

# GT14B

1:16 SCALE SHAFT DRIVE 4WD

## INSTRUCTION MANUAL



### Chassis Specification

- Length : 309mm • Width : 213mm • Wheelbase : 190mm • Front Tire :  $\phi$ 75.5mm x 33mm (width) • Rear Tire :  $\phi$ 75.5mm x 26mm (width)
- Ride Height : 25mm • Front Toe - in / out : Preset 1° toe - out (adjustable) • Rear Toe - in : Preset 2.5° • Caster : Preset 15°
- Camber : Preset -1° • Running Weight : Approx. 920g with battery pack

### Contents

Safety Precaution	2
Item Included / Tool Required	3
About the 2.4GHz Radio System	4 — 6
About GT14B Chassis	7
Steering and Rate Adjustment	8
Chassis Set-up Tips	9 — 10
Battery Pack & Charger Menu	11
Trouble Shooting Guide	12
Assembly Diagrams	13 — 17
GT14B Exploded Diagram	18
Spare Parts List	19 — 20
Option Parts List	21 — 22
Set Up Sheet	23

# SAFETY PRECAUTIONS



## SAFETY PRECAUTIONS

**THIS MODEL IS ONLY SUITABLE FOR PEOPLE 14 YEARS OLD AND UP.**

**THIS RADIO CONTROL MODEL IS NOT A TOY.**

Beginner should seek advice from experienced person in order to assemble the model or parts correctly and to make best performance.

\* Assemble this model or parts only in place out of children's reach, and take safe precautions before operating this model. User is fully responsible for the model assembly and safe operations.

## Introduction

This is a sophisticated hobby product and not a toy. It must be operated with caution and common sense. User also requires some basic mechanical abilities. Fail to operate this necessary in a safe and responsible manner could result in injury or do damage to the product or other properties. This product is not intended for use by children without direct adult supervision. The product manual contains instructions for safe operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual prior to assembly, setup or use, in order to operate correctly and avoid damage or injury.

## Safety, Precautions, and Warnings

As the user of this product, you are solely responsible for operating it in a manner that does not endanger yourself and others or result in damage to the product or the property of others.

This model is controlled by a radio signal that is subject to interference from many sources outside your control. This interference can cause momentary loss of control so it is necessary to always keep a safe distance in all directions around your model, as this will help to avoid collisions or injury.

- Always operate your model in an open area away from cars, traffic, or people.
- Avoid operating your model on the street where injury or damage can occur.
- Never operate the model out into the street or populated areas for any reason.
- Never operate your model with low transmitter batteries.
- Carefully follow the directions and warnings for this product and any optional support equipments (chargers, rechargeable battery packs, etc.) that you use.
- Keep all chemicals, small parts and anything electrical out of the reach of children.
- Moisture causes damage to electronics. Avoid water exposure to all equipments not specifically designed and protected for this purpose.

## CE Compliance Information For The European Union

The associated regulatory agencies of the following countries recognize the noted certifications for this product as authorized for sale and use.

UK	DE	DK	BG	SE	CZ	ES	NL	SK	HU	RO	FR	PT
FI	EE	LV	LT	PL	AT	CY	SI	GR	MT	IT	IE	LU

### Declaration of Conformity

**Products: Carisma CTX-2810 2.4GHz Transmitter, MRX2800 Receiver, V6 Type R Electronic Speed Controller , MS-903GT Servo**

Equipment Class: 2

The objects of declaration described above are in conformity with the requirements of the specifications listed below.

**Item Name : Carisma CTX-2810 2.4GHz Transmitter and MRX2800 Receiver**

ETSI EN 300 328 V1.7.1:2006

ETSI EN 301 489-1 V1.8.1:2008

EN 301 489-17 V1.3.2:2008

EN 50371:2002

**Directive 1999/5/EC (R&TTE)**

**Article 3.1a Health**

**Article 3.1b EMC**

**Article 3.2 Radio Spectrum**

**FCC ID YDTMTM28HP**

Statement - This device 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 operation. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### RF Exposure Warning:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

And should be operated with minimum distance of 20 cm between the antenna & your body.

CE 0197



**Item Name : MS-903GT Servo**

EN 55 014-1:2006

EN 55 014-2:1997 + A1:2001

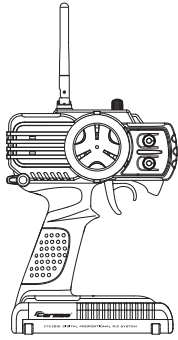
**Item Name : V6 Type R Electronic Speed Controller**

EN 301 489-3 V1.4.1

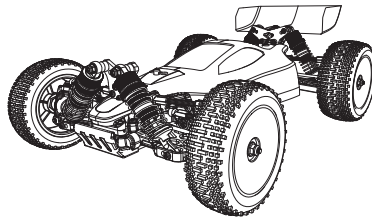
EN 301 489-1 V1.8.1

**Manufactured By : Mun Ah Plastic Electronic Toys Company.,Ltd**

**Parts Included**



CTX-2810 Transmitter



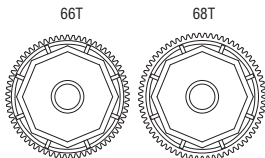
GT14B Main Chassis / Car Body / Assembled



Antenna Pipe



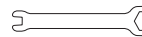
Servo Saver Adaptor



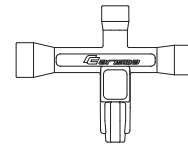
Spur Gear (66T, 68T)



Hex Wrench



Mini Spanner

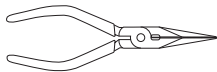


Plastic Wrench

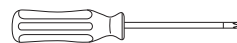
**TOOLS REQUIRED**

**Required Equipment**

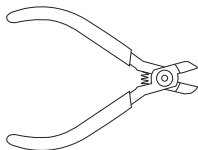
Recommended to use the following tools to operate or maintenance of your RC model :



Long Nose Pliers



Screwdriver (Small)



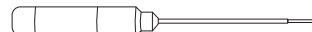
Nippers



Screwdriver (Large)

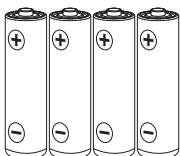


Soft Brush



Hex Driver

**For Transmitter**



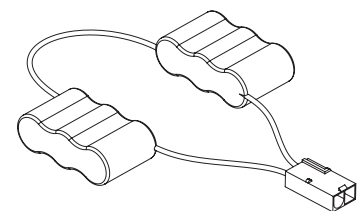
**x 4**

**Heavy Duty  
1.5V "AA" Size Batteries**

**⚠ ATTENTION**

**Damages or Leaking  
Do not use any damaged  
batteries.**

**For the Car**



**7.2V 1200mAh NiMh  
Rechargeable Battery Pack**

**Instructions for Disposal of WEEE by Users in the European Union**

This product must never be thrown away with other waste. Thus the users are liable for disposing the wasted model by submitting them to designated collection stations specific for recycling electronic and electric items. Disposing of the wasted model in this way is helpful to conserve natural resources and enable to keep human health and protect the environment. For more information about wasted model disposal and recycling, please contact your local city office, your disposal service or where you purchased the product.

# ABOUT THE RADIO SYSTEM

## Carisma CTX-2810 2.4GHz FHSS Technology System

The following is an overview of the various functions and adjustments found on CTX-2810 radio system for GT14 series RC models. Since GT14 model operates on the radio signal you control, it is important for you to read and understand about all of these functions and adjustments before driving.

### Power ON / OFF the Transmitter

#### The Transmitter CTX-2810

**Steering Wheel** : Control direction (Left / Right) of the RC model.  
**Throttle Trigger** : Control speed and direction (Forward/Brake/Backward) of the driving model.

**Foldable Antenna** : Transmit signal to the model.  
**Power ON / OFF** : Power ON / OFF the transmitter

**SYNC & Battery Indicator** : Top Green LED light indicates synchronization status and/or adequate battery power supply.

**Power Indicator** : Bottom Red LED light indicates power "ON".

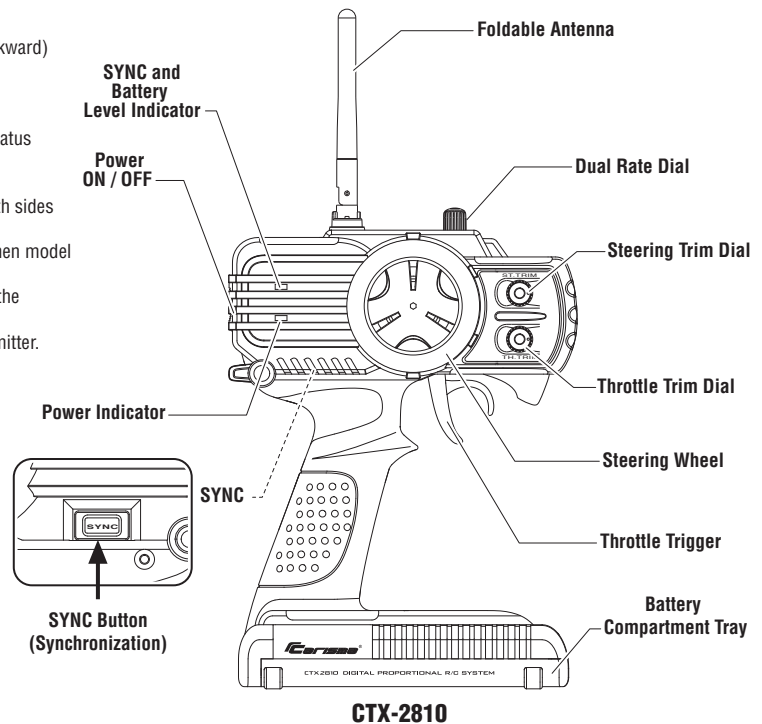
**Dual Rate Dial** : Adjust the same maximum steering angle on both sides when model turns Left / Right

**ST. Trim Dial** : Adjust the neutral position of steering servo when model wheels are straight ahead.

**TH. Trim Dial** : Make sure the model stays still when releasing the throttle trigger.

**Battery Compartment Tray** : Cover and hold the batteries powering the transmitter.

\* In general, user will experience under steer when making a wide turn at high speed or over steer when making sharp turn at high speed (easy to spin out). User should practice the throttle and steering approach for different cornering at different speed or road surface.



### Battery Installation

Supplied with 4 x 1.5V AA Batteries, CTX-2810 can be operated a few hours. Installation: Remove the battery compartment cover as shown below.

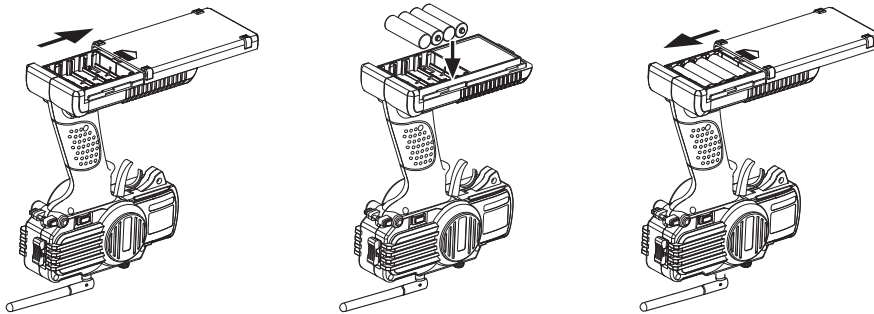
Install the batteries observing the polarity marked on battery compartment.

Then reinstall the battery compartment cover as the Picture shown below.

**Warning** : Never disassemble batteries or put the batteries in fire, chemical agents, otherwise they may cause personal injuries or property damages.

**Battery Disposal** : Observe corresponding regulations about wasted battery treatment regulations.

1. After running out of power, dispose of wasted batteries in designated areas far away from water supply, household areas and planted areas.
2. Submit the wasted batteries to specific recycling stations.

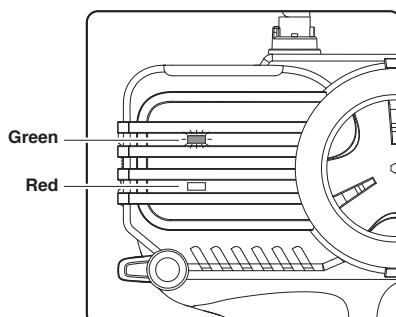


### Battery LED Indicator

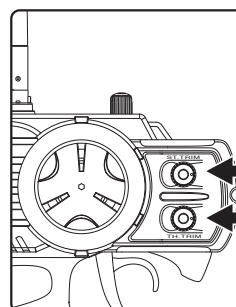
The Green LED indicator located on the front left side of the transmitter indicates the power supply of batteries. The green LED will go solid on indicating that the batteries have sufficient power. When batteries voltage drops below 3.6 volts, the Green LED will flash, indicating the batteries power is low and should be replaced.

**Solid Green** : Sufficient Power supply

**Flashing** : Time to replace batteries



### Pre-Run Check



1. Steering : Adjust the steering trim to keep the front wheels in straight line when steering wheel remains in NEUTRAL position.
2. Throttle : Adjust the throttle trim to ensure the rear wheels stop rotating when throttle trigger remains in NEUTRAL position.

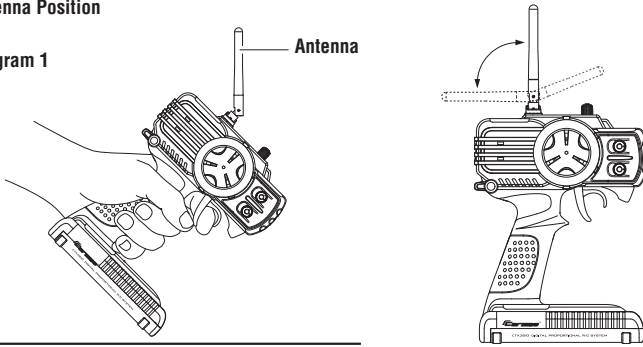
\* Always turn on the transmitter first by sliding the switch on the left side from bottom to top. The small red and green lights above the switch should both light up. If not, you need to check for low or incorrectly installed batteries.

## About Transmitter Antenna

In favor of the user to operate as they wish during running, the antenna of CTX-2810 transmitter can be rotated to every direction within the adjustment range. While the foldable feature is helpful for packing and storage.

### Antenna Position

Diagram 1



Adjust the antenna vertically to the ground.

- Always keep the antenna of transmitter vertical to the ground when synchronization. See Diagram 1 on the left.
- Hold the grip handle, otherwise the antenna may be damaged.
- Never carry the transmitter by holding antenna alone to avoid damage.
- Handle with care when operation.

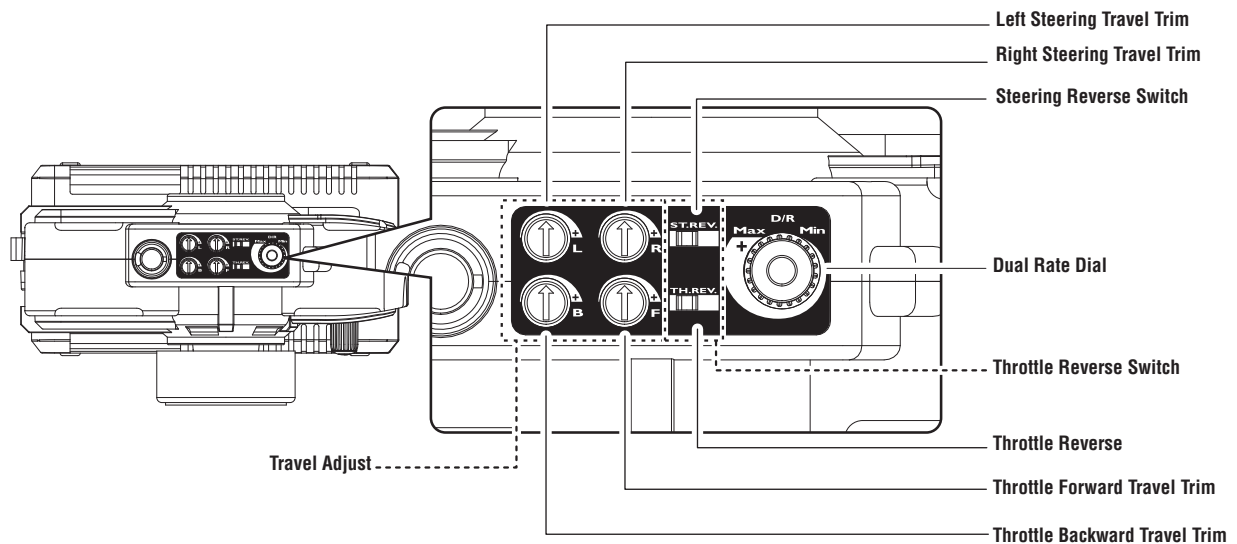


### WARNING

**WARNING :**

**ADJUST THE ANTENNA WITHIN THE RANGE DURING OPERATION.**

## Top Control Panel



### Travel Adjust

Travel Adjust is used to limit the operation amount of steering servo and throttle trigger. Left / Right Steering Travel Trim : Adjust the steering angle when model turning left or turning right individually.

Forward / Brake & Backward : Throttle high side/brake side operation amount.

Use your finger or small screwdriver by rotating the corresponding dials to achieve your desired travel amount. Turning clockwise increases the travel amount while turning counterclockwise reduces the travel amount.

**Warning : Do not over rotate the Travel adjust Trim.**

### Reversing

Reversing is used to change the response direction of steering wheel and throttle trigger. CTX-2810 Transmitter features 2 reversing functions: Steering Reverse and Throttle Reverse.

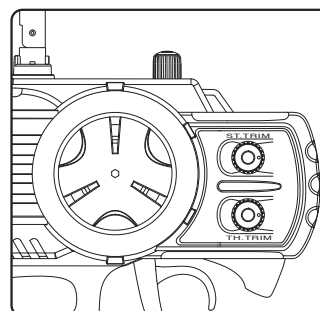
**Steering Reverse:** Reverse the response direction when operating steering wheel. Turning left steering wheel, the model turns right while turning right the model turns left.

**Throttle Reverse:** Reverse the response direction when operating throttle trigger. Pushing forward throttle trigger the model moves backward while pulling back, the model moves forward. If necessary you can just use a small screwdriver to adjust the corresponding switches.

### Dual Rate Dial

Dual Rate Dial enables to adjust the same maximum steering angle of servo on both sides (Left and Right) when model makes steering. The Dual Rate Dial affects the sensitivity of servo. Reducing dual rate value can **lower** the sensitivity of servo and reduce the same maximum steering angle on both sides. Remember to adjust the dual rate value within the adjustment range.

### Trimming



**CTX-2810 features two trimming functions: Steering Trim and Throttle Trim.**

**Steering Trim Dial :**

Adjust the neutral position of steering servo when the wheels are straight ahead.

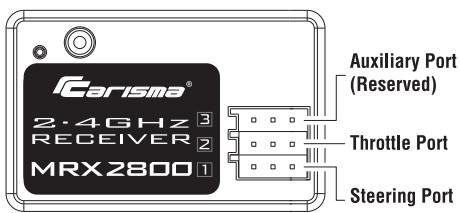
Normally steering trim is adjusted until the model can keep straight tracks.

**Throttle Trim Dial :**

Adjust neutral position of throttle servo. Make sure the model stays still when releasing the throttle trigger.

# RECEIVER CONNECTION AND INSTALLATION

## Carisma 2.4GHz Receiver MRX2800



### Auxiliary Port (Reserved)

**Steering Port** : Where to plug in the servos.

**Throttle Port** : Where to plug in the Electronic Speed Controller (ESC).

**Setup button** : Synchronize transmitter and receiver. Select frame rate.

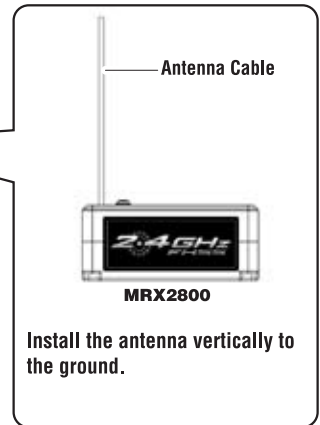
### Tips :

- Wrap the receiver with something soft, such as foam rubber, to avoid vibration. If there is a chance of getting wet, put the receiver in a waterproof bag or balloon.



### Warning :

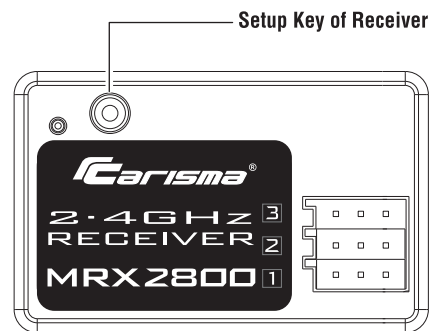
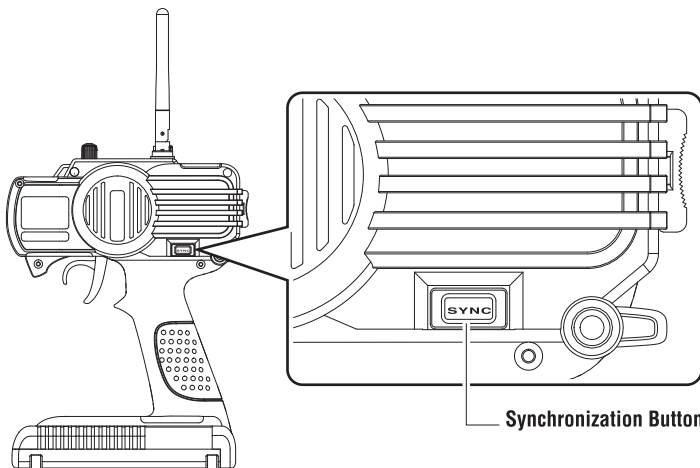
- Never bend the metal pins on the PCB of receiver.
- Never cut the antenna cable.
- Install the antenna vertically as shown in the figure.
- Keep the antenna as far away from the motor, ESC and other noise sources as you possibly can.



### Remarks :

The mounting positions of receiver and antenna cable greatly affect the operating range.

## Synchronization & Frame Rate Adjust



1. Prior to any operation make sure the transmitter and receiver are both turned off.
2. Press and hold the setup button on the receiver while power on the receiver.
3. Release the setup button till green LED flashes.
4. Press the setup button to select the frame rate with green LED flashing.  
Faster Flashing = High frame rate (7ms) for digital servo  
Slower Flashing = Low frame rate (15ms) for analogue servo
5. Power on the transmitter. With the transmitter steering wheel and throttle trigger in neutral position (full stop and straight steering), press the SYNC button of the transmitter.
6. When synchronization is done, the green LED on both receiver and transmitter will turn solid on.

### Remarks :

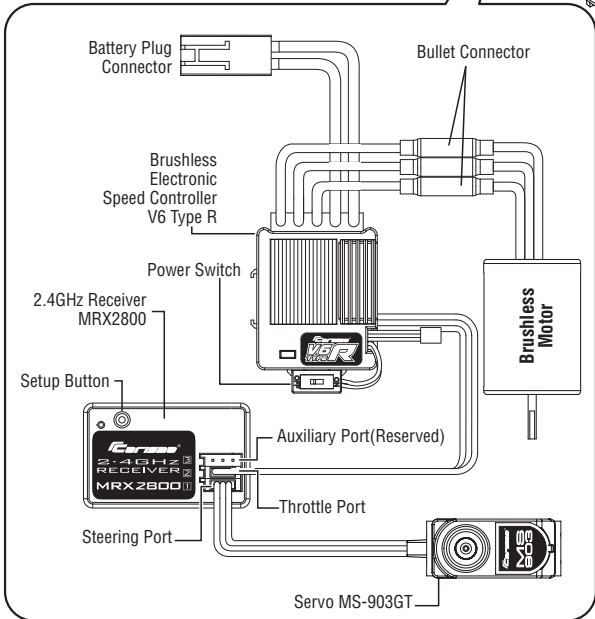
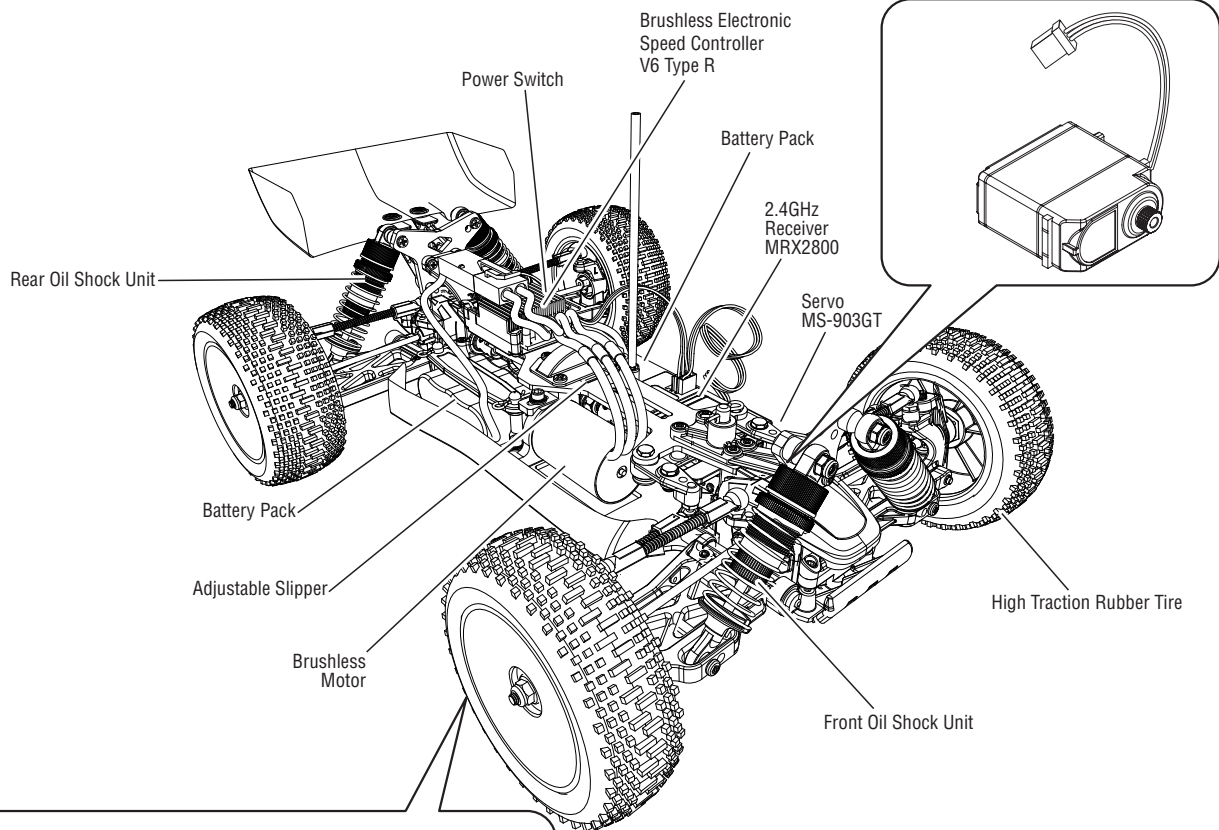
After the synchronization is done, turn off the transmitter and check the neutral position of receiver and fail safe mode. If the neutral position is not correct, repeat the above procedure again.

Fail Safe mode will be activated if the transmitter lost connection with receiver and the receiver will automatically set the vehicle in rest position to avoid possible damage. Read Fail Safe Section for details.

## Fail Safe

When the connection of the transmitter and receiver is lost during running, the receiver will stop outputting signal to the servo, and the servo will stop at current position. At the same time the ESC will stop the motor. When the connection between the transmitter and receiver is detected, normal control is resumed.

# ABOUT THE GT14B CHASSIS



## Brushless ESC V6 Type R Features

### ESC Features:

- Auto Detect Brushed or Brushless Motor (Details see Select Motor Type)
- One Touch End Points calibration
- Battery Selection:
  - LiPo (ESC auto detect 2S or 3S)
  - NiHM [ 6 cell (7.2V) or 7 cell (8.4V)]
- 2 ESC profile:
  - Forward / Reverse with Smart Brake II
  - Forward Only
- Battery Over Voltage Protection (Max Input voltage = 13V)
- Thermal Protection
- Motor Stall Detection

### Select Motor Type:

When power on the ESC, it will check the connection between Red and White wire, if it is shorted, then it will consider it is a brushed motor.

- Brushed Motor:
  - Motor (+) connected to Red and White Wire of ESC
  - Motor (-) connected to Black Wire of ESC
- Brushless Motor:
  - Connect the 3 motor wires to Red, White and Black wire of ESC as usual.

### LED Indicator:

- After Power On:
  - Just after power on the ESC, the LED will display the currently selected Battery Type for 2 sec:
    - RED, GREEN LED are used to display Currently Selected Battery Type:
      - RED LED Flashing = LiPo is selected
      - GREEN LED Flashing = NiHM is selected
- Battery Type Programming:
  - During the battery type displaying 2 second as mentioned above, user can press the key to select other battery type.
  - Cut-off voltage will be automatically adjusted according to the battery type selected:
    - For LiPo Battery: ESC will auto detect whether it is 2S or 3S
    - For NiHM: ESC will cut-off at 4.3V
- LED Display during "Normal Operation"

Condition	LED
Stop	GREEN
Partial Forward	OFF
Max Forward	RED
Partial Reverse	OFF
Max Reverse	RED
Brake	RED + GREEN

### LED Display For "Error"

- Battery Voltage too high (over 13V)
  - RED LED solid on and GREEN LED flashing slowly (Can only happen during Power ON).
- Overheat
  - Alternatively Flashing Red and Green
- Motor Failure, eg. Motor wire broken, Bad motor, or Motor Jammed
  - RED LED flashing quickly 3 times, turn off and then repeat
- Battery Low
  - GREEN LED solid on and RED LED flashing slowly

### Recommended Gear Ratio with 4500KV Carisma Brushless Motor

Spur Gear	Pinion Gear	9T	10T	11T	12T	14T	16T
66T		✓	✓	✓	✓	Marginal	
68T		✓	✓	✓	✓	✓	
70T		✓	✓	✓	✓	✓	Marginal

### Recommended Gear Ratio with 6800KV Carisma Brushless Motor

Spur Gear	Pinion Gear	9T	10T	11T	12T	14T	16T
66T		✓	Marginal				
68T		✓	✓				
70T		✓	✓	Marginal			

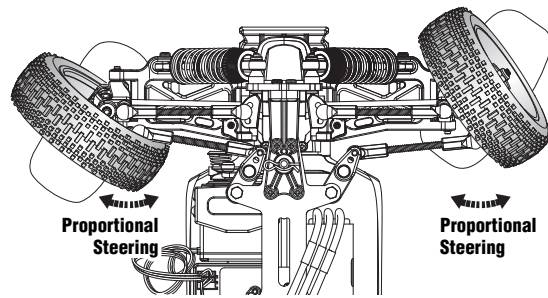
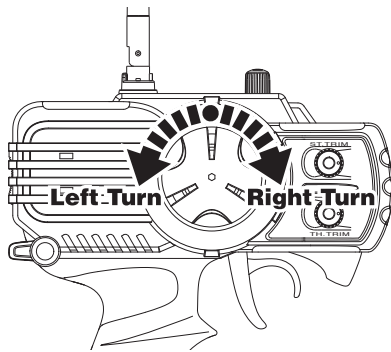
Failure to observe this may result in over loading the ESC and caused failure and will void the Warranty

### One Touch End-Points Calibration Programming:

- Step 1 - Turn on the Transmitter, Throttle at Stop position.
- Step 2 - Hold the ESC setup key and then power on the ESC.
- Step 3 - RED and GREEN LED will turn on, then release the key.
- Step 4 - GREEN LED flashing, then hold Throttle at Full Throttle position until GREEN LED become Solid ON.
- Step 5 - Then RED LED will flashing.
- Step 6 - Next hold Throttle at Max Reverse position until RED LED become Solid ON.
- Step 7 - Release Throttle to Stop position, programming done.

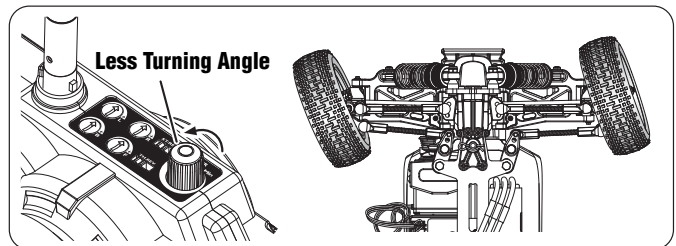
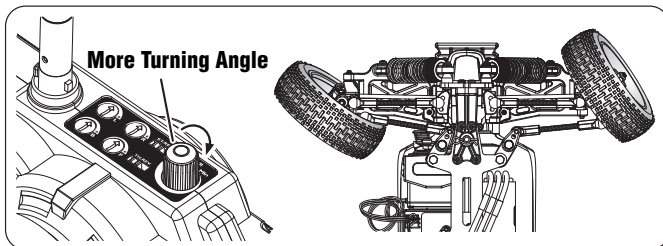
# STEERING AND RATE ADJUSTMENT

## Control of the R/C Model

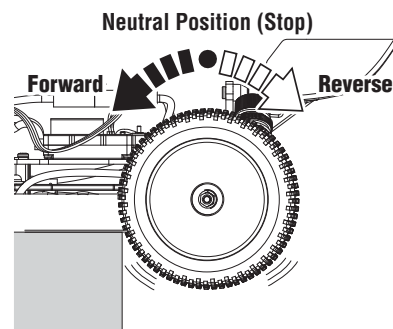
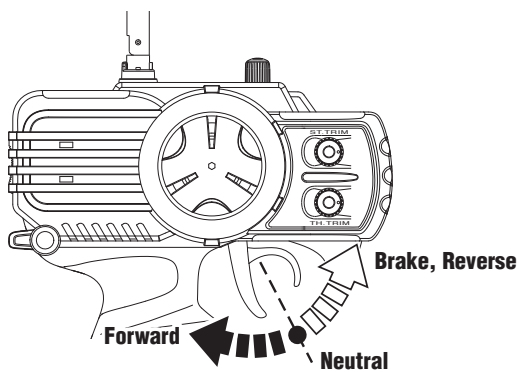


## Steering Rate

Your transmitter is equipped with a steering rate control on the top of the transmitter just above the steering wheel. This advanced feature, usually found only on competition-type transmitter, allows you to adjust the amount the front tires move when you turn the steering wheel. This is really helpful when you are on slick, as well as high traction, surfaces. If your GT14B turns too sharply and / or spins out easily, try turning the steering rate down by rotating the knob counterclockwise ( to the left ). For sharper or additional steering, turn the knob clockwise ( to the right ).



## Throttle Trigger



To reverse, push the throttle trigger to the braking position. After the car has come to a stop, release the throttle trigger and pull the trigger again to go reverse.

Once power on the GT14B Model Car, turn on the transmitter by sliding the switch to "On" position. If the rear wheels turn, adjust the "TH Trim" knob located on the lower right of the steering wheel until they stop. To go forward, pull the trigger back. If you need reverse, wait for the model to stop then push the trigger forward. When going forward, the model should move in a straight line. If not, adjust the "ST Trim" so that it tracks in a straight line without having to move the steering wheel.

After you have finished, turn the GT14B Model Car off first by sliding the switch on the ESC to the " OFF" position. After the model has been turned off, turn off the transmitter.

If you wish to clean your GT14B Model Car, use compressed air and / or a soft paint brush to remove the dust and dirt. Never use chemicals or anything wet as it can cause damage to both the electronics and plastic parts.

### Always

- Take caution when running your vehicle near people
- Turn both the GT14B Model Car and the Transmitter "OFF" when done
- Check the battery condition of the transmitter before running

### Never

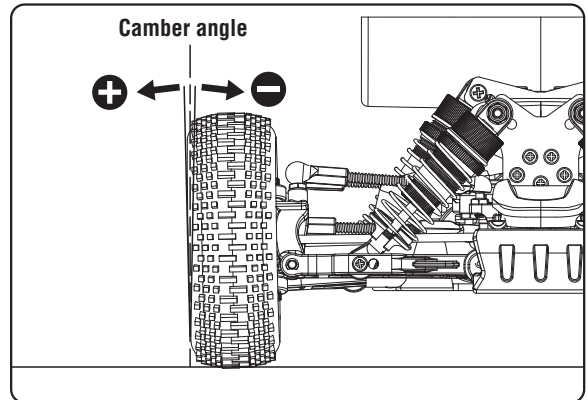
- Operate the GT14B Model Car with low battery power
- Run the GT14B Model Car through water
- Use chemicals to clean the chassis



GT14B Model Car has several adjustments available to match your driving need. Although there are multiple shock positions and camber link locations provided, we have built this model with the best overall settings. The following are simple adjustments and easily maintained settings for proper operation and performance. It is advised when making any adjustment you do so in small increments and always check for other parts of the chassis that are affected.

## Camber

Camber refers to the angle to which the wheel's flat face relative to the ground surface. Negative Camber means the wheel is leaning towards the chassis. Positive Camber means the wheel is leaning away from the chassis. The use of Camber angle can change the handling aspect of the car. Maximise the tyre contact patch to the surface during cornering. By fine tuning the front and rear camber angle, driver can tune the car's handling characteristic to the track for maximum performance. Camber can be adjusted by lengthening or shortening of the threaded turnbuckles or threaded rods.



## Toe - in / Out

Toe - In (Negative Toe) and Toe - Out (Positive Toe) refers to the angle if the wheels as viewed from the top of the Chassis.

Toe - In meaning the Wheels are pointing inwards. Toe - Out meaning the wheels are pointing outwards.

The use of Toe - angle is to change the turning characteristics during initial turn in, during the turn and exit the turn.

### Front Wheels :

Toe - Out will help the car to response faster at turn in. However, during the turn and exit the turn, the front end of the car will be less responsive.

Toe - In will help the car to react slower at turn in but during the turn and exit the turn will react faster.

Can adjust the Toe angle by lengthening the steering links (Toe - In) or Shortening the steering links (Toe - Out)

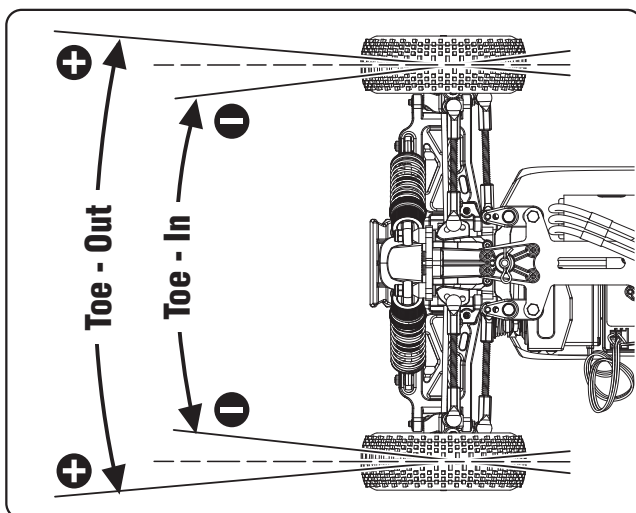
### Rear Wheels:

Toe - Out : NEVER have Toe - Out at the rear wheels. Will becoming undrivable.

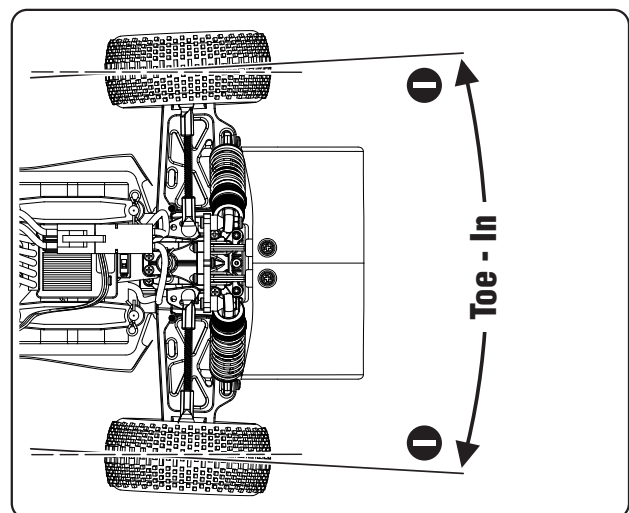
Toe - In : will help to stabilized the rear wheels and make the rear end of the car more stable.

Changing the Rear Toe - angle is by changing the car suspension hinge pin brace.

### FRONT Wheels

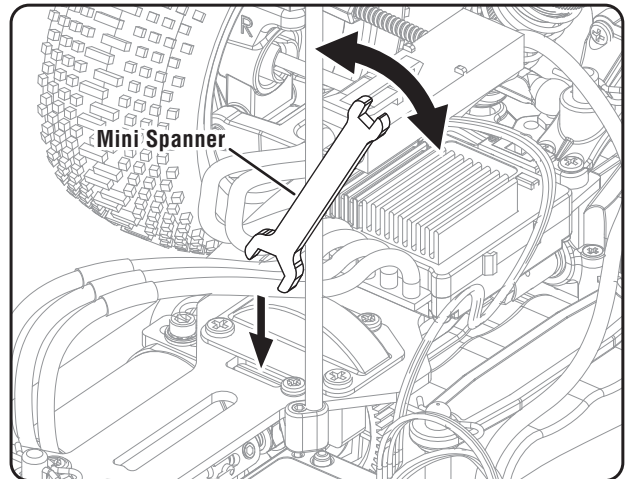


### REAR Wheels



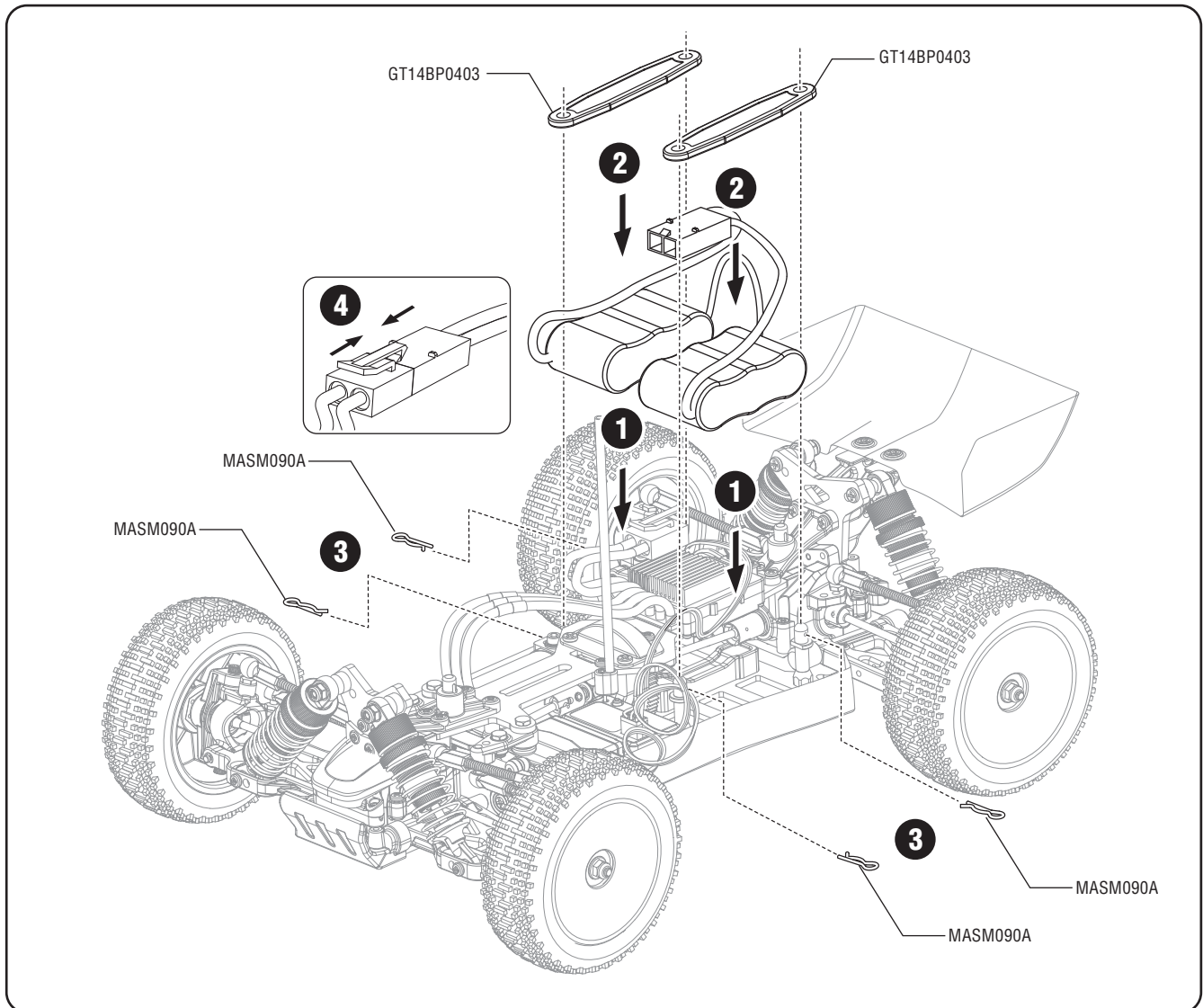
## Slipper Adjustment

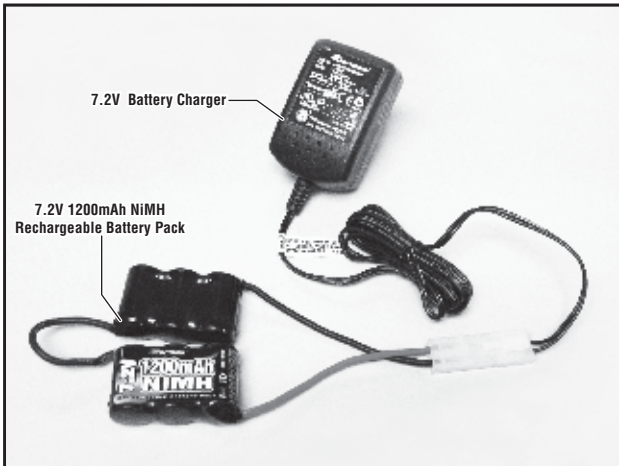
GT14B Model Car is equipped with an adjustable slipper device that offers both traction control and protection for the gear differentials. The slipper is primarily used to absorb sudden impacts to the drivetrain when using more powerful motors and/or battery packs. In addition it can be used to limit the amount of wheel spin when running on an extremely slick surfaces. Adjustment is made by turning the nut clockwise (to the right) to reduce the slip, or counterclockwise (to the left) to increase the slip. To check your setting, place the GT14B Model Car on the ground. As you push the car backwards allowing it to roll freely, punch the throttle. The slipper should slip no more than an inch or two as it accelerates. With the included motor and battery it should slip just a little.



## Battery Placement

GT14B utilizes a saddle pack battery placement location. This offer ultimate weight distribution and improve balance



**Battery Pack & Charger Manual****Warning**

To reduce the risk of fire, electric shock or injury, carefully follow these instructions.

This manual contains important safety and operating instructions for your charger. Before using the battery charger, read all the following in this instructions manual on the battery chargers and the rechargeable batteries to be charged, and on the products that use the rechargeable batteries.

Plug supplied charger into mains outlet socket. Connect the 7.2V rechargeable battery pack to the charger. The charger's connector fits only one way. Don't force it! If the connectors do not fit together easily, be sure that you have positioned them properly. Average recharging time is approximately 2 to 3 hours maximum. When recharging is over, remove the charger from the household outlet. After recharging is completed, disconnect the battery pack from the battery charger.

The 7.2V battery pack is not supplied pre-charged and you must charge it before connecting the R/C car. The 7.2V battery pack and charger will get hot while charging. This is normal. Do not charge on, or near to, a material / surface that is flammable or can be damaged by heat. When the 7.2V battery pack out of power ( dead battery ), it should be replaced. Do not dispose in the household garbage but to the collection stations or at a special garbage depot.

**Operation**

- Completely discharge a Nickel - Metal Hydride (NiMH) battery pack before you charge it. Frequent charging a Nickel - Metal Hydride battery pack that is not fully discharged can shorten its battery life.
- The battery pack cannot be fully charged when it is in a low temperature environment.
- To charge a very hot after use battery pack can permanently lose its ability to charge.
- Unplug the charger from the mains outlet before attempting any maintenance or cleaning.

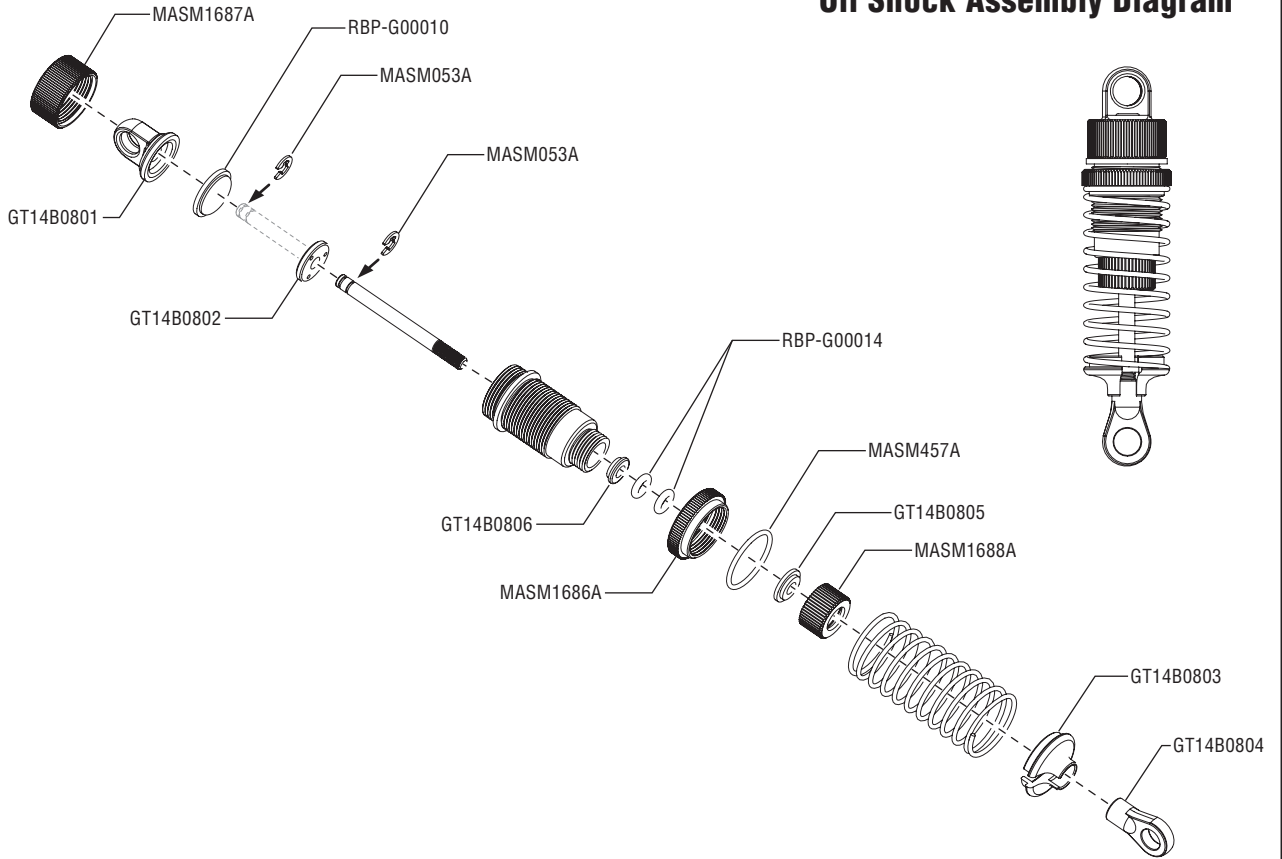
**Caution**

- The battery charger is not a toy.
- Charge only Ni-MH type rechargeable batteries. Other types of batteries may explode and cause serious personal injury or damages.
- Never let the charger or battery pack get wet or damp.
- Overcharging can damage the battery pack. Follow the indicated recharging time.
- Check the batteries regularly for leakage.
- Non-rechargeable batteries are not to be recharged.
- Do not disassemble the charger. Take it to a qualified service technician when service or repair is required. Improper reassembly may result in a risk of fire, electric shock, or injury to persons.
- Do not recharge the battery pack while it is still hot after use. Wait until it has cooled down before recharge.
- Use only the recommended batteries or batteries of equal quality.
- Do not short circuit - all cables should be insulated. If necessary, use vinyl tape for insulation (not included).
- Do not leave battery pack charger unattended when charging.
- The supply terminals are not to be short-circuited.
- Packing has to be kept since it contains important information.
- Do not expose the charger to rain or excessive moisture.
- Do not operate the charger if it has received a sharp blow, or been dropped or damaged in any way. Take it to a qualified service technician to repair.
- To reduce the risk of damage to the AC plug and cord, disconnect the charger by pulling plug rather than the cord.
- Do not use an extension cord. It could result in fire or electric shock.
- Do not operate the charge if the cord or plug is damaged. Repair the charger. Never alter the provided AC cord or plug. If it does not fit in the AC outlet, have a qualified service technician install the appropriate connector plug. Improper connection can result in an electrical shock. Never use the charger as a DC power source for any other electrical equipments.
- Rechargeable battery pack can explode if under incorrectly or non stop charging.
- Always observe the polarity to correctly connect :  
Positive (+) to Positive (+) Negative (-) to Negative (-).

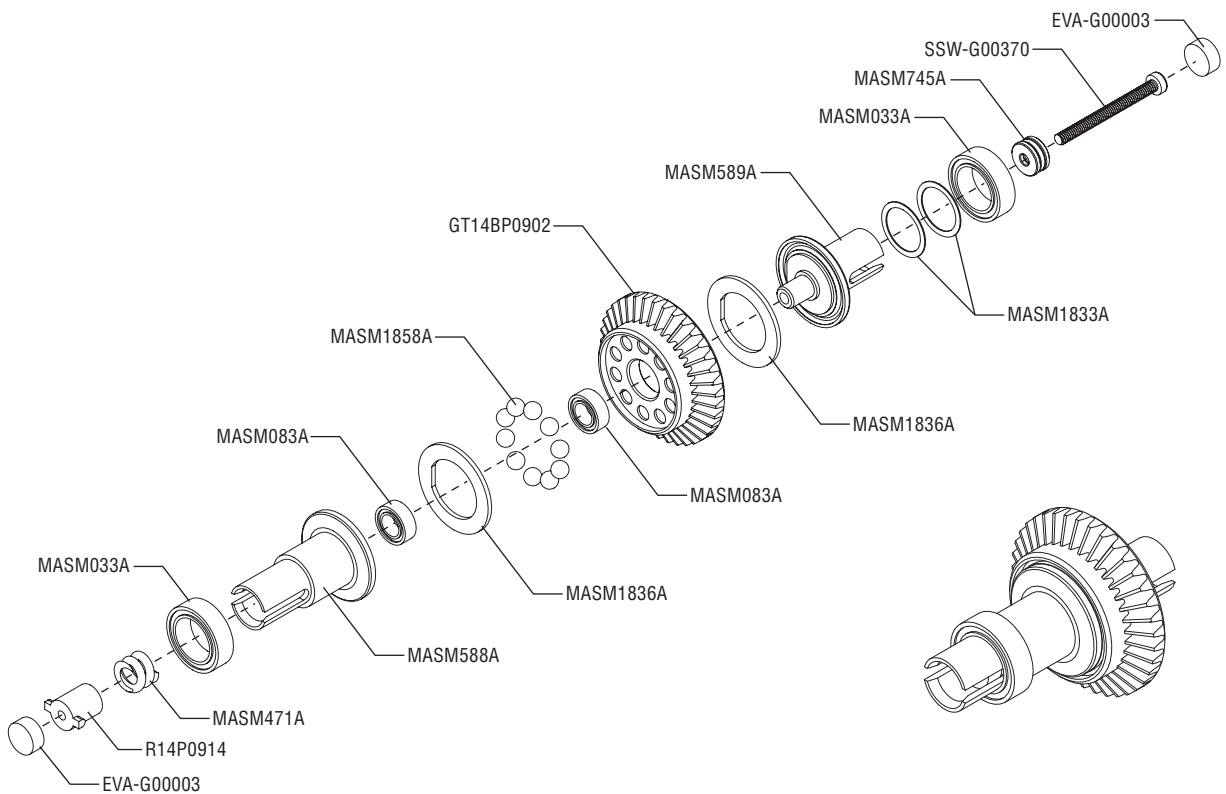
## Trouble Shooting Guide / Q&A

Problems	Possible Reasons	Solutions
Short run time / Running slow	<ul style="list-style-type: none"> <li>• Battery not fully charged</li> <li>• Battery power has run down</li> <li>• Motor gets dirty or worn out</li> <li>• Wheel nuts are over tightened</li> <li>• Dust or other objects are inside the gears</li> <li>• Bind drivetrain</li> </ul>	<ul style="list-style-type: none"> <li>• Fully recharge batteries</li> <li>• Replace new batteries</li> <li>• Clean / Replace the damaged part of motor</li> <li>• Slightly loosen the wheel nuts</li> <li>• Clean the gears</li> <li>• Full check all drive trainparts</li> </ul>
Don't Run straight	<ul style="list-style-type: none"> <li>• Steering trim is not adjusted correctly</li> </ul>	<ul style="list-style-type: none"> <li>• Adjust the steering trim on the transmitter.</li> </ul>
Model doesn't stop when throttle trigger stay at " Neutral " position	<ul style="list-style-type: none"> <li>• Throttle trim is not adjusted correctly</li> </ul>	<ul style="list-style-type: none"> <li>• Adjust the throttle trim on the transmitter</li> </ul>
Model doesn't operate	<ul style="list-style-type: none"> <li>• Transmitter batteries have run down</li> <li>• Transmitter not switched on</li> <li>• ESC / Receiver not switched on</li> <li>• Battery power has run down</li> <li>• Poor synchronization of transmitter and receiver</li> </ul>	Replace new AA alkaline batteries Turn on the transmitter Switch on the ESC / Receiver Replace new batteries Resynchronize transmitter and receiver
Reversed transmitter steering direction	Improper setting of throttle reverse switch	Check steering reverse switch on top panel and set to the opposite side.
Reversed transmitter throttle direction	Improper setting of steering reverse switch	Check throttle reverse switch on top panel and set to the opposite side.
Poor operating range	<ul style="list-style-type: none"> <li>• Transmitter battery low</li> <li>• Transmitter antenna not pointing upward</li> <li>• Battery power has run down</li> <li>• Receiver antenna Cut / Worn</li> </ul>	<ul style="list-style-type: none"> <li>• Check / Replace new AA batteries</li> <li>• Let antenna pointing upward</li> <li>• Charge up the battery and retry</li> <li>• Check if properly attaching or repair if necessary</li> </ul>
Lose Control	<ul style="list-style-type: none"> <li>• Batteries have run down</li> <li>• Receiver antenna Cut / Worn</li> </ul>	<ul style="list-style-type: none"> <li>• Check / Replace new batteries</li> <li>• Check Receiver Antenna</li> </ul>
Steering doesn't work	<ul style="list-style-type: none"> <li>• Servo gears damaged</li> <li>• Servo Saver Broken</li> </ul>	<ul style="list-style-type: none"> <li>• Replace a new servo</li> <li>• Replace new servo saver</li> </ul>
<b>Q:</b> Why does the analog servo fail to work properly with the CTX-2810		<b>A:</b> High frame rate setting results in the abnormal performance of analog servo. For analog servo, please choose low frame rate (15ms). ( See P.6 for How to Select Frame Rate )
<b>Q:</b> What is the difference between high frame rate and low frame rate while using digital servo?		<b>A:</b> High frame rate setting enables shorter response time. It is suggested to use high frame rate for digital servo.

**Oil Shock Assembly Diagram**

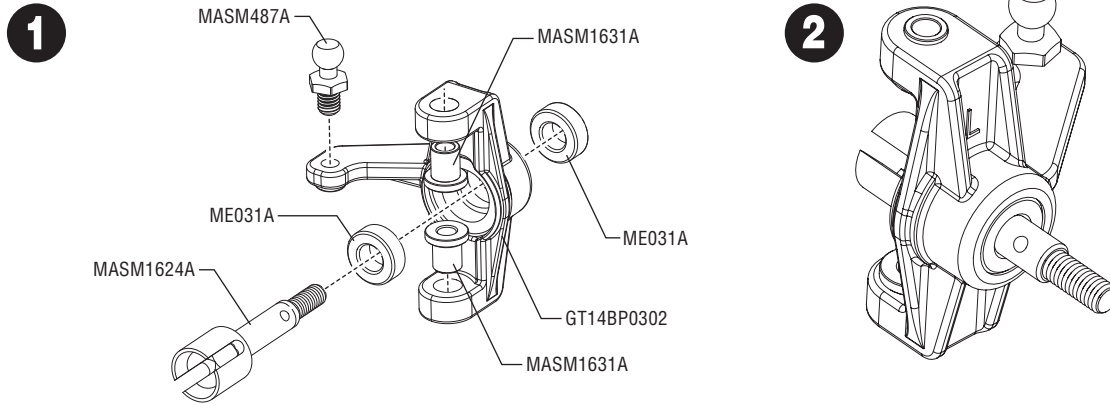


**Ball Differential Assembly Diagram**

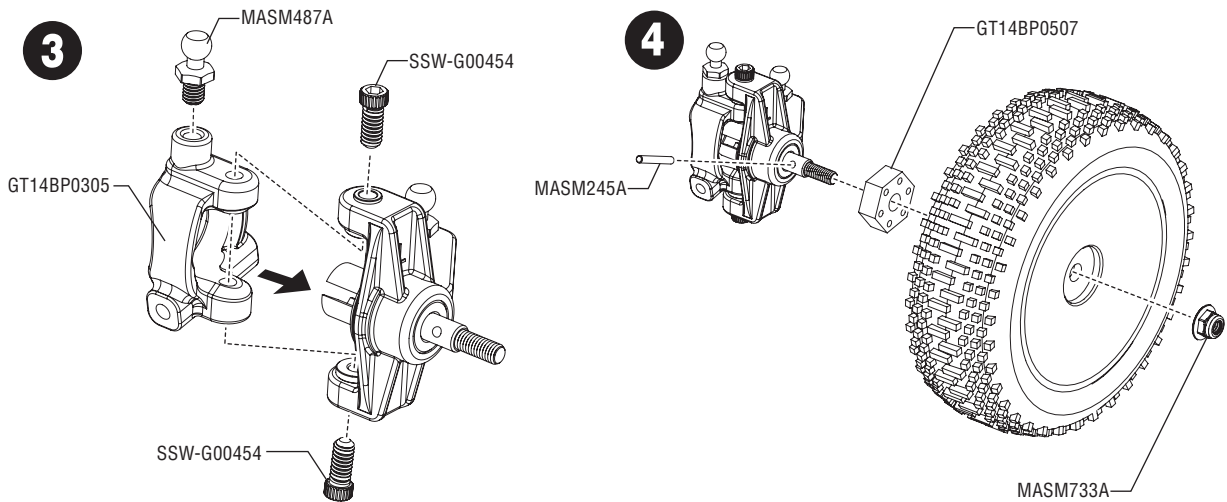


# STEERING HUB / REAR HUB ASSEMBLY DIAGRAM

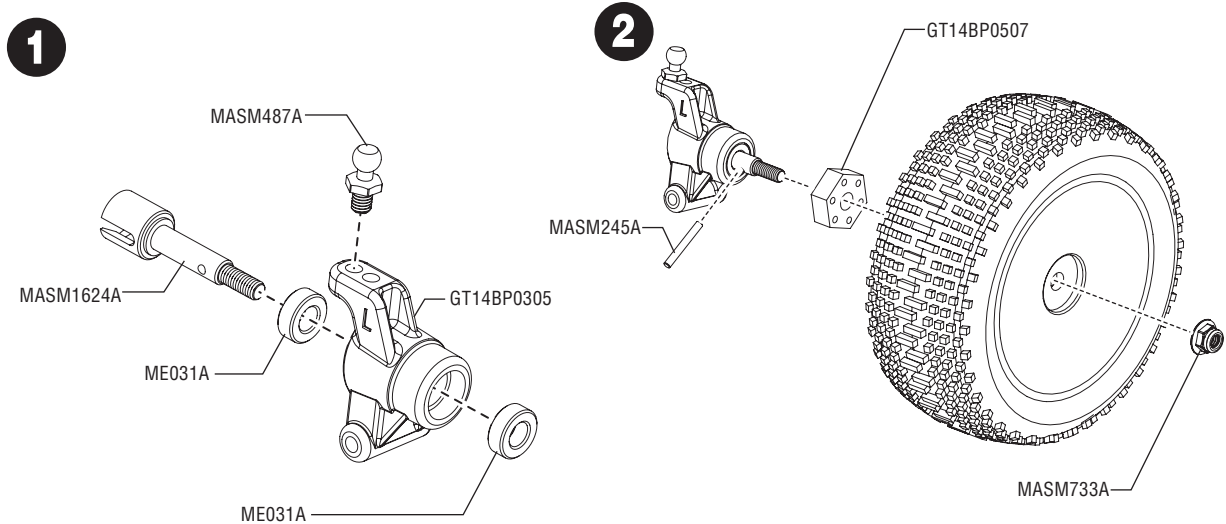
## Steering Hub Assembly Diagram



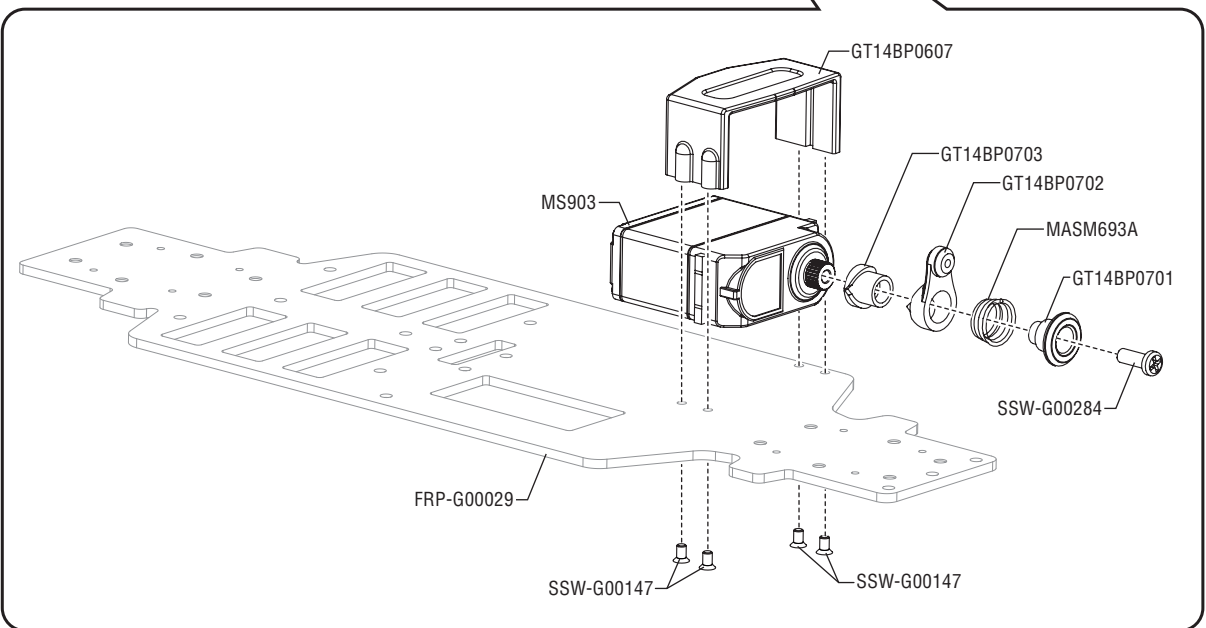
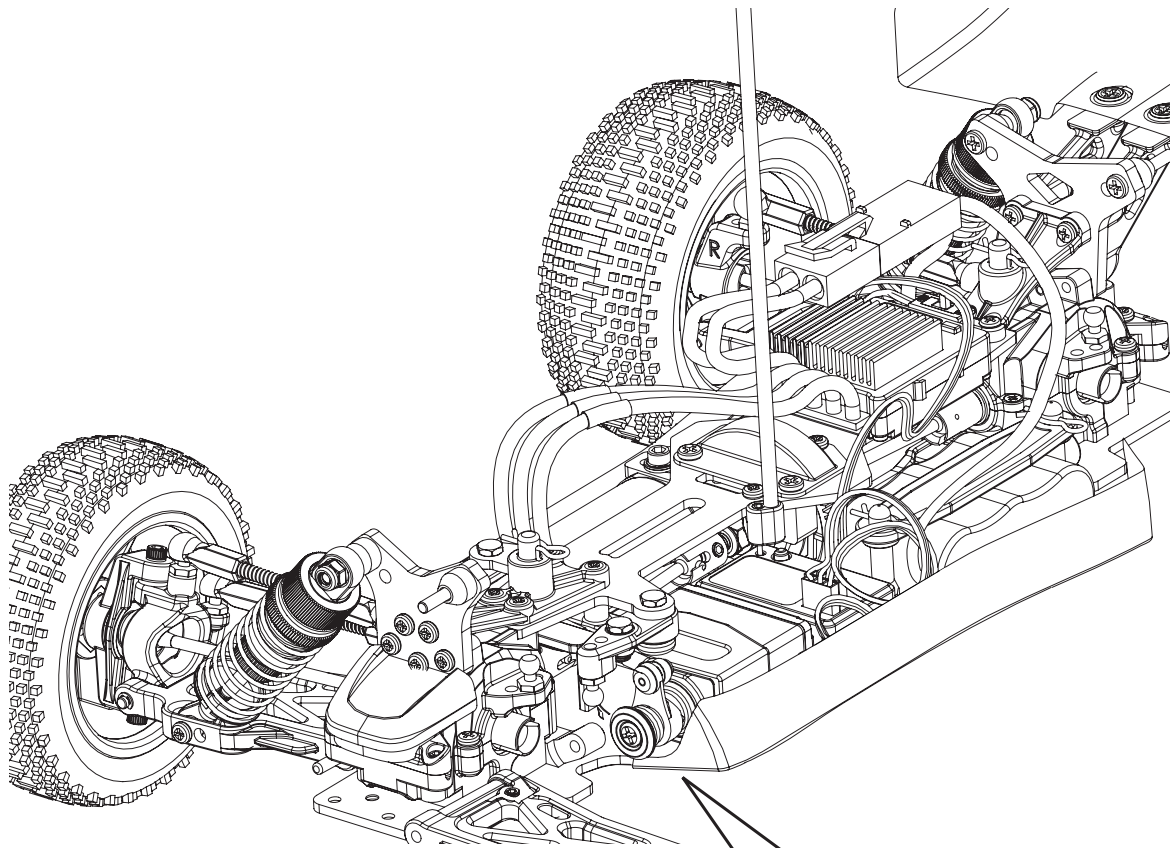
## Steering Hub / C-Hub Assembly Diagram



## Rear Hub Assembly Diagram

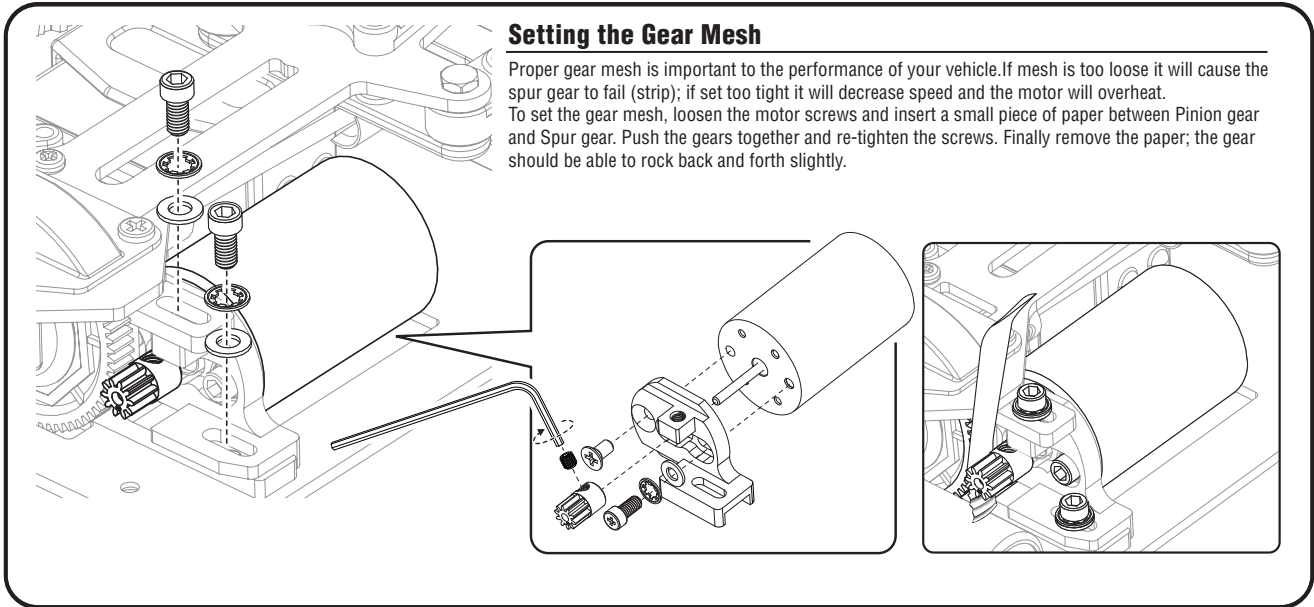


# STEERING UNIT / SERVO UNIT ASSEMBLY DIAGRAM

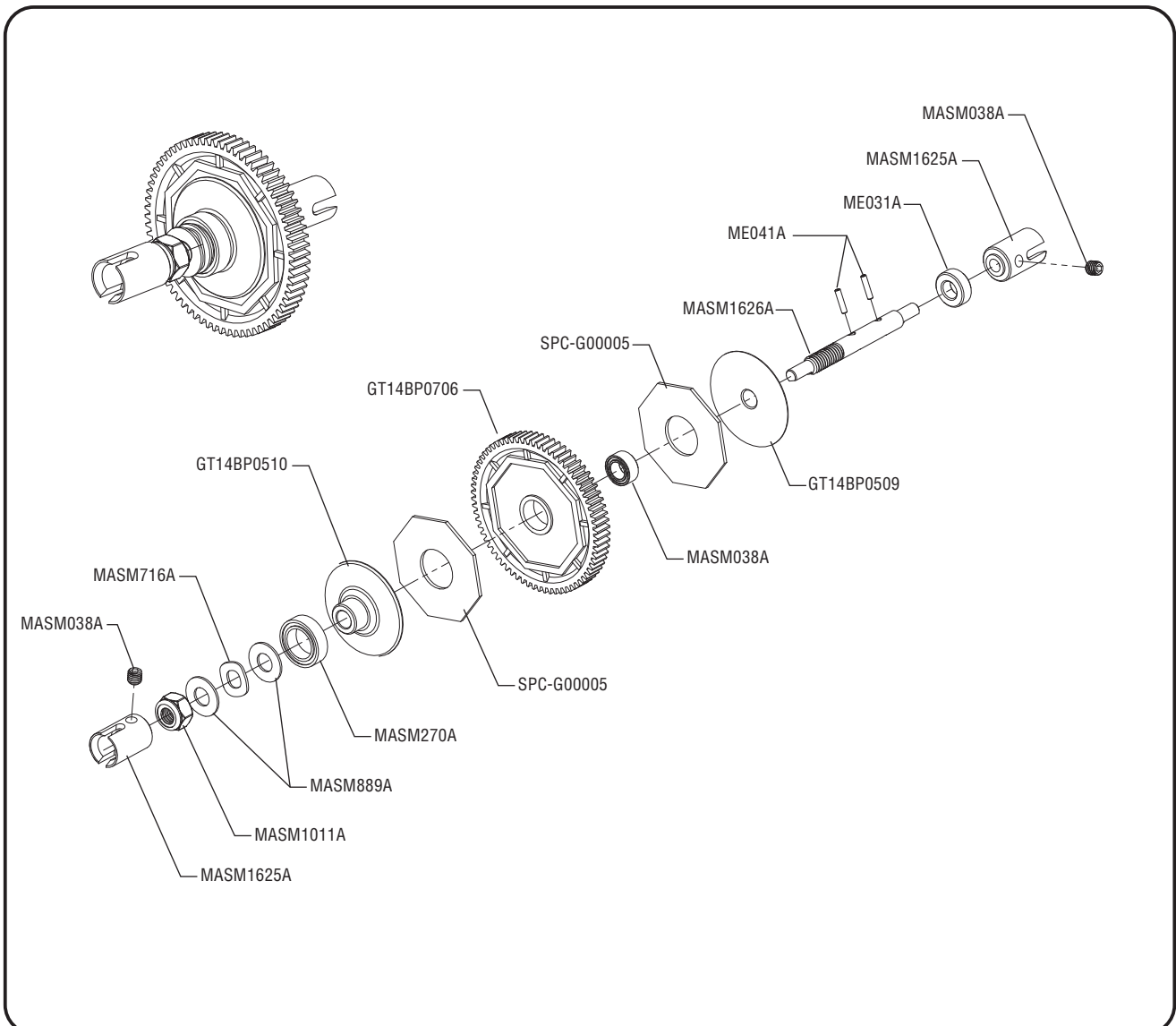


# MOTOR ASSEMBLY DIAGRAM

## Motor Mounting / Pinion and Spur Gear Mesh

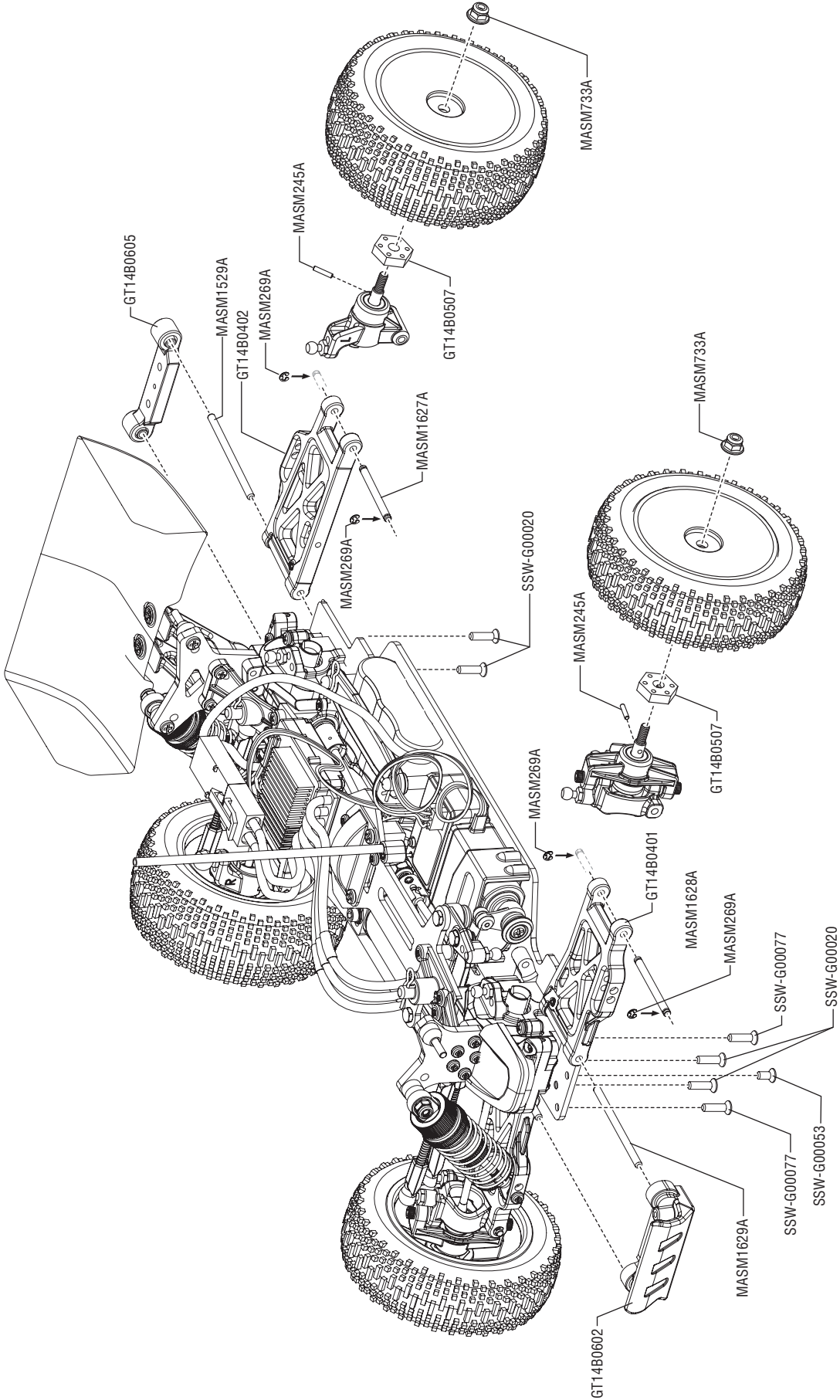


## MAIN DRIVE SHAFT / SLIPPER UNIT ASSEMBLY DIAGRAM

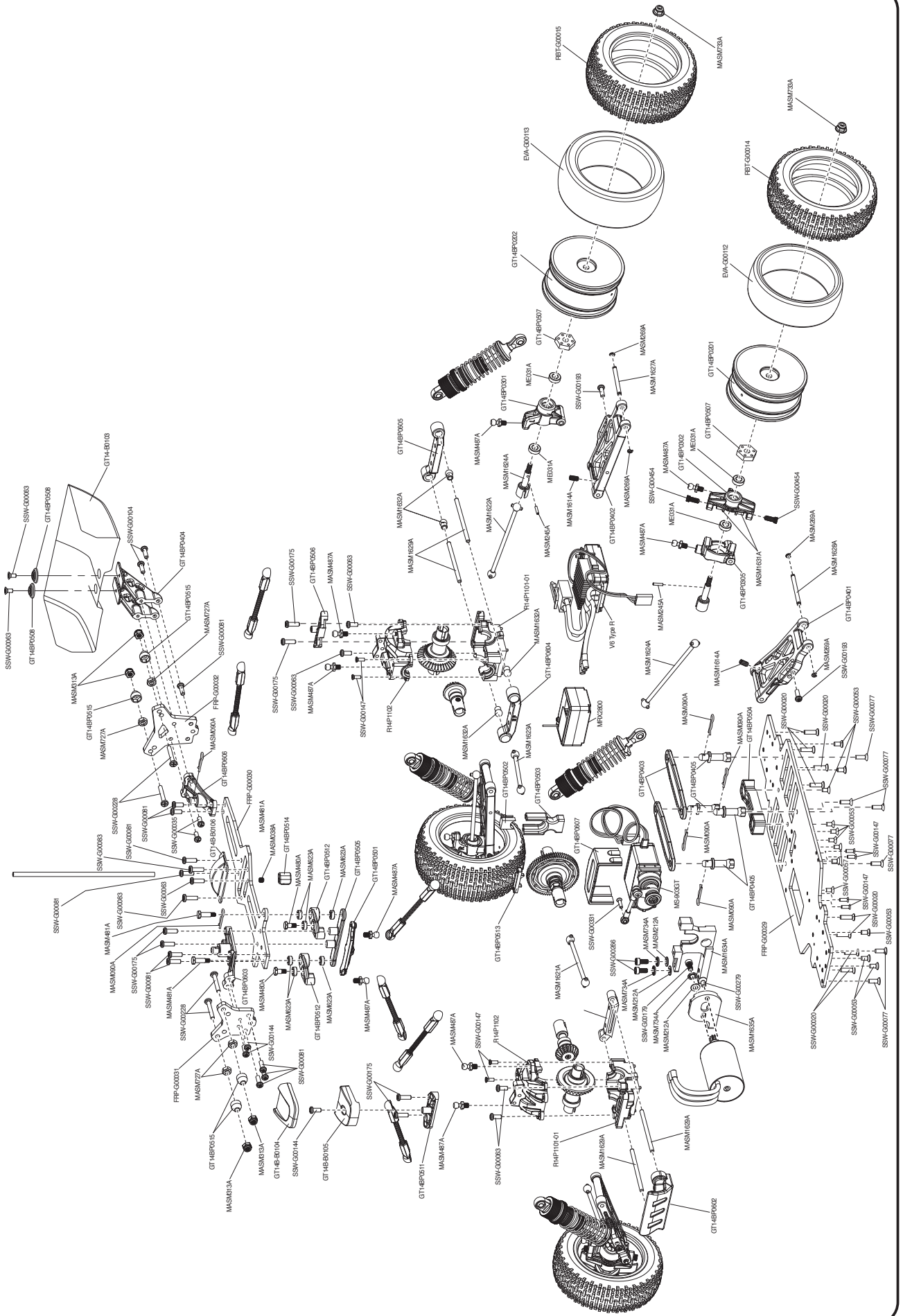




# HINGE MOUNT ASSEMBLY DIAGRAM



# GT14B EXPLODED DIAGRAM



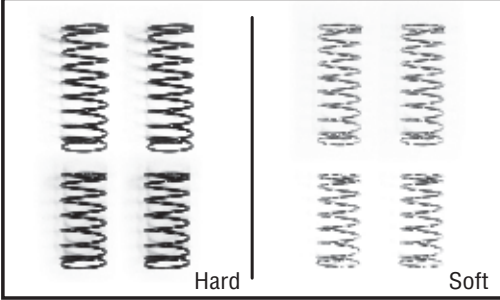

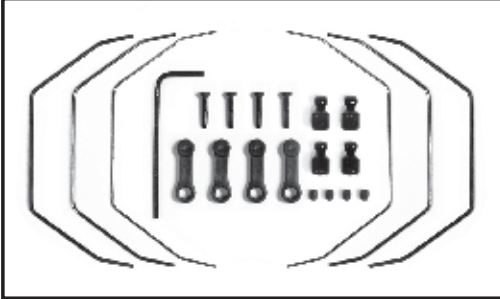

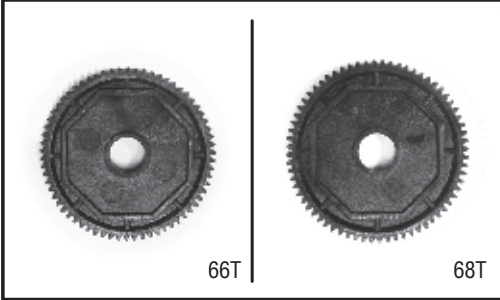


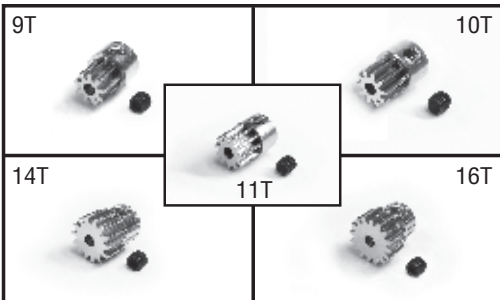
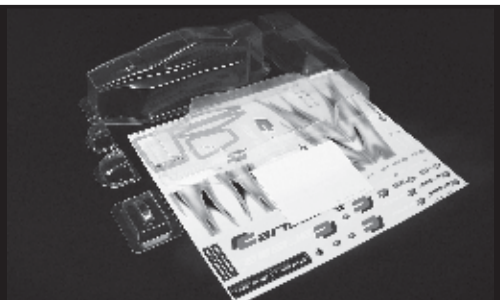
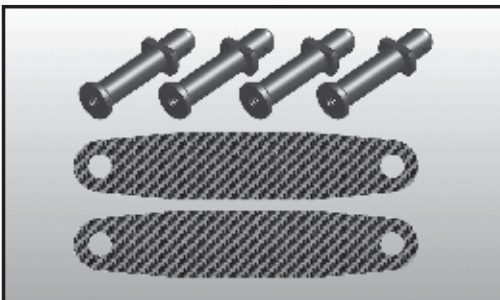


# SPARE PARTS LIST

Part No.	Header Descriptions	MA Part No.	Descriptions	Quantity		
14747	GT14B Steering Bushing	MASM1631A	Steering Bushing	4		
14739	GT14B 4.3mm Ball Cap	RST-P14-01	4.3mm Ball Cap Long	12		
14688	GT14B Motor Mount Set	MASM1634A	Center Motor Mount	1		
		MASM1635A	Motor Mount	1		
		SSW-G00279	Screws For Motor	1		
		SSW-G00179	Screws For Motor	1		
		SSW-G00266	Screws For Mount	2		
		MASM212A	M3 Washer	3		
		MASM734A	M3 Internal Tooth Washer	3		
14362	GT14B Pinion Gear 12T	MASM669A	Pinion Gear 12T	1		
		MASM038A	Set Screw	1		
14749	GT14B Main Chassis	FRP-G00029	Main Chassis	1		
14750	GT14B Upper Deck	FRP-G00030	Upper Deck	1		
14751	GT14B Shock Tower	FRP-G00031	Front Shock Tower	1		
		FRP-G00032	Rear Shock Tower	1		
14752	GT14B Diff Outdrive Foam Stud	EVA-G00003	Diff Outdrive Foam Stud	8		
		MASM033A	Bearing 8 x 12 x 3.5	4		
14753	GT14B Bearing Set	MASM083A	Ball Bearing 4 x 7 x 2.5 mm	5		
		MASM084A	Ball Bearing 5 x 9 x 3 mm	4		
		ME031A	Bearing 4 x 8 x 3	9		
		MASM693A	Servo Spring	1		
14754	GT14B Servo Spring	MASM693A	Servo Spring	1		
14755	GT14B Tie Rod	SSW-G00595	M3 x 38 mm Tie Rod	6		
14756	GT14B King Pin Set	MASM480A	King Pin Short	6		
		MASM481A	King Pin Long	2		
14757	GT14B Bushing	MASM623A	3 x 6 x 2.5mm Bushing	6		
14687	GT14B Slipper Sheet	SPC-G00005	Slipper Sheet	2		
14696	GT14B Hardware Bag	MASM038A	Set Screw M3 x 3	8		
		MASM1614A	Set Screw M3 x 10	5		
		ME017A	3.9mm Ball	2		
		MASM734A	M3 Internal Tooth Washer	3		
		MASM212A	M3 Washer	3		
		MASM1803A	4.3 Ball Stud	12		
		MASM204A	5.79 x 4.6 L Ball Through	8		
		MASM716A	Wave Washer	1		
		MASM1011A	M4 Lock Nut	1		
		MASM889A	Washer	2		
		MASM313A	M3 Locknut	4		
		MASM733A	M3 Flange Lock Nut	4		
		MASM727A	M3 Nut	4		
		MASM090A	Snap Pin	6		
		SSW-G00020	2.6 x 10KB (D=4.8mm)	8		
		SSW-G00035	2.6 x 12PB (D=4.2mm)	2		
		SSW-G00083	2.6 x 8PM (D=4.2mm)	2		
		SSW-G00053	2.6 x 6KB (D=4.8mm)	9		
		SSW-G00057	2.6 x 6KM (D=4.8mm)	3		
		SSW-G00063	2.6 x 6PB (D=4.2mm)	7		
		SSW-G00077	2.6 x 8KB (D=4.8mm)	6		
		SSW-G00081	2.6 x 8PB (D=4.2mm)	10		
		SSW-G00100	2x 6PWB (D=4.5mm)	1		
		SSW-G00141	2 x 5PM (D=3.5mm)	2		
		SSW-G00144	2 x 6PB (D=3.5mm)	2		
		SSW-G00145	2 x 6KM (D=3.5mm)	2		
		SSW-G00147	2 x 6KB	8		
		SSW-G00175	2.6 x 10PB (D=4.2mm)	8		
		SSW-G00193	3 x 10PM (D=5.2mm)	4		
		SSW-G00228	3 x 18BM (D=6mm)	4		
		SSW-G00266	3 x 6CM (D=2.5)	1		
		SSW-G00279	3 x 8KM (D=5.8mm)	1		
		SSW-G00284	3 x 8PB (D=4.8mm)	1		
		SSW-G00331	2 x 8KB (D=3.6 - 3.7mm)	2		
		SSW-G00370	2 x 22HSM	2		
		SSW-G00179	3 x 6CM	1		
		SSW-G00454	2.6 x 10CM(D=4.6mm)	4		
		14682	GT14B Blue Car Body with Stickers	GT14B-B0101BL	Main Body Blue	1
				GT14B-B0102	Bottom Cover	1
				GT14B-B0103BL	Rear Wing Blue	1
GT14B-B0104BL	Front Nose Blue			1		
GT14B-B0105	Front Nose base			1		
GT14B-B0106	Spur Gear Cover			1		
DCC-G00136	GT14B Body Sticker			1		
DCC-G00137	GT14B Logo Sticker			1		
14683	GT14B Red Car Body with Stickers	GT14B-B0101RE	Main Body Red	1		
		GT14B-B0102	Bottom Cover	1		
		GT14B-B0103RE	Rear Wing Red	1		
		GT14B-B0104RE	Front Nose Red	1		
		GT14B-B0105	Front Nose base	1		
		GT14B-B0106	Spur Gear Cover	1		
		DCC-G00136	GT14B Body Sticker	1		
		DCC-G00137	GT14B Logo Sticker	1		
14758	GT14B Gunmetal Car Body with Stickers	GT14B-B0101GM	Main Body Gun Metal	1		
		GT14B-B0102	Bottom Cover	1		
		GT14B-B0103GM	Rear Wing Gun Metal	1		
		GT14B-B0104GM	Front Nose Gun Metal	1		
		GT14B-B0105	Front Nose base	1		
		GT14B-B0106	Spur Gear Cover	1		
		DCC-G00136	GT14B Body Sticker	1		
		DCC-G00137	GT14B Logo Sticker	1		
14759	GT14B Charger(Internation version)	TRF-G00065	Charger Body	1		
		DCL-G00773	Charger Warning Label	1		
		TRF-G00038	Australian Plug	1		
		TRF-G00039	European Plug	1		
		TRF-G00040	British Plug	1		
14760	GT14B 7.2V 1200mAh NiMH Battery	NMH00027	Ni-Mh Battery	1		
		DCL-G00787	Ni-Mh Battery Label	1		

Part No.	Descriptions	Part No.	Descriptions
14762	GT14B Hard Tire Foam (4)	14793	GT14B R40 Tyre with Foam
14763	GT14B Carbon Fibre Upper Deck	14684	GT14B Carbon Fibre Main Chassis
14764	GT14B Turnbuckle	14685	GT14B Carbon Fibre Shock Tower
14766	GT14B Aluminum Wheel Hex	14686	GT14B Assembled CVD Set
14761	GT14B 7.4V 2000mAh LiPo Battery	14765	GT14B Aluminum Inner Hinge Pin Brace

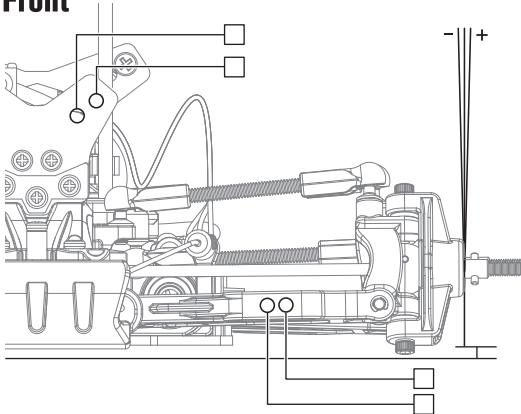
# OPTION PARTS LIST

Part No.	Descriptions	Part No.	Descriptions
 <p>14768 14769</p>	<p>GT14B Shock Spring ( Hard ) GT14B Shock Spring ( Soft )</p>	 <p>14767</p>	<p>GT14B Aluminum Slipper Plate</p>
 <p>14770</p>	<p>GT14B Anti Roll Bar</p>	 <p>14794</p>	<p>GT14B Aluminum Rear Inner Hinge Pin Brace (3° Toe-in)</p>
 <p>14775 14776</p>	<p>GT14B Spur Gear 66T GT14B Spur Gear 68T</p>	 <p>14796</p>	<p>GT14B Hard Servo Spring</p>
 <p>14777</p>	<p>GT14B Light Weight Center Drive Cup</p>	 <p>14773 14689 14774 14771 14772</p>	<p>GT14B Pinion Gear 9T GT14B Pinion Gear 10T GT14B Pinion Gear 11T GT14B Pinion Gear 14T GT14B Pinion Gear 16T</p>
 <p>14681</p>	<p>GT14B Clear Body</p>	 <p>14795</p>	<p>GT14B Battery Hold Post</p>

Driver \_\_\_\_\_ Date \_\_\_\_\_ Air temp. \_\_\_\_\_ Humidity \_\_\_\_\_

Track \_\_\_\_\_ Track Condition \_\_\_\_\_ Track temp. \_\_\_\_\_

## Front



**Camber**

L \_\_\_\_\_ °

R \_\_\_\_\_ °

**Front Tire**

Type \_\_\_\_\_

Hardness \_\_\_\_\_

**Front Axle**

Ball Diff.  Solid Axle

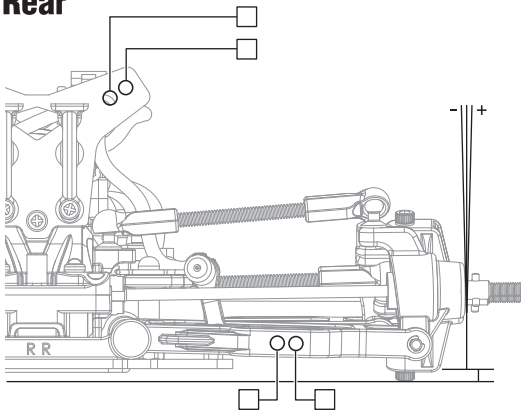
One Way

Gear Diff.

Loose | Tight

Ride height \_\_\_\_\_ mm

## Rear



**Camber**

\_\_\_\_\_ °

\_\_\_\_\_ °

**Rear Tire**

Type \_\_\_\_\_

Hardness \_\_\_\_\_

**Rear Axle**

Ball Diff.  Solid Axle

Gear Diff.

Loose | Tight

Ride height \_\_\_\_\_ mm

**Oil Shock**

Oil Front \_\_\_\_\_

Oil Rear \_\_\_\_\_

**Oil Shock length**

Front \_\_\_\_\_ mm

Rear \_\_\_\_\_ mm

**Piston**

Front \_\_\_\_\_ Holes

Rear \_\_\_\_\_ Holes

**Spring**

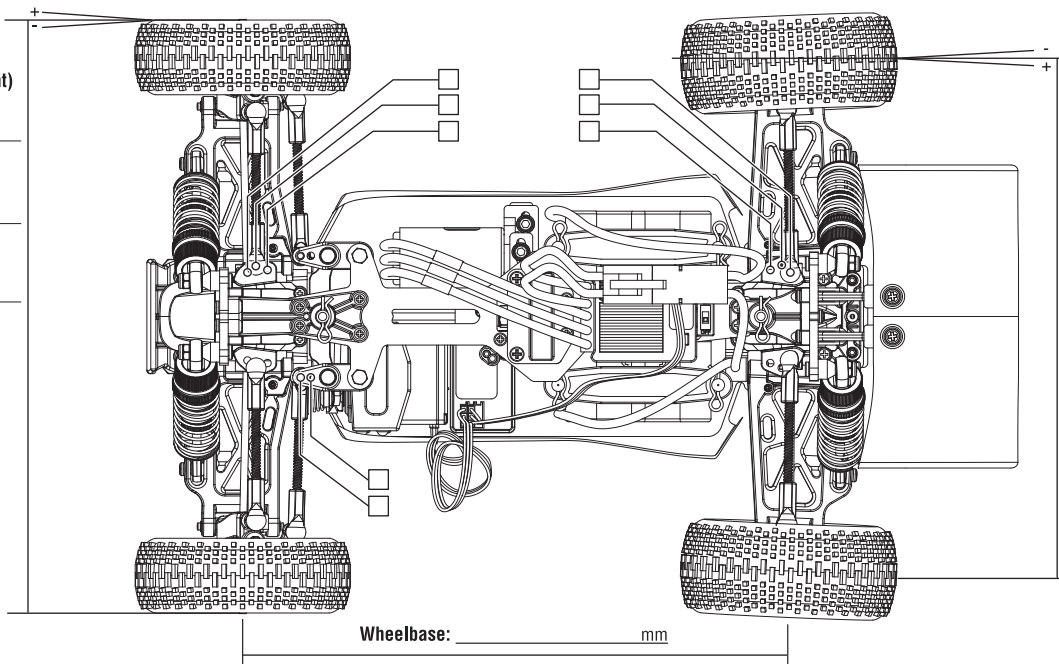
Front \_\_\_\_\_

Rear \_\_\_\_\_

Toe Angle (Front)

F sus.mount : Front

Rear



Toe Angle (Rear)

R sus.mount : Front

Rear

Wheelbase: \_\_\_\_\_ mm

Front width : \_\_\_\_\_ F sus. arm spacer : \_\_\_\_\_ R sus. arm spacer : \_\_\_\_\_ Rear width : \_\_\_\_\_

Motor : \_\_\_\_\_ Spur gear : \_\_\_\_\_ Pinion gear : \_\_\_\_\_ Battery : \_\_\_\_\_ Body : \_\_\_\_\_

Servo : \_\_\_\_\_ Wing : \_\_\_\_\_ Front Tire Insert : \_\_\_\_\_ Rear Tire Insert : \_\_\_\_\_

Front Anti Roll Bar : \_\_\_\_\_ Rear Anti Roll Bar : \_\_\_\_\_ Best lap : \_\_\_\_\_

Memo : \_\_\_\_\_



**Manufactured by :**

**MUN AH PLASTIC ELECTRONIC TOYS CO., LTD.**

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

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