用户使用说明书

User's Instruction Manual

RAZ-R BL
MODEL# 8132

WOLF BL
MODEL# 8131

1/10 SCALE 4WD BRUSHLESS BUGGY/TRUGGY

Introduction

Thank you for choosing DHK's RAZ-R BL/WOLF BL! This model is designed in thorough research and assembled with utmost craftsmanship.This 1:10 sclale 4WD brushless model can run as fast as 50km per hour. 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. 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

WOLF BL
Length: 445mm (17.5in) (Including Rear Wing)
Width: 260mm (10.2in)
Height: 180mm (7.1in) (Including Rear Wing))
Wheelbase: 290mm (11.4in)
Front Track/Rear Track: 220mm/234mm (8.7in/9.2in)
Front/Rear Tire Diameter/Width: 88mm/33mm (3.5in/1.3in), 88mm/40mm((3.5in/1.6in)
Front/Rear Wheel Diameter/Width: 61mm/29mm (2.4in/1.14in), 61mm/36mm (2.4in/1.42in)
Ground Clearance: 25mm (0.9in)
Gear Ratio: 10.97:1
Weight: 4.35lbs/1.94Kg (Excluding Transmitter)

RAZ-R BL
Length: 459mm (18.1in) (Including Rear Wing)
Width: 300mm (11.8in)
Height: 185mm (7.3in) (Including Rear Wing)
Wheelbase: 290mm (11.4in)
Front Track/Rear Track: 244mm/249mm (9.6in/9.8in)
Tire Diameter/Width: 108mm/54mm (4.3in/2.1in)
Wheel Diameter/Width: 61mm/48mm (2.4in/1.9in)
Ground Clearance: 35mm (1.4in)
Gear Ratio: 13.17:1
Weight: 4.75lbs/2,14Kg (Excluding Transmitter)

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 (#P111,Optional) (for 2S/3S Lipo battery)500mA output with AC input

2 Channel 2.4GHz radio system

RAZ-R BL/WOLF BL 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)

RAZ-R BL/WOLF BL comes with 50A brushless electronic speed controller. Please refer to the instructions manual of the ESC for detail.

Brushless electric motor

Motor 3650 KV(RPM)	: 3970
Power	: 21.0V
Empty load current	: 2.0A(10V)
Resistance(Ω)	: 11Ω
Length(including motor shaft)	: 70mm
Diameter	: 36mm
Weight	: 170g
Shaft diameter	: 3.175mm

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 and heat sink.

Servos

Features	(6kgs)
Gears	: Plastic gears, ball bearings
Working voltage	: 4.8-6.0V
Speed (seconds/60°C)	: 0.18-0.16sec/60°
Torque	: 6kg/cm
Net weight	: 40g
Size(LxWxH)	: 40.8x20.1x38mm

Lipo Batteries

This model comes with 2S Lipo battery pack. 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 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 physi cally 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.
> Submerse 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.

Parts List

Part#	Desc
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)
8381-104	Flathead screw-coarse thread(KB2.6*10mm) (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)
8381-108	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)
8381-112	Assembly of the pinion gear
8381-113	Flathead screw(KM2.6X6mm) (16 pcs)
8381-114	Ball bearing(dia 8mm*dia14*4mm) (2 pcs)
8381-115	Pins(dia 2*8mm) (16 pcs)
8381-116	Pinion gear outdrive/pins(dia 2*8mm)
8381-117	Ball bearing(dia 5mm*dia 11*4mm) (2 pcs)
8381-118	Diff gear box-F/R
8381-119	B head screw-coarse thread(BB3*16mm) (16 pcs)
8131-200	Diff box assembly
8131-201	Diff outdrive/pins (dia 2*10mm)
8131-202	Brackets (2 pcs)
8131-204	Diff gear box (diff gear cover upper/lower)
8131-203	Spur gear-53T (plastic) (2 pcs)
8131-205	Center diff outdrive/lock nut(M4*4mm)
8381-204	Set screws (M4*4mm) (16 pcs)
8131-300	Shock absorber complete (2 PCS)
8131-301	Shock spring (4 pcs)
8131-302	Shock body (2 pcs)
8381-305	Shock ball (8 pcs)
8381-306	M3 nylon nut (8 pcs)
8381-309	Shock shaft (4 pcs)
8381-400	Anti-roll bar assembly
8381-40L	Assembly of anti-roll bar linkage-left
8381-40R	Assembly of anti-roll bar linkage-right

Part#	Desc
8381-401	Anti-roll bar rod end (8 pcs)
8381-402	Anti-roll bar linkage (4 pcs)
8381-403	Anti-roll bar pivot ball-upper/lower (4 sets)
8381-404	Set screws (M3*3mm) (8 pcs)
8381-405	Anti-roll bar(dia 2.2mm) (2 pcs)
8131-50L	Assembly of upper sus.arm-Left
8131-50R	Assembly of upper sus.arm-Right
8131-501	Upper sus.arm/rod end (2 sets)
8131-502	Upper sus.arm linkage (2 pcs)
8381-501	Upper sus.arm ball (4 pcs)
8131-600	Servo saver assembly-complete
8131-601	Servo saver spring (4 pcs)
8131-602	Steering plate
8381-601	Brass washer (4 pcs)
8381-602	Servo saver bushing/adjustment ring
8381-604	Servo saver sus. Arm-upper/lower/steering sus. Arm
8381-605	B head screw-coarse thread(BB3*12mm) (16 pcs)
8381-606	Screw bushing (16 pcs)
8381-608	Shaft (2 pcs)
8131-6Z0	Assembly of steering linkage (2PCS)
8381-6Z2	Plastic rod end (8 pcs)
8381-6Z3	Double way ball end (8 pcs)
8131-701	Lower sus.arm-front (2 pcs)
8131-702	Drive shaft set-A (2 pcs)
8131-703	Wheel axle (2 pcs)
8131-704	T head screw(TM4*17mm) (16 pcs)
8131-705	Steering arm (2 pcs)
8131-707	M6 lock nut (4 pcs)
8131-708	Hex adaptor/12mm nut (2 pcs)
8381-701	Upper sus.arm mount-rear/suspension mount
8381-702	B head screw-coarse thread(BB3*14mm) (16 pcs)
8381-703	B head screw-coarse thread(BB3*10mm) (16 pcs)
8381-710	Ball bearing(dia 6mm * dia 12*4mm) (2 pcs)
8381-715	B head screw(BM3*20mm) (16 pcs)
8381-716	Set screws (M4*10mm) (16 pcs)

Parts List

Part#	Desc
8381-717	Shock tower (2 pcs)
8381-718	Pivot ball mount (4 pcs)
8381-719	Upper sus.arm shaft (4 pcs)
8381-720	Front bumper/upper sus.arm mount-front
8381-721	Lower sus.arm plate-front
8381-726	B head screw-coarse thread(BB3*18mm) (16 pcs)
8381-727	B head screw(BM3*56mm) (8 pcs)
8131-801	Lower sus.arm-rear (2 pcs)
8131-802	Sus.arm short axle (4 pcs)
8131-803	Rear hub-L/R
8131-804	Rear wing (black)
8131-805	Suspension arm screw shaft(2 pcs)
8381-803	B head screw(BM3*18mm) (16 pcs)
8381-804	Wing mount/wing brace-L/R
8381-805	B head screw(BM3*10mm) (16 pcs)
8381-806	Rear wing rod-long/short
8381-807	Pin-A(dia 1.5mm) (16 pcs)
8131-9S1	Servo mount
8381-9S2	Servo arm (2 pcs)
8381-9S3	B head screw(BM3*6mm) (16 pcs)
8381-9Z0	Assembly of steering tie rod
8381-9Z1	Steering tie rod (2 pcs)
8131-9M1	Motor mount
8131-001	Chassis
8131-002	Upper deck mount-F/R
8131-003	Central drive shaft-E
8131-004	Battery mount-A/B
8131-005	Receiver cover-upper/lower
8131-006	Upper deck-F
8131-007	Upper deck-G
8131-008	Wire mount (2 pcs)
8131-019	Suspension arm front mount (2 pcs)
8131-020	Velcro battery strap(2 pcs)
8382-005	Central drive shaft-C
8381-008	Antenna tube (3pcs)
8381-009	Pin-B(dia 1.2mm) (16 pcs)
8381-010	Screw washer(4 pcs)
8381-011	Flathead screw(KM3X10mm) (16 pcs)

Part#	Desc
8381-012	Flathead screw-coarse thread(KB3*10mm) (16 pcs)
8381-015	Flathead screw(KM3X18mm) (16 pcs)
8381-024	Flathead screw(KB4X11.5mm) (12 pcs)
H109	3650 Brushless motor (KV:3970)
H110	LiPo battery (7.4V, 20C, 2300mAh)
H146	Brushless ESC (50A)-Waterproof
D302T	2.4GHz transmitter
D302S	2.4GHz receiver
D303	Servo (6kg)
Remarks: The above parts are common.	

The following parts are suitable for cars only where there is a √ mark.

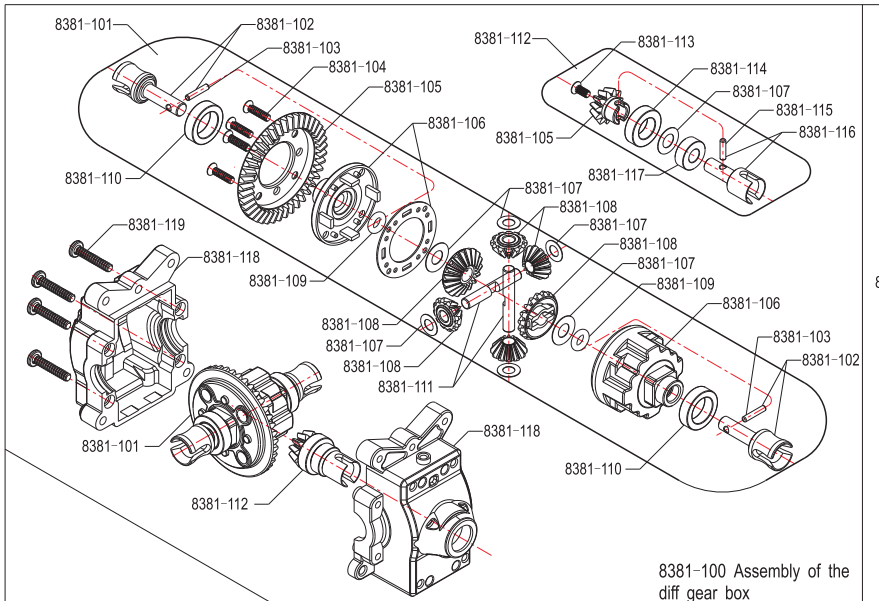
		8131	8132
8131-9M2	Motor gear-18T/Lock nut(M3*3)	√	
8132-9M1	Motor gear-15T/Lock nut(M3*3)		√
8131-009	Body post-F/R	√	
8131-010	Rear tires (for buggy 8131)	√	
8131-011	Painted body (for buggy 8131) (PVC body)	√	
8131-011C	Clear buggy body (PVC,with window cutout and body decals)	√	
8131-013	Front tires (for buggy 8131)	√	
8131-015	Buggy wheels (front) (2 pcs)	√	
8131-016	Buggy tires (with foams) (front, unglued) (2 pcs)	√	
8131-017	Buggy wheels (rear) (2 pcs)	√	
8131-018	Buggy tires (with foams) (rear, unglued) (2 pcs)	√	
8131-021	Buggy wheels (front, chromed) (2 pcs)	√	
8131-022	Buggy tires (front, with chromed wheels) (2 pcs)	√	
8131-023	Buggy wheels (rear, chromed) (2 pcs)	√	
8131-024	Buggy tires (rear, with chromed wheels) (2 pcs)	√	
8382-705	B head screw(BM3*24mm) (16pcs)		√
8132-001	Tires (for truggy 8132)		√
8132-002	Painted body (for truggy 8132) (PVC body)		√
8132-003	Body post holder/body post		√
8132-005	Truck wheels (2 pcs)		√

Parts List

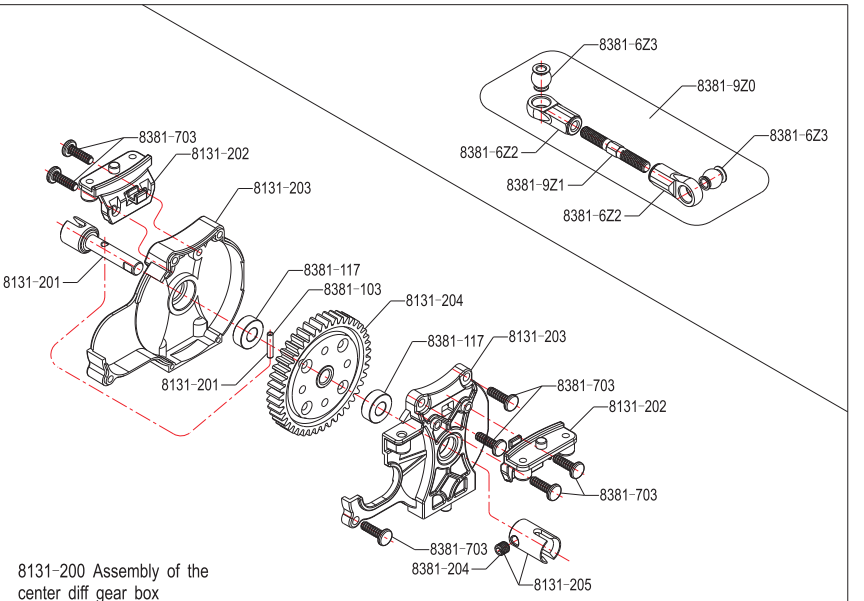
Part#	Desc		
8132-006	Truck tires (with foams, unglued) (2 pcs)		√
8132-007	Truck wheels (chromed) (2 pcs)		√
8132-008	Truck tires (with chromed wheels) (2 pcs)		√
D303	Servo (6kg)	√	√

Upgrade/Optional Parts

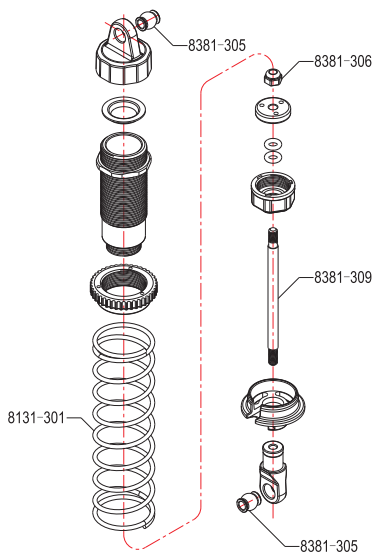
8131-012	Side guard (left/right) & aluminium chassis
D302HT	2.4GHz LCD transmitter
P102	Smart multi-functional charger & discharger
P103	LiPo battery (7.4V, 30C, 3200mAh)
H113	6-cell (7.2V) SC 1800mAh NiMh battery
H125	7-cell (8.4V) SC 1800mAh NiMh battery



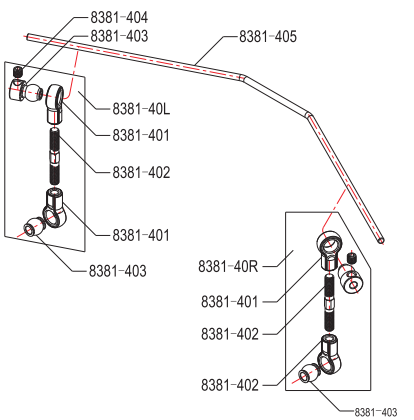
8381-100 Assembly of the diff gear box



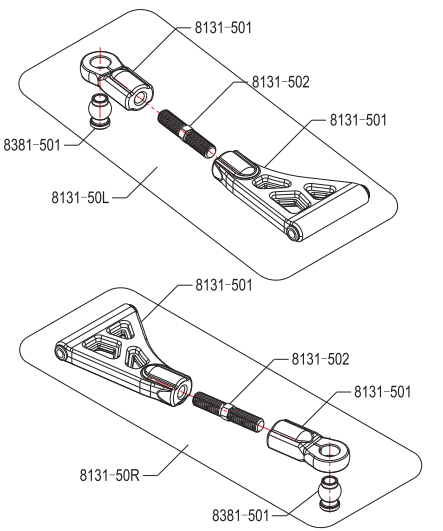
8131-200 Assembly of the center diff gear box



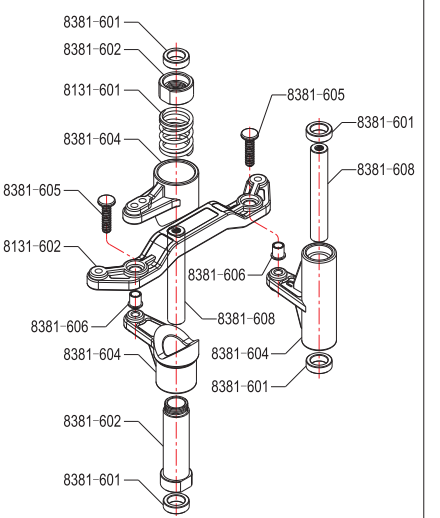
8131-300 Assembly of the shocks



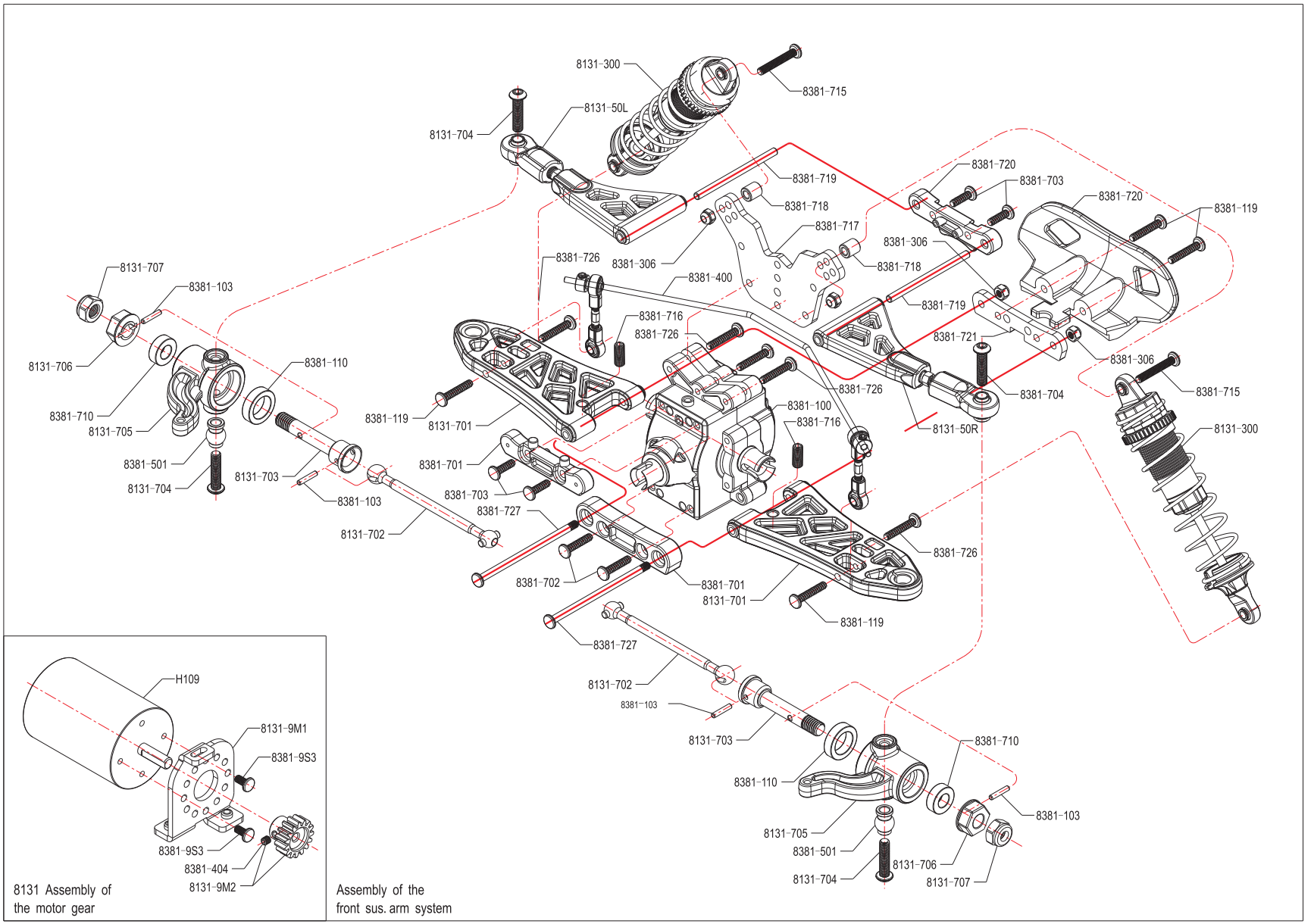
8381-400 Assembly of the sway bar



8131-50L Assembly of upper sus. arm-Left
8131-50L Assembly of upper sus. arm-Right

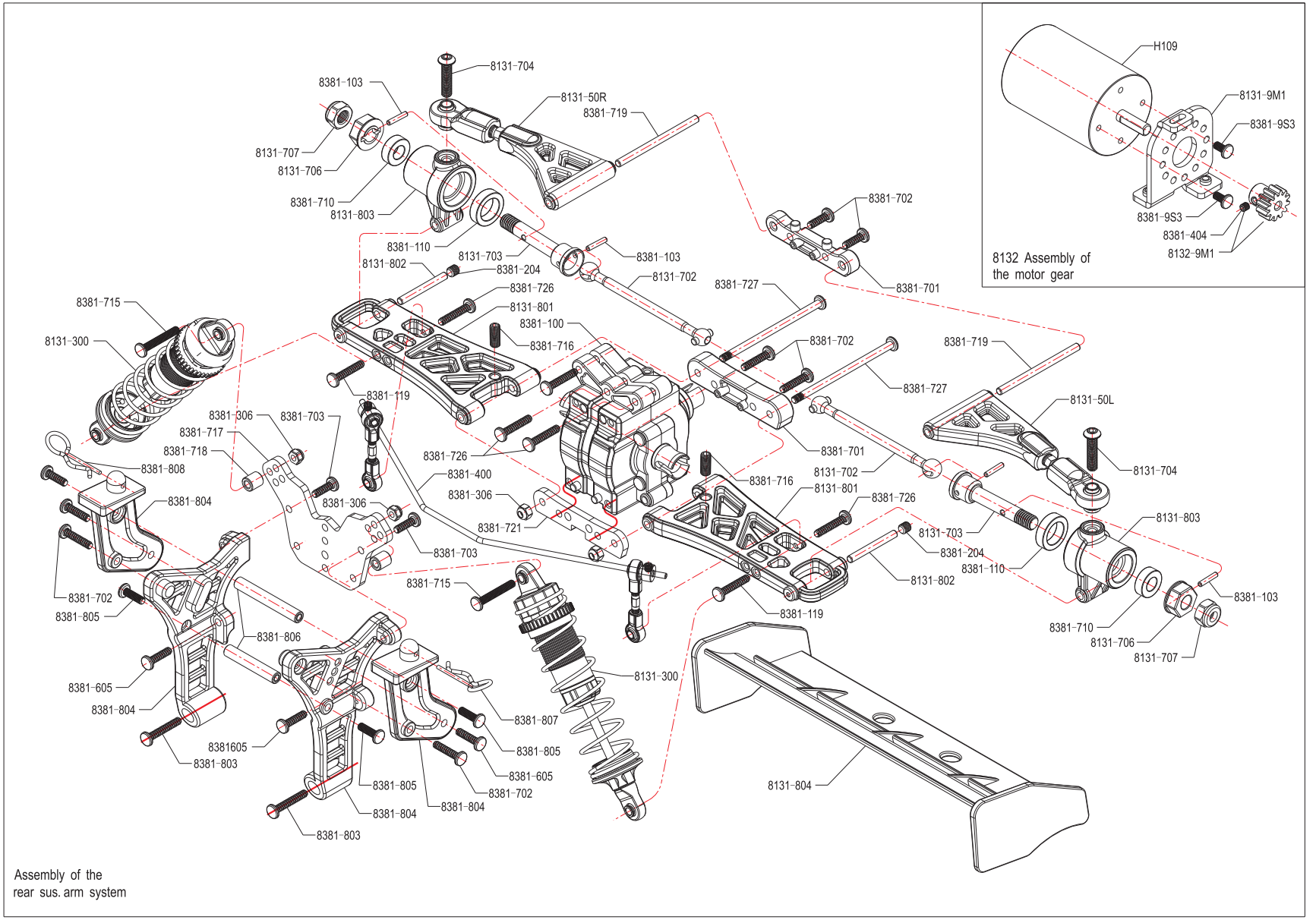


8131-600 Servo saver assembly -complete



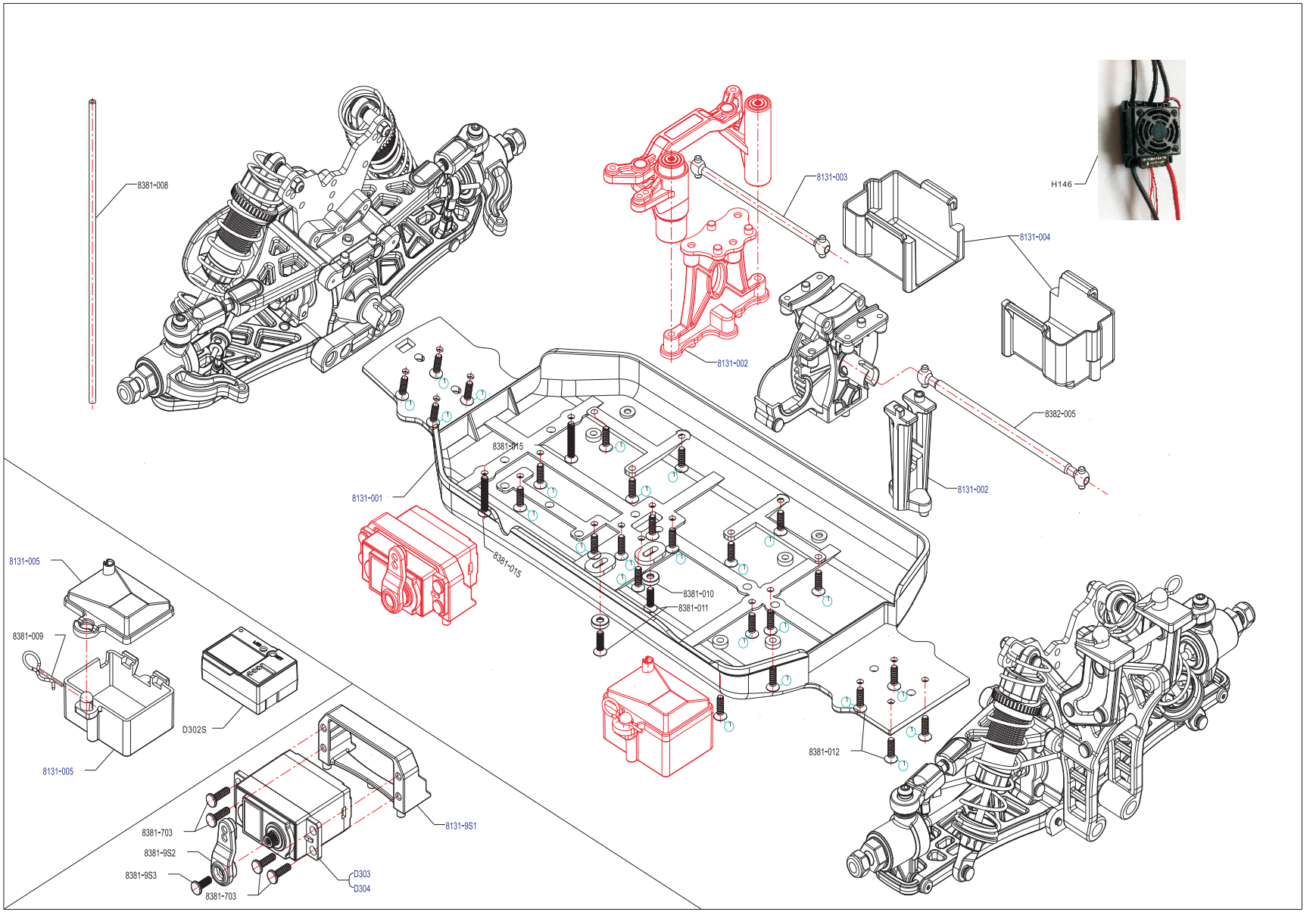
8131 Assembly of the motor gear

Assembly of the front sus. arm system



8132 Assembly of the motor gear

Assembly of the rear sus. arm system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H146
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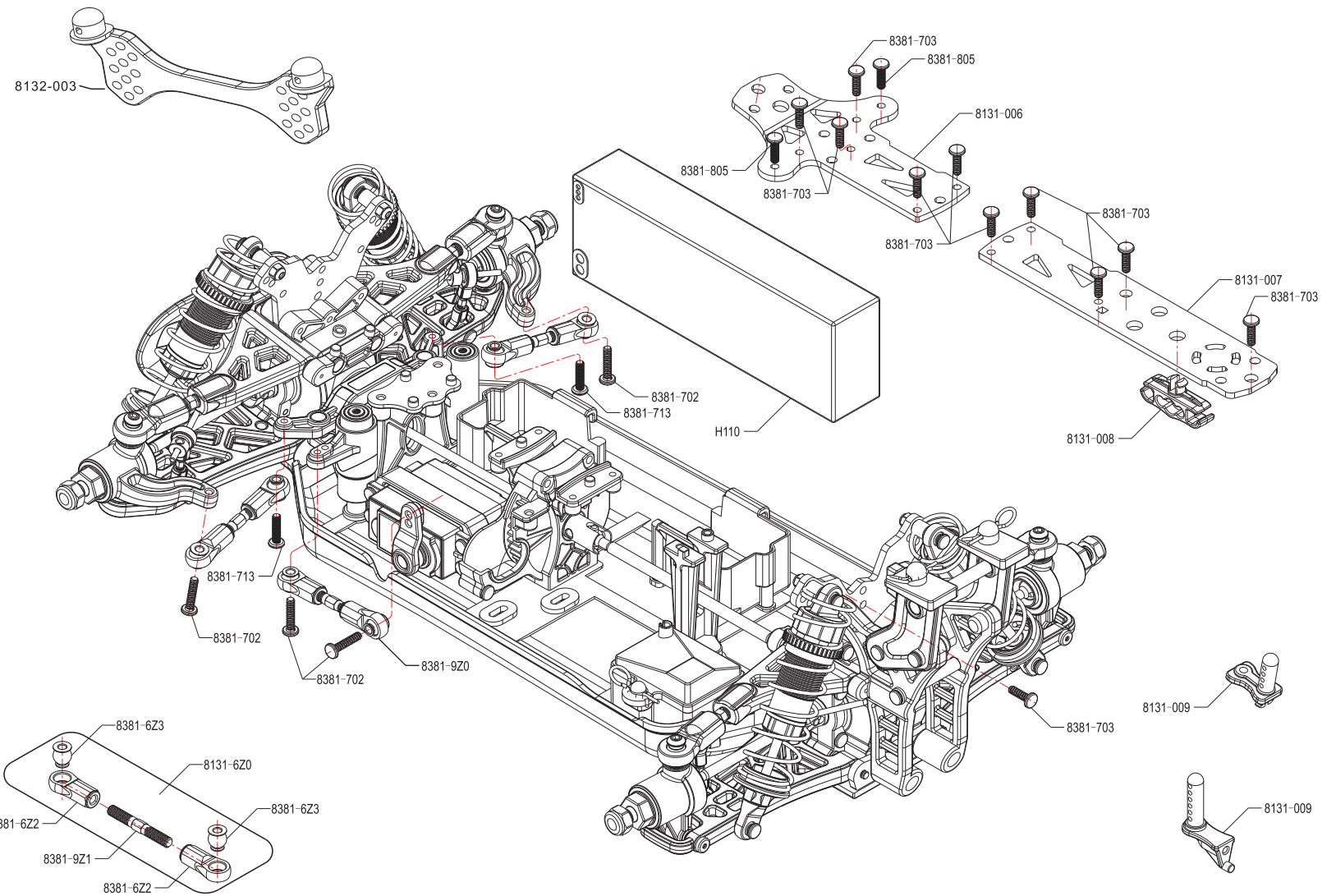
D303
D304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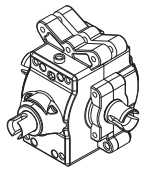
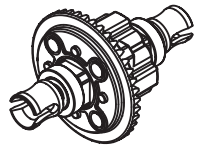
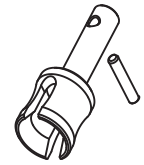


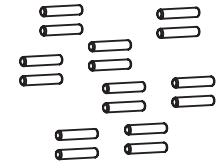
8381-100 Assembly of diff gear box



8381-101 Diff set

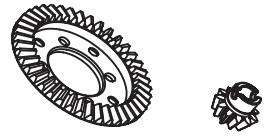


8381-102 Diff outdrive/pins (dia 2*10mm)

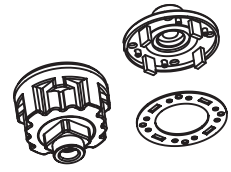


8381-103 Pins (dia 2*10mm) (16 pcs)

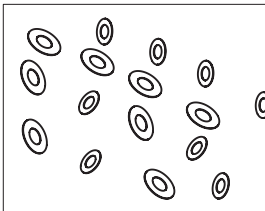
8381-104 Flathead screw-coarse thread(KB2.6*10mm) (16 pcs)



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

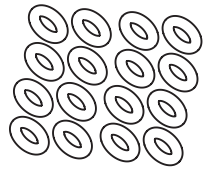


8381-106 Diff case set/diff case cover/diff gasket

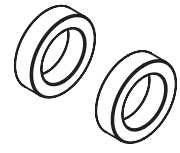


8381-107 Washer-A/washer -B (8 pcs each)

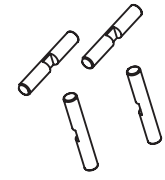
8381-108 Gear-18T (2 pcs)/ gear-12T (4 pcs)



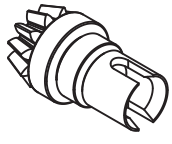
8381-109 O Ring(dia 8mm * dia 2mm)(16 pcs)



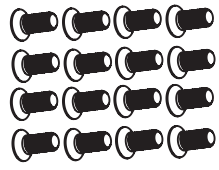
8381-110 Ball bearing(dia 10mm * dia 15*4mm)(2 pcs)



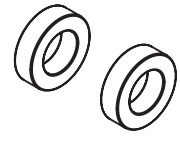
8381-111 Diff pins (dia 4*25.8mm) (4 pcs)



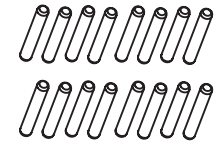
8381-112 Assembly of the pinion gear



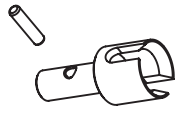
8381-113 Flathead screw (KM2.6X6mm)(16 pcs)



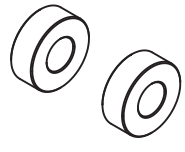
8381-114 Ball bearing (dia 8mm * dia14*4mm)(2 pcs)



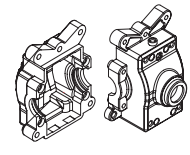
8381-115 Pins(dia 2* 8mm) (16 pcs)



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

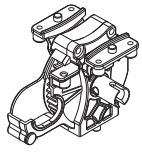


8381-117 Ball bearing(dia 5 mm * dia 11*4mm)(2 pcs)

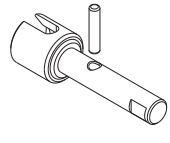


8381-118 Diff gear box-F/R

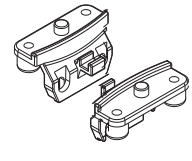
8381-119 B head screw-coarse thread(BB3*16mm) (16 pcs)



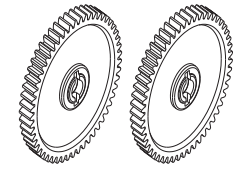
8131-200 Diff gear box (complete set with diff gears)



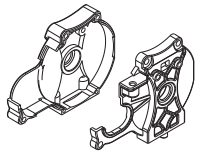
8131-201 Diff outdrive/pins (dia 2*10mm)



8131-202 Bracket (2 pcs)

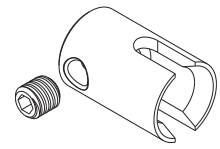


8131-204 Spur gear-53T (plastic) (2 pcs)

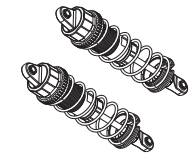


8131-203 Diff gear box(diff gear cover upper/lower)

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

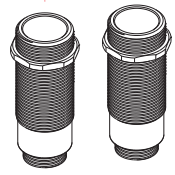


8131-205 Center diff outdrive/ lock nut(M4*4mm)

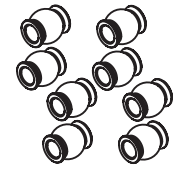


8131-300 Shock absorber complete (2 PCS)

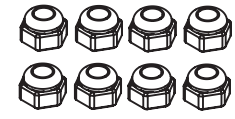
8131-301 Shock spring (4 pcs)



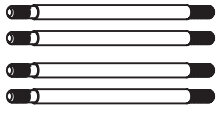
8131-302 Shock body (2 pcs)



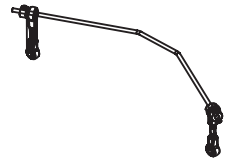
8381-305 Shock ball (8 pcs)



8381-306 M3 nylon nut (8 pcs)

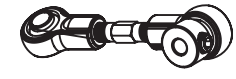


8381-309 Shock shaft (4 pcs)



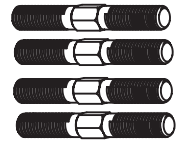
8381-400 Anti-roll bar assembly

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

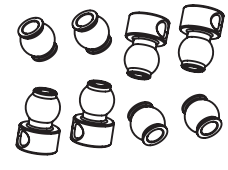


8381-40R Assembly of anti-roll bar linkage-Right

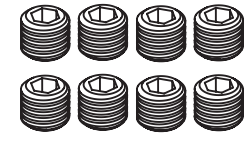
8381-401 Anti-roll bar rod end (8 pcs)



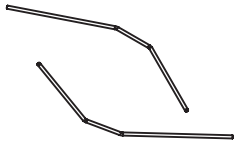
8381-402 Anti-roll bar linkage (4 pcs)



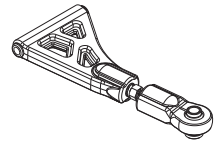
8381-403 Anti-roll bar pivot ball-upper/lower (4 sets)



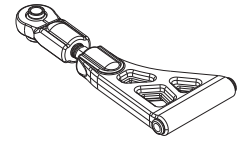
8381-404 Set screws (M3*3mm) (8 pcs)



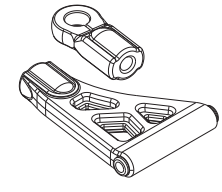
8381-405 Anti-roll bar (dia 2.2mm) (2 pcs)



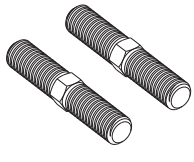
8131-50L Assembly of upper sus.arm-Le



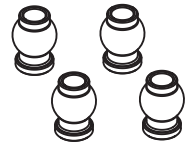
8131-50R Assembly of upper sus.arm-Right



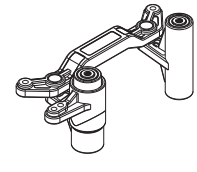
8131-501 Upper sus.arm/rod end (2 sets)



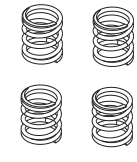
8131-502 Upper sus.arm linkage (2 pcs)



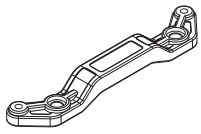
8381-501 Upper sus.arm ball (4 pcs)



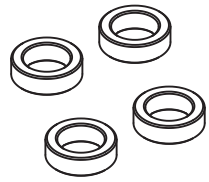
8131-600 Assembly of buffer set



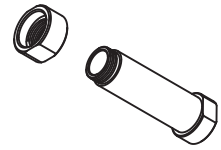
8131-601 Servo saver spring (4 pcs)



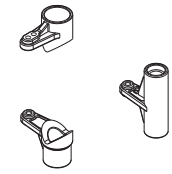
8131-602 Steering plate



8381-601 Brass washer (4 pcs)

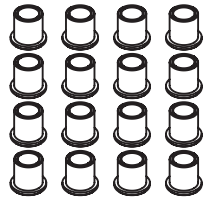


8381-602 Servo saver bushing/adjustment ring

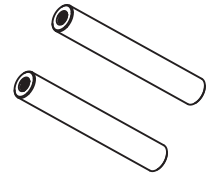


8381-604 Servo saver sus. Arm-upper/lower/steering sus. Arm

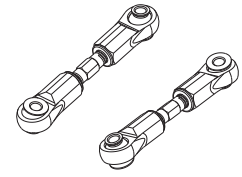
8381-605 B head screw-coarse thread(BB3*12mm) (16 pcs)



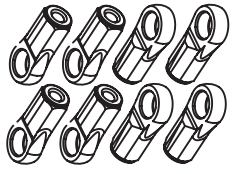
8381-606 Screw bushing (16 pcs)



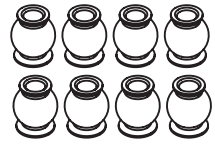
8381-608 Shaft (2 pcs)



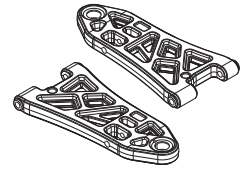
8131-6Z0 Assembly of steering linkage (2 pcs)



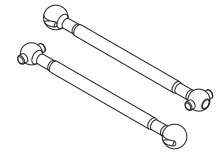
8381-6Z2 Plastic rod end (8 pcs)



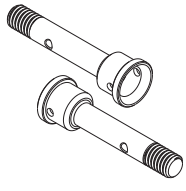
8381-6Z3 Double way ball end (8 pcs)



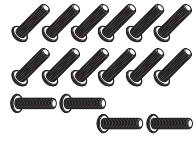
8131-701 Lower sus.arm-front (2 pcs)



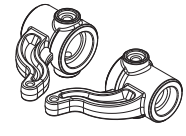
8131-702 Drive shaft set-A (2 pcs)



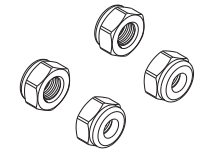
8131-703 Wheel axle (2 pcs)



8131-704 Thead screw (TM4*17mm) (16 pcs)

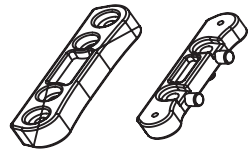


8131-705 Steering arm (2 pcs)

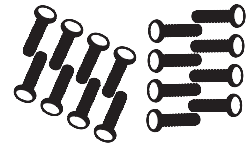


8131-707 M6 lock nut (4 pcs)

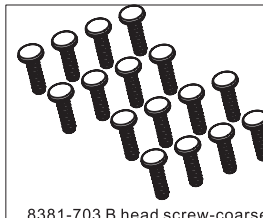
8131-708 Hex adaptor/12mm nut (2 pcs)



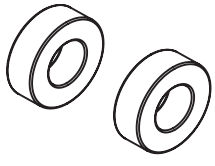
8381-701 Upper sus.arm mount-rear/suspension mount



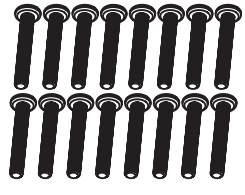
8381-702 B head screw-coarse thread(BB3*14mm) (16 pcs)



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

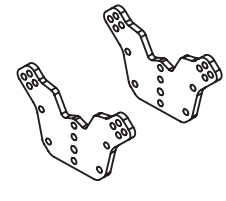


8381-710 Ball bearing(dia 6mm * dia 12*4mm) (2 pcs)

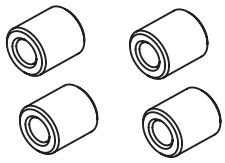


8381-715 B head screw (BM3*20mm) (16 pcs)

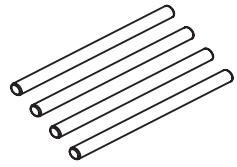
8381-716 Set screws (M4*10mm) (16 pcs)



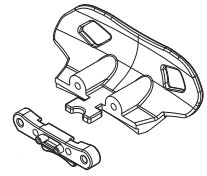
8381-717 Shock tower (2 pcs)



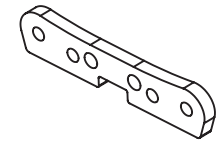
8381-718 Pivot ball mount (4 pcs)



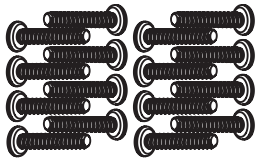
8381-719 Upper sus.arm shaft (4 pcs)



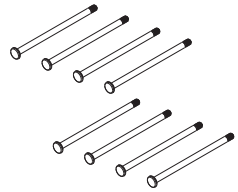
8381-720 Front bumper/upper sus.arm mount-front



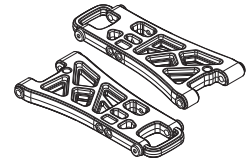
8381-721 Lower sus.arm plate-front



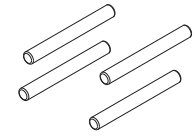
8381-726 B head screw-coarse thread(BB3*18mm) (16 pcs)



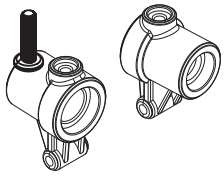
8381-727 B head screw (BM3*56mm) (8 pcs)



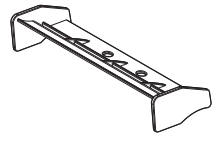
8131-801 Lower sus. arm-rear (2 pcs)



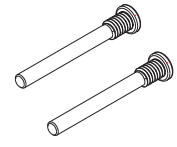
8131-802 Sus.arm short axle (4 pcs)



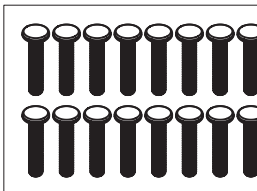
8131-803 Rear hub-L/R



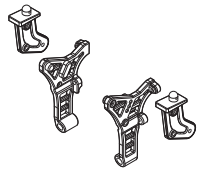
8131-804 Rear wing (black)



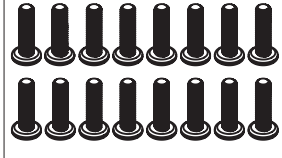
8131-805 Suspension arm screw shaft(2 pcs)



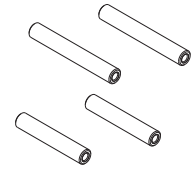
8381-803 B head screw (BM3*18mm) (16 pcs)



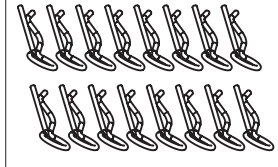
8381-804 Wing mount/ wing brace-L/R



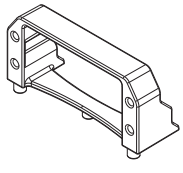
8381-805 B head screw (BM3*10mm) (16 pcs)



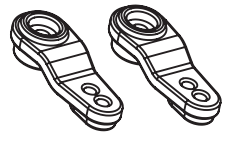
8381-806 Rear wing rod-long/short



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

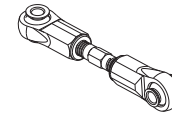


8131-9S1 Servo mount

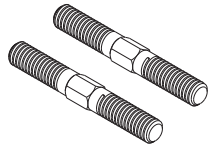


8381-9S2 Servo steering plate (2 pcs)

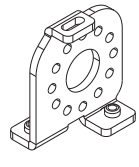
8381-9S3 B head screw (BM3*6mm) (16 pcs)



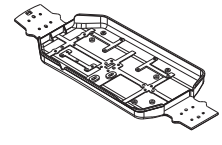
8381-9Z0 Assembly of steering tie rod



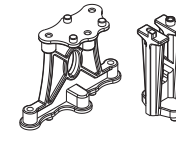
8381-9Z1 Steering tie rod (2 pcs)



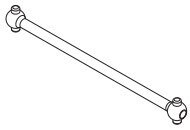
8131-9M1 Motor mount



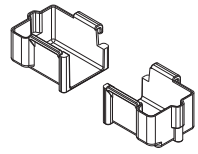
8131-001 Chassis



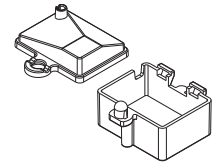
8131-002 Upper deck mount-F/R



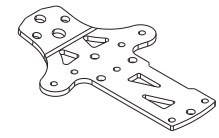
8131-003 Central drive shaft-E



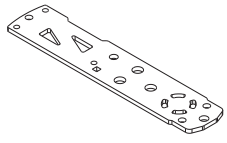
8131-004 Battery mount-A/B



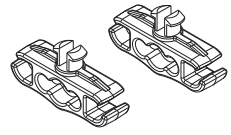
8131-005 Receiver cover-upper/lower



8131-006 Upper deck-F



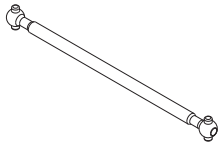
8131-007 Upper deck-G



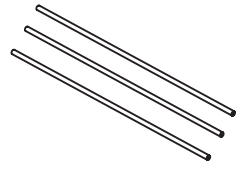
8131-008 Wire mount (2 pcs)

8131-019 Suspension arm front mount (2 pcs)

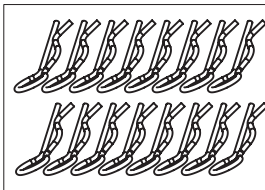
8131-020 Velcro battery strap (2 pcs)



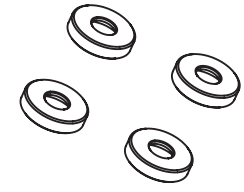
8382-005 Central drive shaft-C



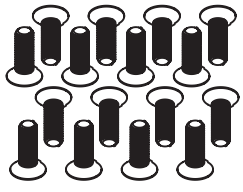
8381-008 Antenna Tube (3 pcs)



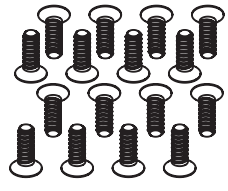
8381-009 Pin-B (dia 1.2mm) (16 pcs)



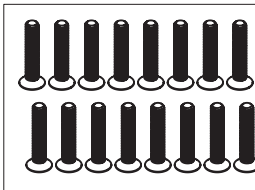
8381-010 Screw washer (4 pcs)



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

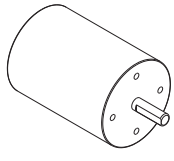


8381-012 Flathead screw-coarse thread(KB3*10mm) (16 pcs)

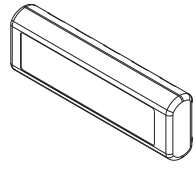


8381-015 Flathead screw (KM3X18mm) (16 pcs)

8381-024 Flathead screw (KB4X11.5mm) (12 pcs)



H109 Brushless motor (3650 KV:3970)

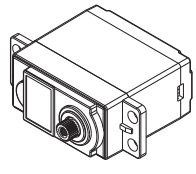


H110 LiPo battery (7.4V, 20C, 2300mAh)

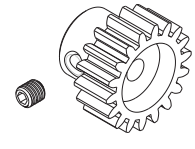
H146 Brushless ESC (50A)-Waterproof

D302T 2.4GHz transmitter

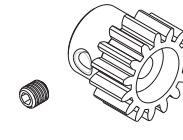
D302S 2.4GHz receiver



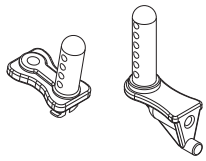
D303 Servo (6kg)



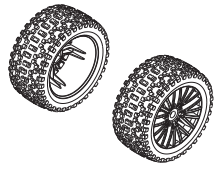
8131-9M2 Motor gear-18T/Lock nut(M3*3)



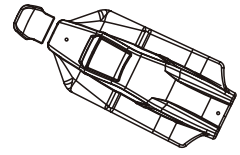
8132-9M1 Motor gear-15T/Lock nut(M3*3)



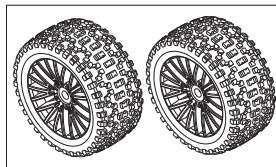
8131-009 Body post-F/R



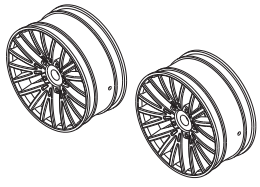
8131-010 Rear tires
(for buggy 8131)



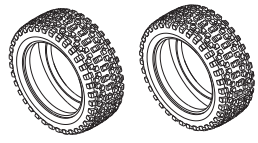
8131-011 Buggy painted body
8131-011C Clear buggy body
(PVC, with window cutout and
body decals



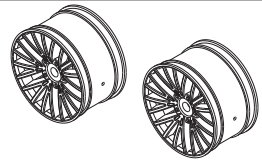
8131-013 Front tires
(for buggy 8131)



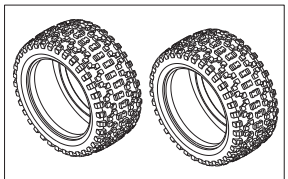
8131-015 Buggy front wheels
(2 pcs)



8131-016 Buggy front tires
(with foams)-unglued (2 sets)



8131-017 Buggy rear wheels
(2 pcs)



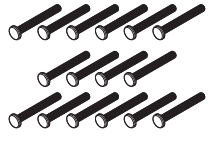
8131-018 Buggy rear tires
(with foams)-unglued (2 sets)

8131-021 Buggy wheels (front,
chromed) (2 pcs)

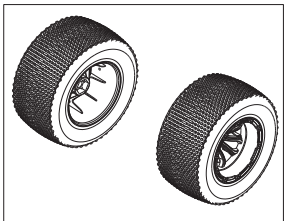
8131-022 Buggy tires (front, with
chromed wheels) (2 pcs)

8131-023 Buggy wheels (rear,
chromed) (2 pcs)

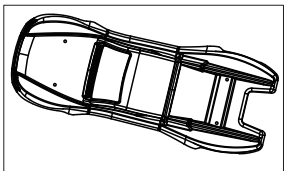
8131-024 Buggy tires (rear, with
chromed wheels) (2 pcs)



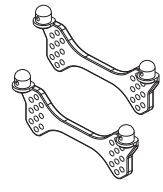
8382-705 B head screw
(BM3*24mm) (16 pcs)



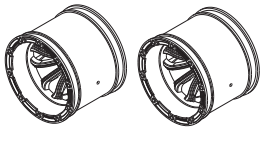
8132-001 Truggy tire (2 pcs)



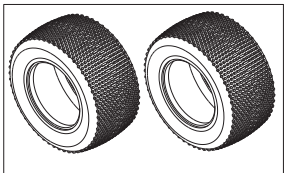
8132-002 Truggy painted body
8132-002C Clear truggy body
(PVC, with window cutout and
body decals)



8132-003
Body post (2pcs)



8132-005 Truggy wheels (2 pcs)

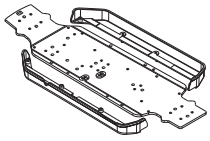


8132-006 Truggy tires
(with foams)-unglued (2 sets)

8132-007 Truck wheels (chromed)
(2 pcs)

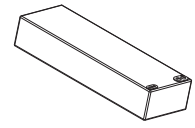
8132-008 Truck tires (with chromed
wheels) (2 pcs)

Upgrade/Optional parts



8131-012 Plastic side guards/ metal chassis

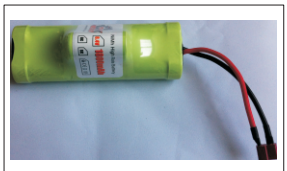
D302HT 2 channel 2.4GHz LCD transmitter



P103 LiPo battery (7.4V, 20C, 3200mAh)

P102 Smart multi-functional charger & discharger

H133 6-cell (7.2V) SC 1800mAh NiMh battery



H125 7-cell (8.4V) SC 1800mAh NiMh battery

Annex: 2.4GHz Transmitter Manual

PART I:

2.4GHz Transmitter (Standard, Model#: D302T)

Safety Precautions

1. The 2.4GHz transmitter and receiver are pre-bound at the factory.
2. Please always use the same receiver model from the factory to match your 2.4GHz transmitter when you need to replace it. Receivers from other suppliers don't work on DHK HOBBY 2.4GHz transmitter.
3. When you need to replace a receiver, please make sure that it is bound with the transmitter before use.
4. Please operate the transmitter in vast areas where no radio interference exists. It's strongly recommended that no humans, animals or high voltage grid should be nearby.
5. Please do not operate this transmitter during fatigue, sickness, intoxication or in bad mood.
6. Do not operate the transmitter at night time, in the rain and thunderstorm or at low visibility.
7. Always use the same types of batteries in the transmitter. Do not mix old and new batteries in the transmitter. Please check the battery power before use. Replace batteries whenever the power is low to avoid out of control. Ni-Mh or Ni-Cd rechargeable batteries can be used on this transmitter. Please charge the batteries to full before use.
8. Before you operate the transmitter, please check the switch, batteries, servo and ESC for proper connection.
9. ALWAYS switch on the transmitter first, and off last so as to avoid possible radio interference from other sources. Failure to do so may cause out of control of your vehicle.
10. Before operation, check the servo forward and reverse functions, motor range, and neutral position. Modify it when necessary.
11. Please handle the transmitter with care. Store the transmitter in a dry and clean place when it's not in use for some time.

Transmitter Specifications

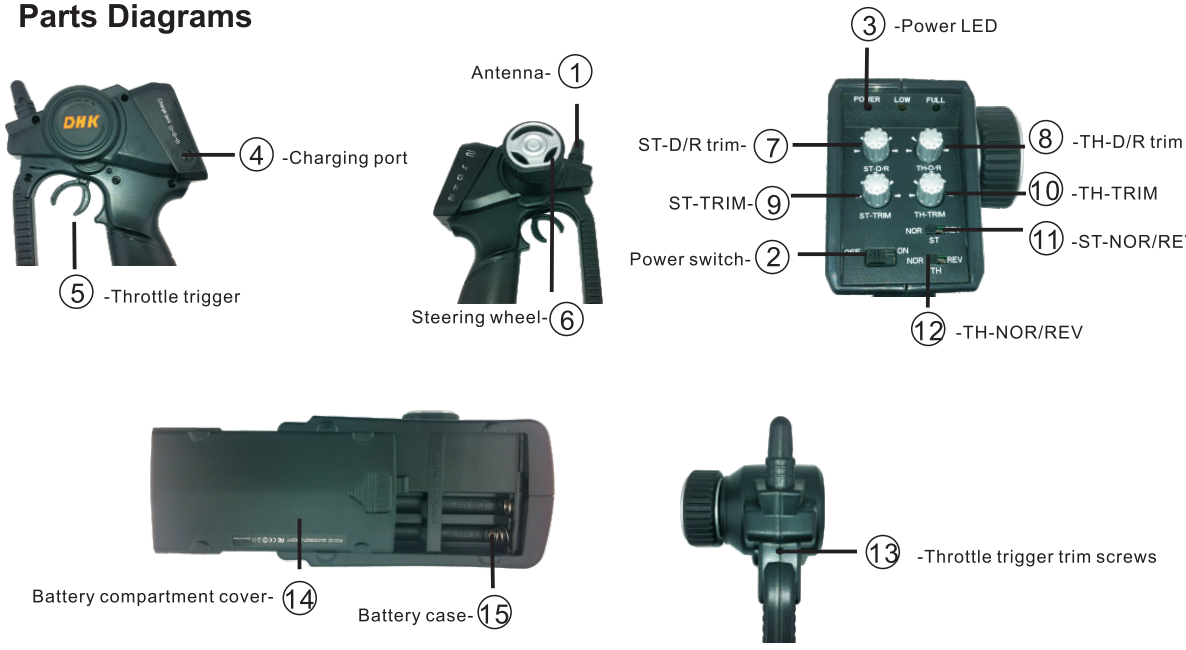
Channels	2 channels
Model types	Cars, boats
Frequency range	2.40-2.483GHz
RF power	⩽20dB
Power output	10mW
Bandwidth	1M
Band number	64
2.4GHz modulation	AFHDS
Encoding	GFSK

Channel resolution	4096
Remote range	>200M
TH range	0.9mS-2.1mS
ST range	0.9mS-2.1mS
Battery voltage	6V (1.5V*4 cells)
Low voltage protection	⩽4.4V
Weight	320g
USB port	N/A
Charging port	Yes

2.4GHz Standard Transmitter Parts and Functions

1-Antenna: pull up the antenna straight before use.
2-Power switch: slide the switch to turn on or off.
3-Power LED: shows the power strength. Green LED shows full power, Yellow LED flashes when the power is running short.
4-Charging port: charges Ni-Mh or Ni-Cd batteries only. Alkaline batteries are not rechargeable. NEVER charge your alkaline batteries.
5-Throttle trigger: Please refer to the transmitter diagram.
6-Steering wheel: Please refer to the transmitter diagram.
7-ST-D/R trim: adjust the steering servo angle ranging from 0% to 120%.
8-TH-D/R trim: adjust the throttle servo angle ranging from 0% to 120%.
9-ST-TRIM: adjust the steering neutral position, from 0% to 20%.
10-TH-TRIM: adjust the throttle neutral position, from 0% to 20%.
11-ST-NOR/REV: slide to left or right to choose steering mode.
12-TH-NOR/REV: push the trigger or pull it back to choose the throttle mode.
13-Throttle trigger trim screws: use a hex driver to tighten or loosen the screw to a comfortable level.
14-Battery compartment cover: to open the compartment, slide the cover to OPEN direction as indicated, snap it to close the compartment.
15-Battery case: open the battery cover, install 4 pcs AA 1.5V alkaline or rechargeable batteries based on the "+" & "-" poles. If the status LED flashes red, the transmitter batteries may be weak, discharged or possibly installed incorrectly. Replace with new or freshly charged batteries. The power indicator light does not indicate the charge level of the battery pack installed in the model.

Parts Diagrams



Receiver Functions

Frequency range	: 2.4GHz
2.4GHz modulation	: AFHDS
Sensitivity	: -100dbm
Working voltage	: DC4.8-6.0V
Working current	: ⩽25mA
Size	: 5.7*26*15.2mm
Weight	: 11.2g

1. Antenna: Pull out the antenna completely

2. Connecting ports: receiver power port and channel signal connecting ports
> ST/1: Channel 1, steering signal port
> TH/2: Channel 2, throttle servo or ESC signal port
> AUX/3: Auxiliary signal port
> BATT/4: Receiver power port, can be auxiliary signal port

3. Set keys & LED indicators
>Bind setup. Switch on the receiver, indicators flash slowly, press the setup key for 2 seconds and release it, LED indicator flash in faster motion, binding starts. When the LED indicator is on in stable status, the binding is complete. Note: To bind it quickly and effectively, please put the receiver 40-50cm away from the transmitter.

>Failsafe. Switch on the transmitter and receiver, then you can see the LED indicator on receiver is on. Adjust the throttle servo or ESC to brake or stop status, and keep it that way. Press the setup key, then receiver LED indicator flashes, keep this for 3 seconds. After this, release the setup key. Failsafe setup is complete.

>Disabling failsafe function. Switch on transmitter and receiver, once the signal is connected, LED indicator is on. Press the setup key for 2 seconds, LED indicator flashes quickly, at this point, keep pressing the setup key without release, press it for 2 more seconds, LED indicator flashes slowly. Release the setup key, LED indicator is on. The setup is complete.

PART II:

2.4GHz Transmitter (LCD Version, Model#: D302HT)

Safety Precautions

Please refer to Safety Precautions in PART I

Transmitter Specifications

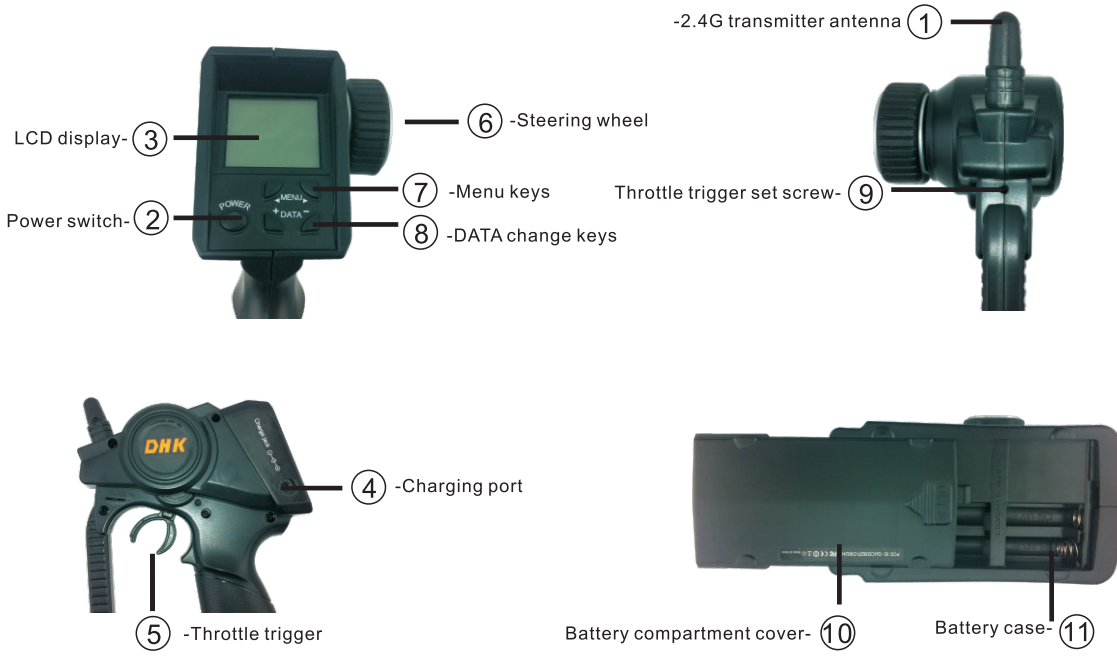
Please refer to Transmitter Specifications in PART I.

2.4GHz LCD Transmitter Parts and Functions

1. 2.4G transmitter antenna: before use, please pull the antenna straight up.
2. Power switch: Press down to turn on the transmitter, press the switch again to turn it off.
3. LCD display: shows transmitter menus, parameters and operation instructions.
4. Charging port: charging area is positive inside and negative outside. When Ni-Mh or Ni-Cd rechargeable batteries are to be charged, right charger should be selected for re-charging the batteries.
5. Throttle trigger: drag, push or make the throttle trigger to a neutral position to forward, reverse or

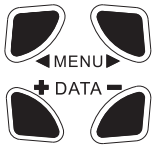
brake your RC model.
6. Steering wheel: turn the steering wheel counterclockwise to turn the model to left. Turn the steering wheel clockwise to turn the model to right. Release it to neutral for straight driving.
7. Menu keys: Press Left key (<) or Right key (>), move the cursor to LCD display options.
8. DATA change keys: press Left key (+) or Right key (-) to change, adjust and save current parameters.
9. Throttle trigger set screw: use a 2.5mm hex screw driver to move forward or backward to adjust the throttle trigger to a comfortable hand feeling.
10. Battery compartment cover: Press the door to OPEN indicated direction to open the battery compartment cover. Snap the compartment door into the slot to close the battery compartment.
11. Installing batteries: open the battery compartment cover, install 4 pcs “AA” batteries (same type) according to the indicated “+” “-“ orientations. Turn on the transmitter and check the indicator status for a solid green light. Please take out the batteries when the transmitter is not in use. If the status LED flashs red, the transmitter batteries may be weak, discharged or possibly installed incorrectly. Replace with new or freshly charged batteries. The power indicator light does not indicate the charge level of the battery pack installed in the model.

Parts Diagrams



LCD Functions and Operations

Key Operations



Menu keys:
Press Left key (<) to main command, and Right key (>) for secondary command.
DATA keys:
Press Left key (+) or Right key (-) to adjust, set up and auto save the current chosen function.

Display Interface

Switch on the transmitter, you will hear “beep” sound (beeps once), and the LCD display mode will read the default parameters pre-set at the factory and BATT status mode (main menu).

BATT: battery status, function reset settings

Battery level display. Battery voltage appears on LCD display. When the voltage is 4.4V, the value flashes and you can hear warning sound. This means the battery voltage is deficient. When battery voltage value shows 4.0V, the value blinks fast and warning sound keeps strong. This indicates battery voltage is too low and batteries cannot be used. Please turn off the transmitter and replace batteries. If rechargeable Ni-Mh or Ni-Cd batteries are used, please charge the batteries with proper charger.

Function reposition. In case the parameters are messed up or if you don't know how to set up, please turn off the power, press and hold MENU Left key (<). Then turn on the power and you will hear “beep” sound after two seconds. Release all keys and all parameters will go back to factory default values.

Frequency duplication setting. When two transmitters are used at the same time, a frequency might be duplicated. In this case, you may choose the auto frequency function. First turn off the power, then press and hold MENU Right key (<), and turn on the power. The display will show hopping data. Release the key and the hopping data will stop. The digit shown on the display is your frequency. Bind the transmitter with the receiver through binding keys.

MOD: Setting up mode and naming

15 group memory data for choice, it's easy to manage and use. At start status, press Left key (+) or Right key (-) of the DATA to choose the necessary module (Screen shows main menu)

For easy control, you may name each module. Press Left key (<) on MENU (6 times on Main Menu) until you see 000 01 on the screen and the first digit must flash, at this moment, you may change the data here. Press Left key (+) or Right key (-) to choose necessary data. Once first change is made, press Right key (>) on MENU to move the cursor to the next position, then press Left key (-) or Right key (+) to choose the needed data. Based on the above, you can change data for the 3rd data group. Once all is changed, press Left key (<) on the MENU function to get back to Main Menu and save the setup. (Screen shows 000 01).

MOD	Range	Default
MODULE	0 – 15	01
NAMING UNITS	Digits 0-9, letters A-Z	000

REV: Servo forward and reverse setup

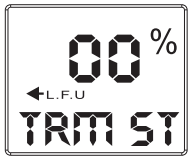
Setting up Steering servo direction. Press MENU function Left key (<) or Right key (>) (Press once under MAIN MENU) until you see” ***REV-ST”, then press DATA function Left key (+) or Right key (-) to choose ON/OFF. (Screen shows OFF REV-ST).

Setting up Throttle speed neutral position. Press MENU function Left key (<) (Press once under the MAIN MENU) and then press twice of MENU Right key (>) until you see ***REV-TH. Press DATA function Left key (+) or Right key (-) ON/OFF. (Screen shows OFF REV-TH).

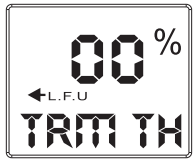
Setting up the 3rd Channel: Press MENU function Left key (<) (Press once under MAIN MENU), then press twice on Menu function Right key (>) until you see ***REV-3C, press DATA function Left key (+) or Right key (-) to choose ON/OFF. (Screen shows OFF REV-3C).

REV	Initial value	Range
ST	OFF	ON/OFF
TH	OFF	ON/OFF
3C	OFF	ON/OFF

TRM: Servo neutral trim setup



Setting up steering servo(ST) neutral position parameters. Press MENU function Left key (<) (Press twice under MAIN MENU) until you see **% TRM ST and neutral value. Press DATA function Left key (+) or Right key (-) to change the steering neutral position. On the screen there is steering neutral status L.F. U, R. B. D and percentage values indicating the neutral position at that setup. (Screen shows 00% TRM ST).

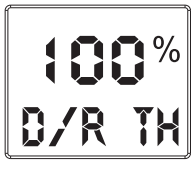


Setting up throttle speed (TH) neutral position parameters. Press MENU function Left key (<) (Press twice under MAIN MENU), and press MENU function Right key (<) until you see **% TRM TH and neutral value. At this point, press DATA function Left key (+) or Right key (-) for adjustment. On the screen you will see neutral position status indicator L. F. U, R. B. D and percentage values. (Screen shows 00% TRM TH)

TRM	Initial value	Range
ST	0%	100%<--L. F. U—100% R.B.D.-->
TH	0%	100%<--L. F. U—100% R.B.D.-->

D/R: Servo angle adjustment setup

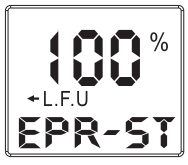
Set up Steering servo (ST) angle. Press Menu function Left key (<) (Press 3 times on MAIN MENU) until you see **% D/R ST on the screen, then press DATA function Left key (+) or Right key (-) to choose servo angle parameter. (Screen shows 100% D/R ST).



Set up Throttle servo (TH) forward and reverse angle. Press MENU function Left key (<) (Press 3 times on MAIN MENU), then press MENU function Right key (>) once, the screen shows **% D/R TH, press DATA function Left key (+) or Right key (-) for throttle angle parameters. (Screen shows 100% D/R TH)

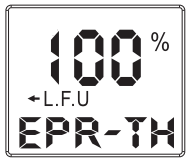
D/R	Initial value	Range
ST	100%	0% - 100%
TH	100%	0% - 100%

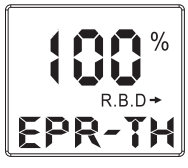
EPA: End point adjustment (servo single side angle setup)



Set up steering servo single side (left steering or right steering) travel angle. Press MENU function Left key (<) (Press 4 times under MAIN MENU) until the screen shows **% EPA ST. Turn the steering wheel clockwise, the screen shows the EPA value of right steering R.B.D.-->; Press DATA function Left key (+) or Right key (-) and change the data. When you turn the steering wheel counterclockwise, the screen displays the EPA value of left steering L. F. U on steering servo. Press DATA function Left key (+) or Right key (-) for desired value. (Screen shows 100% EPA-ST)

Note: for this function, the steering servo travel angle is adjusted to a wider or narrower range, hence the steering angle of the left or right tire is adjusted to desired angle.





Set up throttle speed (forward or reverse). Press MENU function Left key (<) (Press 4 times under MAIN MENU) and press once on MENU function Right key (>), the screen shows **% EPA TH. Pull back the throttle trigger and the screen displays L.F.U value of forward (F) speed. Press DATA function Left key (+) or Right key (-) to change the value. Push forward the throttle trigger and the screen shows reverse R.B.D value of reverse speed, press DATA function Left key (+) or Right key (-) to change the value. (Screen shows 100% EPA-ST)

Note: for this function, the throttle servo angle is adjusted (wider or narrower) on nitro- (gas-) powered vehicles, and for EP vehicles, speed of the electronic speed controller adjusted (faster or slower).

EPA	Initial value	Range
ST←L.F.U	100%	0% - 120%
ST R.B.D→	100%	0% - 120%
TH←L.F.U	100%	0% - 120%
TH R.B.D→	100%	0% - 120%

ABS: Setting up brake system

Set up throttle ABS brake system. Press MENU function Left key (<) (Press 5 times under MAIN MENU), screen shows *** ABS- TH, press DATA function Left key (+) or Right key (-) to choose ON/OFF. At ON status, it prevents the tires from getting stuck in powerful griping motion during brake. (Screen shows *** ABS- TH)

For each of the above setup, when one setting is selected, please wait for 5 seconds until you see the main menu, then that setting is automatically saved as memory.

Receiver Functions

Please refer to Receiver Functions Section in PART I.

FCC Caution: Any changes or modifications not expressly approved y the party responsible for compliance could void the user's authority to operation this equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the this device must accept any interference received, including interference that may cause undesired operation .
This device and its antenna(s) must not
be co-located or operating in conjunction with any other antenna or transmitter.

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;

R&TTE

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:

Kendy Wang

Date of Issued: Sep. 5, 2011

1/F, Block East H-3, OCT Eastern Ind. Zone, Qiaocheng East Road, Nanshan, Shenzhen, China
Tel:+86-755-86337020 Fax:86-755-86337028 http://www.bontek.com.cn

TCB

GRANT OF EQUIPMENT AUTHORIZATION

TCB

Certification

Issued Under the Authority of the

Federal Communications Commission

By:

PHOENIX TESTLAB GmbH
Koenigswinkel 10
D-32825 Blomberg,
Germany

Date of Grant: 11/20/2012

Application Dated: 11/20/2012

DHK TECHNOLOGY CO., LTD.
E2 BLDG, WANFENG WESTERN IND ZONE, HEYI, SHAJING
SHENZHEN, 518104
China

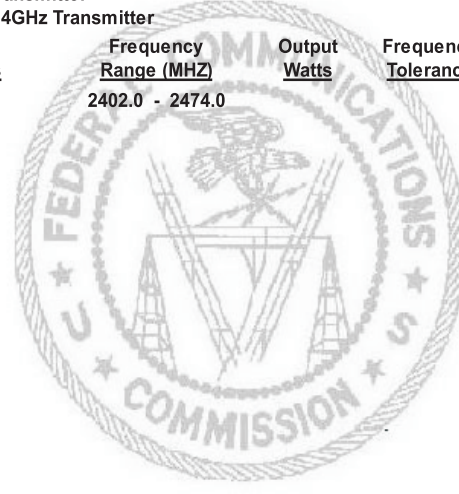
Attention: Jack Jiang , Manager

NOT TRANSFERABLE

EQUIPMENT AUTHORIZATION IS HEREBY ISSUED TO THE NAMED GRANTEE, AND IS VALID ONLY FOR THE EQUIPMENT IDENTIFIED HEREON FOR USE UNDER THE COMMISSION'S RULES AND REGULATIONS LISTED BELOW.

FCC IDENTIFIER: QUCD302T-D302HT
Name of Grantee: DHK TECHNOLOGY CO., LTD.
Equipment Class: Part 15 Low Power Communication Device Transmitter
Notes: 2.4GHz Transmitter

Grant Notes	FCC Rule Parts	Frequency Range (MHZ)	Output Watts	Frequency Tolerance	Emission Designator
	15C	2402.0 - 2474.0			



DHK TECHNOLOGY CO.LTD
http://www.dhkhobby.com