MODEL: R5

R5

MAN-R5-2018.8.17

•To ensure that you are using the most recent version of this manual:
www.redcatracing.com/manuals/R5MANUAL.pdf
•To ensure that you have the most recent version of the Electronic Vehicles Manual:
www.redcatracing.com/manuals/ELECTRIC-MANUAL.pdf

Redcat

FAST AFFORDABLE FUN™

WARNINGS

READ ALL INSTRUCTIONS INCLUDED WITH VEHICLE BEFORE OPERATING

AGE WARNING!
This radio controlled (RC) vehicle is not a toy! You must be 14 years of age or older to operate this vehicle. Adult supervision is required.

RISK OF RUNAWAY VEHICLE OR INJURY!
Never turn on the vehicle or plug in the battery pack without first having the controller turned on.

RISK OF FIRE! / RISK OF EXPLOSION!
There is a risk of fire and explosion when dealing with batteries. Rechargeable batteries may become hot and catch fire if left unattended or charged too quickly. Use extra caution when charging LiPO batteries. Use only LiPO specific chargers with LIPO batteries. Use a LiPO safe charging pouch when charging LiPOs. Charge away from flammable materials. Never charge at a rate higher than 1C. {2000Mah pack= 2amps charge rate). Overcharging can lead to fire and explosion. Always store battery packs in a cool dry place.

RISK OF BURNS!
The batteries, electronic speed controller (ESC), electric motor, and other areas of the vehicle can get hot. Burns can occur if touched after vehicle operation. Allow adequate time to cool before handling.

RISK OF ELECTRICAL SHOCK!
Use caution when charging batteries. Do not touch positive and negative leads together. Do not lay battery on metal. Use only chargers specified for the battery type being charged. Keep batteries and chargers away from water.

RISK OF INJURY!
Hobby grade RC vehicles can cause serious injury or death if not operated correctly. Never use vehicle in crowds. Never chase people or animals. Drive in safe open areas only. Keep body parts away from moving parts.

RISK OF DAMAGE!
Never operate RC vehicles on public roads. Damage of vehicle and property can occur. Only operate on open private property. Never charge the battery pack while it is still plugged into the RC vehicle. Always unplug the battery pack from the electronic speed controller (ESC) and remove the battery from the RC vehicle before charging. Failure to do so will result in damage to the vehicle's electronics.

WARNING!
Do not mix old and new batteries. Do not mix alkaline, lithium, standard (carbon zinc), or rechargeable (nickel cadmium) batteries. Do not change or charge batteries in a hazardous location.

FCC Compliance Statement! The radio included with your vehicle complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operations. Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

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

WARNING: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
WARNING: While operating the Radio, a separation distance of at least 20 centimeters must be maintained between the radiating antenna and the body of the user or nearby persons in order to meet the FCC RF exposure guidelines.

WARNINGS

ENGLISH

WARNING: DO NOT MIX OLD AND NEW BATTERIES. DO NOT MIX ALKALINE, LITHIUM, STANDARD (CARBON ZINC), OR RECHARGEABLE (NICKEL CADMIUM) BATTERIES.

WARNING: THIS REMOTE-CONTROL VEHICLE IS NOT A TOY. THIS REDCAT RACING PRODUCT IS A HIGH-PERFORMANCE VEHICLE THAT FOR SAFETY REASONS SHOULD NOT BE RUN ON PUBLIC STREETS, IN CROWDED AREAS, ENVIRONMENTALLY SENSITIVE AREAS, OR NEAR CHILDREN OR ANIMALS. THIS VEHICLE CONTAINS MOVING PARTS AND PARTS THAT CAN BECOME HOT TO THE TOUCH DURING NORMAL OPERATIONS. PLEASE READ THE MANUAL AND ALL WARNINGS CAREFULLY TO AVOID ANY DAMAGE OR INJURIES THAT MIGHT OCCUR. FOLLOW ALL PRODUCT WARNINGS. THIS PRODUCT MAY REQUIRE SOME ASSEMBLY AND ROUTINE MAINTENANCE IS NECESSARY. VISIT REDCATRACING.COM FOR HELPFUL VIDEOS ON PREPARING AND RUNNING YOUR R/C CAR. PLEASE GO TO REDCATRACING.COM TO VIEW THE LIMITED WARRANTY INFORMATION. CRASH DAMAGE IS NOT COVERED UNDER WARRANTY.

WARNING: THIS PRODUCT CONTAINS CHEMICALS WHICH ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, OR OTHER REPRODUCTIVE HARM. NOT FOR CHILDREN UNDER 14 YEARS OF AGE WITHOUT ADULT SUPERVISION. CONTAINS SMALL PARTS. KEEP OUT OF REACH OF SMALL CHILDREN.

MADE IN CHINA

SPANISH

ADVERTENCIA: NO REVOLVER BETERIAS VIEJAS CON NUEVAS. NO REVUELVA ALCALINAS, LITIO, ESTANDARS (CARBONO DE ZINC), O BATERIAS RECARGABLES (NIQUEL CADMIO).

ADVERTENCIA: ESTE VEHICULO CONTROL REMOTO NO ES UN JUGETE. ESTE PRODUCTO REDCAT RACING ES UN VEHICULO DE ALTO RENDIMIENTO Y POR RAZONES DE SEGURIDAD NO DEVERIA SER CORRIDO EN CALLES PUBLICAS, EN ZONAS CON MUCHEDUMBRE, AREAS AMBIENTALMENTE SENSIBLES, O CERCA DE NIÑOS O ANIMALES. ESTE VEHICULO CONTIENE PARTES QUE TIENEN MOVIMIENTO Y PARTES QUE SE CALIENTAN DURANTE SU USO NORMAL. POR FAVOR LEA EL MANUAL Y TODAS SUS ADVERTENCIAS CUIDADOSAMENTE PARA EVITAR CUALQUIER DAÑO O LESION QUE PUEDA OCURRIR. SIGA TODAS LAS ADVERTENCIAS DEL PRODUCTO. ESTE PRODUCTO PUEDE REQUERIR ALGUN ENSAMBLE Y ES NECESARIO EL MANTENIMIENTO DE RUTINA. VISITA REDCATRACING.COM POR VIDEOS DE AYUDA EN PREPARACION Y COMO CORRER TU R/C CAR. POR FAVOR VE A REDCATRACING.COM PARA VER LA INFORMACION DE LOS LIMITES DE GARANTIA. DAÑOS POR CHOQUE NO SON CUBIERTOS POR LA GARANTIA.

ADVERTENCIA: DEACUERDO AL ESTADO DE CALIFORNIA ESTE PRODUCTO CONTIENE QUIMICOS QUE SON CONOCIDOS POR CAUSAR CANCER, DEFECTOS DE NACIMIENTO, O OTROS DAÑOS REPRODUCTIVOS. NO PARA NIÑOS MENORES DE 14 AÑOS DE EDAD SIN LA SUPERVISION DE UN ADULTO. CONTIENE PARTES PEQUEÑAS, MANTENLO FUERA DEL ALCANCE DE LOS NIÑOS PEQUEÑOS.

HECHO EN CHINA

GERMAN

WARNUNG: ALTE UND NEUE BATTERIEN NICHT MISCHEN. MISCHEN SIE KEINE ALKALI-, LITHIUM-, STANDARD-(KOHLENSTOFF-ZINK) ODER WIEDERAUFLADBAREN (NICKEL-CADMIUM) BATTERIEN.

WARNUNG: DIESES FERNGESTEUERTE FAHRZEUG IST KEIN SPIELZEUG. DIESES REDCAT RACING PRODUKT IST EIN HOCHLEISTUNGSFAHRZEUG, DAS AUS SICHERHEITSGRÜNDEN NICHT AUF ÖFFENTLICHEN STRAßEN, IN ÜBERFÜLLTEN GEBIETEN, IN ÖKOLOGISCH SENSIBLEN BEREICHEN ODER IN DER NÄHE VON KINDERN ODER TIEREN EINGESETZT WERDEN SOLLTE. DIESES FAHRZEUG ENTHÄLT BEWEGLICHE TEILE UND TEILE, DIE SICH WÄHREND DES NORMALEN BETRIEBS ERHITZEN KÖNNEN. BITTE LESEN SIE DAS HANDBUCH UND ALLE WARNHINWEISE SORGFÄLTIG DURCH, UM SCHÄDEN ODER VERLETZUNGEN ZU VERMEIDEN. ALLE PRODUKTWARNUNGEN BEACHTEN. DIESES PRODUKT KANN EINIGE MONTAGE- UND WARTUNGSARBEITEN ERFORDERN. BESUCHEN SIE REDCATRACING.COM FÜR HILFREICHE VIDEOS ÜBER DIE VORBEREITUNG UND DEN BETRIEB IHRES RC-AUTOS. BITTE GEHEN SIE ZU REDCATRACING.COM, UM DIE INFORMATIONEN ZUR EINGESCHRÄNKTEN GARANTIE EINZUSEHEN. UNFALLSCHÄDEN SIND VON DER GARANTIE AUSGESCHLOSSEN.

WARNUNG: DIESES PRODUKT ENTHÄLT CHEMIKALIEN, DIE DEM STAAT KALIFORNIEN BEKANNT SIND, UM KREBS, GEBURTSFEHLER ODER ANDERE REPRODUKTIVE SCHÄDEN ZU VERURSACHEN. BENUTZUNG NICHT FÜR KINDER UNTER 14 JAHREN OHNE AUFSICHT EINES ERWACHSENEN. ENTHÄLT KLEINTEILE. AUßERHALB DER REICHWEITE VON KLEINEN KINDERN AUFBEWAHREN.

HERGESTELLT IN CHINA

FRENCH

AVERTISSEMENT : NE PAS MÉLANGER D'ANCIENNES ET DE NOUVELLES PILES. NE PAS MÉLANGER DES PILES ALCALINES, AU LITHIUM, STANDARD (CARBONE-ZINC) OU RECHARGEABLES (NICKEL-CADMIUM).

AVERTISSEMENT : CE VÉHICULE TÉLÉCOMMANDÉ N'EST PAS UN JOUET. CE PRODUIT REDCAT RACING EST UN VÉHICULE DE HAUTE PERFORMANCE QUI, POUR DES RAISONS DE SÉCURITÉ, NE DOIT PAS ÉTRE UTILISÉ SUR LA VOIE PUBLIQUE, DANS DES ENDROITS BONDÉS, DANS DES ZONES ÉCOLOGIQUEMENT SENSIBLES OU À PROXIMITÉ D'ENFANTS OU D'ANIMAUX. CE VÉHICULE CONTIENT DES PIÉCES MOBILES ET DES PIÉCES QUI PEUVENT DEVENIR CHAUDES AU TOUCHER PENDANT LES OPÉRATIONS NORMALES. VEUILLEZ LIRE ATTENTIVEMENT LE MANUEL ET TOUS LES AVERTISSEMENTS AFIN D'ÉVITER TOUT ACCIDENT OU BLESSURE QUI POURRAIT S'EN SIUVRE. SUIVRE TOUTES LES MISES EN GARDE SUR LES PRODUITS. CE PRODUIT PEUT NÉCESSITER UN CERTAIN ASSEMBLAGE ET UN ENTRETIEN DE ROUTINE SI NÉCESSAIRE. VISITEZ REDCATRACING.COM POUR VISIONNER DES VIDÉOS UTILES SUR LA PRÉPARATION ET L'UTILISATION DE VOTRE VOITURE DE LOCATION. VEUILLEZ VOUS RENDRE SUR REDCATRACING.COM POUR CONSULTER LES INFORMATIONS SUR LA GARANTIE LIMITÉE. LES DOMMAGES DUS À UN ACCIDENT NE SONT PAS COUVERTS PAR LA GARANTIE.

AVERTISSEMENT : CE PRODUIT CONTIENT DES PRODUITS CHIMIQUES QUI SONT SONT CONNU DE L'ÉTAT DE CALIFORNIE COMME CAUSANT LE CANCER, DES MALFORMATIONS CONGÉNITALES OU D'AUTRES PROBLÉMES DE REPRODUCTION. PAS POUR LES ENFANTS DE MOINS DE 14 ANS SANS LA SURVEILLANCE D'UN ADULTE. CONTIENT DE PETITES PIÉCES. GARDER HORS DE PORTÉE DES JEUNES ENFANTS.

FABRIQUÉ EN CHINE

FEATURES & SPECIFICATIONS

- Scale: 1:5
- Drive: 4WD Shaft Driven
- Length: 800mm
- Width: 550mm
- Height: 340mm
- Wheelbase: 503mm
- Wheel Track: 460mm
- Wheel Diameter: 190mm
- Wheel Width: 96mm
- Weight: 10.34kg
- Motor: Brushless 1050kv
- ESC: Waterproof Brushless 160A
- Servo: 30kg
- Gear Ratio: 21.5:1
- Batteries and Charger Not Included

VEHICLE OVERVIEW

A: On/Off Switch

B: 2.4GHz Receiver

C: ESC

D: Electric Motor

E: Steering Servo

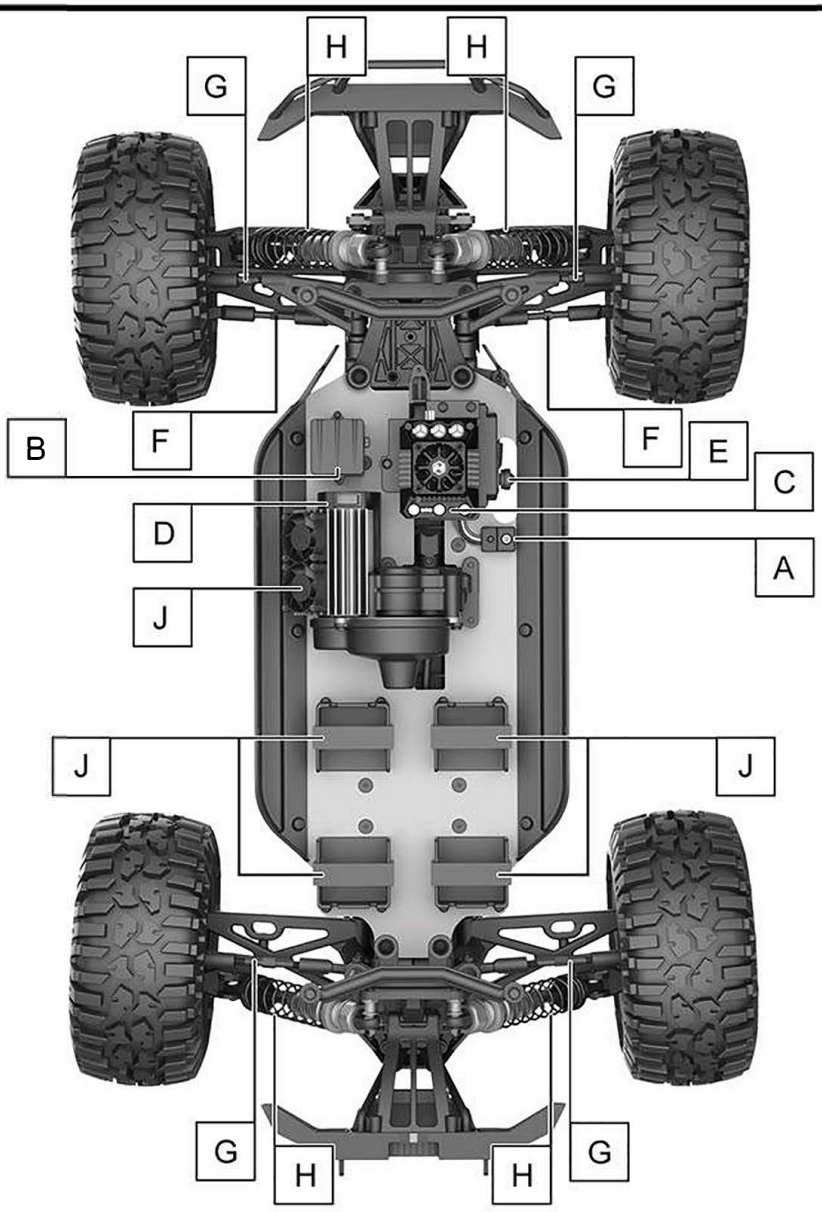
F: Steering Linkage

G: Upper Suspension Link

H: Oil Filled Shocks

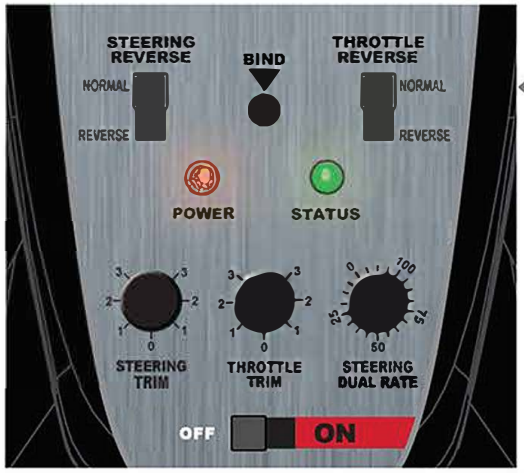
I: Battery Straps

J: Electric Cooling Fans



RADIO GUIDE

CONTROL PANEL



RADIO:

Steering Reverse Switch: Top left switch. Used to change steering orientation. If the car turns right when you steer left, flip this switch.

Throttle Reverse Switch: Top right switch. Used to change throttle trigger orientation. If the car goes in reverse while you pull the throttle trigger, flip this switch.

Power LED: Left LED light. Lights up when the transmitter is turned on.

Status LED: Right LED light. Lights up green when transmitter batteries are full. Flashes when transmitter batteries are low and need replacing.

Bind Button: Used to bind the transmitter to the receiver. See binding instructions.

Steering Trim: Left knob. Used to set the steering neutral point. If the vehicle veers in one direction while the steering wheel is centered, turn this knob in the opposite direction until the car drives straight.

Throttle Trim: Middle knob. Used to set the throttle neutral point. If the vehicle moves forward or reverse while the throttle trigger is centered, turn this knob until the vehicle remains still. For maximum setting, turn slowly until the vehicle creeps forward, then turn the knob the opposite direction until the car stops.

Steering Dual Rate: Right knob. Used to limit the amount of steering. 0= little/no steering & 100= maximum steering. Set the knob to the amount of steering you feel comfortable with. If the vehicle has a tendency to spin out, lower the steering rate.

On/Off Switch: Bottom switch. Turns transmitter On and Off.

RECEIVER:

BIND/VCC: Used when binding to transmitter.

Ch3: Used for 3rd channel when needed.

Ch2: Used for electronic speed controller (ESC).

Ch1: Used for steering servo.

Failsafe Button: See next page.

BINDING:

1. Insert the BIND PLUG into the receiver BIND port.
2. Make sure your ESC is plugged into CH2, and insert the bind plug into BIND/VCC. Now, power the vehicle on and the receiver light should begin to blink red.
3. Press the BIND button in the center of the transmitter's Control Panel and turn on radio.
4. Release the bind button when you see the green light on the radio flashing. At this point, your receiver's LED should now be slowly blinking. Turn off the power to your vehicle, as well as the radio.
5. Remove the BIND PLUG from the receiver. Make sure the servos and ESC are attached as described above.
6. First turn your radio on, then your vehicle as normal. Your radio and receiver should be bound together and communicating with each other.

RADIO GUIDE

USING THE BUILT IN FAILSAFE

1.Function:

The failsafe helps to prevent out-of-control RC vehicles if the transmitter signal is lost. If the receiver is unable to receive a transmitter signal, the position of the throttle channel, on the receiver, will return to its preset failsafe position.

2. Setting the Failsafe:

a. Turn on the transmitter.
b. Turn on the receiver. The LED [N] will light up.
c. On the transmitter, Apply full brakes and hold.
d. Press the setting button [O] on receiver. The LED will blink, then stop after 3 seconds. This means the failsafe has completed setup.

3. Testing the Failsafe:

a. Turn on the transmitter.
b. Turn on the receiver.
c. Turn off the transmitter.
d. The throttle will return to its full brake setting automatically.
e. The failsafe setup is complete if the above procedures were successful.

WARNING: Low or no voltage will not allow the failsafe to engage.

ELECTRONIC SPEED CONTROLLER

WARNINGS:

- Ensure all wires and connections are properly insulated before connecting the ESC to related devices as short circuits will damage the ESC.
- Ensure all devices are connected securely. Poor connections may cause loss of vehicle control or damage to electrical components. Loose connections may also generate unwanted heat and cause damage or fire.
- Thoroughly read all manuals to all components being used with this device, including the vehicle manual, to ensure all parameters are met before using.
- Do not hold the vehicle in the air while pulling the throttle. Rubber tires can "expand" to extreme size and explode, causing serious injury.
- Stop using the ESC when its casing temperature exceeds 90ºC /194ºF. These temps. can destroy the ESC and may also cause damage to the motor. We recommend setting the "ESC Thermal Protection" to 105ºC/221ºF (this refers to the internal temperature of the ESC).
- We recommend removing the cooling fan from ESC before exposing vehicle to liquids, and completely dry the ESC immediately following wet use.
- Always disconnect and remove batteries after use. The ESC will continue to draw current from the batteries, even if the ESC is turned off. Leaving the batteries plugged into the ESC for a length of time may cause the batteries to become completely discharged, resulting in damage to the batteries, electronics, persons, and surroundings. This will not be covered under warranty.

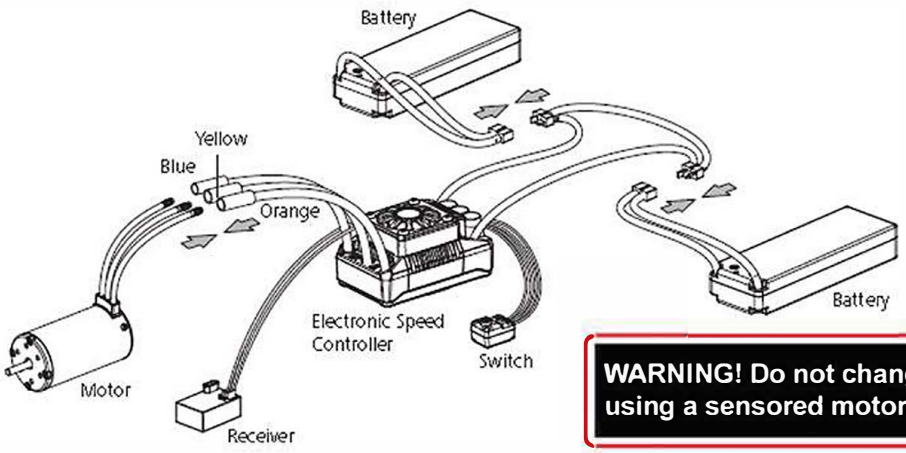
FEATURES:

- Compatible with sensorless brushless motors (only in sensorless mode) and sensored brushless motors.
- Fully waterproof design for all weather conditions. The power button is water proof and dust proof.
- Super internal switching BEC with switchable voltage of 6V/7.4V and a cont./peak current of 6A/15A for high voltage servos with high voltage and amperage requirements.
- Proportional braking with 9 levels of brake sensitivity, 9 levels of maximum brake force, and 9 levels of drag brake force.
- 5 levels of punch/acceleration, soft to aggressive, for different vehicles, tires, and driving conditions.
- A built-in spark-proof circuit technology helps prevent sparks while connecting the battery pack to the ESC. This reduces the risk of electrical shock, keeping both the user and electrical components safer.
- Multiple protective features: motor lock-up protection, low-voltage cutoff protection, thermal protection, overload protection, and fail safe.
- Single-button ESC programming and factory reset.
- Advanced programming via portable LED program card.

Model	HX-HEX6-160-8S-XT90
Cont./Burst Current	160A/1050A
Motor Supported	Sensored / Sensorless Brushless Motor (only in sensorless mode)
Cars Applicable	1/6,1/7th Touring Car, Buggy and Truck
Motor Limit	6S LiPo : KV≤ 1500 5892 size motor 8S LiPo : KV≤ 1200 5892 size motor
Battery	9-24 Cells NiMH, 6-8S Lipo
BEC Output	6V/7.4V Switchable, Continuous Current of 6A (Switch-mode BEC)
Cooling Fan	Powered by a stable BEC voltage of 6V/7.4V
Size/Weight	70(L)x56(W)x46.5(H)/240g
Programming Port	Fan/Programming Port

WARNING! This is an extremely powerful brushless motor system. For your safety and the safety of those around you, we recommend removing the motor's pinion gear before performing calibration and programming functions with this system. Keep the wheels off the ground when turning on the ESC.

WIRING DIAGRAM:



If using a sensorless motor, the #A, #B, #C wires of the ESC can be connected with the motor wires in any sequence. If the sensorless motor runs in the opposite direction, just swap any two of the wire connections. **If using a sensored motor, DO NOT SWAP THE WIRE CONNECTIONS! All three motor wires must be connected in the correct sequence (A-A, B-B, C-C). Failure to do so may permanently damage the ESC and sensored motor . If a sensored motor runs in the opposite direction you must change the rotation setting in the ESC menu.**

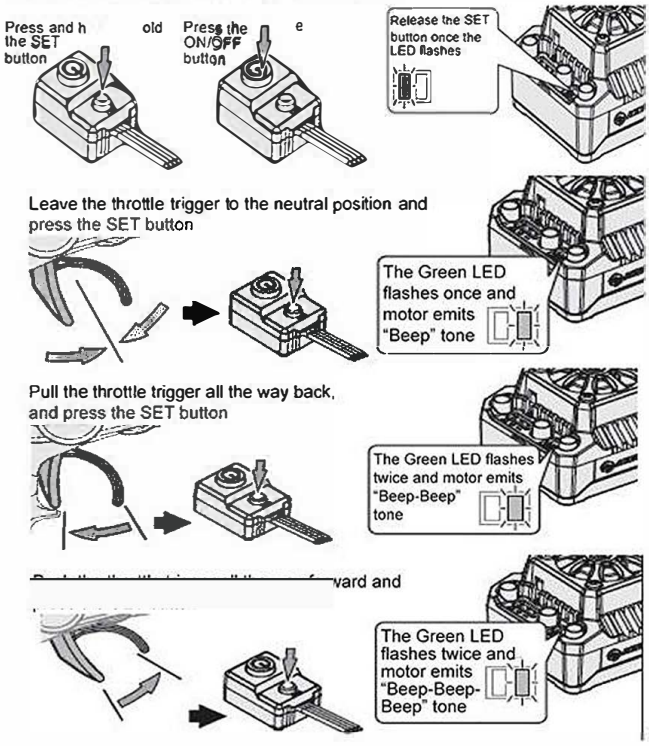
WARNING! Do not change the motor wire sequence when using a sensored motor!

THROTTLE CALIBRATION:

In order to match up the radio's throttle range with the throttle range of the ESC, you must calibrate the radio and ESC before using. Be sure to do this before running the vehicle for the first time. The pictures on the following page show how to set the throttle range with the included RCR-2CENR transmitter.

ELECTRONIC SPEED CONTROLLER

Example of calibrating neutral range and endpoint.



1. Turn on the transmitter and set the throttle "TRIM" to "0".

   If using an upgraded radio, like the FlySky FS-GT3C, be sure to set the throttle "DR", "EPA", and "ATL" to 100%. Also DISABLE the "ABS braking function" on the transmitter.

2. Plug the battery into the ESC, but leave the power turned off. On the ESC, while pressing and holding the SET button, press and release the ON/OFF button to turn on the ESC. Release the SET button immediately when the motor begins to beep and the Red light on the ESC begins to blink. The ESC will continue to beep after the button is released, to show the ESC is now in calibration mode.

3. While leaving the throttle trigger in the neutral position, press and release the SET button (on the ESC) one time. The Red LED will go out and the Green LED will flash one time, along with one motor beep.

4. While holding the trigger at the full throttle position, press and release the SET button on the ESC one time. The Green LED will flash two times, along with two motor beeps. Now release the trigger.

5. While holding the trigger at the full brake (or reverse) position, press and release the SET button on the ESC one time. The Green LED will flash three times, along with three motor beeps. Release the trigger.

6. After waiting at least three seconds, the ESC should be calibrated and ready to use.

LED Status During Operation:

A. Red & Green LEDs go out when the throttle trigger is in throttle neutral zone.
B. The Red LED lights up solid when the vehicle runs forward. The Green LED will also come on when pulling the throttle trigger to the full (100%) forward driving position.
C. The Red LED lights up solid when applying brakes and the Green LED will also light up when full (100%) brake is being applied.
D. The Red LED lights up solid when the vehicle is in reverse.

Powering ON/OFF & Warning Tones:

A. Powering ON/OFF:
Be sure the radio is turned ON before turning on the ESC.
(Start with the ESC turned off), press the ON/OFF button to turn on the ESC.
(Start with the ESC turned on), press and hold the ON/OFF button to turn off the ESC. Once the ESC is turned off, you can turn off the radio.
B. Warning Tones:
Turn on the ESC as normal (not holding the SET button), the motor will beep the number of Lipo cells you have plugged in.
For example, 6 beeps indicate a 6S Lipo (2x 3S Lipos), 8 beeps indicate a 8S Lipo (2x 4S Lipos).

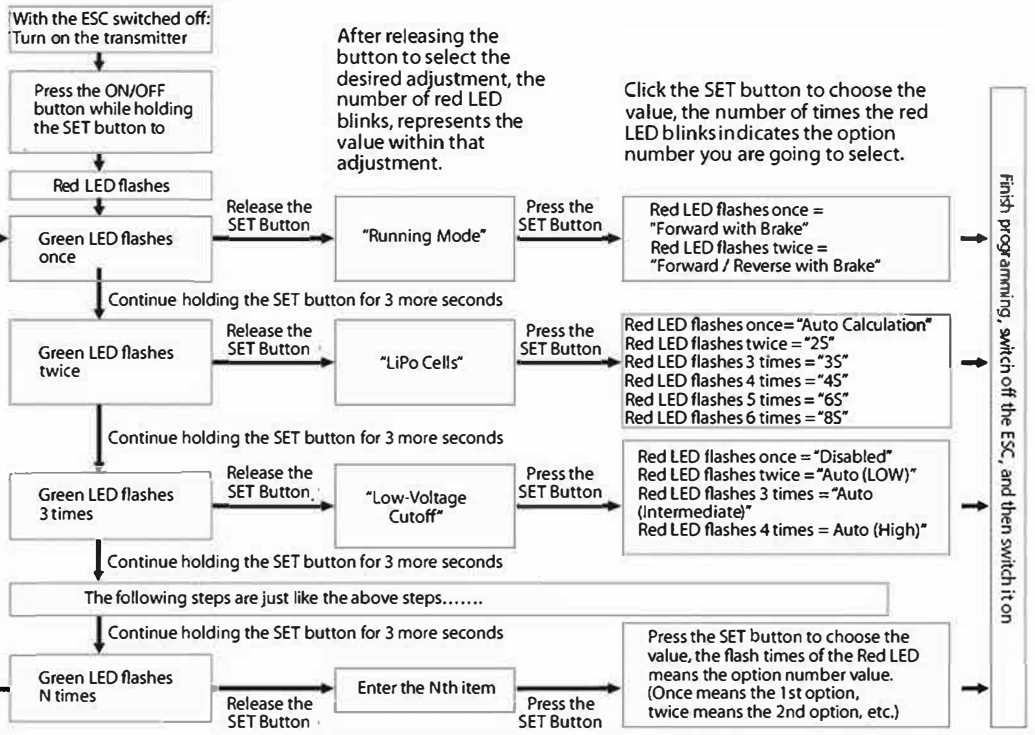
PROGRAMMING LIST (black boxes are factory default settings):

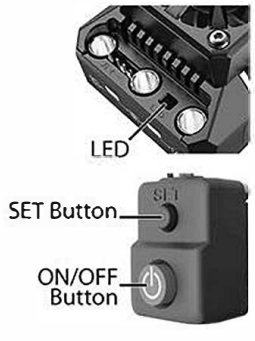
Programmable Items	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8	Option 9
1. Running Mode	Fwd/Br	*Fwd/Rev/Br*							
2. LiPo Cells	*Auto*	2S	3S	4S	6S	8S			
3. Low Voltage Cutoff	Disabled	Auto (Low)	*Auto (Intermediate)*	Auto (High)					
4. ESC Thermal Protection	*105°C/221°F*	125°C/257°F							
5. Motor Thermal Protection	*Disabled*								
6. Motor Rotation	*CCW*	CW							
7. BEC Voltage	*6.0V*	7.4V							
8. Max Brake Force	12.50%	25.00%	37.50%	*50.00%*	62.50%	75.00%	87.50%	100.00%	Disabled
9. Max Reverse Force	*25.00%*	50.00%							
10. Start Mode (Punch)	Level 1	Level 2	*Level 3*	Level 4	Level 5				
11. Drag Brake	*0%*	2%	4%	6%	8%	10%	12%	14%	16%

ELECTRONIC SPEED CONTROLLER

- **Running Mode:** Option 1: Fwd/Br (Forward with Brake) The vehicle can go forward and brake, but cannot reverse in this mode. Option 2: Fwd/Rev/Br (Forward/Reverse with Brake) This mode includes the reverse function. "Forward/Reverse with Brake" mode uses the "DOUBLE-CLICK" method. The vehicle only brakes (won't reverse) the 1st time the throttle trigger is pushed forward. If the motor stops when you release the throttle trigger and you quickly push it again (2nd push), the vehicle will go into reverse. If the motor does not stop (1st push), the vehicle will not go into reverse on the second push, it will continue to brake. You will need to push the throttle trigger one more time to enter into reverse. The vehicle only goes into reverse after the motor has stopped. This method is to prevent the vehicle from accidentally going into reverse.
- **LiPo Cells:** We recommend setting this parameter manually instead of using the default parameter "Auto Calc." (which means calculating the LiPo cells automatically). The ESC can only identify 4S, 6S, and 8S LiPo packs when setting this parameter to "Auto Calc.". After the ESC is powered on, if the battery voltage is from 13.6V to 17.6V, it will be identified as a 4S. If the voltage is from 17.6V to 26.5V, it will be identified as a 6S. Note 2: This ESC is not intended for 4S operation. Even if you can set the "LiPo Cells" to 4S, it still does not work. When using a NiMH pack, you need to set "LiPo Cells" to "Auto Calc." and "Cutoff Voltage" to "Disabled".
- **Low Voltage Cut-Off:** This sets the voltage at which the ESC lowers or removes power to the motor in order to keep the LiPo battery at a safe minimum voltage. The ESC will constantly monitor the battery voltage and when the voltage drops below the cutoff threshold per cell, the ESC will immediately reduce the power to 50% and then to 0% ten-seconds later. The red LED will flash a short, single flash that repeats to indicate the low-voltage cutoff protection is activated. If using a NiMH pack, set the "Cutoff Voltage" to "Disabled".
- **ESC Thermal/Overheat Protection:** The ESC will automatically cut off power output and the green LED will flash a short, single flash that repeats (* * *) when the temperature exceeds the preset ESC thermal protection value that was selected in the menu. The output won't resume until the temperature drops to a safe level.
- **Motor Thermal/Overheat Protection:** This item has been permanently "Disabled".
- **Motor Rotation:** Pull the throttle trigger with the motor shaft facing you. The motor spins counter clockwise if this item is set to CCW; the motor spins clockwise if set to CW. The (A/B/C) wiring order of motors from different manufacturers may vary, so the direction of the motor rotation may be opposite to what you expect. You can adjust the "Motor Rotation" or swap any two (ESC-to-motor) wires if the motor runs in reverse unless in sensored mode using a sensored motor. If in sensored mode, the ESC will be damaged if the motor wires are not in the correct sequence. (A-A, B-B, C-C)
- **BEC Voltage:** Option 1: 6.0V: Best setting for standard servos. Do not use this option with high voltage servos, or your servos may not function correctly due to insufficient voltage. Option 2: 7.4V: Best setting for high voltage servos. Do not use this option with standard servos, or your servos may burn out from high voltage.
- **Brake Amount/Max. Brake Force:** This ESC uses proportional braking; the position of the throttle trigger effects the amount of braking applied. This function sets the percentage value of available braking power that is applied with full brake. Large amounts will shorten the braking distance but may damage your pinion and spur gears. Set it to the least amount of braking you can successfully and safely drive with. The looser the driving surface, the less brake force you should use.
- **Reverse Amount/Max. Reverse Force:** This effects how fast the vehicle will drive in reverse. We recommend a lower value to protect the mechanical and electrical components of the vehicle.
- **Start Mode/Punch:** This effects the initial starting force. You can choose from punch level 1 (very soft) to level 5 (very aggressive). Track condition, grip level, tire choice, and driving style may effect the amount of punch you choose. Soft punch is useful for preventing tires from slipping during initial acceleration. Aggressive (level 4 and level 5) punch has strict requirements on a battery's discharge capability (C-rating). This may affect initial vehicle movement if the battery discharges slowly and cannot quickly provide the required current. If the car stutters or suddenly loses power with acceleration, the battery's discharge capability is too low and you need to use a higher rated battery, or reduce the punch on the ESC. Using a smaller pinion gear on the motor may also help.
- **Drag Brake:** Drag brake is the slight braking power produced when releasing the throttle trigger to neutral zone. This gently slows the vehicle down when you let off the trigger. Properly set drag brake makes the vehicle easier to corner during races. (Attention! Drag brake will consume lots of power, so use it cautiously.)

PROGRAMMING WITH THE SET BUTTON:



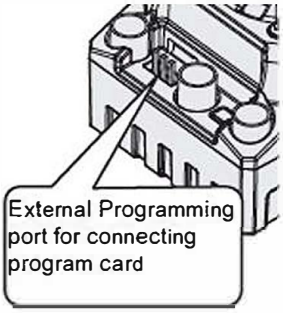


ELECTRONIC SPEED CONTROLLER

- ***NOTE:*** In the SET button program process, the motor will emit a "Beep" tone when the LED is flashing. The Hex6 uses a long flash and a long "Beep---" tone to represent number "5", to help identify the larger menu items. A long flash (Motor sounds "B---") = the No.5 item. A long flash + a short flash (Motor sounds "B--- B") = the No.6 item. A long flash + 2 short flashes (Motor sounds "B--- B B") = the No.7 item. A long flash + 3 short flashes (Motor sounds "B--- B B B") = the No.8 item. A long flash + 4 short flashes (Motor sounds "B--- B B B B") = the No.9 item.

- Programming the ESC with the LED program box:
  The portable program card is an optional accessory applicable for field use. It's friendly interface makes the ESC programming quick and easy. Before programming, connect the ESC to the program card with a cable that uses a JR male connector on each end, and then turn on the ESC; all programmable items will show up a few seconds later. You can select the item you want to program and the setting you want to choose via "ITEM" and "VALUE" buttons on the program card. Then press the "OK" button to save all new settings to your ESC.

- ***NOTE:*** The programming port of this ESC is also the fan port. You will need to unplug the fan, then plug one end of the programming cable into the PRG/FAN port. The other end of the programming cable plugs into the ESC port on the LED program box. Do NOT use the throttle control cable (also called Rx cable) on the ESC to connect to the program card/box. This may cause damage and the program card/box won't function.



TROUBLE-SHOOTING:

Trouble	Possible Reason	Solution
After powering on the ESC, neither the motor nor fan work.	No power is supplied to the ESC.	Check if all ESC & battery connectors have been well soldered and firmly connected.
	The ESC switch is damaged	Call customer service.
After the ESC is powered on, motor doesn't work, but emits "beep-beep-, beep-beep-" alert tone. (Every "beep-beep-" has a time interval of 1 second)	Input voltage is abnormal, too high or too low	Check the voltage of the battery pack
After the ESC is powered on and finished LiPo cell detection, the Geen LED flashed N times, and the Red LED flashed rapidly.	The ESC didn't detect any throttle signal.	Check if the ESC throttle wire is correctly plugged into receiver CH.2 and the transmitter is turned on
	The neutral throttle value stored on your ESC is different from the value stored on the transmitter	Re-calibrate the throttle range after you return the throttle trigger to the neutral position.
The motor runs in the opposite direction when it is accelerated.	The (ESC-to-motor) wiring order was incorrect.	Swap any two wire connections between the ESC and the motor.
	Motor direction set wrong in the ESC (CW/CCW)	Set the motor direction correctly (CW/CCW)
The motor suddenly stops running while in working state.	The throttle signal is lost	Check the transmitter and the receiver Check the signal wire from the throttle channel of your receiver
	The ESC has entered the Low Voltage Protection Mode or Over-heat Protection Mode	Red LED flashing means Low Voltage. Green LED flashing means Over-heat
The motor stuttered but couldn't start.	Bad connection between the motor and the ESC.	Check all soldered connections, please re-solder if necessary.
	The ESC was damaged (some MOSFETs are burnt).	Contact the distributor for repair or other customer services.
The vehicle still has forward function, but no reverse.	The throttle trim position on your transmitter is not centered.	Re-calibrate the throttle neutral position. No LED on the ESC will come on when the throttle trigger is at the neutral position.
	The "Running Mode" is set improperly.	Set the "running mode" to "Forward/Reverse with Brake".
	The ESC is damaged.	Contact the distributor for repair or other customer services.
The car ran forward / backward slowly when the throttle trigger was at the neutral position.	The neutral position on the transmitter is not stable, so signals are not stable either.	Replace your transmitter
	The ESC calibration is incorrect.	Re-calibrate the throttle range or fine tune the neutral position on the transmitter.
The LED program card keeps displaying 3 short lines (- - -) after being connected to the ESC.	The programming card/box was connected to the ESC via the throttle control cable (Rx cable).	It is wrong to use the Rx cable to connect the programming card/box. The programming port of this ESC is also the fan port, so please connect the ESC and programming card/box by plugging the programming cable into the fan port.
When pressing the SET button to set the throttle neutral position, the Green LED didn't flash and no beep was emitted, or you were unable to set the full throttle endpoint or the full brake endpoint after the neutral position was accepted.	The ESC throttle cable isn't plugged into the correct channel on the receiver.	Plug the throttle cable into the throttle (TH) channel on your receiver (CH.2).
	The ESC throttle cable is plugged in backwards.	Plug in the throttle cable properly by referring to relevant mark shown on your receiver.

BATTERY REQUIREMENTS

This vehicle does not include batteries, but has specific requirements that must be followed when choosing a battery for use with this vehicle.

Minimum LIPO Battery: 22.2v 6S LIPO (2x 11.1v 3S LIPO packs)
Maximum LIPO Battery: 29.6v 8S LIPO (2x 14.8v 4S LIPO packs)

Warning: Exceeding the maximum battery voltage may cause damage to the motor and electronic components of this vehicle and will void the vehicle warranty.

ATTENTION:

It is important to read all instructions included with your battery and charger before attempting to charge a battery. Follow all instructions and warnings included with your battery and charger when using batteries.

Battery Connection Instructions:

Make sure battery connectors are fully pushed in when connecting the battery to the vehicle. If the connectors are not fully pushed together, excess heat may be generated from a loose connection, possibly resulting in fire and damage.

Be sure to unplug and remove the battery from the vehicle when not in use or charging.

The ESC will continue to draw current from the battery even when it is turned off.

LIPO batteries may catch fire even when not in use. This may result in total vehicle loss and possible property damage, injury, and death.

WARNING

UNPLUG THE BATTERY PACK FROM THE VEHICLE!

BEFORE CHARGING YOUR BATTERY PACK, YOU MUST FIRST UNPLUG IT FROM THE ESC. FAILURE TO UNPLUG THE BATTERY FROM THE VEHICLE'S ESC BEFORE CHARGING MAY PERMANENTLY DAMAGE SOME OR ALL ELECTRONICS IN THE VEHICLE.

NEVER LEAVE BATTERY PACKS UNATTENDED WHILE CHARGING! Leaving a battery unattended while charging may result in fire and damage / injury.

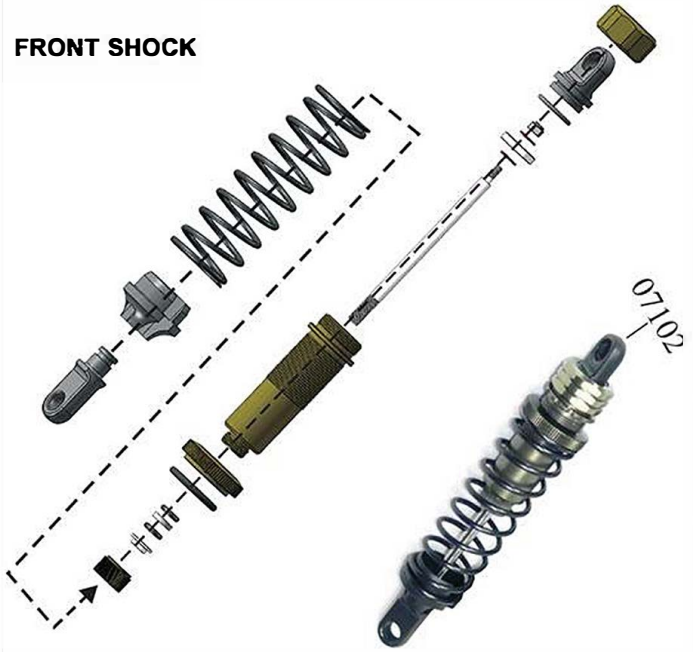
NEVER ALLOW A BATTERY PACK TO GET HOT! It's normal for the battery pack to get warm, but it should never get hot! Monitor batteries during charging and unplug to let cool if the battery gets hot.

WHEN CHARGING LIPOs, A LIPO SAFE CHARGING BAG SHOULD BE USED TO HELP PREVENT FIRES.

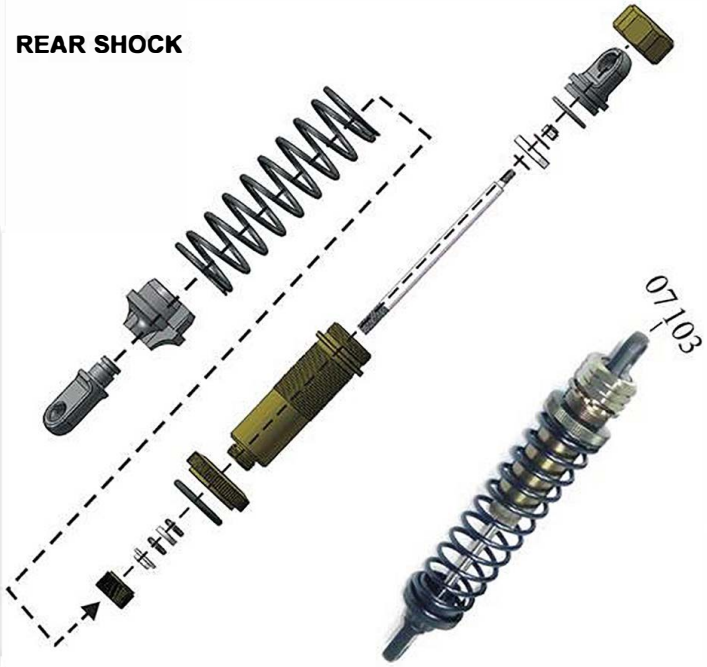
EXPLODED VIEWS

SHOCK ASSEMBLY:

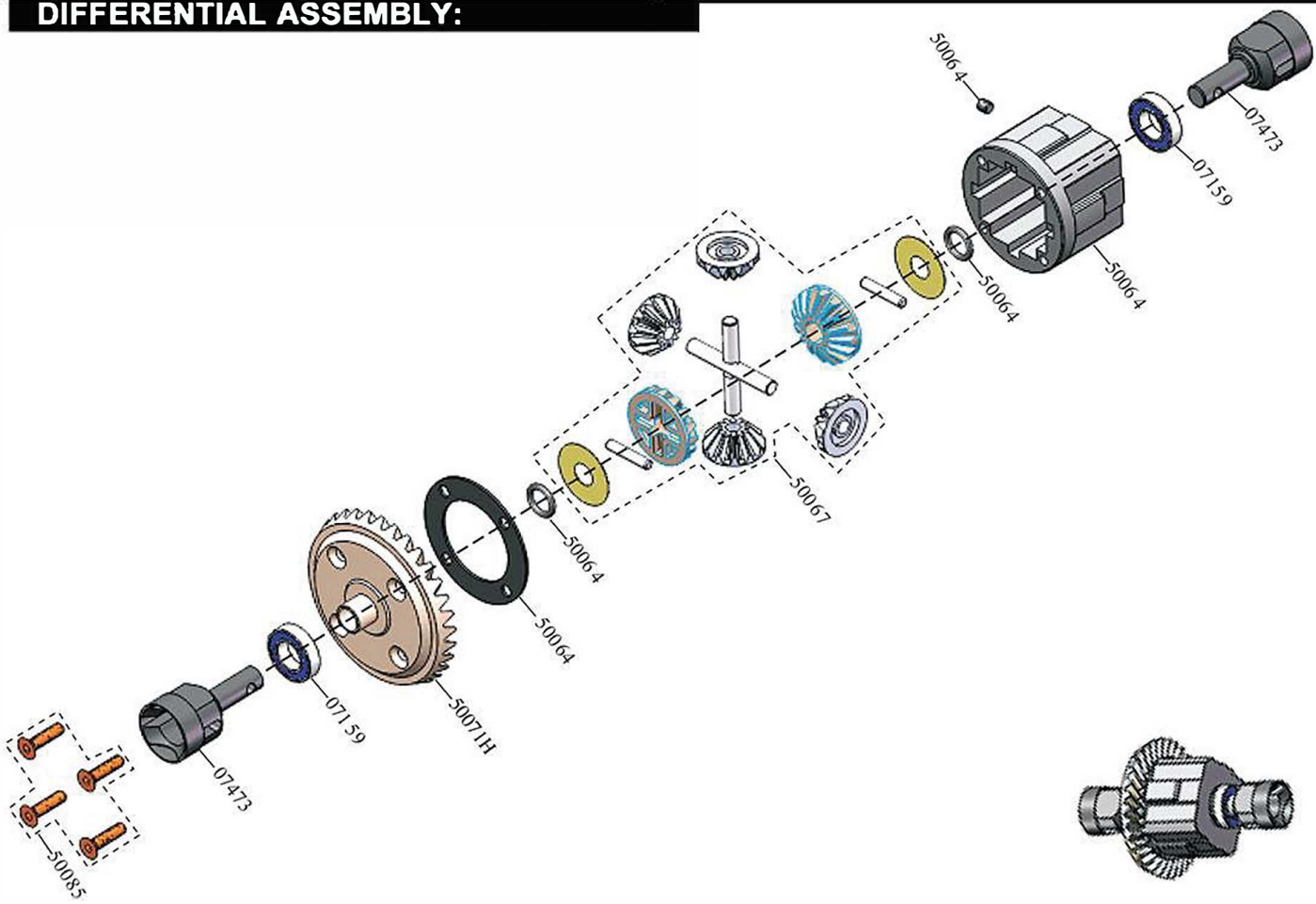
FRONT SHOCK



REAR SHOCK

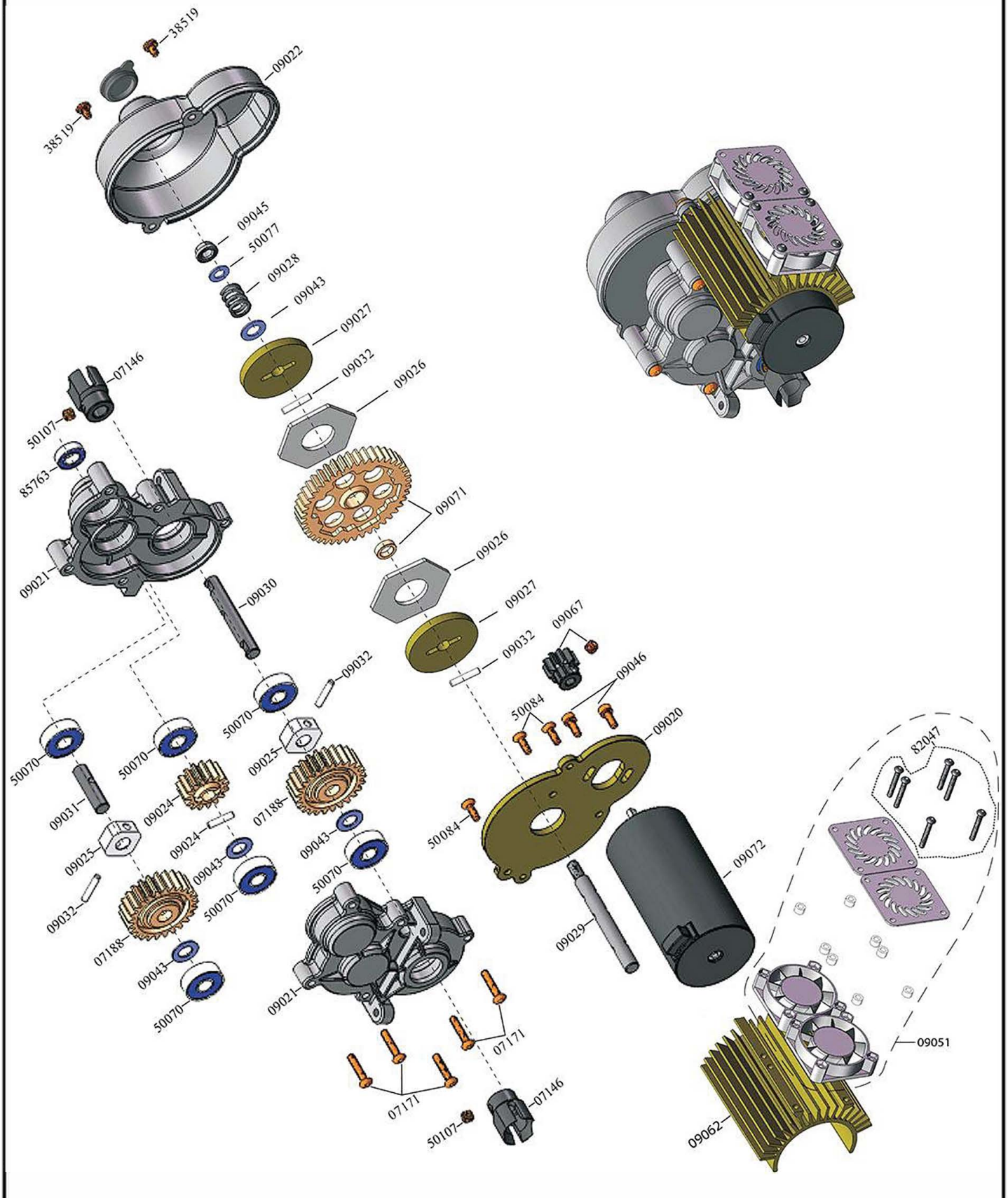


DIFFERENTIAL ASSEMBLY:



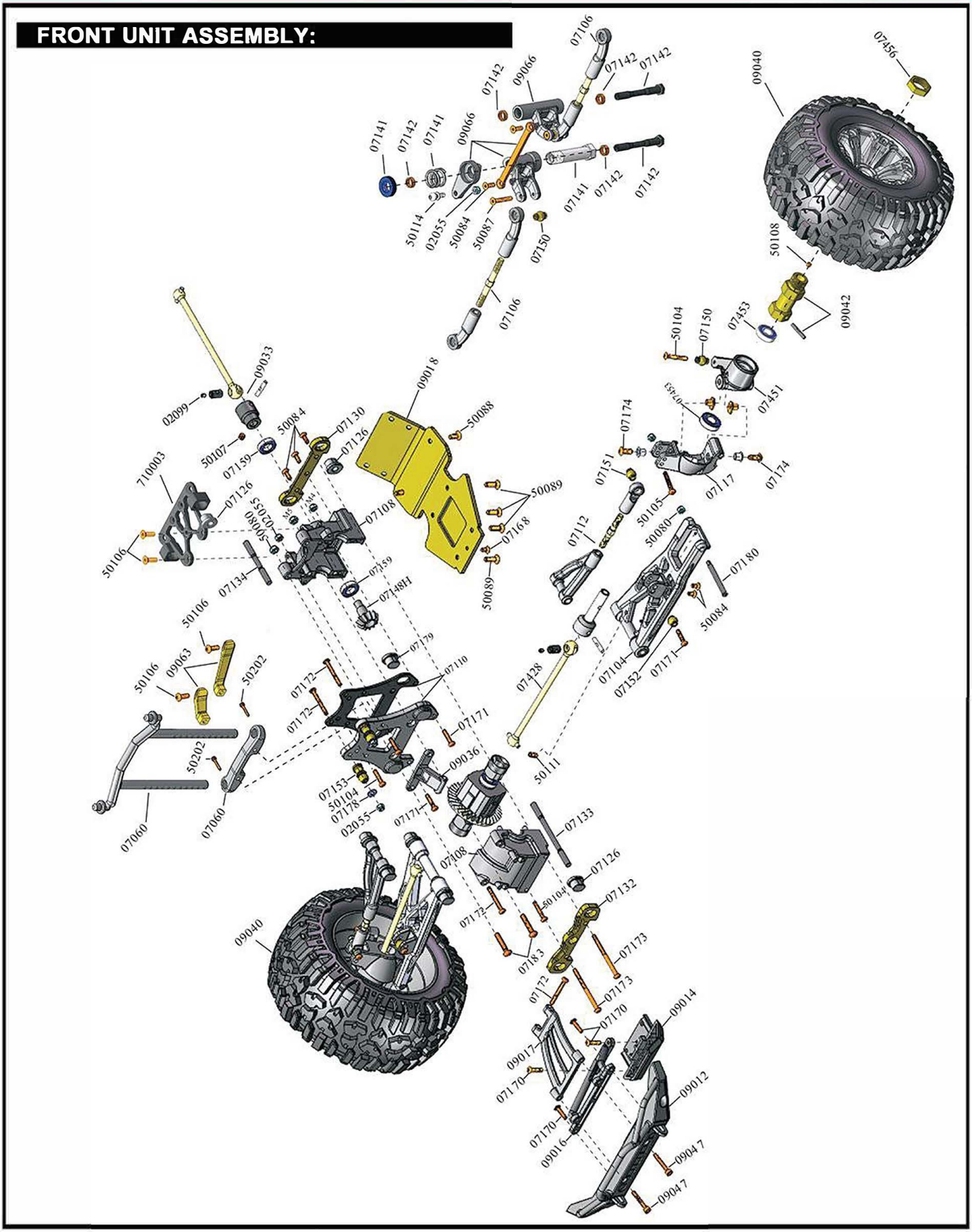
EXPLODED VIEWS

CENTER GEARBOX ASSEMBLY:



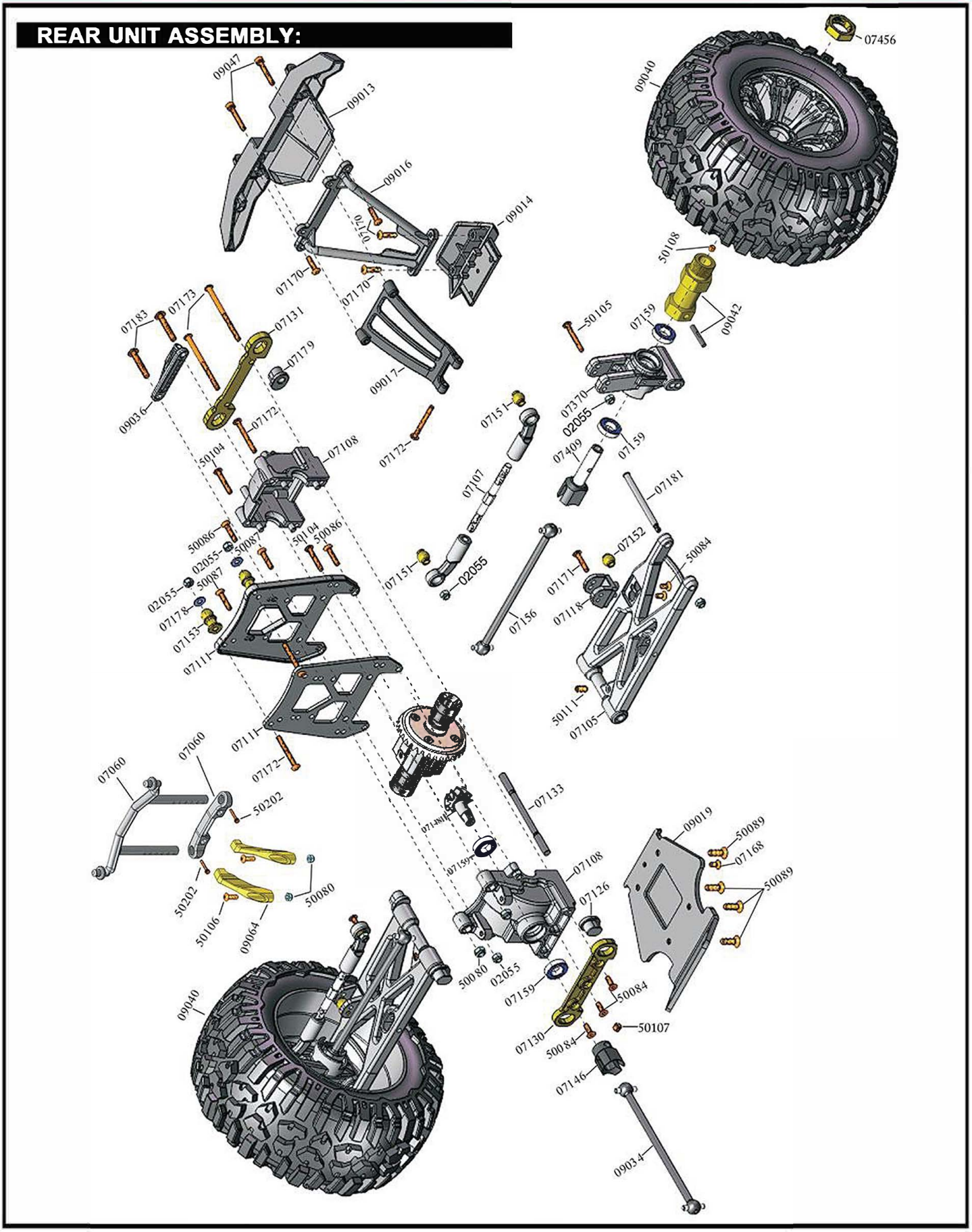
EXPLODED VIEWS

FRONT UNIT ASSEMBLY:



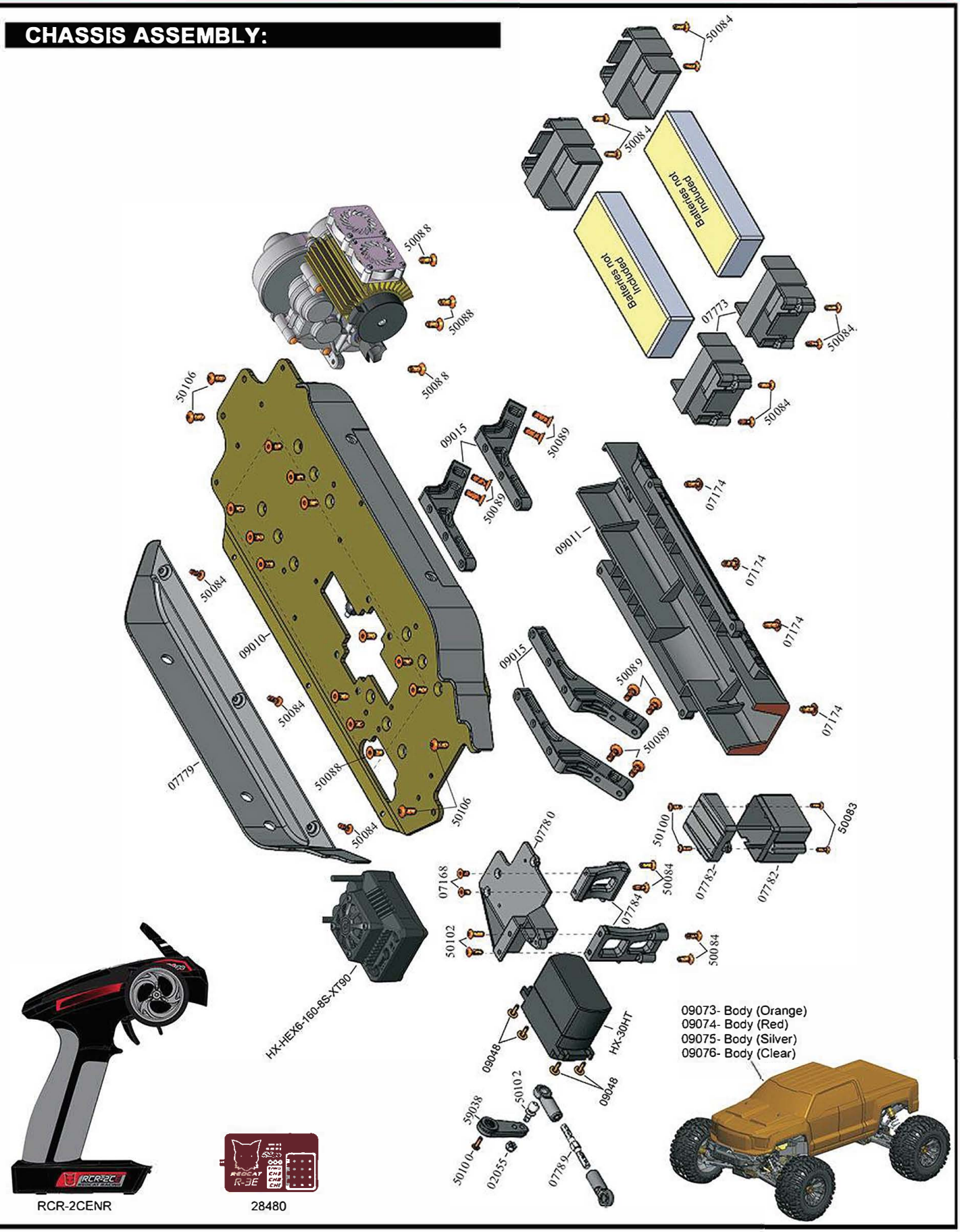
EXPLODED VIEWS

REAR UNIT ASSEMBLY:



EXPLODED VIEWS

CHASSIS ASSEMBLY:

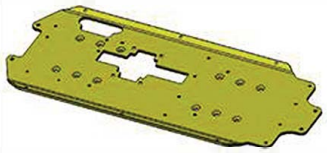


RCR-2CENR

28480

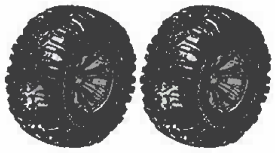
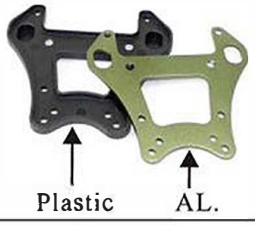
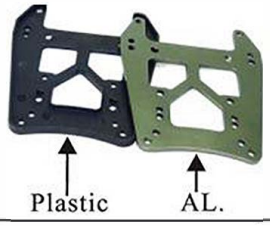
PARTS

SPARE PARTS:

09010- Chassis 	09011- Lower Chassis Cover 	09012- Front Bumper 	09013- Rear Bumper 
09014- Bumper Mount 	09015- Skid Plate Support 	09016- Bumper Mount (B) 	09017- Bumper Brace 
09018- Front Skid Plate 	09019- Rear Skid Plate 	09020- Motor Plate 	09021- Center Transmission Case 
09022- Gear Cover 	09071- Steel Spur/Slipper Gear (43T) + Brass Bushing 8*12*3.5 	09024- Steel Gear 15T +Pin 3.5*15 	09067- Motor Pinion Gear (12T) 
09025- Gear Shaft Hubs 	09026- Slipper Pads 	09027- Slipper Plates 	09028- Slipper Spring 
09029- Slipper Shaft 	09030- Lower Output Shaft 	09031- Idler Gear Shaft 	09032- Pin 3.5*18mm 

PARTS

SPARE PARTS:

09033- Center Front Drive Shaft 142mm 	09034- Center Rear Drive Shaft 187mm 	09063- Front Brace 	09064- Rear Brace 
09037- Wheels 	09038- Tire (L/R) 	09040- Wheel/Tire Complete (L/R) 	09036- Bumper Brace Mount 
09073- Body (Orange) 09074- Body (Red) 09075- Body (Silver) 09076- Body (Clear) 	07773- Battery Trays 	07779- Chassis Side Guards (L/R) 	07780- ESC Mount 
07782- Receiver Case 	07784- Servo Mounts 	07789- Servo Link 	07108- Gear Box 
50064- Differential Case Set 	50067- Differential Inner Gear Set 	50071H- Differential Ring Gear (33T) 	07188- Steel Idler Gears (25T) 
07148H- Differential Pinion Gear (11T) 	07110- Front Shock Tower 	07111- Rear Shock Tower 	07104- Front Lower Susp. Arm (L/R) 

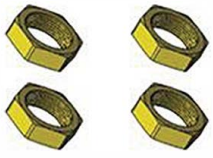
PARTS

SPARE PARTS:

07105- Rear Lower Susp. Arm (L/R) 	07106- Steering Links 	07107- Rear Upper Links 	07112- Front Upper Susp. Arm (L/R) 
710003- Aluminum Front Upper Top Plate 	07117- C-Hub (L/R) 	09066- Servo Saver 	07451- Steering Knuckles (L/R) 
07370- Rear Hub Carriers (L/R) 	07102- Front Shock Absorbers 	07103- Rear Shock Absorbers 	07060- Body Post 
07146- Center Dogbone Joint Cup 	07473- Differential Joint Cups 	07409- Rear Wheel Axle 	09042- Wheel Hex + Nut + Shaft 4*22mm 
07130- Lower Susp. Arm Bracket (B&C) 	07131- Rear Lower Susp. Arm Bracket (D) 	07132- Front Lower Susp. Arm Bracket (A) 	07118- Lower Shock Mount Tabs (4pcs) 
07428- Front CV Drive Shafts 	07156- Rear Dog Bones 135mm 	07142- Steering Buffer Post w/ Bushings 	07141- Servo Saver Spring, Tube, & Nut 

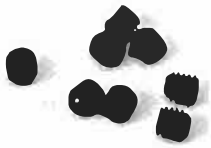
PARTS

SPARE PARTS:

07183- Cap Head Hex. Mechnical Screw (5*28) 4P 	07133- Lower Inner Suspension Arm Pin 6*90mm 	07134- Front Upper Inner Suspension Arm Pin 6*60mm 	07180- Front Lower Outer Suspension Arm Pin 5*50.5mm 
07181- Rear Lower Outer Suspension Arm Pin 5*65mm 	07126- Inner Hinge Pin Bushings 	07179- Outer Hinge Pin Bushings 	81013- Body Clips 2.0mm 
07150- Aluminum Steering Link Ball 13mm (4pcs) (AL) 	07151- Front Upper Outer Suspension Arm Ball 12mm (4pcs) (AL) 	07152- Lower Shock Ball 10mm (4pcs) (AL) 	07153- Upper Shock Mount (4pcs) (AL) 
50114- Threaded Ball Stud for Servo Link 8mm (4pcs) 	85763- Ball Bearings 16*8*5mm (4pcs) 	07159- Ball Bearings 19*10*5mm (4pcs) 	50070- Ball Bearings 22*8*7mm (4pcs) 
07453- Ball Bearings 22*10*6mm (4pcs) 	50232- Servo Saver Bushings 10*7*4mm (4pcs) 	50078- Servo Washers 3*8*0.8mm (9pcs) 	07178- Washers 4*10*1.0mm (6pcs) 
50077- Washers 6*12*1.5mm (6pcs) 	09043- Washer 8*15*1.0mm 	02055- M4 Lock Nuts (8pcs) 	07456- Wheel Nuts 

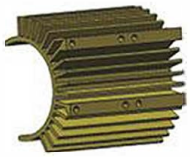
PARTS

SPARE PARTS:

50080- M5 Lock Nuts (8pcs) 	82047- Button Head Hex Machine Screw (3*20) 8P 	09045- M6 Flange Nuts (2pcs) 	02099- Hex Head Grub Screw (4*4) 10P 
50108- Hex Head Grub Screw (5*5) 8P 	50111- Hex Head Grub Screw (5*10) 4P 	50107- Hex Head Grub Screw (6*6) 8P 	50083- Countersunk Head Hex. Mechanical Screw (3*10) 4P 
07168- Countersunk Head Hex. Mechanical Screw (4*8) 12P 	50084- Countersunk Head Hex. Mechnical Screw (4*12) 12P 	50085- Countersunk Head Hex. Mechnical Screw (4*16) 12P 	50086- Countersunk Head Hex. Mechnical Screw (4*20) 8P 
50087- Countersunk Head Hex. Mechnical Screw (4*25) 8P 	50088- Countersunk Head Hex. Mechnical Screw (5*12) 12P 	50089- Countersunk Head Hex. Mechnical Screw (5*15) 12P 	50100- Cap Head Hex. Mechnical Screw (3*10) 8P 
50102- Cap Head Hex. Mechnical Screw (4*12) 8P 	07170- Cap Head Hex. Mechnical Screw (4*16) 8P 	07171- Cap Head Hex. Mechnical Screw (4*20) 8P 	50104- Cap Head Hex. Mechnical Screw (4*25) 4P 
50105- Cap Head Hex. Mechnical Screw (4*30) 4P 	07172- Cap Head Hex. Mechnical Screw (4*35) 4P 	07173- Cap Head Hex. Mechnical Screw (4*60) 4P 	07174- Cap Head Hex. Mechnical Screw (5*12) 10P 

PARTS

SPARE PARTS:

50106- Cap Head Hex. Mechnical Screw (5*15) 10P 	09048- Flanged Hex. Mechnical Screw (3*12) 6P 	50202- Column Head Hex. Mechnical Screw (3*16) 12P 	09046- Column Head Hex. Machine Screw (4*10) 6P 
09047- Column Head Hex. Machine Screw (4*25) 4P 	38519- Round Head Hex. Machine Screw (4*8) 6P 	59038- Servo Horn 	HX-HEX6-160-8S-XT90 - Brushless ESC 160A 
HX-30HT- Servo (30KG) 	RCR-2CENR- 2.4GHz Radio Transmitter 	28480- 2.4GHz Receiver 	09072- Brushless Motor 1050KV (4690) 
09062- Motor Heat Sink 	09051- Motor Cooling Fans 		

PARTS

UPGRADE PARTS:

710002- Aluminum Front Upper Suspension Arms 	710004- Aluminum Front Shock Tower 	710005- Aluminum Rear Shock Tower 	710006- Aluminum Rear Hub Carriers 
710010- Aluminum Front C-Hubs 	710017- Aluminum Lower Suspension Arm Holder (B or C) 	710018- Aluminum Lower Suspension Arm Holder (D) 	710019- Aluminum Lower Suspension Arm Holder (A) 
710032- Aluminum Rear Lower Suspension Arms w/ Tabs 	710033- Aluminum Front Lower Suspension Arms w/ Tabs 	090001- Aluminum Bumper Mount 	090002- Aluminum Skid Plate Support 
090004- Aluminum Steering Link 	090005- Aluminum Upper Camber Link 	090006- Aluminum Front Shock Absorbers 	090007- Aluminum Rear Shock Absorbers 
090012- Aluminum Servo Saver Set (No internal parts) 	090013- Aluminum Front Steering Knuckles 	090015- Aluminum Wheel Nut 	090016- Aluminum Bead-Lock Ring (inner) 

PARTS

UPGRADE PARTS:

090017- Aluminum Bead-Lock Rings (outer) 	050029- Shock Absorber Protective Cap (AL.) 	09068 - Pinion Gear (11T) (ø 8mm) 	09069 - Pinion Gear (13T) (ø 8mm) 
09070 - Pinion Gear (14T) (ø 8mm) 	HX-0007- Hexfly Tool set w/ Case. includes: 1.5 / 2.0 / 2.5 / 3.0 metric hex drivers 	FS-GT3C- FlySky 2.4GHz Radio w/ Receiver 	09044- LED Light Mounts (4pcs) 

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