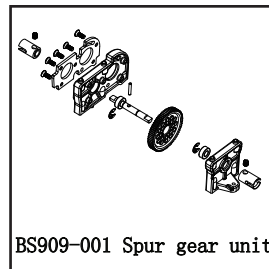
BS701-011 Front drive shaft



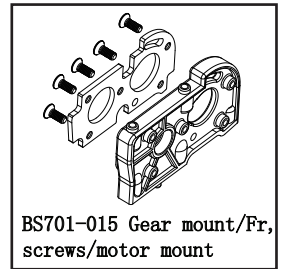
BS701-012 Rear drive shaft



BS701-013 Diff gear Unit



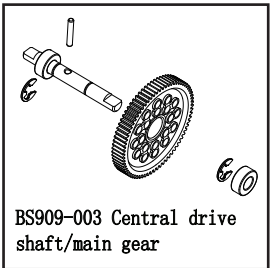
BS909-001 Spur gear unit



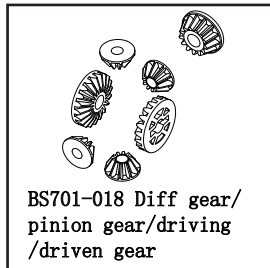
BS701-015 Gear mount/Fr,  
screws/motor mount



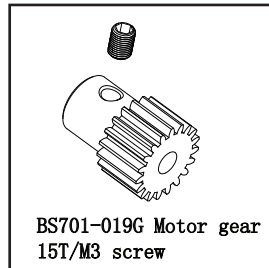
BS701-016 Gear mount/Rear



BS909-003 Central drive  
shaft/main gear



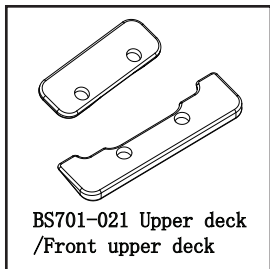
BS701-018 Diff gear/  
pinion gear/driving  
/driven gear



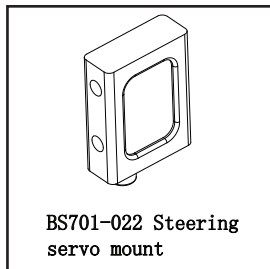
BS701-019G Motor gear  
15T/M3 screw



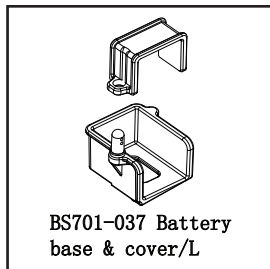
BS701-020 Washer 4pcs



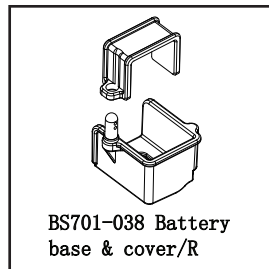
BS701-021 Upper deck  
/Front upper deck



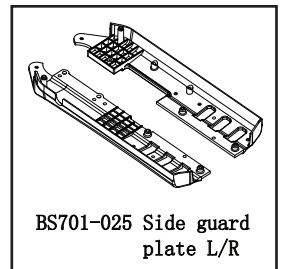
BS701-022 Steering  
servo mount



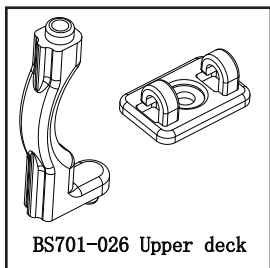
BS701-037 Battery  
base & cover/L



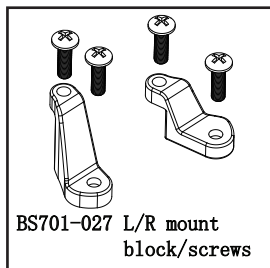
BS701-038 Battery  
base & cover/R



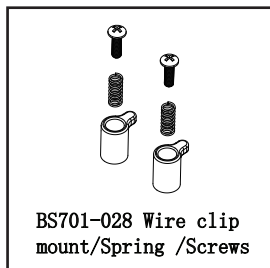
BS701-025 Side guard  
plate L/R



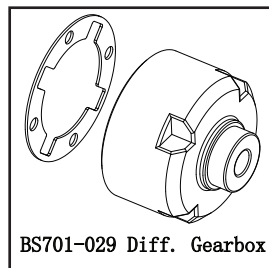
BS701-026 Upper deck



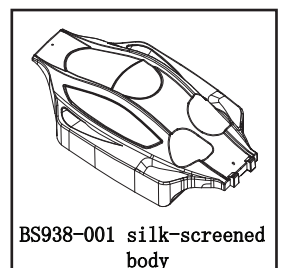
BS701-027 L/R mount  
block/screws



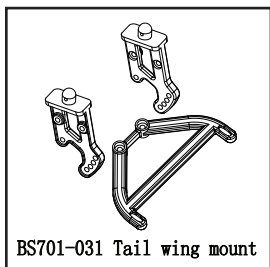
BS701-028 Wire clip  
mount/Spring /Screws



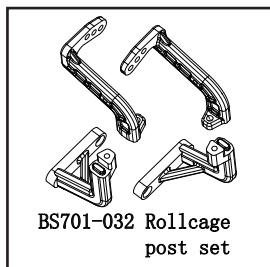
BS701-029 Diff. Gearbox



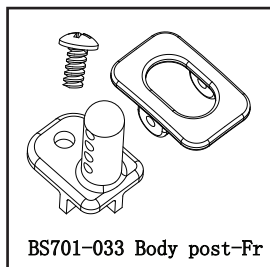
BS938-001 silk-screened  
body



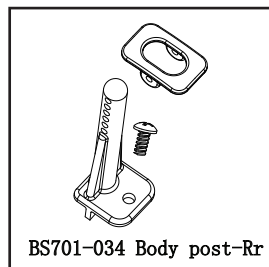
BS701-031 Tail wing mount



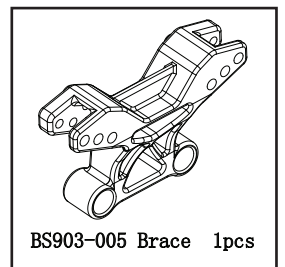
BS701-032 Rollcage  
post set



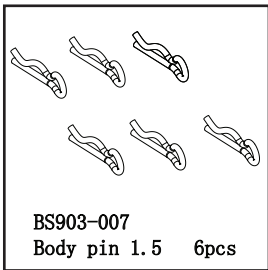
BS701-033 Body post-Fr



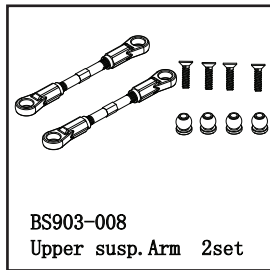
BS701-034 Body post-Rr



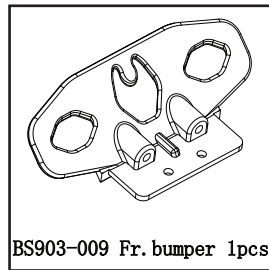
BS903-005 Brace 1pcs



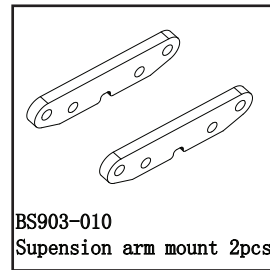
BS903-007  
Body pin 1.5 6pcs



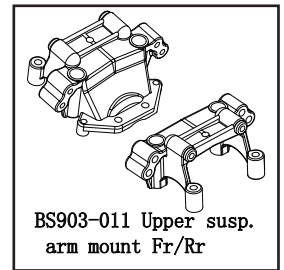
BS903-008  
Upper susp. Arm 2set



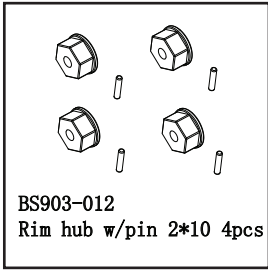
BS903-009 Fr. bumper 1pcs



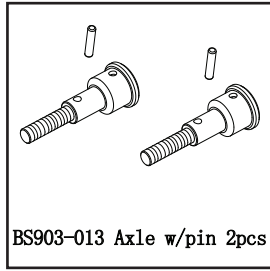
BS903-010  
Suspension arm mount 2pcs



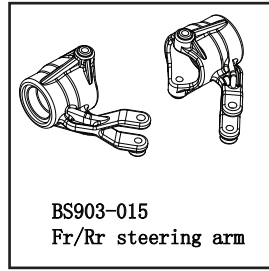
BS903-011 Upper susp.  
arm mount Fr/Rr



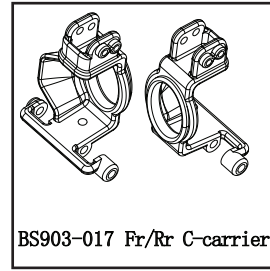
BS903-012  
Rim hub w/pin 2\*10 4pcs



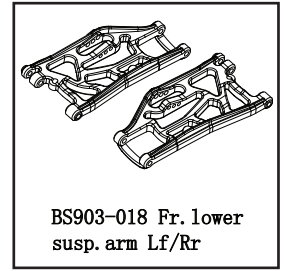
BS903-013 Axle w/pin 2pcs



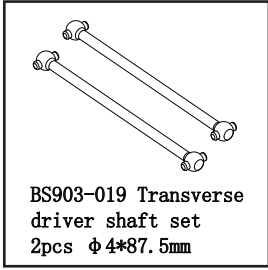
BS903-015  
Fr/Rr steering arm



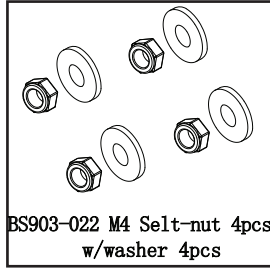
BS903-017 Fr/Rr C-carrier



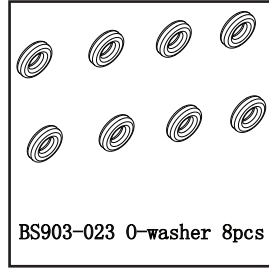
BS903-018 Fr. lower  
susp. arm Lf/Rr



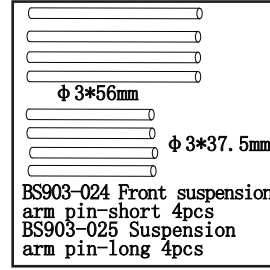
BS903-019 Transverse  
driver shaft set  
2pcs  $\phi 4*87.5\text{mm}$



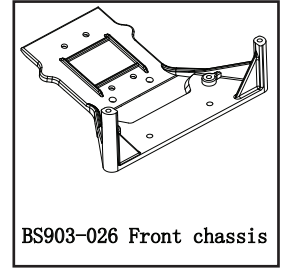
BS903-022 M4 Selt-nut 4pcs  
w/washer 4pcs



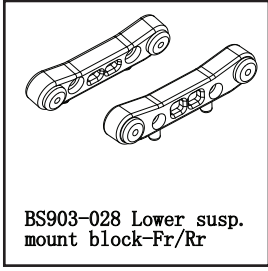
BS903-023 O-washer 8pcs



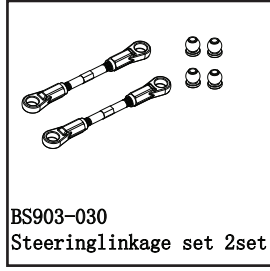
BS903-024 Front suspension  
arm pin-short 4pcs  
BS903-025 Suspension  
arm pin-long 4pcs



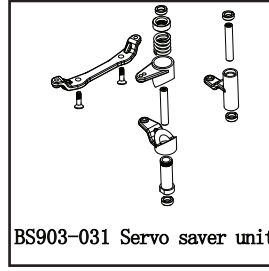
BS903-026 Front chassis



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



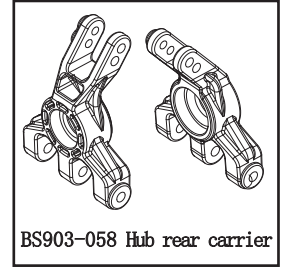
BS903-030  
Steering linkage set 2set



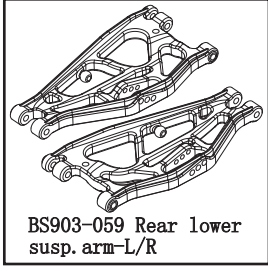
BS903-031 Servo saver unit



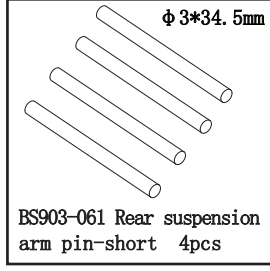
BS903-037 Steering servo  
horn and linkage 1set



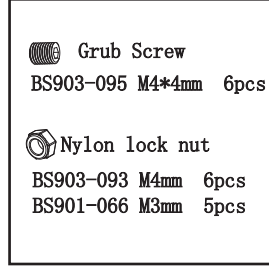
BS903-058 Hub rear carrier



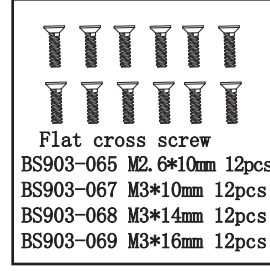
BS903-059 Rear lower  
susp. arm-L/R



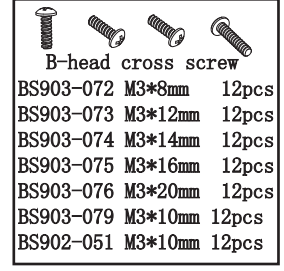
BS903-061 Rear suspension  
arm pin-short 4pcs



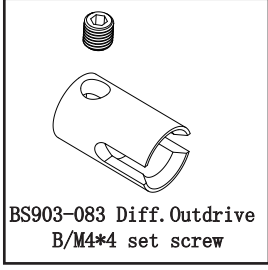
Grub Screw  
BS903-095 M4\*4mm 6pcs  
Nylon lock nut  
BS903-093 M4mm 6pcs  
BS901-066 M3mm 5pcs



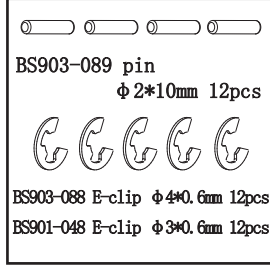
Flat cross screw  
BS903-065 M2.6\*10mm 12pcs  
BS903-067 M3\*10mm 12pcs  
BS903-068 M3\*14mm 12pcs  
BS903-069 M3\*16mm 12pcs



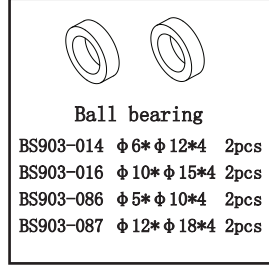
B-head cross screw  
BS903-072 M3\*8mm 12pcs  
BS903-073 M3\*12mm 12pcs  
BS903-074 M3\*14mm 12pcs  
BS903-075 M3\*16mm 12pcs  
BS903-076 M3\*20mm 12pcs  
BS903-079 M3\*10mm 12pcs  
BS902-051 M3\*10mm 12pcs



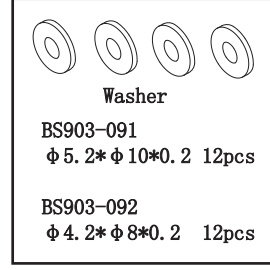
BS903-083 Diff. Outdrive  
B/M4\*4 set screw



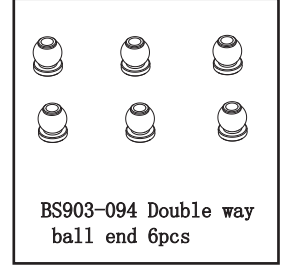
BS903-089 pin  
 $\phi 2*10\text{mm}$  12pcs  
BS903-088 E-clip  $\phi 4*0.6\text{mm}$  12pcs  
BS901-048 E-clip  $\phi 3*0.6\text{mm}$  12pcs



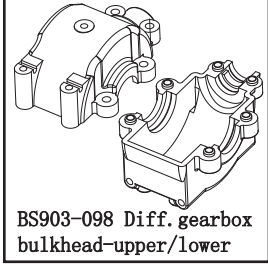
Ball bearing  
BS903-014  $\phi 6*\phi 12*4$  2pcs  
BS903-016  $\phi 10*\phi 15*4$  2pcs  
BS903-086  $\phi 5*\phi 10*4$  2pcs  
BS903-087  $\phi 12*\phi 18*4$  2pcs



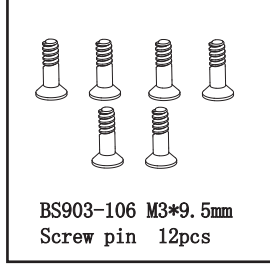
Washer  
BS903-091  
 $\phi 5.2*\phi 10*0.2$  12pcs  
BS903-092  
 $\phi 4.2*\phi 8*0.2$  12pcs



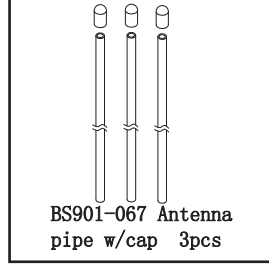
BS903-094 Double way  
ball end 6pcs



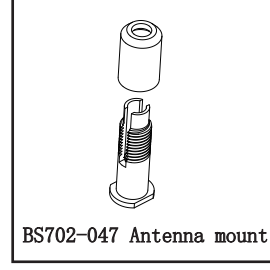
BS903-098 Diff. gearbox  
bulkhead-upper/lower



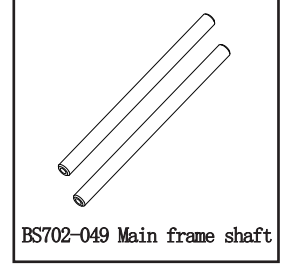
BS903-106 M3\*9.5mm  
Screw pin 12pcs



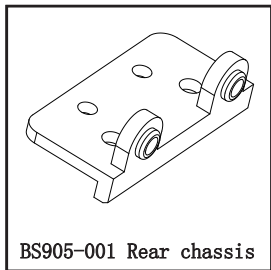
BS901-067 Antenna  
pipe w/cap 3pcs



BS702-047 Antenna mount



BS702-049 Main frame shaft



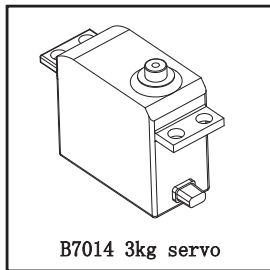
BS905-001 Rear chassis



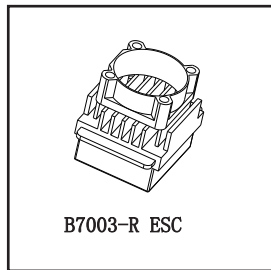
B7053 Transmitter complete 1pcs



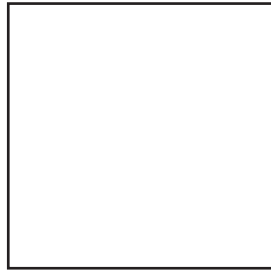
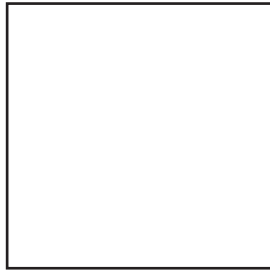
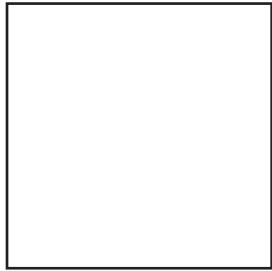
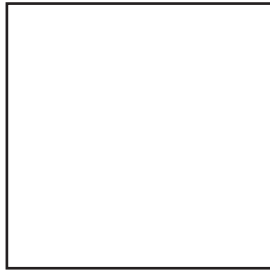
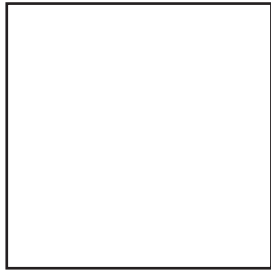
B7054 Receiver



B7014 3kg servo



B7003-R ESC



**EXTRA SPARE PARTS FOR BS701T-R**



B7003-R Brushless ESC 35A-SL



BS701-007R Brushless 540 motor kv: 3570



Stainless steel AL6061

MPO-01 Wheel Hex Set



Stainless steel AL6061

MPO-02 C HCB C HCB Pin



Stainless steel AL6061

MPO-03 Knuckle Arm se



Stainless steel AL6061

MPO-04 Rear Hub set



Stainless steel AL6061

MPO-05 Shock stay mount



Stainless steel AL6061

MPO-06 Front suspension mount



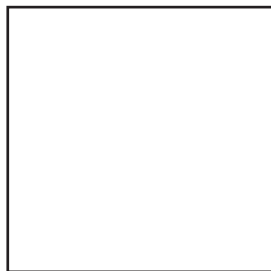
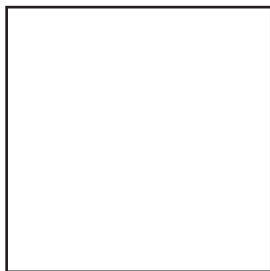
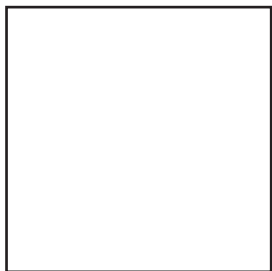
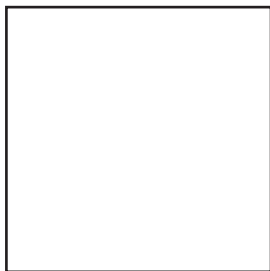
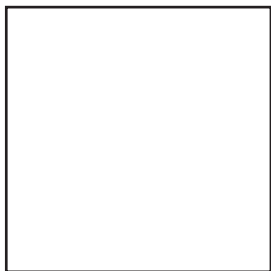
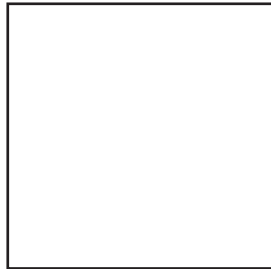
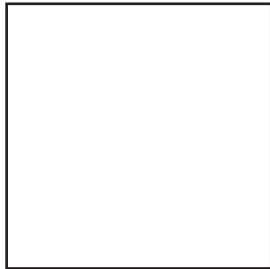
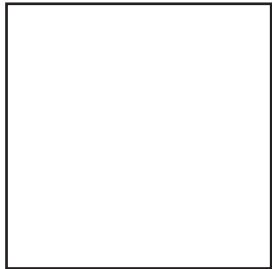
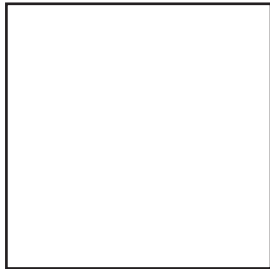
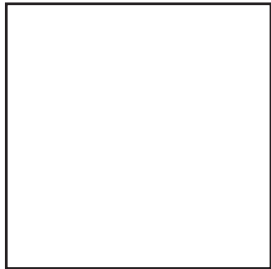
Stainless steel AL6061

MPO-07 Rear suspension mount



Stainless steel AL6061

MPO-11 Steering Linkage



# **Redcat Racing**

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