



User's Instruction Manual



MODEL#:8382

1/8 Scale 4WD Brushless Electric Monster Truck

Introduction

Thank you for choosing DHK HOBBY'S monster truck! This model is designed in thorough research and assembled with utmost craftsmanship. It is easy to drive and it uses quality parts and accessories to achieve best performance. It will bring you a lot of joy and fun when you drive this model.

Before starting to run the model, you are kindly requested to take some time to review this instruction manual for a better operation. This easy to follow instruction manual aims to provide a general guideline for end-users. Kindly note that a good understanding of the model, its relevant parts together with other accessories packed in this consumer box will enable you to have fun in driving. Meanwhile, users are recommended to conduct regular maintenance for a smooth performance. Failure to do so might shorten the lifespan of your model. You are cordially advised that DHK Hobby makes all necessary parts and accessories to support you for any problem during and after your driving.

Before you operate this radio controlled model, you must understand the following:

1. Make sure that all screws and nuts are tightened securely.
2. Make sure that the batteries are fresh or fully charged so the vehicle won't lose control.
3. Do not drive the model in the following places/areas to avoid injury of people and damage to the public property. Drive your model in open areas.
 - > On public streets or parks. Cause injury or death of pedestrians, young children, animals and pets.
 - > On highways. Cause accidents or damage of the model.
 - > In water. Cause damage to electronic components and parts, or direct failure of the model.
4. Check all signals and electronic parts are working properly.

After running, battery, ESC, and motor can be very hot. Make sure not to touch with bare hands.

Warning:

This high performance model can run very fast. It is designed and produced for people of 14+ years of age to operate. Players under that age should be guided by adult supervision. Entry level players should seek guidance and supervision from experienced model players. Players are responsible for any/all accidental occurrences (human or animal injury, damage to property and possessions, breakage of the model itself) due to improper operation of this model.

Model specifications

Overall length	: 20.36" (517.8mm)
Width	: 16.1" (410.0mm)
Height	: 7.13" (181.3mm, not including body)
Wheelbase	: 13.78" (350.4mm)
Ground clearance	: 1.96" (49.8mm)
Weight (net)	: 3.50kgs (7.8 LBs)
Front track/rear track	: 12.88" (327.0mm)/13.15" (334.0mm)
Tire diameter/width	: Ø6.2", 3.3" (Ø 158mm, 85mm)
Wheel diameter/width	: Ø3.5", 2.6" (Ø88mm, 66mm)
Gear ratio	: 13.98:1

Articles required to operate the model

4 pcs AA batteries (Ni-Mh or Ni-Cd rechargeable batteries, or non-rechargeable alkaline batteries) for 2.4GHz transmitter. Please refer to the 2.4GHz transmitter Instruction Manual.



Lipo balance charger (#P109) (for 2S/3S Lipo battery) 1,000mAh output with AC input.



2 Channel 2.4GHz radio system

This monster truck comes with a full function 2 channel 2.4GHz radio transmitter and receiver. Please refer to the 2.4GHz User's Instructions Manual for detail.

Brushless electronic speed control (ESC)

This model comes with 80A brushless electronic speed controller. Please refer to the instructions manual of the ESC for detail.

Brushless electric motor

3670 motor KV(RPM)	: 2260
Power	: 14.8V
Empty load current	: 4.0A(10V)
Resistance(Ω)	: 0.01Ω
Length(including motor shaft)	: 85mm
Diameter	: 36mm
Weight	: 338g
Shaft diameter	: 5mm
Battery (Li-Po)	: 2-4S

9kgs Servo

Features	: Metal gears, ball bearings
Working voltage	: 6.0V
Speed (seconds/60°C)	: 0.16sec
Torque	: 9kg/cm (88.3Ncm)
Net weight	: 60g
Size(LxWxH)	: 55x21x43mm

Note:

When the motor temperature is over 120°C(248°F), please add a fan over the motor for better ventilation. Please refer to the parts list for the optional part motor cooling fan (Part#: P101).

Lipo Batteries

This model comes with duo 7.4V 2S Lipo battery packs. Handling Lipo batteries should be very careful. Please read the following points with regard to charging and discharging Lipo batteries.

Charging the Lipo battery

Important warnings:

Be sure to follow these important warnings regarding the charging of Lipo batteries.

- > Never leave a Lipo battery unattended at any time while being charged.
- > Never charge a Lipo battery while it's inside the model. A hot pack could ignite wood, foam, plastic, etc.
- > Never charge Lipo battery with Ni-Mh or Ni-Cd peak charger. Only use a charger designed specifically for Lipo batteries which can apply the constant current/constant voltage charge technique.
- > Never charge Lipo battery at currents greater than the "1C" rating of the battery.
- > Never allow Lipo cells to overheat at any time. Cells which exceed 60°C (140°F) during charge can and usually will become damaged physically and possibly catch fire. Always inspect a battery which has previously overheated and do not re-use if you suspect it has been damaged in any way.
- > Always discontinue charging a Lipo immediately if at any time you witness smoke or see the battery starting to swell up. This may cause the battery to rupture and/or lead, and the reaction with air may cause the chemicals to ignite, resulting in fire. Disconnect the battery and leave it in a safe fireproof location for approximately 15 minutes.
- > Always charge a Lipo battery in a fireproof location, which could be a container made of metal, ceramic tile, or a bucket of sand.
- > Never allow a battery's positive and negative leads to accidentally touch each other. This will result in a short circuit and cause permanent damage to your battery and charger.
- > Always monitor the battery and charger during the entire charge process. Never leave the battery and charger unattended during charge!
- > Never continue to charge the Lipo batteries if the charger fails to recognize full charge. Overheating or swelling of the Lipo cells is an indication that a problem exists and the batteries should be disconnected from the charger immediately and placed in a fireproof location.

Discharging the Lipo battery

- > Never leave a Lipo battery unattended at any time while being discharged.
- > Always discharge Lipo batteries in a fireproof location, which could be a container made of metal or on ceramic tile.
- > Always connect the battery's lead marked "Discharge" or "TO ESC" to the electronic speed controller. Never attempt to connect the battery's "CHARGE" lead to the ESC.

> It is strongly recommended to use an ESC which is designed to handle the low voltage cutoff points or Lipo batteries (Always follow the instructions provided with the ESC for proper operation). Discharging Lipo batteries below 2.5V per cell (Norm is 3.7V per cell, at 4.2V once fully charged) can cause permanent damage and limit the number of times the battery can effectively be used again.

> Never discharge Lipo batteries at currents which exceed the discharge current rating of the battery as this can often cause a cell to overheat. Do not allow a Lipo cell to exceed 60°C (140°F) during discharge.

Caution!

Cells may be hot. Do not allow the battery's internal electrolyte to get in the eyes or on skin. Wash affected areas with soap and water immediately if they come in contact with the electrolyte. If electrolyte makes contact with the eyes, flush with large amounts of water for 15 minutes and seek medical attention immediately.

Carefully inspect Lipo batteries which have been involved in a crash for even the smallest of cracks, splits, punctures or damage to the wiring and connectors.

Disposal of Lipo batteries

Unlike Ni-Cd batteries, Lithium-polymer batteries are environmentally friendly. For safety reasons, it's best that Lipo cells be fully discharged before disposal (however, if physically damaged it is not recommended to discharge Lipo cells before disposal). The batteries must also be cool before proceeding with disposal instructions. To dispose of Lipo cells and packs:

- > If any Lipo cell in the pack has been physically damaged, resulting in a swollen cell or a split or tear in a cell's foil covering, do not discharge the battery.
- > Place the Lipo battery in a fireproof container or bucket of sand.
- > Connect the battery to a Lipo discharger. Set the discharge cutoff voltage to the lowest possible value. Set the discharge current to a C/10 value, with "C" being the capacity rating of the pack.
- > Discharge the battery until its voltage reaches 1.0V per cell or lower. For resistive load type dischargers, discharge the battery for up to 24 hours.
- > Submerge the battery into bucket or tub of salt water. This container should have a lid, but it does not need to be air-tight. Perhaps a bucket or tub containing 3 to 5 gallons of cold water, and mix in 1/2 cup of salt per gallon of water. Drop the battery into the salt water. All the battery to remain in the tub of salt water for at least 2 weeks.
- > Remove the Lipo battery from the salt water and place it in the normal trash.

Terminology

Electronic speed control (ESC)

An electronic circuit with the purpose to vary an electric motor's speed, its direction and possibly also to act as a dynamic brake. ESCs are often used on electrically-powered radio controlled models.

An ESC can be a stand-alone unit which plugs into the receiver's throttle control channel or incorporated into the receiver itself, as is the case in most toy-grade R/C vehicles. Some R/C manufacturers that install proprietary hobby-grade electronics in their entry-level vehicles, vessels or aircraft use onboard electronics that combine the two on a single circuit board.

Brushless DC motors (BLDC motors, BL motors)

Also known as electronically commutated motors (ECMs, EC motors). BLDC motors are synchronous electric motors powered by direct-current (DC) electricity and having electronic commutation systems, rather than mechanical commutators and brushes. The current-to-torque and voltage-to-speed relationships of BLDC motors are linear.

BLDC motors may be described as stepper motors, with fixed permanent magnets and possibly more poles on the rotor than the stator, or reluctance motors. The latter may be without permanent magnets, just poles that are induced on the rotor then pulled into alignment by timed stator windings. However, the term stepper motor tends to be used for motors that are designed specifically to be operated in a mode where they are frequently stopped with the rotor in a defined angular position.

RC servos

Servos are hobbyist remote control devices typically employed in radio-controlled models, where they are used to provide actuation for various mechanical systems such as the steering of a car, the control surfaces on a plane, or the rudder of a boat.

Due to their affordability, reliability, and simplicity of control by microprocessors, RC servos are often used in small-scale robotics applications.

RC servos are composed of an electric motor mechanically linked to a potentiometer. A standard RC receiver sends Pulse-width modulation (PWM) signals to the servo. The electronics inside the servo translate the width of the pulse into a position. When the servo is commanded to rotate, the motor is powered until the potentiometer reaches the value corresponding to the commanded position.

RC servos use a three-pin 0.1" spacing jack (female) which mates to standard 0.025" square pins (which should be gold-plated, incidentally). The most common order is Signal, +voltage, ground. The standard voltage is 6VDC, however 4.8V and 12V has also been seen for a few servos. The control signal is a digital PWM signal with a 50Hz frame rate. Within each 20ms timeframe, an active-high digital pulse controls the position. The pulse nominally ranges from 1.0ms to 2.0ms with 1.5ms always being center of range. Pulse widths outside this range can be used for "overtravel" -moving the servo beyond its normal range. This PWM signal is sometimes (incorrectly) called Pulse Position Modulation (PPM).

The servo is controlled by three wires: ground, power, and control. The servo will move based on the pulses sent over the control wire, which set the angle of the actuator arm. The servo expects a pulse every 20 ms in order to gain correct information about the angle. The width of the servo pulse dictates the range of the servo's angular motion.

A servo pulse of 1.5 ms width will typically set the servo to its "neutral" position or 45°, a pulse of 1.25 ms could set it to 0° and a pulse of 1.75 ms to 90°. The physical limits and timings of the servo hardware varies between brands and models, but a general servo's angular motion will travel somewhere in the range of 90° - 120° and the neutral position is almost always at 1.5 ms. This is the "standard pulse servo mode" used by all hobby analog servos.

A hobby digital servo is controlled by the same "standard pulse servo mode" pulses as an analog servo. Some hobby digital servos can be set to another mode that allows a robot controller to read back the actual position of the servo shaft. Some hobby digital servos can optionally be set to another mode and "programmed", so it has the desired PID controller characteristics when it is later driven by a standard RC receiver.

RC servos are usually powered by the receiver which in turn is powered by battery packs or an Electronic speed controller (ESC) with an integrated or a separate Battery eliminator circuit (BEC). Common battery packs are either NiCd, NiMH or Lithium-ion polymer battery (LiPo) type. Voltage ratings vary, but most receivers are operated at 5V or 6V.

Parts List

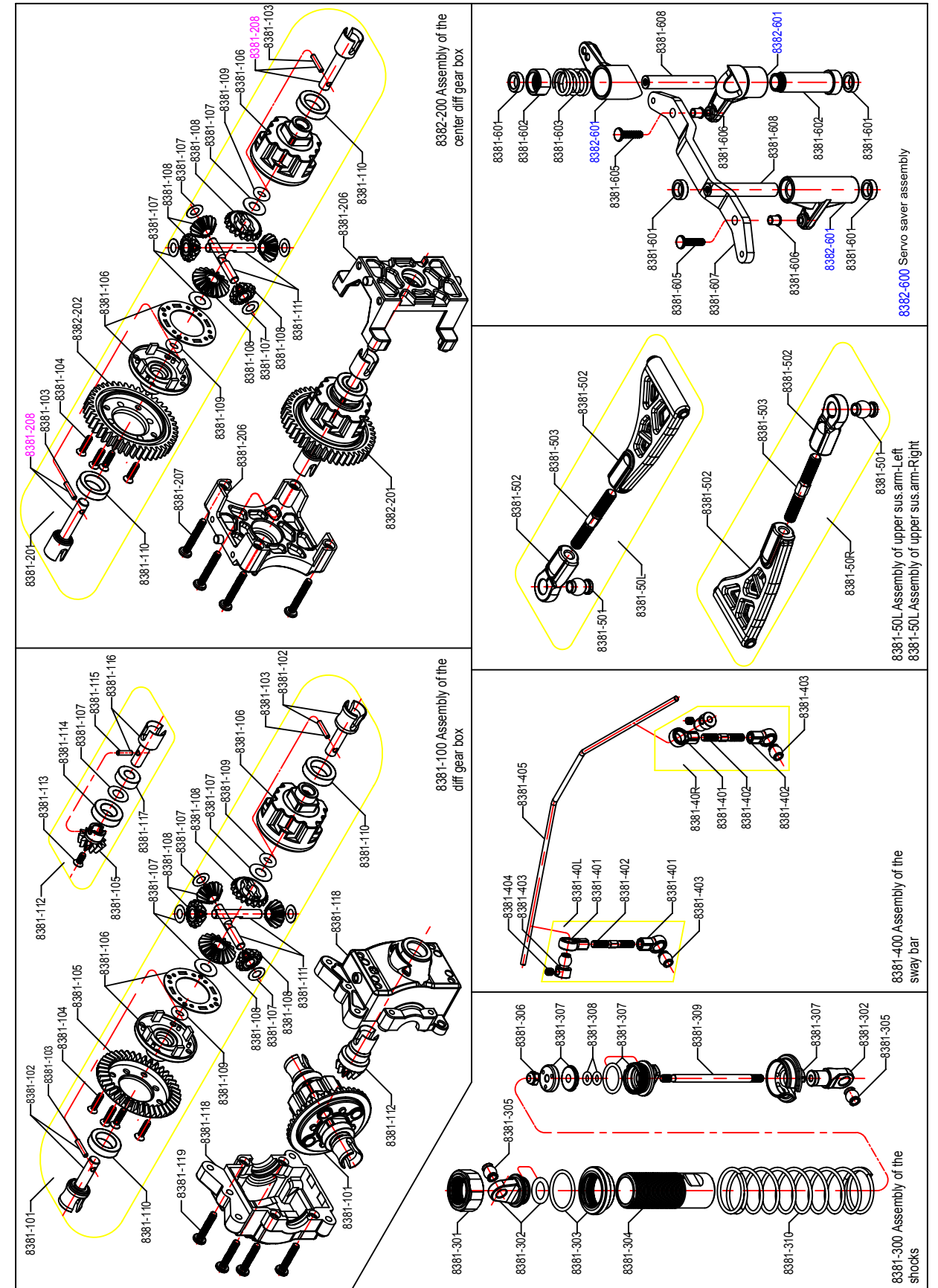
Part#	Desc	Part#	Desc
8381-100	Assembly of diff gear box	8382-601	Servo saver sus. Arm-upper/lower/steering sus. Arm
8381-101	Diff set	8381-601	Brass washer (4 pcs)
8381-102	Diff outdrive/pins (dia 2*10mm)	8381-602	Servo saver bushing/adjustment ring
8381-103	Pins(dia 2*10mm) (16 pcs)	8381-603	Servo saver spring (4 pcs)
8381-104	Flathead screw-coarse thread(KB2.6*10mm) (16 pcs)	8381-605	B head screw-coarse thread(BB3*12mm) (16 pcs)
8381-105	Crown gear-41T (large)/pinion gear-11T (small)	8381-606	Screw bushing (16 pcs)
8381-106	Diff case set/diff case cover/diff gasket	8381-607	Steering plate
8381-107	Washer-A/washer-B (8 pcs each)	8381-608	Shaft (2 pcs)
8381-108	Gear-18T (2 pcs)/gear-12T (4 pcs)	8381-6Z0	Assembly of steering linkage (2PCS)
8381-109	O Ring(dia 8mm * dia 2mm) (16 pcs)	8381-6Z1	Steering linkage (2 pcs)
8381-110	Ball bearing(dia 10mm * dia 15*4mm) (2 pcs)	8381-6Z2	Plastic rod end (8 pcs)
8381-111	Diff pins(dia 4*25.8mm) (4 pcs)	8381-6Z3	Double way ball end (8 pcs)
8381-112	Assembly of the pinion gear	8381-701	Upper sus.arm mount-rear/suspension mount
8381-113	Flathead screw(KM2.6X6mm) (16 pcs)	8381-702	B head screw-coarse thread(BB3*14mm) (16 pcs)
8381-114	Ball bearing(dia 8mm * dia14*4mm) (2 pcs)	8381-703	B head screw-coarse thread(BB3*10mm) (16 pcs)
8381-115	Pins(dia 2*8mm) (16 pcs)	8381-704	Sus.arm long axle/short axle (2 sets)
8381-116	Pinion gear outdrive/pins(dia 2*8mm)	8381-706	Lower sus.arm-front (2 pcs)
8381-117	Ball bearing(dia 5 mm * dia 11*4mm) (2 pcs)	8381-707	Drive shaft set/revolving shaft (2 sets)
8381-118	Diff gear box-F/R	8381-708	Wheel axle (2 pcs)
8381-119	B head screw-coarse thread(BB3*16mm) (16 pcs)	8381-709	Steering arm (2 pcs)
8382-200	Central diff gear box(complete)	8381-710	Ball bearing(dia 6mm * dia 12*4mm) (2 pcs)
8382-201	Central diff set	8381-729	Pins(dia 2*14mm) (16 pcs)
8382-202	Spur gear-45T(plastic) (2 pcs)	8381-713	B head screw(BM3*12mm) (16 pcs)
8381-204	Set screws (M4*4mm) (16 pcs)	8381-714	C-hub (2 pcs)
8381-206	Center diff gear box/center diff gear box plate	8381-715	B head screw(BM3*20mm) (16 pcs)
8381-207	B head screw-coarse thread(BB3*20mm) (16 pcs)	8381-716	Set screws (M4*10mm) (16 pcs)
8381-208	Center outdrive set	8381-717	Shock tower (2 pcs)
8381-300	Shock absorber complete (2 PCS)	8381-718	Pivot ball mount (4 pcs)
8381-301	Shock cap (2 pcs)	8381-719	Upper sus.arm shaft (4 pcs)
8381-302	Shock connecting rod-upper/lower/O ring (dia 12mm * dia 2mm)	8381-721	Lower sus.arm plate-front
8381-303	Shock adjust ring /O ring (dia 18.5mm * dia 1.5mm) (2 pcs)	8381-723	C-hub screw bushing (16 pcs)
8381-304	Shock body (2 pcs)	8381-724	T head screw(TM4*12mm) (16 pcs)
8381-305	Shock ball (8 pcs)	8381-725	T head screw(TM4*22mm) (16 pcs)
8381-306	M3 nylon nut (8 pcs)	8381-726	B head screw-coarse thread(BB3*18mm) (16 pcs)
8381-307	Lower shock mount/piston/O ring(dia 13mm * dia 1.5mm)	8382-701	Hex adapter/M12 17mm nut
8381-308	O ring (16 pcs)	8382-702	Bumper/upper sus.arm mount
8381-309	Shock shaft (4 pcs)	8382-703	Body post holder/body post
8381-310	Shock spring (4 pcs)	8382-704	Tire complete (2 pcs)
8381-400	Anti-roll bar assembly	8382-705	B head screw(BM3*24mm) (16 pcs)
8381-40L	Assembly of anti-roll bar linkage-Left	8381-801	Lower sus.arm-rear (2 pcs)
8381-40R	Assembly of anti-roll bar linkage-Right	8381-802	Rear hub-L/F
8381-401	Anti-roll bar rod end (8 pcs)	8381-803	B head screw(BM3*18mm) (16 pcs)
8381-402	Anti-roll bar linkage (4 pcs)	8381-805	B head screw(BM3*10mm) (16 pcs)
8381-403	Anti-roll bar pivot ball-upper/lower (4 sets)	8381-807	Pin-A(dia 1.5mm) (16 pcs)
8381-404	Set screws (M3*3mm) (8 pcs)	8382-9M1	Motor gear-12T/Set screw (M4*4)
8381-405	Anti-roll bar(dia 2.2mm) (2 pcs)	8381-9M1	Motor mount-Upper/Lower
8381-50L	Assembly of upper sus.arm-Left	8382-9S1	Servo mount
8381-50R	Assembly of upper sus.arm-Right	8381-9S2	Servo arm (2 pcs)
8381-501	Upper sus.arm ball (4 pcs)	8381-9S3	B head screw(BM3*6mm) (16 pcs)
8381-502	Upper sus.arm/rod end (2 sets)	8382-9Z0	Assembly of steering tie rod
8381-503	Upper sus.arm linkage (2 pcs)	8381-007	Receiver cover-upper/lower
8382-600	Servo saver assembly-complete	8381-008	Antenna tube (3 pcs)
		8381-009	Pin-B(dia 1.2mm) (16 pcs)
		8381-010	Screw washer
		8381-011	Flathead screw(KM3X10mm) (16 pcs)

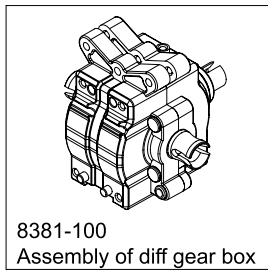
Parts List

Part#	Desc
8381-012	Flathead screw-coarse thread(KB3*10mm) (16 pcs)
8381-013	Flathead screw-coarse thread(KB3*12mm) (16 pcs)
8381-015	Flathead screw (KM3*18mm) (16 pcs)
8381-020	Hex driver H17
8381-022	17mm nut (4 pcs/set)
8382-001	Chassis
8382-002	Side guard-L/R
8382-003	Battery mount-A/B
8382-004	Upper deck mount-F/R
8382-005	Central drive shaft-C
8382-006	Central drive shaft-D
8382-007	Upper deck-C
8382-008	Upper deck-D
8382-009	Upper deck-E
8382-010	Wire mount-B
8382-011	Battery cover
8382-012	Painted body (PVC body)
8382-013	Upper deck E mount
H118	Brushless ESC (80A)
H115	Brushless motor (KV:2260)
H103	LiPo battery (7.4V, 20C, 3200mAh)
D301	Servo (9kg metal gears)
D302T	2.4GHz transmitter
D302S	2.4GHz receiver
8382-014	Painted body(PC body)
P101	Motor cooling fan/T head screw (TM4*22 mm)

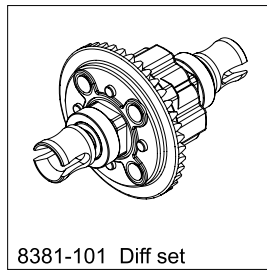
Optional & Upgrade Parts

Part#	Desc
P102	Smart multi-functional charger & discharger
P103	LiPo battery (7.4V, 30C, 3200mAh)
D302HT	2.4GHz LCD transmitter
P123	Central Diff Gear-45T (Zinc Alloy)
P124	Steering link
P125	Lower Suspension Arm (2 pcs)
P126	C-Hub (2 pcs)
P127	Suspension Mount (2 pcs)
P128	Left/Right Rear Hub
P129	Diff Case set/Diff Case Cover
P130	Front/Rear Diff Gear Box
8382-014C	Clear PC body

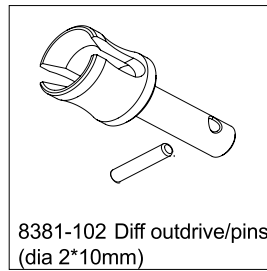




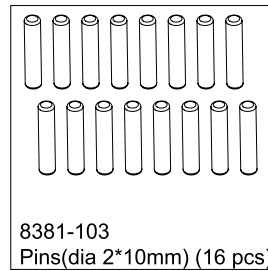
8381-100
Assembly of diff gear box



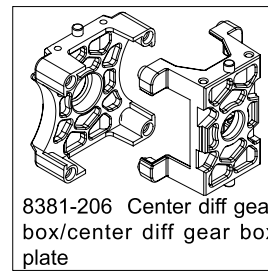
8381-101 Diff set



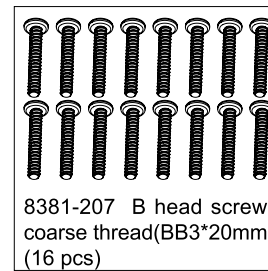
8381-102 Diff outdrive/pins
(dia 2*10mm)



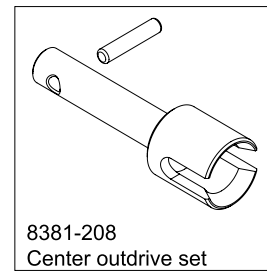
8381-103
Pins(dia 2*10mm) (16 pcs)



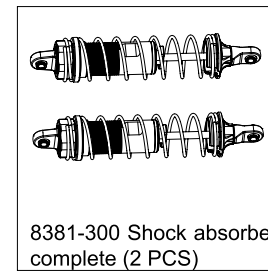
8381-206 Center diff gear
box/center diff gear box
plate



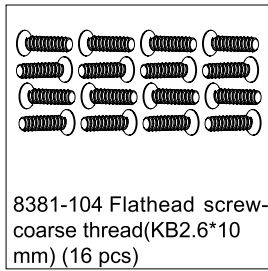
8381-207 B head screw-
coarse thread(BB3*20mm)
(16 pcs)



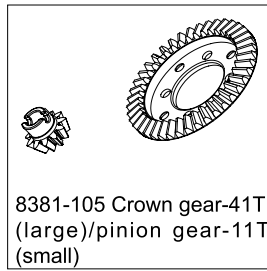
8381-208
Center outdrive set



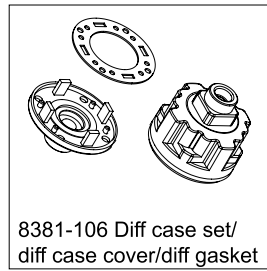
8381-300 Shock absorber
complete (2 PCS)



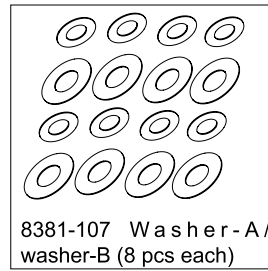
8381-104 Flathead screw-
coarse thread(KB2.6*10
mm) (16 pcs)



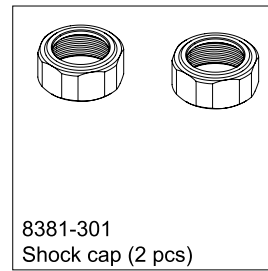
8381-105 Crown gear-41T
(large)/pinion gear-11T
(small)



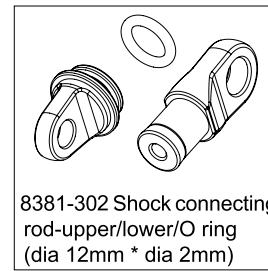
8381-106 Diff case set/
diff case cover/diff gasket



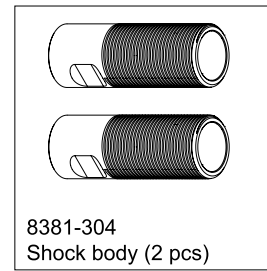
8381-107 Washer - A /
washer-B (8 pcs each)



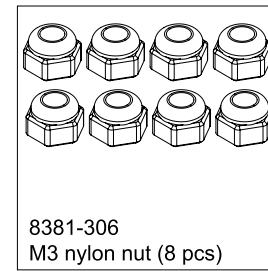
8381-301
Shock cap (2 pcs)



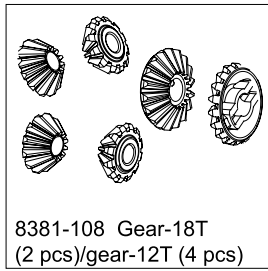
8381-302 Shock connecting
rod-upper/lower/O ring
(dia 12mm * dia 2mm)



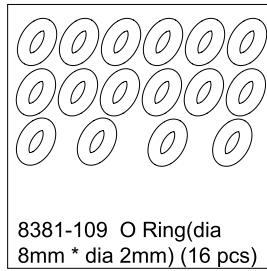
8381-304
Shock body (2 pcs)



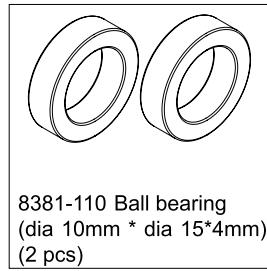
8381-306
M3 nylon nut (8 pcs)



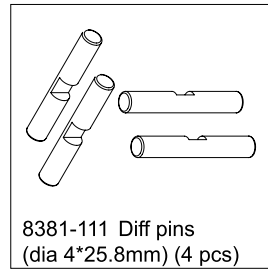
8381-108 Gear-18T
(2 pcs)/gear-12T (4 pcs)



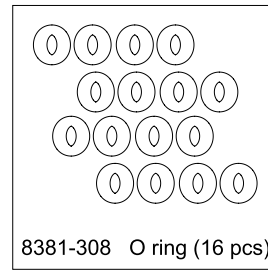
8381-109 O Ring(dia
8mm * dia 2mm) (16 pcs)



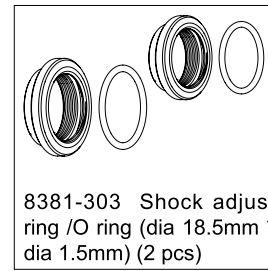
8381-110 Ball bearing
(dia 10mm * dia 15*4mm)
(2 pcs)



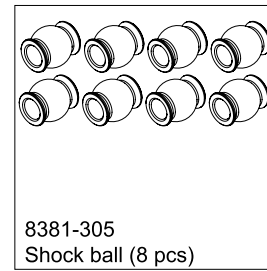
8381-111 Diff pins
(dia 4*25.8mm) (4 pcs)



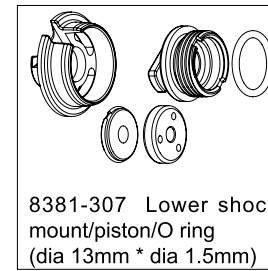
8381-308 O ring (16 pcs)



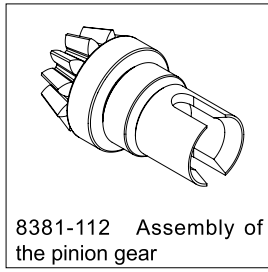
8381-303 Shock adjust
ring /O ring (dia 18.5mm *
dia 1.5mm) (2 pcs)



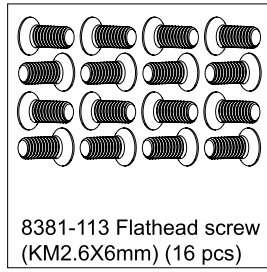
8381-305
Shock ball (8 pcs)



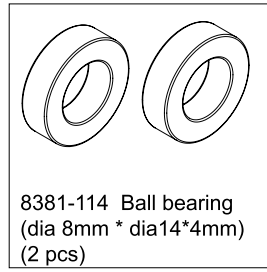
8381-307 Lower shock
mount/piston/O ring
(dia 13mm * dia 1.5mm)



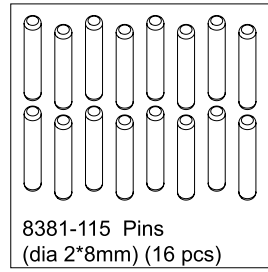
8381-112 Assembly of
the pinion gear



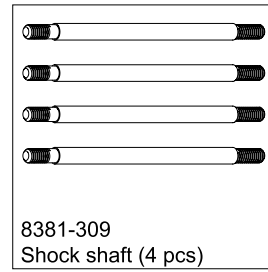
8381-113 Flathead screw
(KM2.6X6mm) (16 pcs)



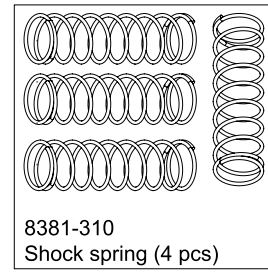
8381-114 Ball bearing
(dia 8mm * dia 14*4mm)
(2 pcs)



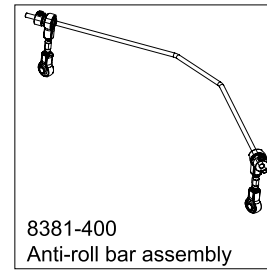
8381-115 Pins
(dia 2*8mm) (16 pcs)



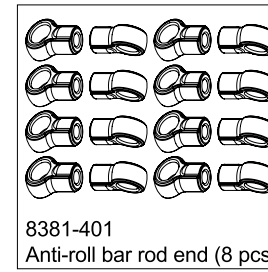
8381-309
Shock shaft (4 pcs)



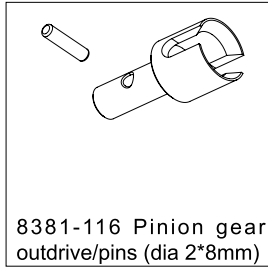
8381-310
Shock spring (4 pcs)



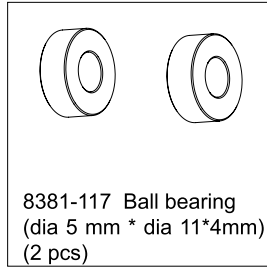
8381-400
Anti-roll bar assembly



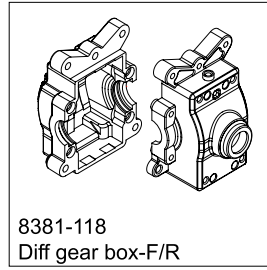
8381-401
Anti-roll bar rod end (8 pcs)



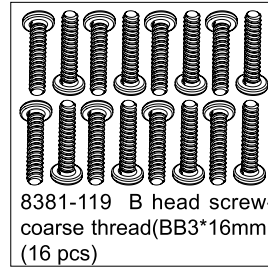
8381-116 Pinion gear
outdrive/pins (dia 2*8mm)



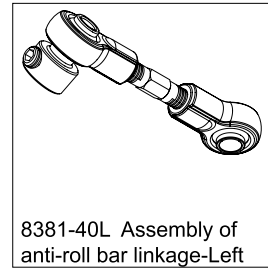
8381-117 Ball bearing
(dia 5 mm * dia 11*4mm)
(2 pcs)



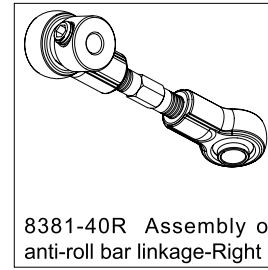
8381-118
Diff gear box-F/R



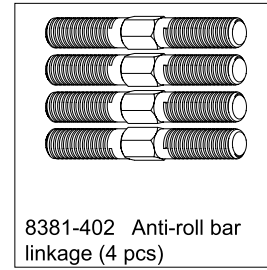
8381-119 B head screw-
coarse thread(BB3*16mm)
(16 pcs)



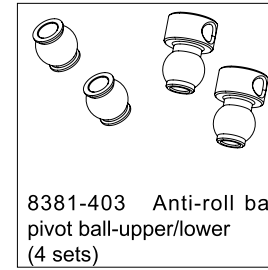
8381-40L Assembly of
anti-roll bar linkage-Left



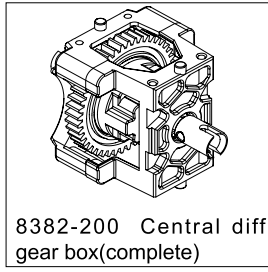
8381-40R Assembly of
anti-roll bar linkage-Right



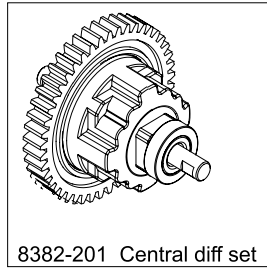
8381-402 Anti-roll bar
linkage (4 pcs)



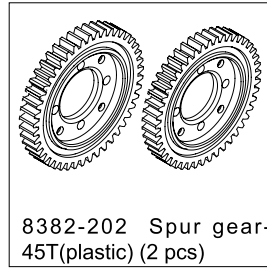
8381-403 Anti-roll bar
pivot ball-upper/lower
(4 sets)



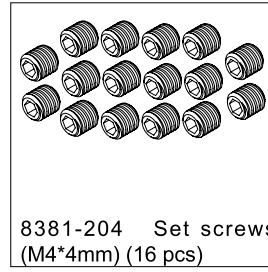
8382-200 Central diff
gear box(complete)



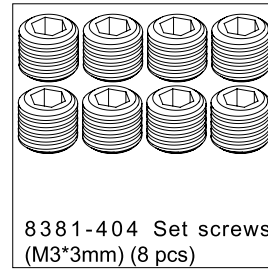
8382-201 Central diff set



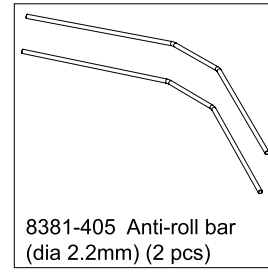
8382-202 Spur gear-
45T(plastic) (2 pcs)



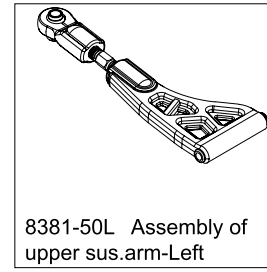
8381-204 Set screws
(M4*4mm) (16 pcs)



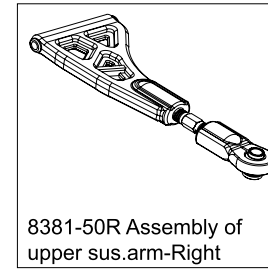
8381-404 Set screws
(M3*3mm) (8 pcs)



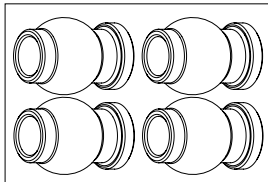
8381-405 Anti-roll bar
(dia 2.2mm) (2 pcs)



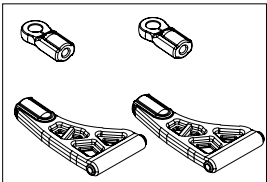
8381-50L Assembly of
upper sus.arm-Left



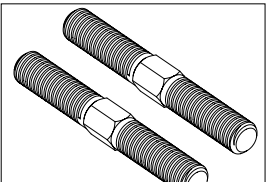
8381-50R Assembly of
upper sus.arm-Right



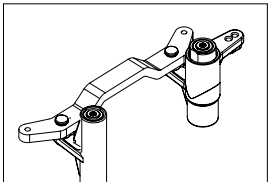
8381-501 Upper sus.arm ball (4 pcs)



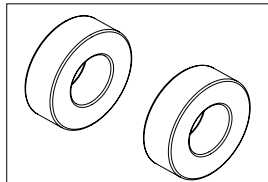
8381-502 Upper sus. arm/rod end (2 sets)



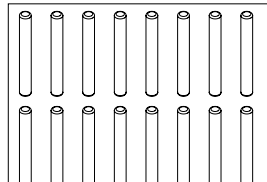
8381-503 Upper sus.arm linkage (2 pcs)



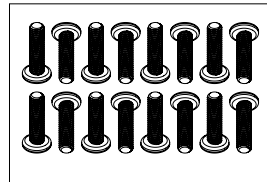
8382-600 Servo saver assembly-complete



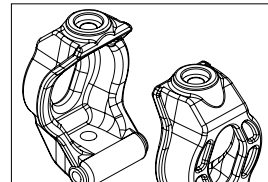
8381-710 Ball bearing(dia 6mm * dia 12*4mm) (2 pcs)



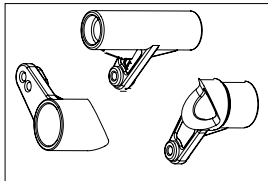
8381-729 Pins (dia 2*14mm) (16 pcs)



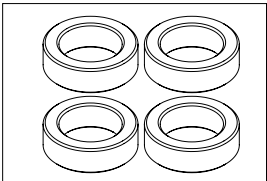
8381-713 B head screw (BM3*12mm) (16 pcs)



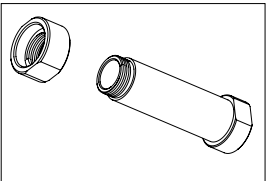
8381-714 C-hub (2 pcs)



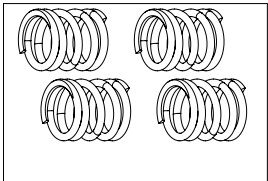
8382-601 Servo saver sus. Arm-upper/lower/steering sus. Arm



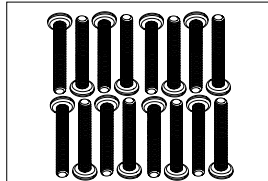
8381-601 Brass washer (4 pcs)



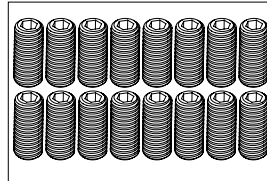
8381-602 Servo saver bushing/adjustment ring



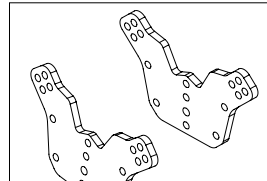
8381-603 Servo saver spring (4 pcs)



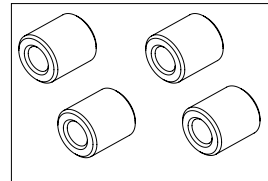
8381-715 B head screw (BM3*20mm)(16 pcs)



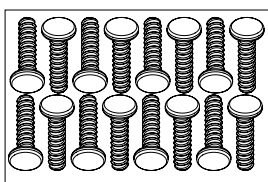
8381-716 Set screws (M4*10mm) (16 pcs)



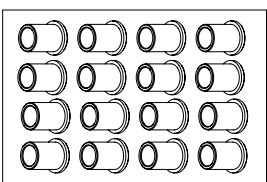
8381-717 Shock tower (2 pcs)



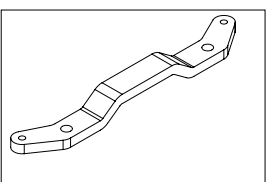
8381-718 Pivot ball mount (4 pcs)



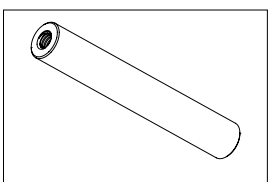
8381-605 B head screw-coarse thread (BB3*12mm) (16 pcs)



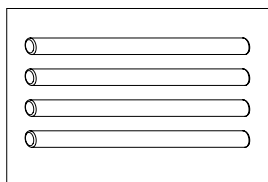
8381-606 Screw bushing (16 pcs)



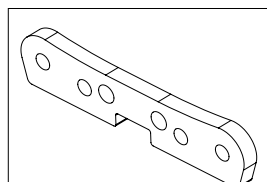
8381-607 Steering plate



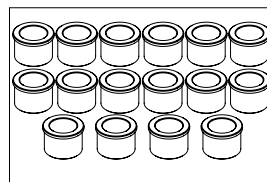
8381-608 Shaft (2 pcs)



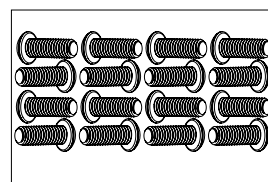
8381-719 Upper sus.arm shaft (4 pcs)



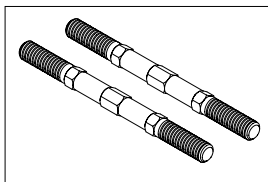
8381-721 Lower sus.arm plate-front



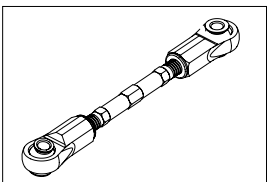
8381-723 C-hub screw bushing (16 pcs)



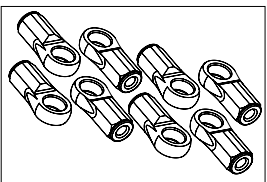
8381-724 T head screw (TM4*12mm) (16 pcs)



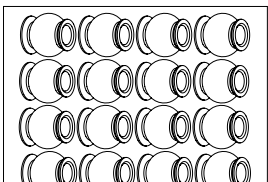
8381-6Z1 Steering linkage (2 pcs)



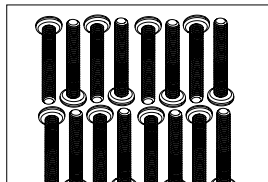
8381-6Z0 Assembly of steering linkage (2PCS)



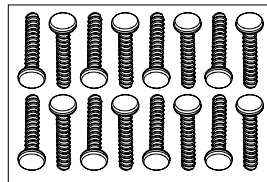
8381-6Z2 Plastic rod end (8 pcs)



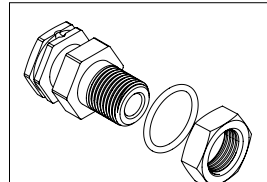
8381-6Z3 Double way ball end (8 pcs)



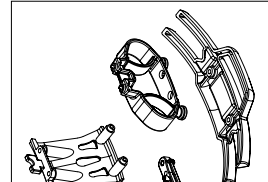
8381-725 T head screw (TM4*22mm) (16 pcs)



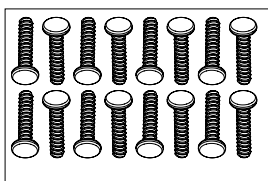
8381-726 B head screw-coarse thread(BB3*18mm) (16 pcs)



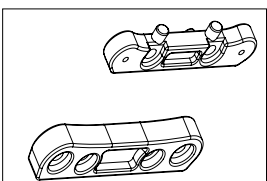
8382-701 Hex adapter/M12 17mm nut



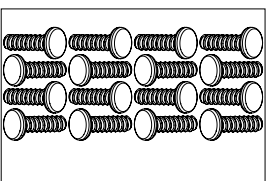
8382-702 Bumper/upper sus.arm mount



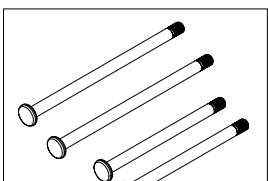
8381-702 B head screw-coarse thread(BB3*14mm) (16 pcs)



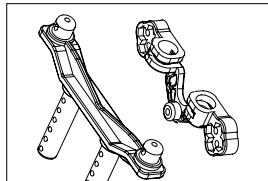
8381-701 Upper sus.arm mount-rear/suspension mount



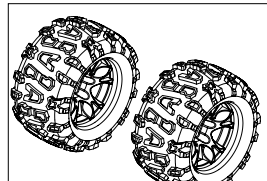
8381-703 B head screw-coarse thread(BB3*10mm) (16 pcs)



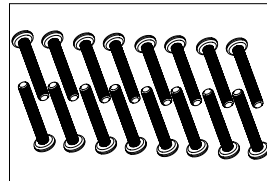
8381-704 Sus.arm long axle/short axle (2 sets)



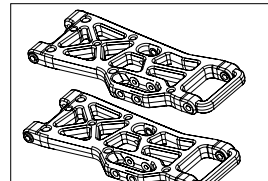
8382-703 Body post holder/body post



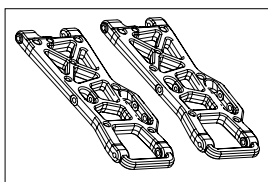
8382-704 Tire complete (2 pcs)



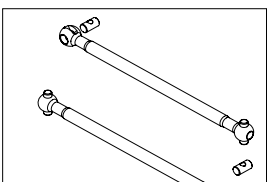
8382-705 B head screw (BM3*24mm)(16 pcs)



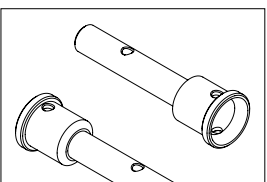
8381-801 Lower sus.arm-rear (2 pcs)



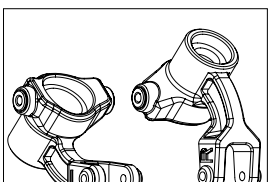
8381-706 Lower sus.arm-front (2 pcs)



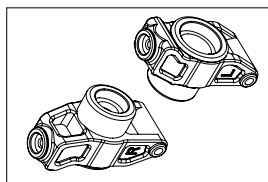
8381-707 Drive shaft set/revolving shaft (2 sets)



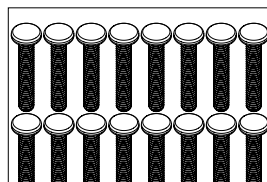
8381-708 Wheel axle (2 pcs)



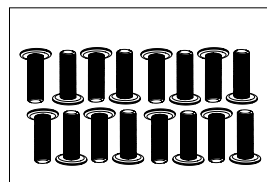
8381-709 Steering arm (2 pcs)



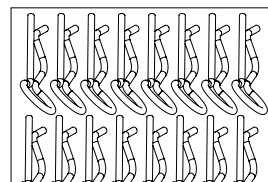
8381-802 Rear hub-L/R



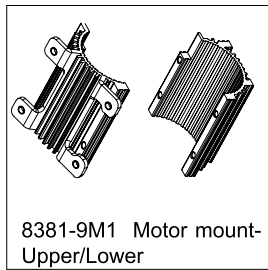
8381-803 B head screw (BM3*18mm) (16 pcs)



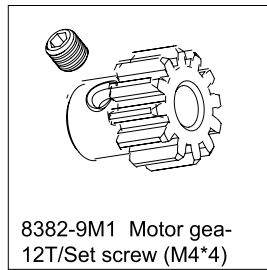
8381-805 B head screw (BM3*10mm)(16 pcs)



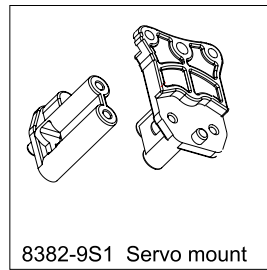
8381-807 Pin-A(dia 1.5mm) (16 pcs)



8381-9M1 Motor mount-Upper/Lower



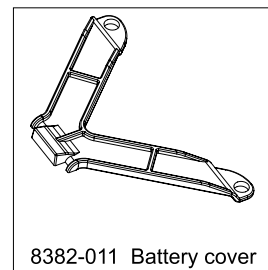
8382-9M1 Motor gear-12T/Set screw (M4*4)



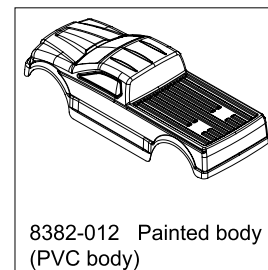
8382-9S1 Servo mount



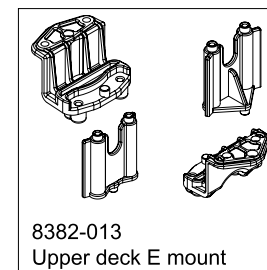
8381-9S2 Servo arm (2 pcs)



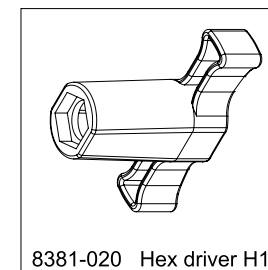
8382-011 Battery cover



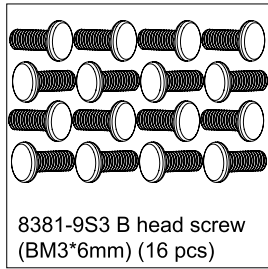
8382-012 Painted body (PVC body)



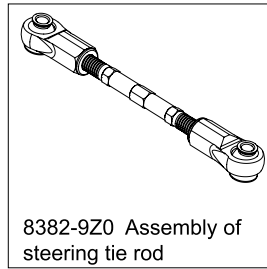
8382-013 Upper deck E mount



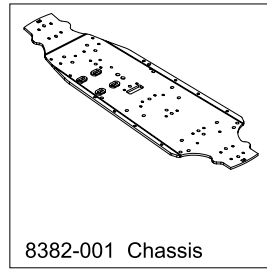
8381-020 Hex driver H17



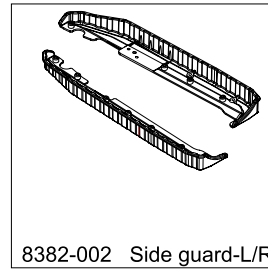
8381-9S3 B head screw (BM3*6mm) (16 pcs)



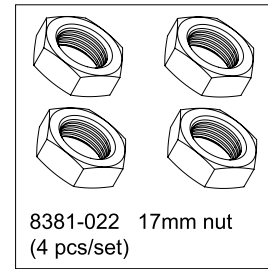
8382-9Z0 Assembly of steering tie rod



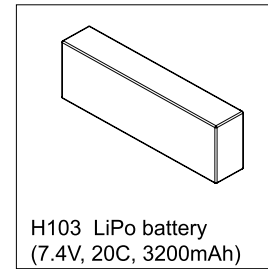
8382-001 Chassis



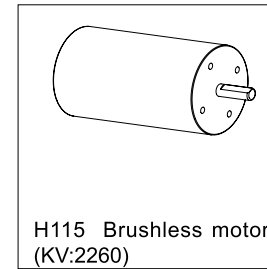
8382-002 Side guard-L/R



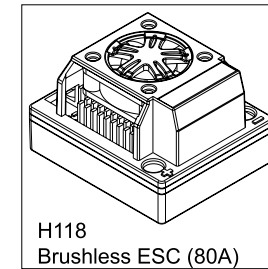
8381-022 17mm nut (4 pcs/set)



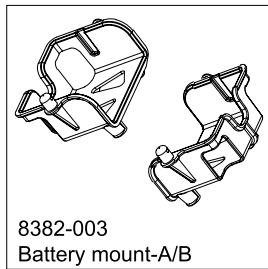
H103 LiPo battery (7.4V, 20C, 3200mAh)



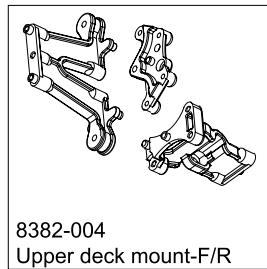
H115 Brushless motor (KV:2260)



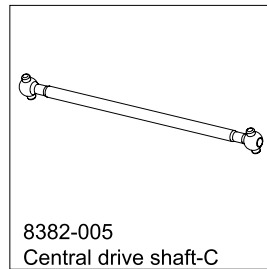
H118 Brushless ESC (80A)



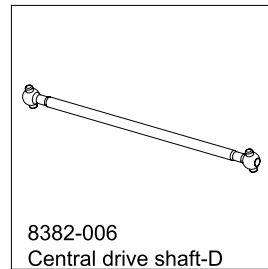
8382-003 Battery mount-A/B



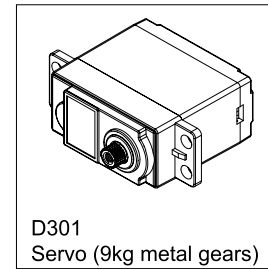
8382-004 Upper deck mount-F/R



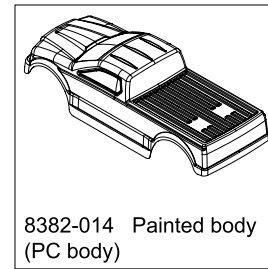
8382-005 Central drive shaft-C



8382-006 Central drive shaft-D



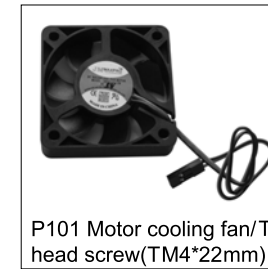
D301 Servo (9kg metal gears)



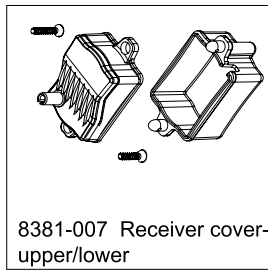
8382-014 Painted body (PC body)



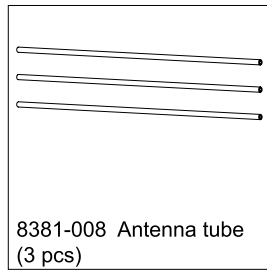
D302S 2.4GHz receiver



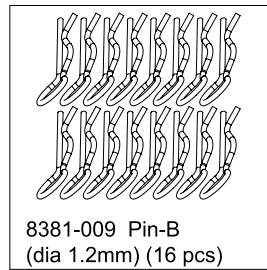
P101 Motor cooling fan/T head screw(TM4*22mm)



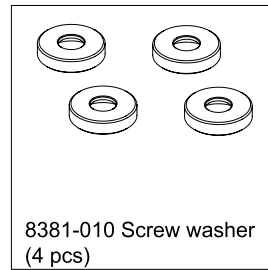
8381-007 Receiver cover-upper/lower



8381-008 Antenna tube (3 pcs)



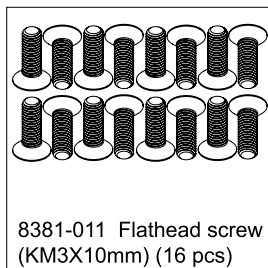
8381-009 Pin-B (dia 1.2mm) (16 pcs)



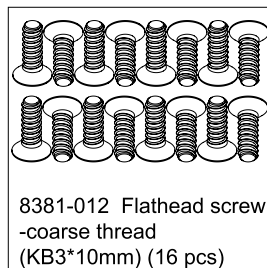
8381-010 Screw washer (4 pcs)



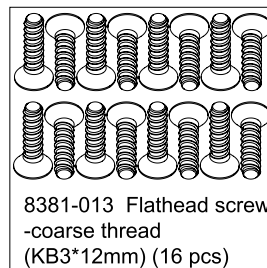
D302T 2.4GHz Transmitter



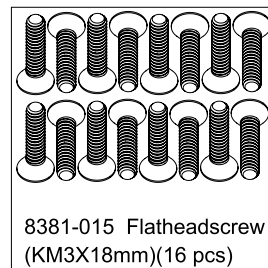
8381-011 Flathead screw (KM3X10mm) (16 pcs)



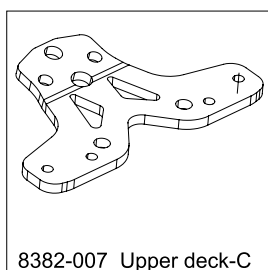
8381-012 Flathead screw -coarse thread (KB3*10mm) (16 pcs)



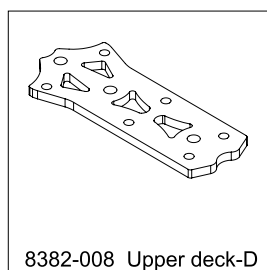
8381-013 Flathead screw -coarse thread (KB3*12mm) (16 pcs)



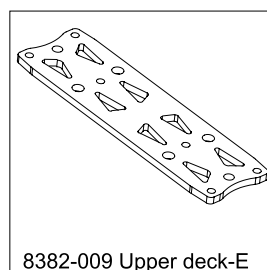
8381-015 Flatheadscrew (KM3X18mm)(16 pcs)



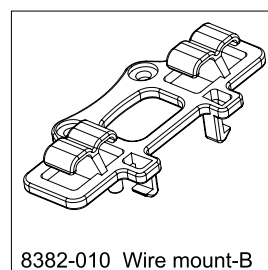
8382-007 Upper deck-C



8382-008 Upper deck-D



8382-009 Upper deck-E

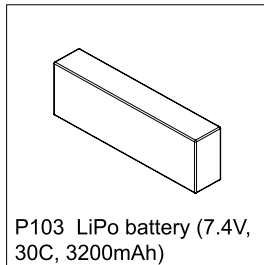


8382-010 Wire mount-B

Optional & Upgrade Parts



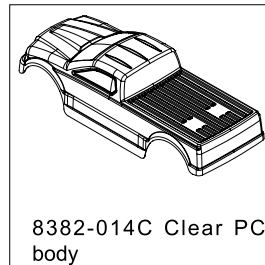
P102 Smart multi-functional charger & discharger



P103 LiPo battery (7.4V, 30C, 3200mAh)



D302HT 2.4GHz Transmitter with LCD Display



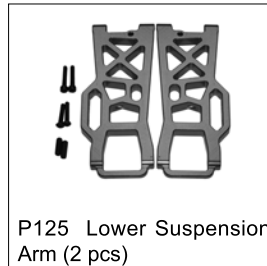
8382-014C Clear PC body



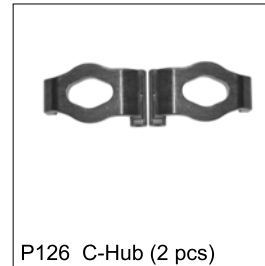
P123 Central Diff Gear-45T (Zinc Alloy)



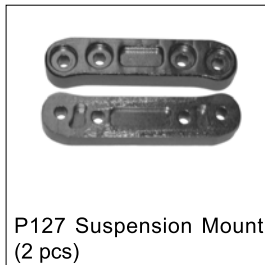
P124 Steering link



P125 Lower Suspension Arm (2 pcs)



P126 C-Hub (2 pcs)



P127 Suspension Mount (2 pcs)



P128 Left/Right Rear Hub



P129 Diff Case set/Diff Case Cover



P130 Front/Rear Diff Gear Box

Brushless Electronic Speed Controller (ESC #H118) Instruction Manual

SAFETY NOTE

⚠ WARNING: This is an extremely powerful brushless motor system. We strongly recommend that your pinion gear should be removed for your own safety and for the safety of those around you before performing calibration and programming functions with this system. Please keep your hands, hair, clothes etc clear from the gear train and wheels of an armed high performance system.

- **DON'T MIX WATER WITH ELECTRONICS!**

Never allow water, moisture, or other foreign materials to get inside this ESC, motor, or on the PC board. Water damage will void the warranty!

- **NO REVERSE VOLTAGE!**

Reverse battery polarity can damage ESC & void warranty. Disconnect battery immediately if a reverse connection occurs.

- **DISCONNECT BATTERIES WHEN NOT USE**

Always disconnect the battery pack from the speed controller when not use to avoid short circuits and possible fire hazard.

- **2-6 LIPO CELLS ONLY**

Never use fewer than 2 or more than 6 Lipo cells in the vehicle's main battery pack. The ESC handles up to 6S Lipo input (25.2 Volts Max).

- **TRANSMITTER ON FIRST**

Always turn on your transmitter first, then on the speed controller.

- **INSULATE WIRES**

Always insulate exposed wiring with heat shrink tubing or electrical tape to prevent short circuits, which can damage this device.

- **1/8 OR SMALLER SCALES**

The ESC system is intended for 1/8 scale and smaller models.

BEFORE YOU BEGIN

1) Plan speed controller placement

- Choose a location for the speed controller that is protected from debris. To prevent radio interference, place the speed controller as far away from the radio receiver as possible and keep the power wires as short as possible.

For best results, clean the bottom of the speed controller and chassis. Peel off the cover on one side of the double-sided tape, and stick to the bottom of the speed controller. **DO NOT** peel off the other side yet.

- Use a small piece of double-sided tape on the ON/OFF switch.

- Determine how you would prefer to connect the motor and battery pack to the speed controller. For the motor, use high power connector pairs. Connectors are preferable for most applications as it allows you to easily change motors.

2) Soldering

TIPS & TRICKS. Place the speed controller upright and use servo tape to secure it to the bench. Doing so provides a stable work area and allows easy access to the solder posts. Attaching wires to the speed controller

- Red wires are usually connected to the speed controller positive battery terminal and positive motor terminal. Black wire is typically used for battery negative terminal. Inspect the housing on the speed controller next to each post or refer to the diagrams to determine which colour wire to attach to each post.

- Strip back the insulation of the wire by about 2.4mm to 3.2mm (3/32" to 1/8") and "pre-tin" the wire by heating the end and applying solder until it is thoroughly covered. **CAUTION:** Be very careful not to splash yourself with hot solder.

- Place the tip of the iron in the notch on top of the post and apply a small amount of solder to the post. When the solder has flowed, remove the soldering iron, wipe the tip clean and apply a small amount of fresh solder to it.

- Pre-heat both the wire and the post.

- Hold the wire so the tinned end is in contact with the notch of the post. Now touch the iron tip to the wire and the post. Wait about 4 seconds for the solder to flow, and then remove the iron while still holding the wire. You may let go of the wire after a second or two when the solder sets.



Same techniques described in the proceeding section may be used to solder the wires to the battery or to battery connectors.

IMPORTANT: Take precautions if removing factory battery connectors. Connecting the battery backwards will cause damage, and will void warranty. When soldering connectors to a battery pack, cut only one wire of the battery pack at a time to ensure that the exposed wires cannot short together.

HINT: If you are using connectors for both the battery and the motor, make sure that they are not the same or that you have a male and a female attached to the speed controller wires. That way, you cannot accidentally connect the battery to the motor wires or vice versa.

- Make sure that the connector ends will be mated together correctly, male to female, and that the wire colours match red to red and black to black.

Prolonged/excessive heating of solder post (motor or ESC) will damage PCB.

Note: Make sure no wire strands have strayed to an adjacent solder post, this will result in short-circuiting & severe ESC damage, which will void the warranty.

CONNECTIONS

Brushless motor wiring

Connect the blue, yellow and orange motor wires to the motor. There is no polarity on the three ESC-to-motor wires, so do not worry about how you connect them initially. You may find it necessary to swap two wires if the motor runs in reverse.



ESC/TRANSMITTER CALIBRATION

IMPORTANT NOTE: Calibration is necessary for the first use of this ESC, or whenever used with a new/different transmitter.

If you are using a Futaba transmitter, you must reverse the throttle channel signal on your transmitter. Please refer to your Futaba instructions for detail.

Individual transmitter signal varies at full throttle, full brake and neutral. You must calibrate your ESC so that it will operate more effectively with your transmitter.

How to calibrate ESC

- Switch the ESC off.
- Turn on the transmitter.
- Hold full throttle on your transmitter and turn the ESC's switch ON. Keep holding full throttle on the transmitter. LED flashes on the ESC and you can hear the initialization tones ring.
- Wait for 2 seconds.
- Green LED blinks rapidly and the motor will ring 4 times indicating full throttle is being measured.
- Red LED blinks while beeping, this indicates it's time to push full brake. Move throttle trigger to full brake and wait for a few seconds, the ESC red LED will blink and ring 4 times indicating full brake is measured.
- Yellow LED blinks while beeping, this indicates it's time for neutral. Relax trigger to neutral (centre). The ESC will now ring 4 times and flash the yellow LED rapidly to accept the neutral position.
- ESC LED will blink and ring twice indicating that it is armed.



From this position, when you connect batteries and turn on the switch, the ESC will give the initialization tone and flash, and the arming tone will ring one second or two later. If the ESC is programmed for the Auto-Lipo setting, it will beep the number of cells in your Lipo pack between the initialization tones and the arming tones. After the arming tone plays, the ESC is ACTIVE and will respond to the throttle application.

ESC PROGRAMMING

1) Program Card (Optional part)

Program Card allows you to modify the most commonly used settings on this ESC with the touch of a single button. No computer needed. Simply connect the Program Card to the throttle lead of the controller and power the program card as described below. Click the button to scroll through and change the indicated settings. All the settings will show on the program card right away. Can't get any easier.



Instruction for Program Card

- Turn off the ESC and disconnect the throttle lead from the receiver.
- Connect the throttle lead from EC to the 3 pin connector on the Program Card.
- Turn on the ESC to apply power to both ESC and Program Card.
- All the current settings will be displayed on the correspondent LEDs. Press and

2) Manual programming

Manual programming the ESC is as simple as answering a few questions. There are nine setting options.

Programmable features

Question(setting)	Value (D)* factory default	Description
1) Brake/Reverse Type	1) Reverse Lockout(D)*	Allow the use of reverse only after the ESC senses two seconds of neutral throttle.
	2) Forward/Brake Only	No reverse function.
	3) Forward/Brake/Reverse	Reverse or forward is accessible at any time after the ESC brakes to zero motor RPM.
2) Brake Percentage	1) 25%	Allow only 25% available braking power at full brake.
	2) 50% (D)*	Allow only 50% available braking power at full brake.
	3) 75%	Allow only 75% available braking power at full brake.
	4) 100%	Allow all available braking power.
3) Reverse Percentage	1) 25%	Allow only 25% power in reverse.
	2) 50% (D)*	Allow only 50% power in reverse.
	3) 75%	Allow only 75% power in reverse.
	4) 100%	Allow full power in reverse
4) Punch Control	1) High	Very limited acceleration. Good for 2WD vehicles.
	2) Medium	Medium acceleration limit.
	3) Low	Moderate acceleration limit. Good for 4WD vehicles on soft dirt.
	4) Lowest (D)*	Very moderate acceleration limit. Good for most situations.
	5) Disabled	Acceleration is only limited by battery capacity. Good for 4WD on high traction drag racing.
5) Drag Brake	1) Disabled (D)*	Vehicle will coast with almost no resistance from the motor at neutral throttle.
	2) 10%	Low amount of braking effect from the motor at neutral throttle.
	3) 20%	More braking effect from the motor at neutral throttle.
	4) 30%	Fairly high braking effect from the motor at neutral throttle.
	5) 40%	High braking effect from the motor at neutral throttle.
6) Throttle Dead Band	1) Large	0.1500ms
	2) Normal (D)*	0.1000ms
	3) Small	0.0750ms
	4) Very Small	0.0500ms
	5) Smallest	0.0250ms
7) Voltage Cutoff	1) None	Does not cut off or limit the power due to low voltage. Use this setting ONLY with NiCd or NiMh packs. Do not use it with any Lipo packs!

	2) Auto-Lipo (D)*	Automatically detects the number of Lipo cells you have plugged in
	3) 5V	Cuts off/limits acceleration when the pack gets down to 5 voltage
	4) 6V	Cuts off/limits acceleration when the pack gets down to 6 voltage. A must use setting for 2 cells Lipo packs
	5) 9V	Cuts off/limits acceleration when the pack gets down to 9 voltage. A must use setting for 3 cells Lipo packs
	6) 12V	Cuts off/limits acceleration when the pack gets down to 12 voltage. A must use setting for 4 cells Lipo packs.
8) Motor Timing	1) Lowest	A maximum efficiency setting giving long runtimes and cooler motor temperature.
	2) Normal (D)*	The best mix of speed, punch and efficiency for all motors.
	3) Highest	Increases ampere draw, reduces runtimes, increase motor temperatures and may increase top speed/punch slightly.
9) Motor Type	1) Brushless (D)*	For brushless motor.
	2) Brushed Reversing	For brushed motor with reversing.
	3) Brushed High Power	For high power brushed motor setup.

You must answer "YES" or "NO" to the setting values as shown on the ESC screen. When you enter the setting, the ESC will emit a sequence of beeps and LED flashes tell you which step you are at. There are two parts to the beep sequence. The first set of beeps indicates the "Setting Number (Question)", e.g. Brake/Reverse Type, and the second set of beeps indicates a Setting Value, e.g. Reverse Lockout. Answering "No" to a setting value will cause the ESC to ask for the next value in that section. After a "Yes" answer is accepted, the ESC knows you are not interested in any other option in that section, so it skips to the first option in the next section.

Note: If you answer "No" to all Setting Values for a particular Setting Number, the ESC will keep whatever value that's been previously programmed. Only by answering "Yes" to a Setting Value will the ESC store/change that value.

How to Enter programming Mode

- Plug battery onto the ESC
- Hold full throttle on your transmitter
- Turn the ESC switch ON
- LED flashes and rings tone once
- Wait for a few seconds
- LED flashes and rings tone 4 times indicating it is ready for calibration mode
- Continue to hold full throttle
- LED flashes while beeping
- Wait another few seconds
- LED flashes and tone rings 4 times
- LED flashes while beeping indicating programming mode
- Let trigger go on neutral (centre)

At this point, the ESC will be flashing/beeping at the following sequence:

Beep-Pause-Beep...and then repeats. This indicates that you are at Question 1 section and that it asks you to accept/reject values now.

When answering a question, you will need to move the trigger to "Yes" (full throttle) position or the "No" (full brake) position and keep it there for about 3 seconds. When the ESC has accepted your answer, it will confirm your reply by flashing the LED and emitting a beeping tone. Release the trigger allowing it to go to Neutral to confirm that you are ready for ESC to ask your next question. You are not required to continue through all nine programming options. For example, if you wish only to change the Brake/Reverse Type (Option 1), then after programming that setting, you can disconnect power from the ESC and you're ready to run. Disconnecting the controller in the middle of programming simply retains the values for the remaining programming options that were previously set up.

FAN REPLACEMENT

The ESC comes with a 30mm*30mm*7mm 5V brushless fan. Should the fan need replacement, simply unplug the fan power wires from the ESC, remove the 4 screws that secure the fan to the shroud and slide the fan out of the shroud housing.

SPEED CONTROLLER SPECIFICATION

Speed controller	Fwd/Brk or Fwd/Brk/Rev
Input Power (Cells)	(2-6S LiPo)
Motor limits,	
Brushless Kv≤2400	Up to 6S(25.2Volt), for 1/8 monster trucks and truggies
Brushless Kv>2400	Up to 4S(16.8Volt), ideal for 1/8 buggies
On Resistance, Brushless	0.0002 Ohms per phase at 25°C (77°F) Trans. Temp.
Continuous/Burst Current	150Amp / 950Amp
Switching BEC	5.7 Volts, 3 Amp
Status LED	One LED with 3 colours(Red, Green & Orange)
Thermal Overload Protection	Yes
Dimensions (L*W*H)	48.8*57.8*35.8mm (1.29*2.28*1.41")
Weight (Not incl. wires)	88g (3.10oz)

TROUBLESHOOTING

Problem: My ESC may or may not arm, but it will not calibrate to my transmitter.

Solution: Most calibration issues can be solved by changing settings on the transmitter. Make sure you have both your throttle and brake endpoints (called EPA or ATV on your radio) on the throttle channel out to between 100 to 120%. Make sure if your have a Futaba or Futaba made transmitter to have the throttle channel set to the reversed position.

Problem: My ESC calibrates for the full throttle and full brake positions but won't calibrate to the neutral throttle position. (Orange LED keeps flashing)

Solution: Move the throttle trim one way, then the other (usually towards the throttle side ideally). If your transmitter has a 50/50 and 70/30 setting for the throttle, set it for 50/50 and retry calibration. Also, if you have changed the dead band to a narrower band, you may want to try going back to the "normal" setting.

Problem: My vehicle acts like it has "turbo lag" (poor acceleration/punch for the first few feet or yards)

Solution: Make sure you're using high quality batteries and a battery connector capable of high amp flow (40-100 amps). This behaviour is very typical of a battery pack that is having difficulty providing the power your vehicles/system requires for top performance. Use copper bars to connect cells rather than welded tabs. Copper bars have a much lower resistance.

Problem: My battery pack is plugged into the ESC and nothing is working.

Solution: Make sure the ESC's receiver plug is plugged into channel 2 on the receiver, and that it's plugged in with the correct orientation. Double check your solder connections on the battery plug, and make sure the battery is showing good voltage.

PRODUCT WARRANTY

This brushless speed controller is guaranteed to be free from defects in materials or workmanship for a period of ONE YEAR from the original date of purchase. Warranty does not cover incorrect installation, components worn by use, damage to case or exposed circuit boards, damage due to timing, damage from using more than 6 LiPo cells input voltage, cross-connection of battery/motor power wires, overheating solder tabs, reverse voltage application, improper use or installation of external BEC, damage resulting from thermal overload or short-circuiting motor, damage from incorrect installation of FET servo or receiver battery pack, tampering with internal electronics, allowing water, moisture, or any other foreign material to enter ESC or get onto the PC board, incorrect installation/wiring of input plug plastic, allowing exposed wiring or solder tabs to short-circuit, or any damage caused by a crash, flooding or natural disaster. Because we have no control over the connection and use of speed controller or other related electronics, no liability may be assumed nor will be accepted for any damage resulting from the use of this product. Every ESC is thoroughly tested and cycled before leaving our facility and is, therefore, considered operational. By the act of connecting/operating the speed controller, users accepts all resulting liability. In no case shall our liability exceed the product original cost. We reserve the right to modify warranty provisions without prior notice. This ESC is not intended for use by young people under 14 years of age without the strict supervision of an adult. Use of this ESC in an uncontrolled manner may result in physical damage or injuries. Take extra care when operating any remote controlled vehicle.

Specifications are subject to change without prior notice.



Manager
 Christina
 Jun. 25, 2010

RoHS

The EUT described above has been consolidated by us and found in compliance with the council RoHS directive - 2002/95/EC. It is only valid in connection with the test report number: BST10060360Y-1RR-4.

Certificate Number: BST10060360Y-1RC-4

Applicant: SHENZHEN SUXFLY TECHNOLOGY CO., LTD
 803, 3 Building Zhongtai Science Park Longhua Town Bao'an District Shenzhen

Manufacturer: SHENZHEN SUXFLY TECHNOLOGY CO., LTD
 803, 3 Building Zhongtai Science Park Longhua Town Bao'an District Shenzhen

Product Trade Name M/N: INRUNNER BRUSHLESS MOTOR
 Suxfly
 540XXL (3674), 540S(3650), 540L(3660), 540XL(3665)

Test Standard: EPA3050B:1996, EN1122:2001, EPA3052:1996, EPA3060A, EPA7196, EPA3540C, EPA8270C

Certificate of Compliance



IC registration No.: 7993
 FCC registration No.: 732901
 VCCI registration No.: R-2205
 Authorization by EWCC
 Witness laboratory authorization by TUV-SUD

Declaration of Conformity

Certificate No.: TC-1103-053-01

Applicant: Shenzhen SKYRC Technology Co., Ltd.

Address: 4/F, Building No. 6, Meitai Industry Park, GuanGuang South Road, Guhua, Guanlan, Baoan District, Shenzhen, China.

Product Name: 1/8 SCALL Brushless Speed Controller
 1/8 SCALL Brushless Speed Controller

Trademark: TORO

Model(s): TORO8 150A
 (All models of EUT are identical and the different names are for marketing purpose only.)
 TORO8 80A (The model of EUT's design and TORO8 150A are identical and the different PCB is less MOSFET)
 TORO Micro
 (All models of EUT are identical and the different names are for marketing purpose only. But the different of 1/8 and 1/18)

Manufacturer: Shenzhen SKYRC Technology Co., Ltd.

Address: 4/F, Building No. 6, Meitai Industry Park, GuanGuang South Road, Guhua, Guanlan, Baoan District, Shenzhen, China.

Test Report: TR-1103-053-01

Complies with the requirements of the **EC EMC Directive 2004/108/EC** with amendments.

Test Standards	Title	Result
EN 61000-6-3:2007	Electromagnetic compatibility (EMC) -- Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments	Conform
EN 61000-6-1:2007	Electromagnetic compatibility (EMC) Part 6-1: Generic standards Immunity for residential, commercial and high-industrial environments	Conform

Remarks:
 The CE markings as shown below can be affixed on the product after preparation of necessary conformity documentation, as stipulated in article 8 of the Council Directive 2004/108/EC.



Issue Date:
 Apr 07, 2011

Manager
 [Signature]



TDK South China EMC Center
 Tel.: +86-769-85644678

Web: www.tdkchina.com
 Fax: +86-769-8564499



Manager
 Christina
 Jun. 23, 2010

CE

The EUT described above has been tested by us with the listed standards and found in compliance with the council EMC directive 2004/108/EC. It is possible to use CE marking to demonstrate the compliance with this EMC Directive.
 The certificate applies to the tested sample above mentioned only and shall not imply an assessment of the whole production. It is only valid in connection with the test report number: BST10060360Y-1ER-1.

Certificate Number: BST10060360Y-1EC-1

Applicant: SHENZHEN SUXFLY TECHNOLOGY CO., LTD
 803, 3 Building Zhongtai Science Park Longhua Town Bao'an District Shenzhen

Manufacturer: SHENZHEN SUXFLY TECHNOLOGY CO., LTD
 803, 3 Building Zhongtai Science Park Longhua Town Bao'an District Shenzhen

Product Trade Name M/N: INRUNNER BRUSHLESS MOTOR
 suxfly
 540XXL(3674), 540S(3650), 540L(3660), 540XL(3665)

Test Standard: EN55014-1:2006
 EN51000-5-2:2006+A2:2009
 EN51000-3-3:2008
 EN55014-2:1957+A2:2008
 EN51000-6-3:2007
 EN51000-6-1:2007

Certificate of Compliance



Shenzhen Bontek Electronic Technology Co., Ltd.

CE Attestation of Conformity

Certification number: BCT11GC-1068E Report number: BCT11GR-1068E-1, BCT11GR-1068E-2
 Shenzhen Bontek Electronic Technology Co., Ltd. hereby declares that testing has been completed and reports have been generated for:

Applicant: DHK TECHNOLOGY CO. LTD.
 E2 Bldg, Wanfeng Western Ind Zone, Heyi, Shajing, Shenzhen, China
 518104

Manufacturer: DHK TECHNOLOGY CO. LTD.
 E2 Bldg, Wanfeng Western Ind Zone, Heyi, Shajing, Shenzhen, China
 518104

Trade Mark: DHK HOBBY

Product: 2.4GHz Transmitter & Receiver

Model: D302T, D302HT

And, in accordance to the following applicable directives:
 1999/5/EC R&TTE Directive (as amended)

That this product has been assessed against the following applicable Standards:
 ETSI EN 300 440-1 V1.6.1
 ETSI EN 300 440-2 V1.4.1
 ETSI EN 301 489-1 V1.8.1
 ETSI EN 301 489-3 V1.4.1

Therefore, SHENZHEN BONTEK ELECTRONIC TECHNOLOGY CO., LTD. hereby acknowledges that the Manufacturer may issue a DECLARATION OF CONFORMITY and apply the CE mark in accordance to European Union Rules.

Attestation by:
 [Signature]



Date of Issue: Sep. 5, 2011
 Kerdy Wang
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 Tel: 86-755-86337020 Fax: 86-755-86337028 Http://www.bontek.com.cn

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