Instruction Manual
取扱説明書

En Thank you

- ***Thank you for selecting this KMRACING product ! This kit is designed to be fun to drive and uses top quality parts for durability and performance. The instruction manual you are reading was designed to be easy to follow yet thorough in its explanations. KMRACING wants you to enjoy driving your new RC kit. If you come across any problems or need some help getting through a step, give us a call and we will do our very best to help you. You can also contact us on the internet at www.kingmotor.cn***
- ***This is a high performance R/C kit, and it requires regular maintenance for best performance. If you don't do regular maintenance the performance will suffer. KMRACING has all the necessary parts and accessories available to keep your car performing at its best.***
- ***The caution or attention symbols will warn you about steps that can be very dangerous. Please read and understand the instructions carefully before proceeding.***

Cautions 警 告	***Failure to follow these instructions can damage your kit, and cause serious bodily injury or death.***
Attention 注 意	***Failure to follow these instructions can cause injury to yourself or others. You might also cause property damage or damage your kit.***

Cautions 警 告

Before Running	●***Please read manual (with parent, guardian or a responsible adult if necessary).***
While Operating	●***Please do not run on a public street, this could cause serious accidents, personal injuries and/or property damage.*** ●***Please do not run near pedestrians or small children.*** ●***Please do not run in small or confined areas.***
Before Operating	●***Make sure that all screws and nuts are properly tightened.*** ●***Always use fresh batteries for your transmitter and receiver to avoid losing control of the model.*** ●***Make sure no one else is using the same radio frequency as you are using.*** ●***Please confirm the neutral throttle trigger position.***
After Running	●***Turn OFF receiver first, then turn OFF transmitter. This will prevent the car from losing control.*** ●***After running KMRACING product, it is necessary t o perform routine maintenance. Failure to do this can result in increased wear and damage to the engine and chassis.***
Battery safety	●***Please be careful when handling the battery. It will be hot after running. If the wire is frayed, a short circuit can cause a fire.***

日本語 はじめに

- この度は、KMRACING製品をお買い上げいただきまして、誠にありがとうございます。本製品は高品質の材料を使用し、ハイレベルな走行が出来るよう設計されています。また、本説明書は初心者の方でもスムーズに理解できるよう多くのイラスト、実寸表示を使用しておりますので、よくお読みいただいた上で楽しいラジコンライフをスタートさせてください。なお、KMRACINGでは走らせる楽しみはもちろんのこと、組み立てる楽しみも知っていただきたいと願っております。
製品の事で不明な点がございましたらお気軽にお問い合わせください。製品をご使用になる前に必ず本取扱説明書をお読みください。
- 高性能なRCカーの性能を充分に発揮させるためには走行後のメンテナンスが必要です。 メンテナンスを行わないとRCカーが傷む原因となります。
KMRACINGでは、メンテナンスや修理用にスペアパーツを用意してありますのでどうぞご利用ください。
- 本取扱説明書ではお客様への危害や損傷を未然に防止するために、危険の従う操作、お取扱いについて以下の記号で警告表示を行っています。
内容をよくご理解の上で本文をお読みください。

Cautions 警 告	この表示は誤った取り扱いをすると、貴方の生命や身体に重大な被害が発生する可能性が想定される内容を示しています。
Attention 注 意	この表示は誤った取り扱いをすると、貴方が障害を負う可能性、物的損害の発生が想定される内容を示しています。

Cautions 警 告

走らせる前に	●必ず本説明書をお読みください。保護者の方も必ず説明書をご覧ください。
走行上の注意	●道路での走行はお止めください。 ●歩行者や小さな子供のいる場所では走行させないでください。 ●狭い場所や屋内での走行させないでください。
走行前の点検	●各部のネジ、ナットに緩みがないかチェックします。 ●送信機、受信機の電池の容量をチェックします。電池の容量が少ないと、車をコントロールする事が出来なくなり危険です。早めの交換を心がけてください。 ●自分と同じ周波数（バンド）を使用している人が周りにいないか確認します。コントロールができない場合は、すぐに走行を中止してください。 ●走行前に電波範囲の確認をしてください。 ●スロットルトリガーのニュートラル（スロットルトリガーに指を掛けない状態）を確認してください。
走行後の注意	●必ず受信機のスイッチをOFFにしてから、送信機のスイッチをOFFにしてください。 順番を間違えると車が暴走する恐れがあります。 ●走行後はR/Cカーのメンテナンス（点検、整備）を行ってください。メンテナンスを行わないとRCカーが本来の性能を発揮せず、トラブルが発生しやすくなります。
バッテリー取り扱いの注意	●バッテリーの取り扱いには十分注意してくださいコード、被服の破れからのショートによる発熱で、ヤケドや火災などの恐れがあります。

En Contents

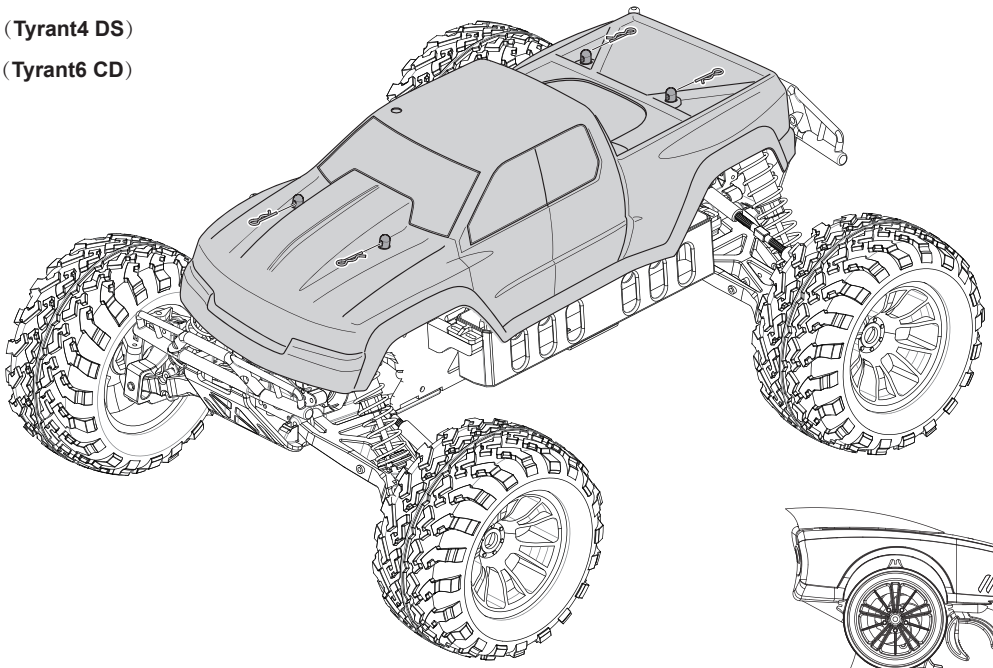
日本語 目 次

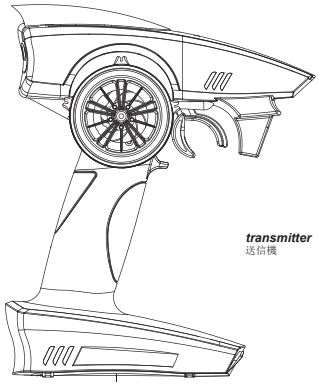
Overview
製品概要

Components
セット内容

Radio control car
RCカー本体

#1013（Tyrant4 DS）
or
#1014（Tyrant6 CD）

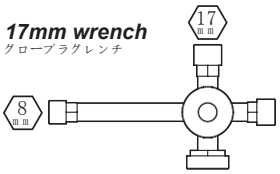


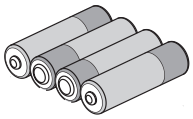


transmitter
送信機

Equipment Needed
別にお買い求めいただく物

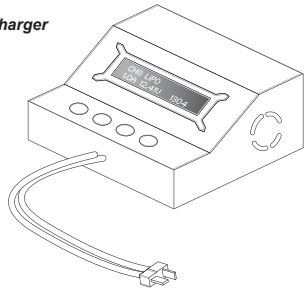
17mm wrench
グロープラグレンチ





AA batteries for Transmitter (4pcs.)
送信機用単三乾電池 4本

Battery Charger
充電器

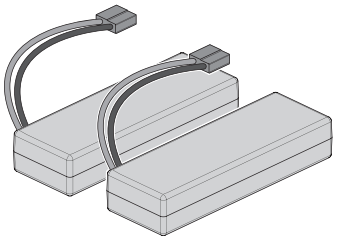


Cautions
警 告

Do not use NiCd/NiMH battery chargers for LiPO batteries. If you do not use a special charger for LiPO batteries, they will be damaged .
LiPOバッテリ ーに対応しない充電器は使用しないでください。バッテリーが破損します。

Battery 走行用バッテリー

2-3 cell LiPo (7.4 to 11.1v) battery pack
2-3セル ***(7.4-11.1V)LiPO***バッテリー

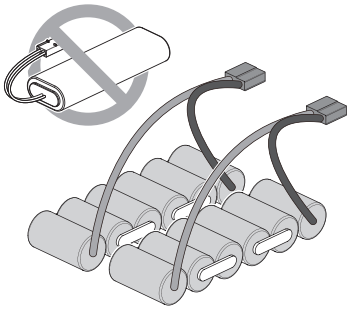


Do not use NiCd/NiMH battery chargers for LiPO batteries. If you do not use a special charger for LiPO batteries, they willbe damaged. When using 3S LiPo packs , cell quality is very important. We recommend battery packs with a 25C rating or better. Using batteries with a lower C rating may result in damage to your batteries.

LiPOバッテリーの充電にはLiPOバッテリー対応充電器を必ず使用してください。 LiPOバッテリーに対応しない充電器を使用した場合、バッテリーが破損します。3セルLiPOバッテリーを使用する場合は放電レート25C以上のバッテリーを使用してください。放電レートの低いバッテリーを使用するとバッテリー本体の故障の原因となります。

Cautions
警 告

When using 3S LiPo batteries it is important to monitor the battery temperature. Battery temp should not exceed 140F .
3セルLiPOバッテリーを使用する場合は温度が60℃を超えないよう注意してください。



6-8 cell NiMh (7.2 to 9.6v) Battery
6-8セル（ ***7.2V-9.6V)***ニッケル　水素バッテリー

Do not use Nickel - Cadmium battery chargers for Nickel Metal Hydride batteries.If you do not use a spe cial charger forNickel M etal Hydride batteries, they will be damaged. We do not recommend the use of low quality batteries referred to as “stick packs” use of “stick packs” may result in personal injury or fire.

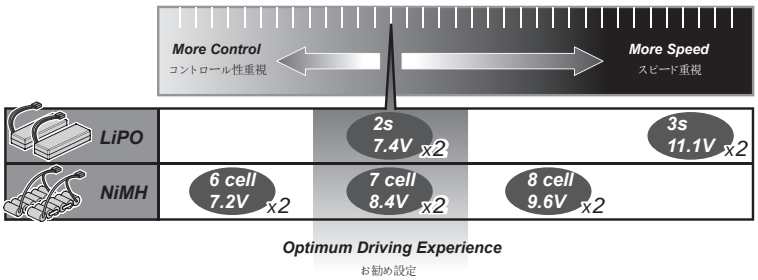
Ni-MHバッテリーの充電にはNi-MHバッテリー対応充電器を必ず使用してください。Ni-MHバッテリーに対応しない充電器を使　用した場合、バッテリーの破損などの事故の起こる恐れがありますので注意してください。 本製品の最大限のパフォーマンスを引き出すためには高性能バッテリーの使用をお勧めします。
スティックパックタイプのバッテリーの使用は発熱、または発火の恐れがあるので使用しないでください。

Cautions
警 告

Always disconnect the battery from the ESC when you are finished using your vehicle.The switch on the ESC controls the power that is delivered to the receiver and servos. The controller will always draw current when it is connected to the battery and will completely ischarge batteries if they are connected for long durations.This may cause failture your batteries.

走行後は必ずバッテリーコネクターをESC から外して保管してください。バッテリーを接続した状態での保管は過放電によりバッテリーが故障します。

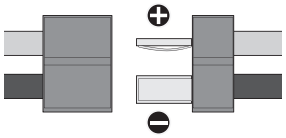
Battery Chart バッテリーの選び方



More speed you use, less control you have. Refer to the Battery Chart and select the type of batteries suit your driving skill.

左の図を参考に使用するバッテリーをお選びください。
スピードを重視するとコントロールが難しくなりますので自身のドライビングスキルに合ったバッテリーをお選びください。

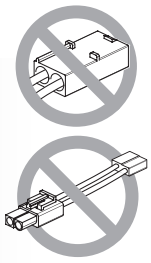
Battery Connector バッテリーコネクター



Deans “Ultra Plug”
Deans社製”ウルトラプラグ”

Poor quality battery connectors can be a roadblock to performance. Avoid the common “white plastic” connectors commonly seen on many battery packs. A fast brushless setup will draw many times the power that these connectors can safely handle. For this reason your Tyrant ESC is equipped with a Deans Ultra plug.

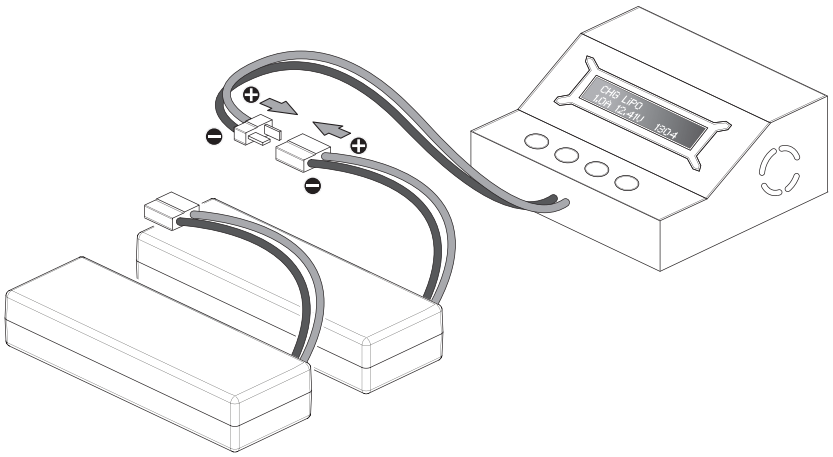
汎用タイプのコネクター（図参照）は発熱により故障の原因となります。Deans社製ウルトラプラグを使用してください。
また、変換コネクター等は使用しないでください。



Charging battery 走行用バッテリーの充電

Charging battery 走行用バッテリーの充電

First, charge the drive batteries.
まず最初に走行用バッテリーを充電します。



Cautions
警告

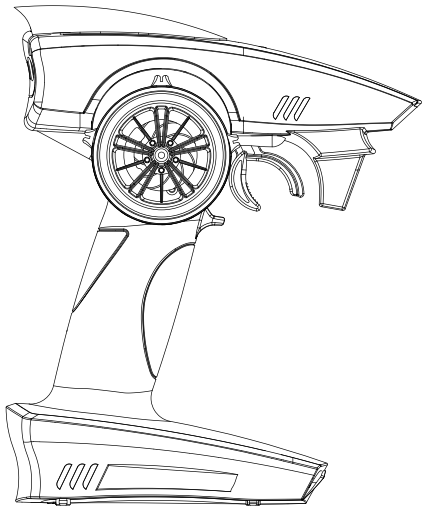
Do not use NiCd /NiMH battery chargers for LiPO batteries. If you do not use a special charger for LiPO batteries, they will be damaged

LiPOバッテリーに対応しない充電器を使用した場合、
バッテリーが破損します。

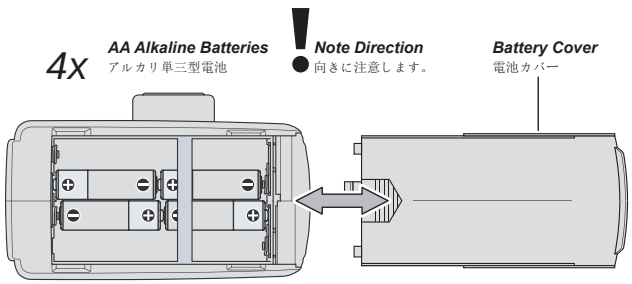
Setup Before Starting
走らせる前の準備

Transmitetr Preparation 送信機の準備

#3074



Transmitter Battery Installation
送信機用バッテリーの入れ方



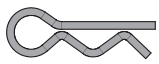
Open battery cover at the bottom of transmitter. Install batteries. Follow the direction of batteries designated in the inside of battery box.
送信機の底面の電池カバーをはずします。
電池ボックスに描かれた電池の向きにあわせて電池を入れ、電池カバーを閉めます。

Attention
注意

Do not mix batteries of different ages or types.
古い電池と新しい電池を混ぜて使わないでください。

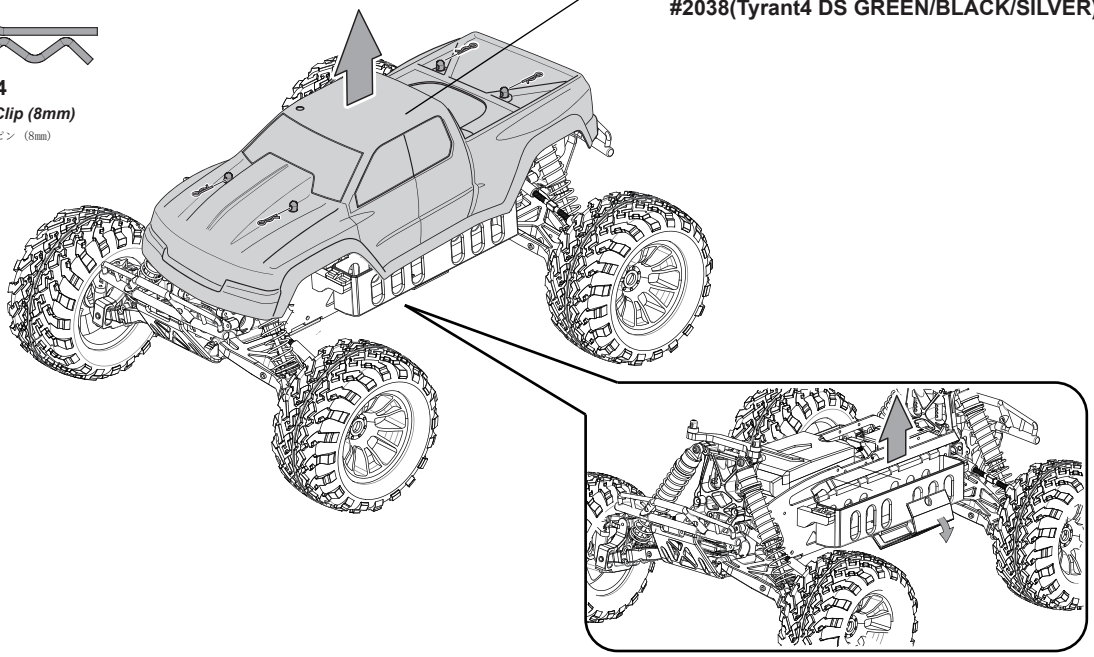
Preparing The Chassis シャーシの準備

Removing the Body ボディを取り外します。



#3034
Body Clip (8mm)
ボディーピン（8mm）

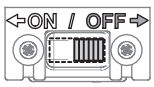
#2037(Tyrant6 CD RED/BLACK/SILVER)
#2038(Tyrant4 DS GREEN/BLACK/SILVER)



Cautions
警 告

Make sure receiver is turned OFF before connectingthe battery, the vehicle may run out of control.
受信機のスイッチが､OFFになっている事を確認してください。
車が暴走する恐れがありますので注意してください。

1



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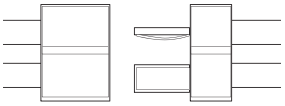
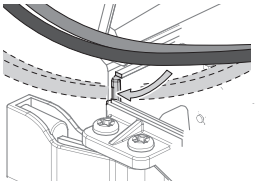
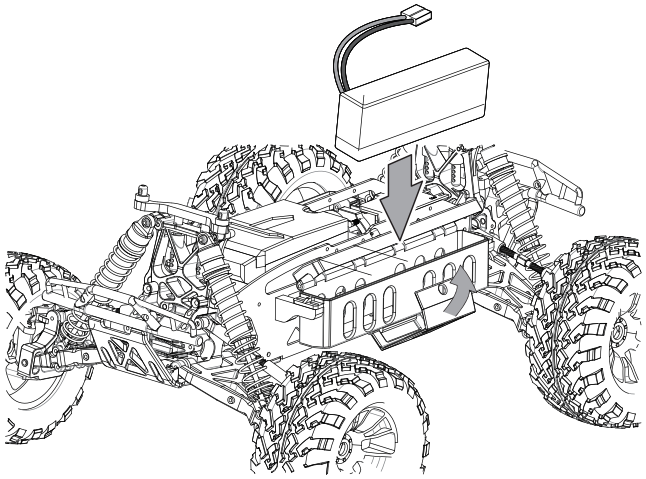


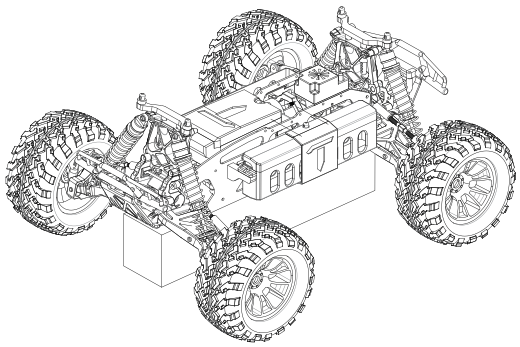
Assemble carefully, and do not pinch the wires in the case.
断線の可能性があるのでコードを挟まないよう注意してください。





Radio Control Car Operating Procedures
ラジオコントロールカーの走らせ方

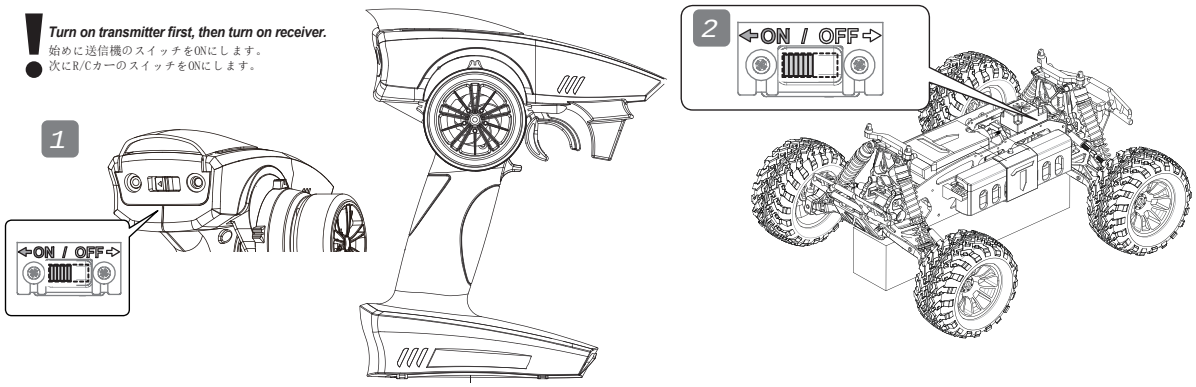
Turn on transmitter first, then turn on receiver.
始めに送信機のスイッチをONにします。
次にR/Cカーのスイッチを ONにします。



Put the car on a stand, with wheels off the ground and connect battery.
台の上に車を乗せ、バッテリーをつなぎます。

Activating R/C Unit スイッチの入れ方

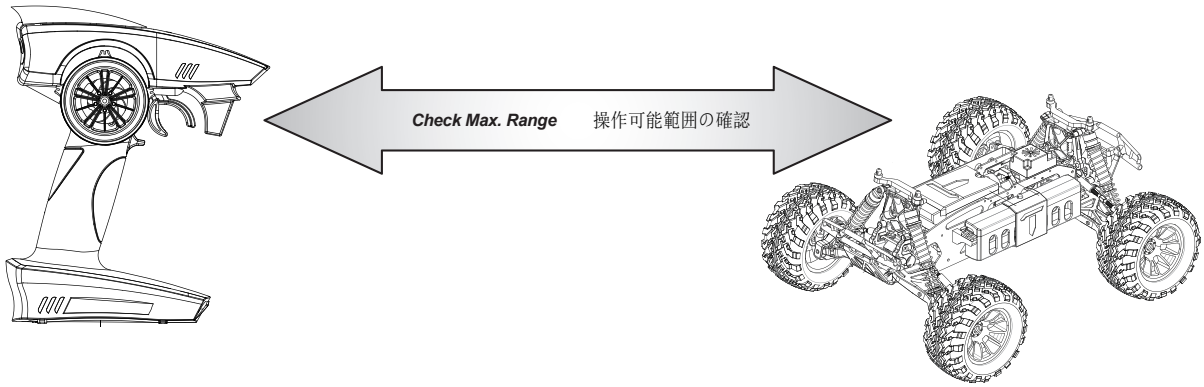
Turn on transmitter first, then turn on receiver.
始めに送信機のスイッチをONにします。
次にR/Cカーのスイッチを ONにします。



Checking Radio Range 操作可能範囲の確認

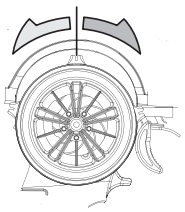
Make sure no one else is using the same radio frequency as you are using. Check the radio system and range before every driving session. To properly check the range, have a friend hold the car and walk to the farthest distance that you plan to operate your model. Operate the controls to make sure the model responds correctly. Do not operate the model if there is any problem with the radio system. If you switch on the R/C car first before the transmitter, you may lose control of the R/C car.

走行前ごとに同じ周波数（クリスタル）を使用している人が近くにいないか確認後、プロポ電源と電波範囲のチェックをしてください。 電波範囲の確認は、実際の走行予定距離まで離れ、友人などと一緒にプロポに正しく反応するか確かめてください。プロポに正しく反応しない場合は走行を始めないでください。 スイッチを入れる順番を間違えるとR/Cカーが 暴走しますので注意してください。



Steering Trim Setup ステアリングトリムの調整

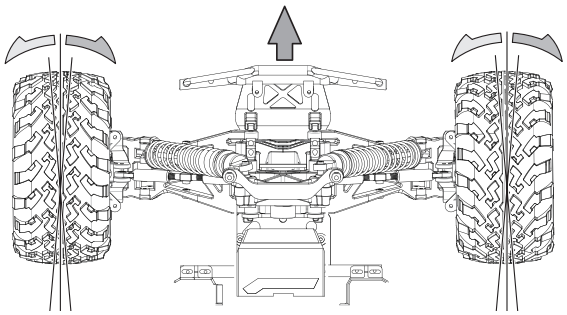
Steering Trim
ステアリングトリム



Turn steering trim to set tires in completely centered position.

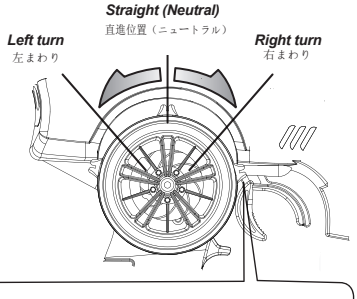
タイヤがまっすぐになるようにステアリングトリムを左右にまわして調整します。

Front
フロント



Transmitter Operation 送信機の操作方法

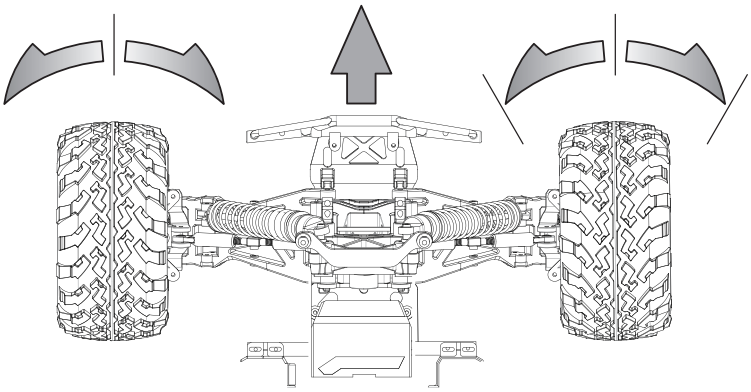
Steering Wheel
ステアリングホイール



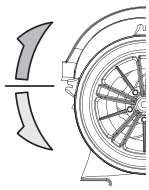
Steering Dual Rate
ステアリングデュアルレート

To be used to adjust steering servo throw.
RCカーの　曲がる量を調整できます。

Front
フロント



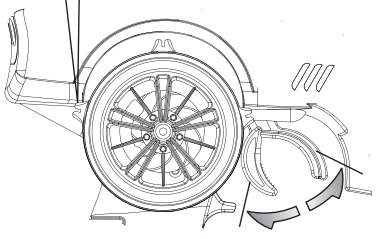
Throttle Trigger
スロットルトリガー



Throttle Trim
スロットルトリム

If your vehicle is moving, adjust the throttle trim until it stops.

なにもしていないのに車が動いてしまう時は、スロットルトリムで動かなくなるように調節します。



Brake / Reverse
ブレーキ / バック

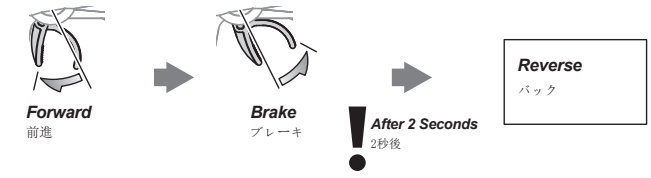
Forward
前進

Stop (Neutral)
停止 （ニュートラル）

Reverse operation
●A and B show the two ways to go in reverse.
バックのしかた
●バックにはA, Bの 2 種類 の方法があります。

A ***Stop → Reverse***
停止した状態 → バック

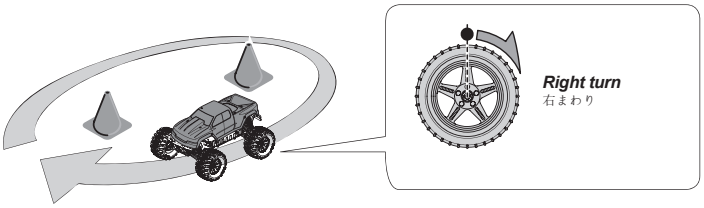
B ***Forward → Brake (2 Seconds) → Reverse***
前進 → 停止(約2秒) → バック



Practice Turning 曲がる練習をしましょう

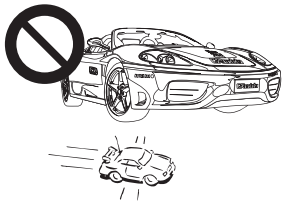
Install body and enjoy! Allow the car to cool down for 15 minutes between each run.When the car is running toward the driver, the directions of the steering wheel are reversed.
Once you become conformable driving the Tyrant , practice driving on a track with pylons.

ボディを取り付け走行させます。走行用バッテリー1本走行後､15分以上 休ませて再走行してください。車がドライバーに向かって走ってくる場合には､ステアリング操作の方向が逆になります。Tyrantの走行になれてきたら、パイロンなど目印を置いてコース通りに走ってみましょう。



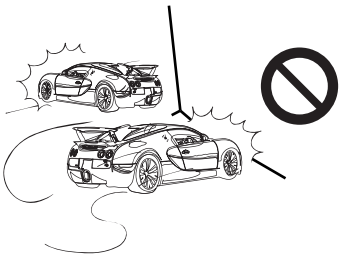
Cautions · Attention
警 告· 注 意

Do not drive the Tyrant in the fallowing place.
次の様な場所では走行させないでください。



Do not run on public streets or highways. This could cause serious accidents, personal injuries, and/or property damage.
道路など､車や人が通る場所では走行させないでください。

Do not run in water or sand.
水たまり、砂地、じゅうたんなどでは走行させないでください
故障の原因になることがあります。



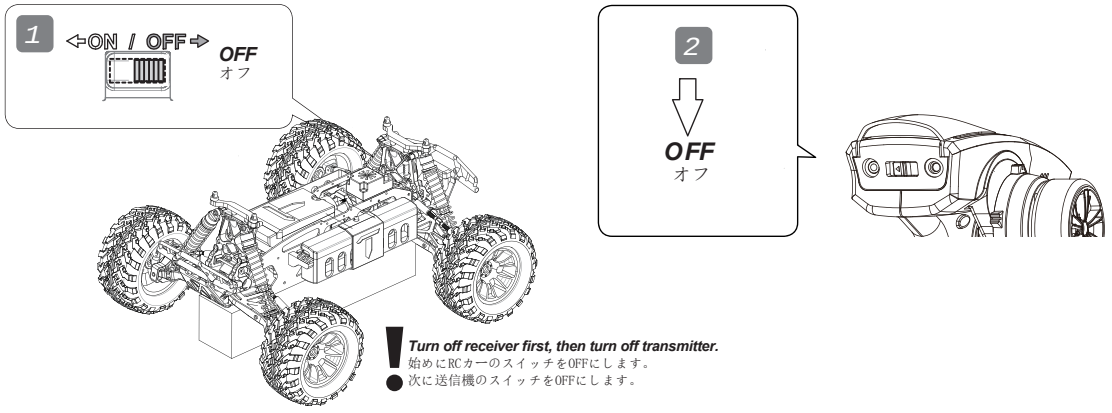
Make sure everyone is using different frequencies when driving together in the same area.
他の車と同じ周波数だと､車のコントロールが出来なくなります。
必ず確認してから走行させましょう。

Turning R/C Unit Off スイッチの切り方

Attention
注 意

Turn off receiver first, then turn off transmitter.
始めにRCカーのスイッチをOFFにします。
次に送信機のスイッチをOFFにします。

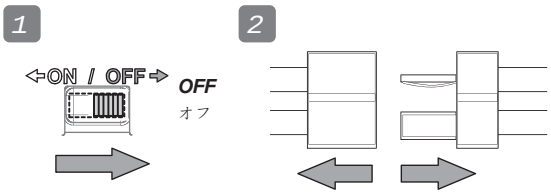
If you switch off the transmitter first before the RC car, you may lose control of the RC car.
スイッチを切る順番を間違えるとR/Cカーが 暴走する恐れがあるので注意してください。



Turn off receiver first, then turn off transmitter.
始めにRCカーのスイッチをOFFにします。
次に送信機のスイッチをOFFにします。

Cautions
警 告

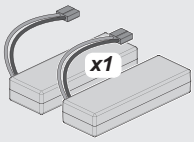
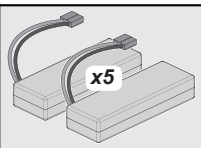
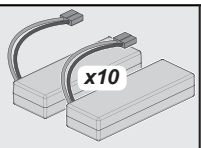
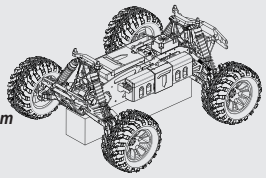
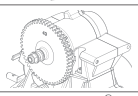
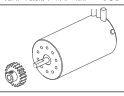
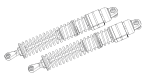
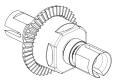
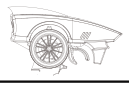
Make sure receiver is turned OFF before connecting the battery, the vehicle may run out of control.
受信機のスイッチが､OFFになっている事を確認してください。
車が暴走する恐れがありますので注意してください。



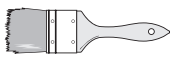
Maintenance schedule
メンテナンススケジュール

For maintenance schedule, refer to right side of the chart. After running, clean the chassis and check all moving parts for damage. If any parts are broken or damaged, repair or replace them before the next run. Regular maintenance is necessary to prevent damage to the car and maintain its performance.

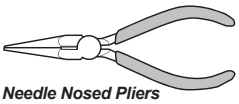
メンテナンス時期は参考走行時間です。 走行条件によりメンテナンス時期は異なることがあります。 RCカー走行後はRCカーを 掃除しながら各部パーツの点検と動作確認を行います。 パーツが破損、磨耗しているときはパーツの交換を行うなど次回の走行に備えてメンテナンスを行います。 メンテナンスを行わないとRCカー本来の性能が発揮されず、RCカーが 壊れる原因ともなりますので走行後は必ずRCカーのメンテナンスを行って走行をお 楽しみください。

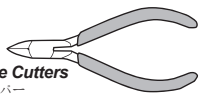
 *Every Pack* 毎1パック走行後	 *Every 5 Packs* 毎5パック走行後	 *Every 10 Packs* 毎10パック走行後	*Maintenance Item* メンテナンス項目 	*Reference Section* 参照ページ
●			*Chassis Maintenance* シャーシのメンテナンス	Page 09
	●		*Wheel Maintenance* タイヤのメンテナンス 	Page 09
		●	*Spur Gear Maintenance* スパーギアのメンテナンス 	Page 10
		●	*Motor and Pinion Gear Maintenance* モーター、ピニオンギアのメンテナンス 	Page 12
		●	*Shock Maintenance* ショックのメンテナンス 	Page 13-14
		●	*Diffrential Maintenance* デフのメンテナンス 	Page 15-18
		●	*Radio Maintenance* プロポシステムのメンテナンス 	Page 19-22

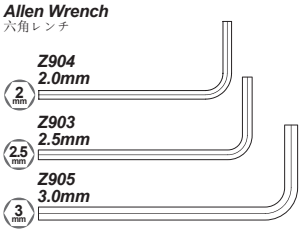
Necessary for Maintenance メンテナンスに必要なもの

Brush
ハケ


Rag
ウエス



Needle Nosed Pliers
ラジオペンチ


Side Cutters
ニッパー

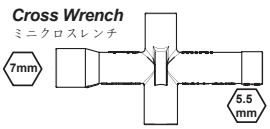
Allen Wrench
六角レンチ


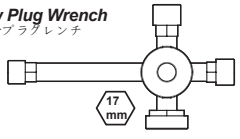

Car Cleaner
カークリーナー


Instant Cement
瞬間接着剤

Grease
グリス


Thread Lock
ネジロック剤

Cross Wrench
ミニクロスレンチ


Glow Plug Wrench
グロープラグレンチ



Oil Spray
潤滑オイルスプレー

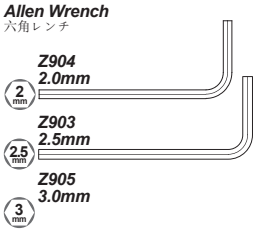
Chassis Maintenance
シャーシのメンテナンス

After running, clean the car and lubricate these points. Replace damaged parts, check that all the screws are tight.
走行後はRCカーの　掃除を行いながら、RCカーのメンテナンスをします。　シャーシの可動部分には市販のオイル潤滑スプレーを吹き付けます。

Car Cleaner
カークリーナー

Oil Spray
潤滑オイルスプレー

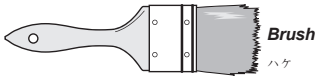
Allen Wrench
六角レンチ



Z904
2.0mm

Z903
2.5mm

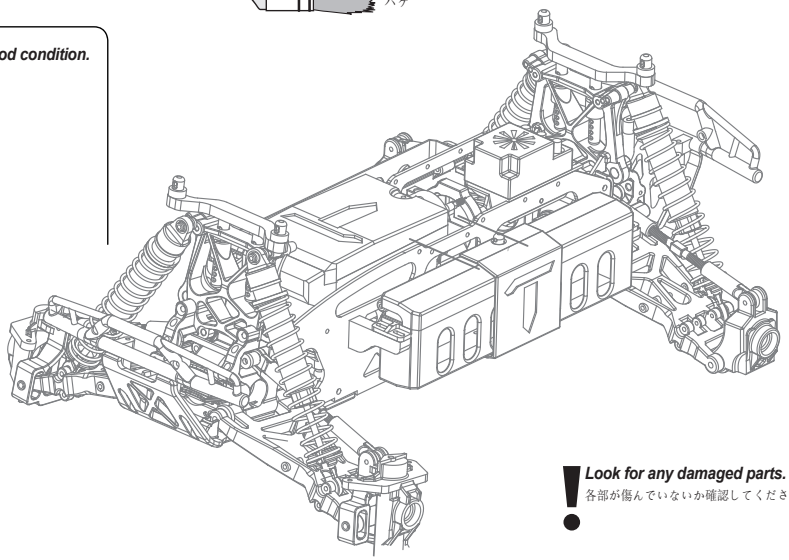
Z905
3.0mm



Brush
ハケ

Check to make sure these screws are in good condition.
下記の優先順位でネジの緩みを確認してください。

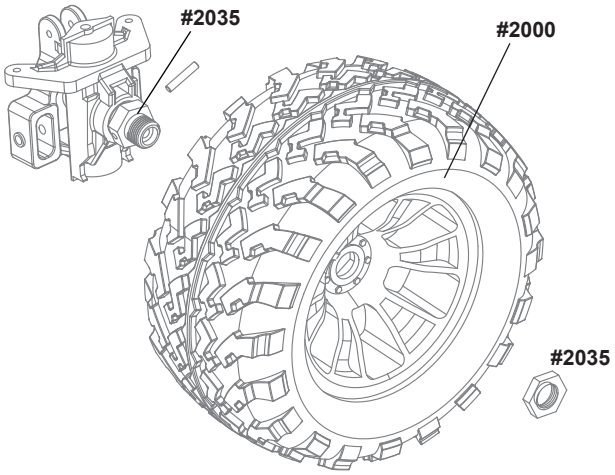
1. ***Steering knuckle screws.***
   ステアリングナックルのネジ
2. ***Motor mount screws.***
   モーターマウントのネジ
3. ***Chassis screws***
   シャーシのネジ

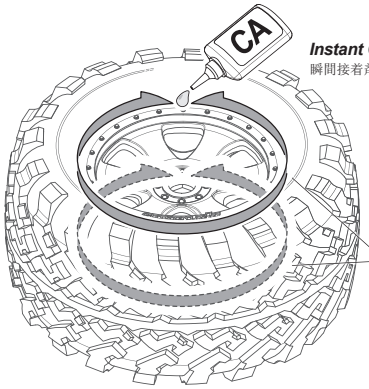


Look for any damaged parts.
各部が傷んでいないか確認してください。

Wheel Maintenance
タイヤのメンテナンス

Make sure the tire is secure on the wheel. Re-glue if necessary.
表裏共にタイヤがホイールに確実に接着されているか確認し、剥がれているところは瞬間接着剤で再接着してください。



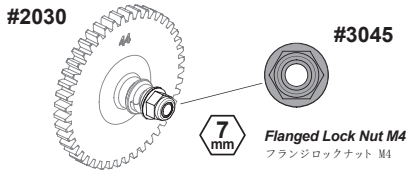


Instant Cement
瞬間接着剤

Glue both sides.
両面貼り付けます。

Use small amount to secure tire.
瞬間接着剤の付けすぎに注意

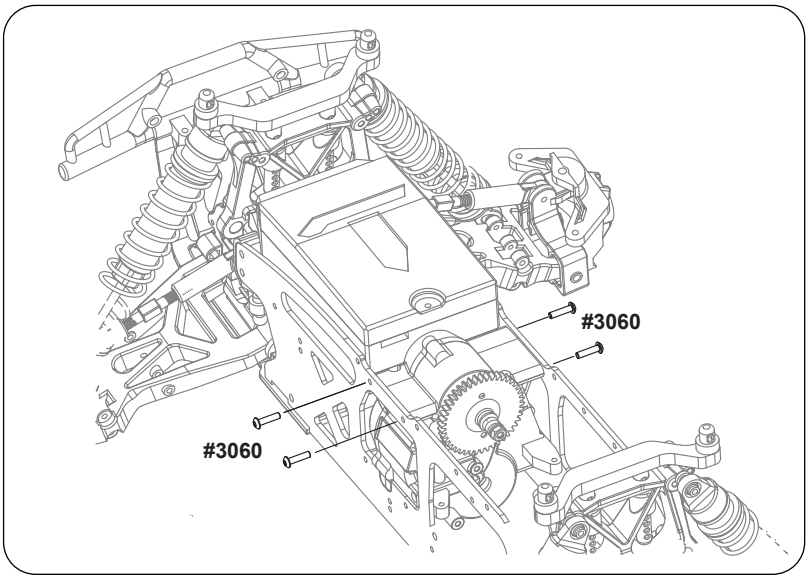
Adjusting the Slipper Clutch スリッパークラッチの調節

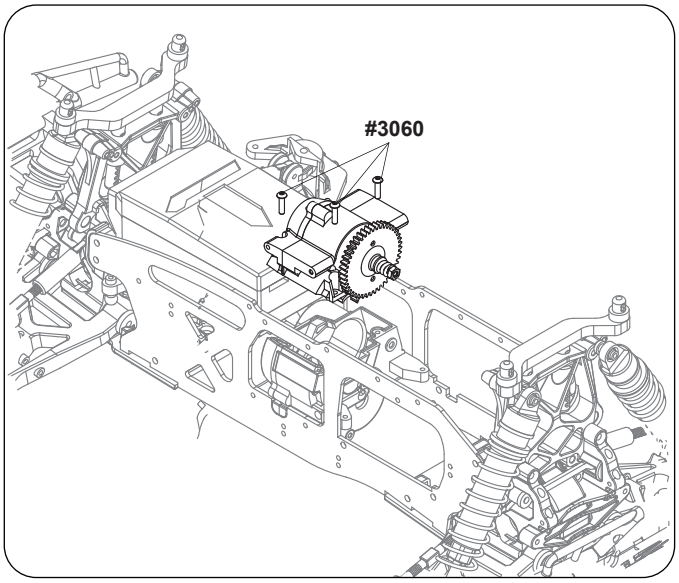


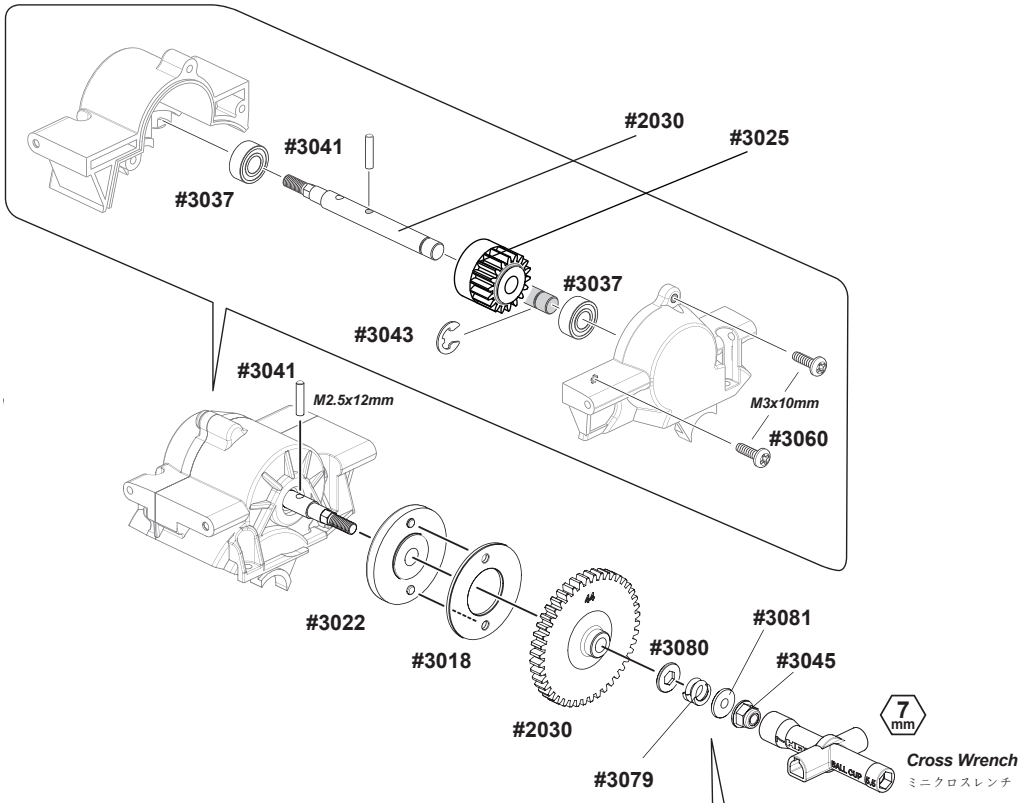
Flanged Lock Nut M4
フランジロックナット M4

Adjust the Slipper Clutch to suit the running conditions.
調整ネジでスリッパーのすべり具合を走行条件に合わせて調整します。

You can adjust the slipper clutch to suit your driving conditions.
If the clutch slips too much, tighten the locknut. If the clutch is too tight, loosen the locknut.
If the slipper clutch is too tight it may damage the drive train.
路面のコンディションに合わせてスリッパークラッチの調節ができます。
すべる時はロックナットを締め、きつい時はロックナットを緩めます。
ロックナットを締めすぎると駆動系を傷めますので注意してください。

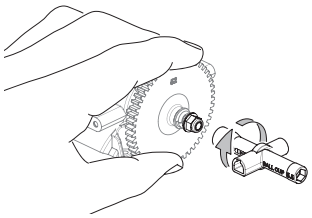




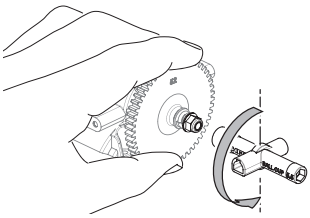


Standard Slipper Setup
スリッパー調整基準位置

Tighten setscrew fully and then loosen one half turn. The Slipper Clutch protects the drivetrain from shock.
締めこんだ所から1/2回転ゆ るめます。スリッパークラッチは駆動系に伝わるショックから駆動系を保護し、破損を防ぎます。



Tighten locknut all the way.
ロックナットを一杯まで締めこみます。

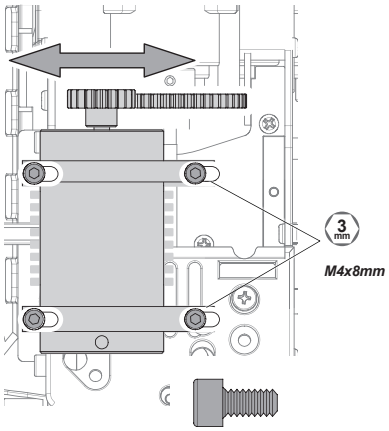


Loosen (1/2) turn.
1/2回転緩 めます。

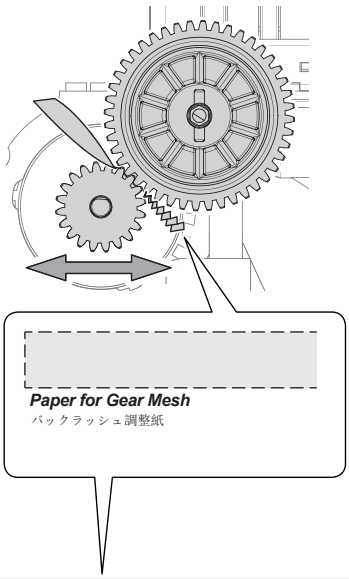
Proper Spur Gear Mesh
バックラッシュの調節

Set gear mesh by adjusting motor mount position. To get a perfect gear mesh, place a piece of paper (See bottom of page) between the gears and tighten the motor mount screws.

モーターの位置を移動させてバックラッシュの調整をします。
スパーギアとクラッチベルの間に紙片をはさみモーター 固定ねじを締めると適切なバックラッシュを設定できます。



Cap Head Screw M4x8mm
キャップネジ M4x8mm



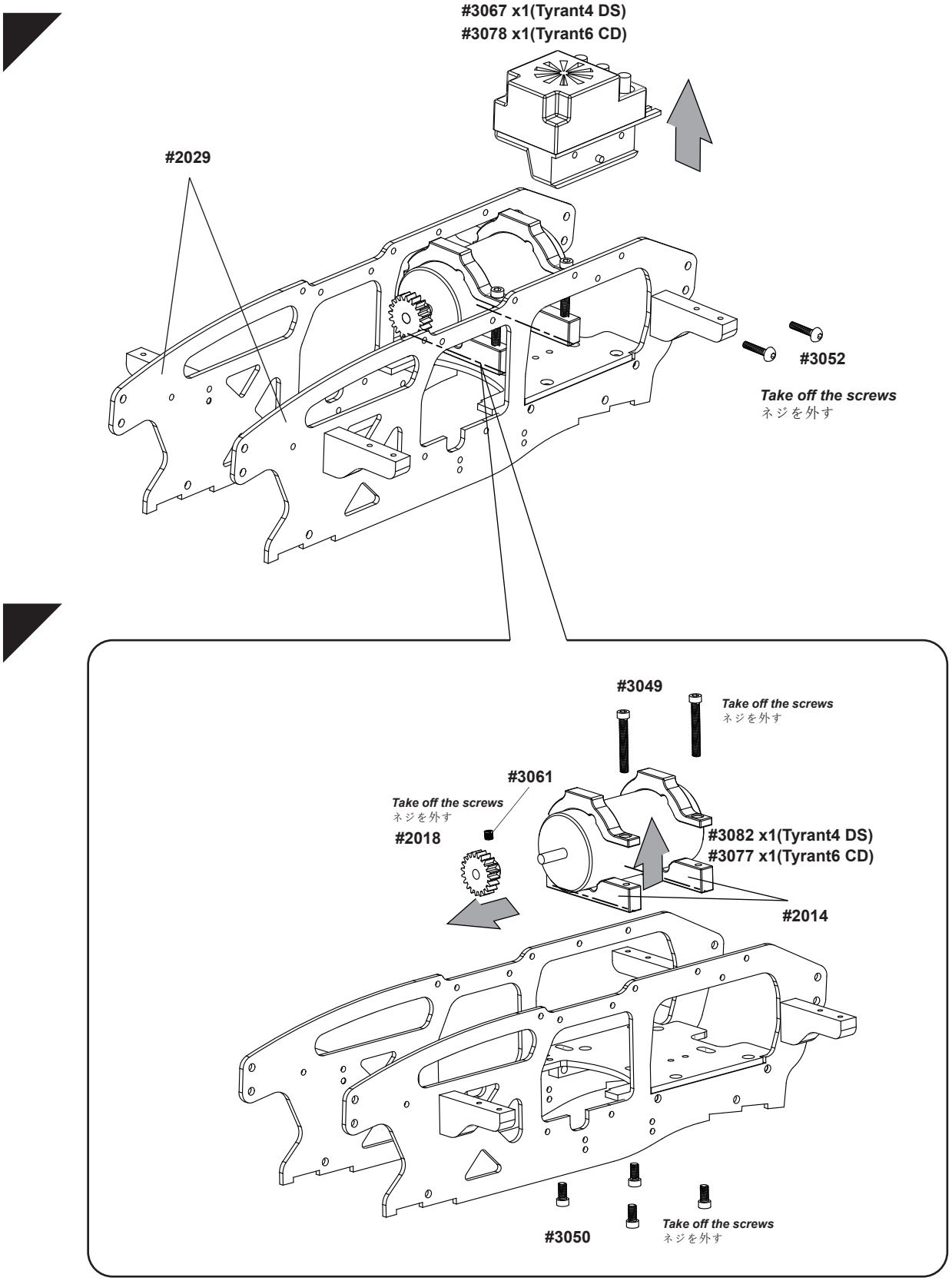
Paper for Gear Mesh
バックラッシュ調整紙

Installation is reverse of removal.
組み立ては逆の手順で図を参考にしてください。

Paper for Gear Mesh

Paper for Gear Mesh

Motor and Pinion Gear Maintenance
モーター、ピニオンギアのメンテナンス



Shock Maintenance
ショックのメンテナンス

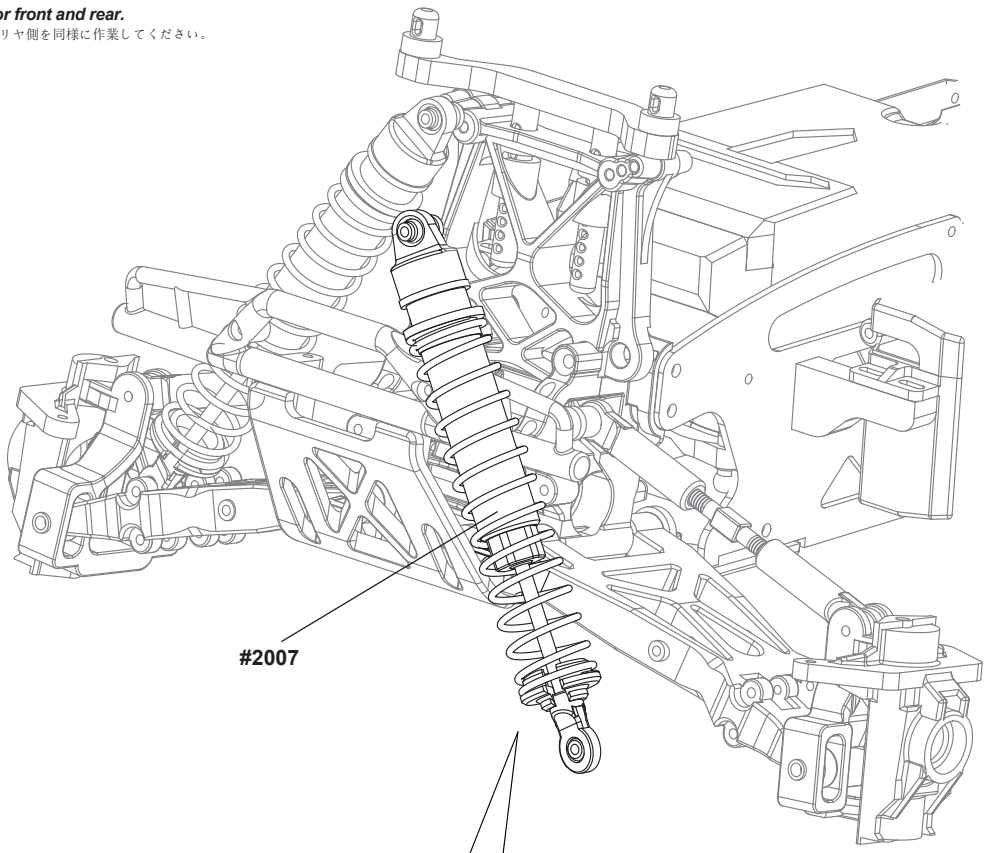
Allen Wrench
六角レンチ

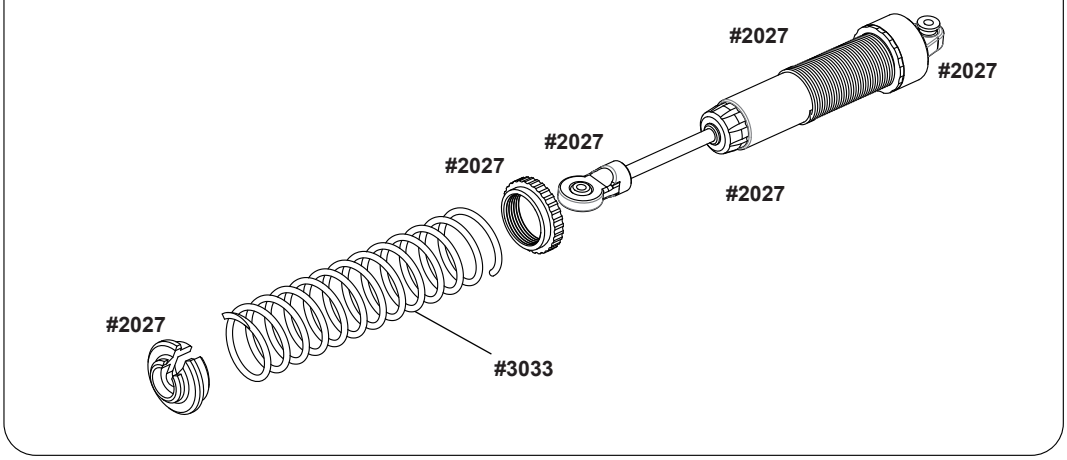
Z903
2.5mm

Cross Wrench
ミニクロスレンチ

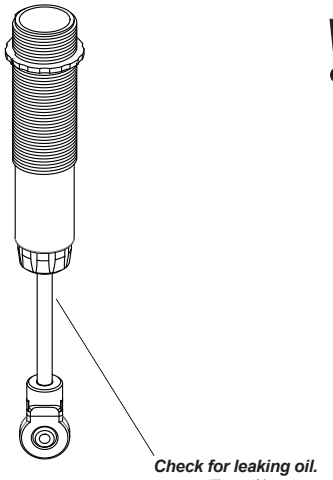
Needle Nosed Pliers
ラジオペンチ

This step same for front and rear.
図を参考にフロント、リヤ側を同様に作業してください。



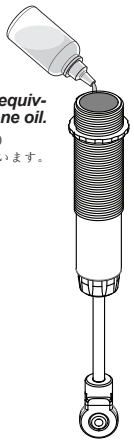


Filling Oil Shocks
オイルの入れ方



Check for leaking oil.
オイルの漏れを確認します。

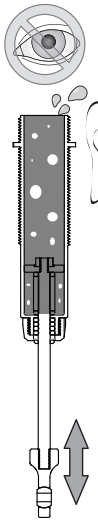
1 ***Shock Oil (Available separately)***
ショックオイル（別売 ）



Standard Setting
標準設定

Stock shock oil is equiv-alent to #1000 ***silicone oil.***
シリコンオイルの＃1000
（＃1000 ）に相当しています。

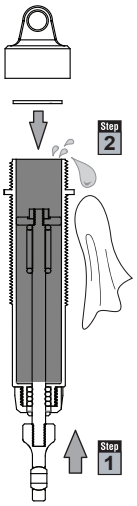
2



Use a Rag.
オイルを拭き取ります。

Move the shaft up and down slowly to remove all air bubbles.
ゆっくりピストンを動かし
空気を抜いてください。

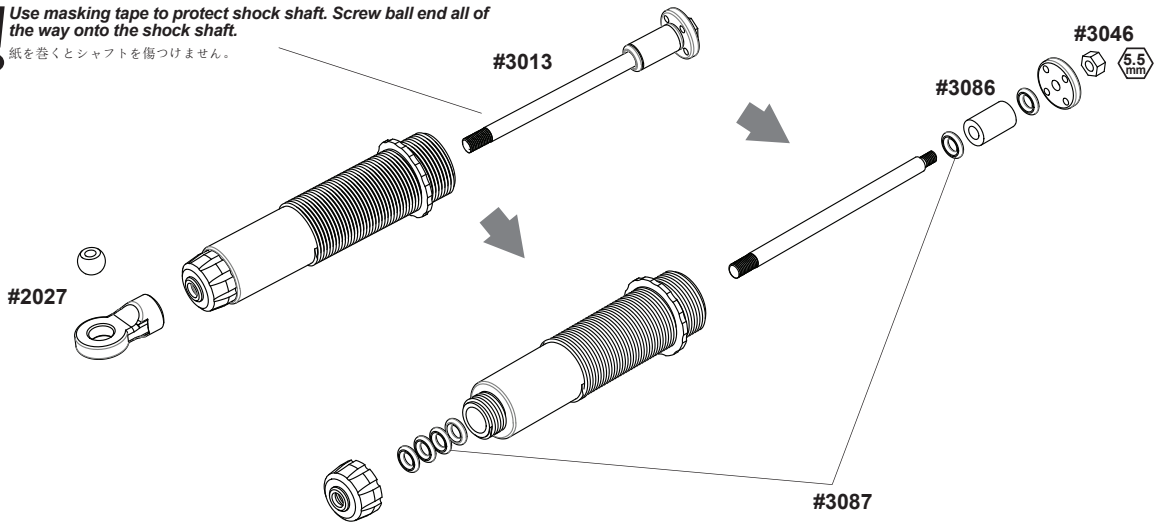
3



Compress shock shaft completely to remove excess oil.This ensures smooth shock travel after assembly.
スムーズにショックが動く様にシャフトを押し上げ、余分なオイルをふき取ります。

If shock shaft is bent, replace shock shaft and silicone O-rings.
シャフトが曲がっている時は、シリコンOリングと合わせて 交換してください。

Use masking tape to protect shock shaft. Screw ball end all of the way onto the shock shaft.
紙を巻くとシャフトを傷つけません。



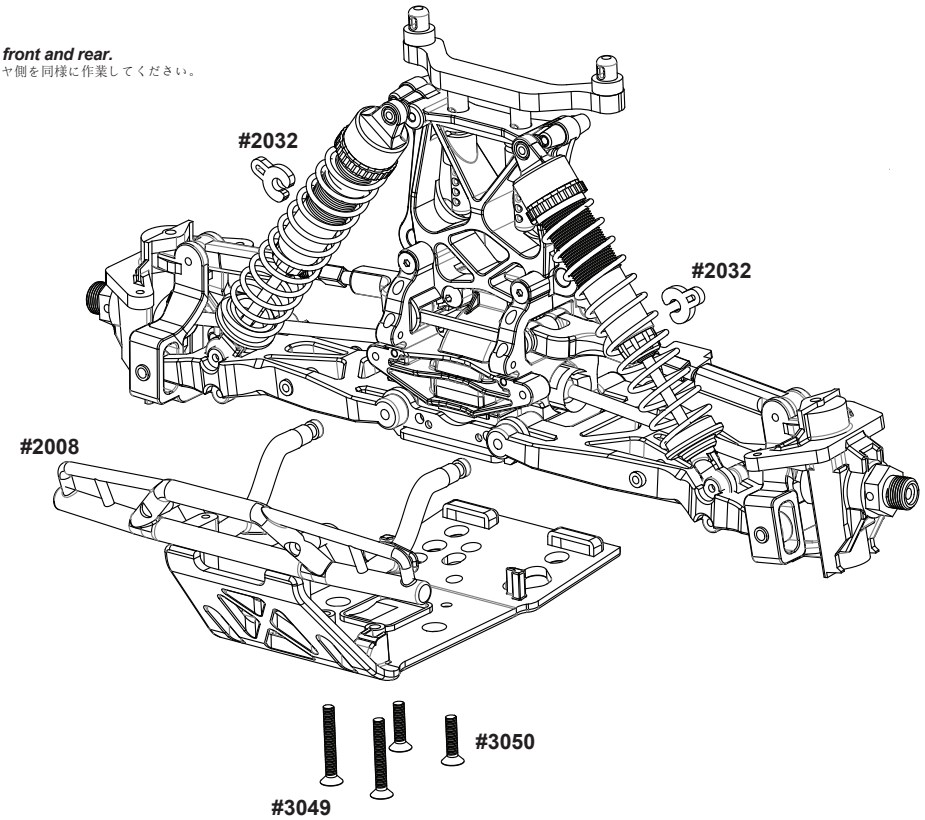
Installation is reverse of removal
組み立ては逆の手順で図を参考にしてください。

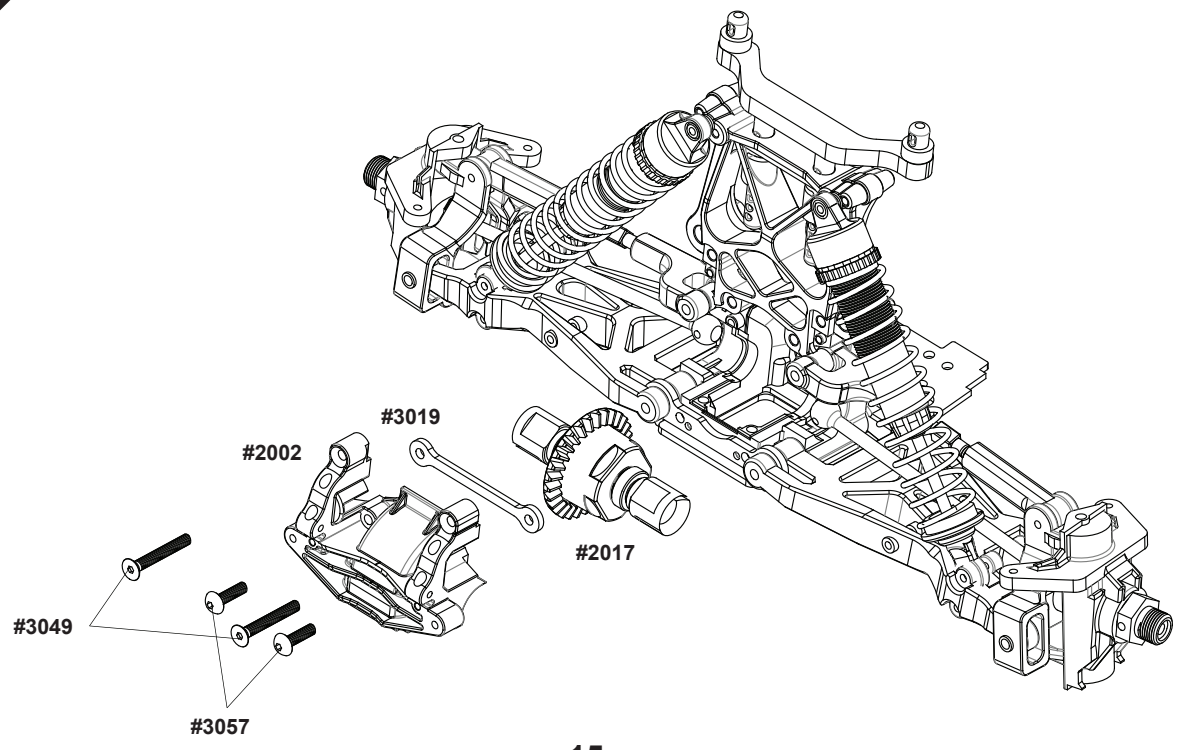
Diffrential Maintenance
デフのメンテナンス

This step same for front and rear.
図を参考にフロント、リヤ側を同様に作業してください。

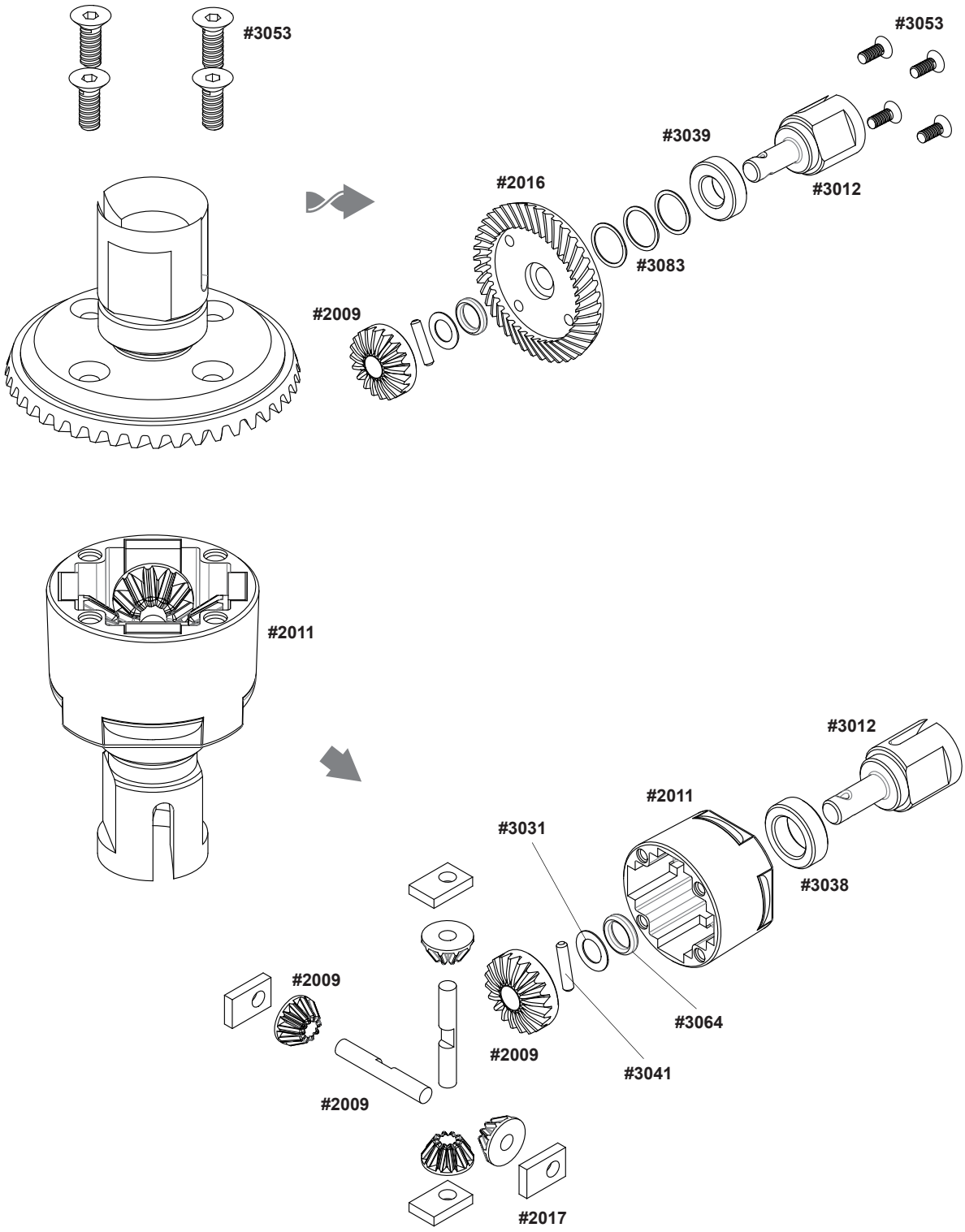
Grease
グリス

Thread Lock
ネジロック剤





If parts are damaged, repair or replace them according to the instruction below.
消耗した部品を交換します。

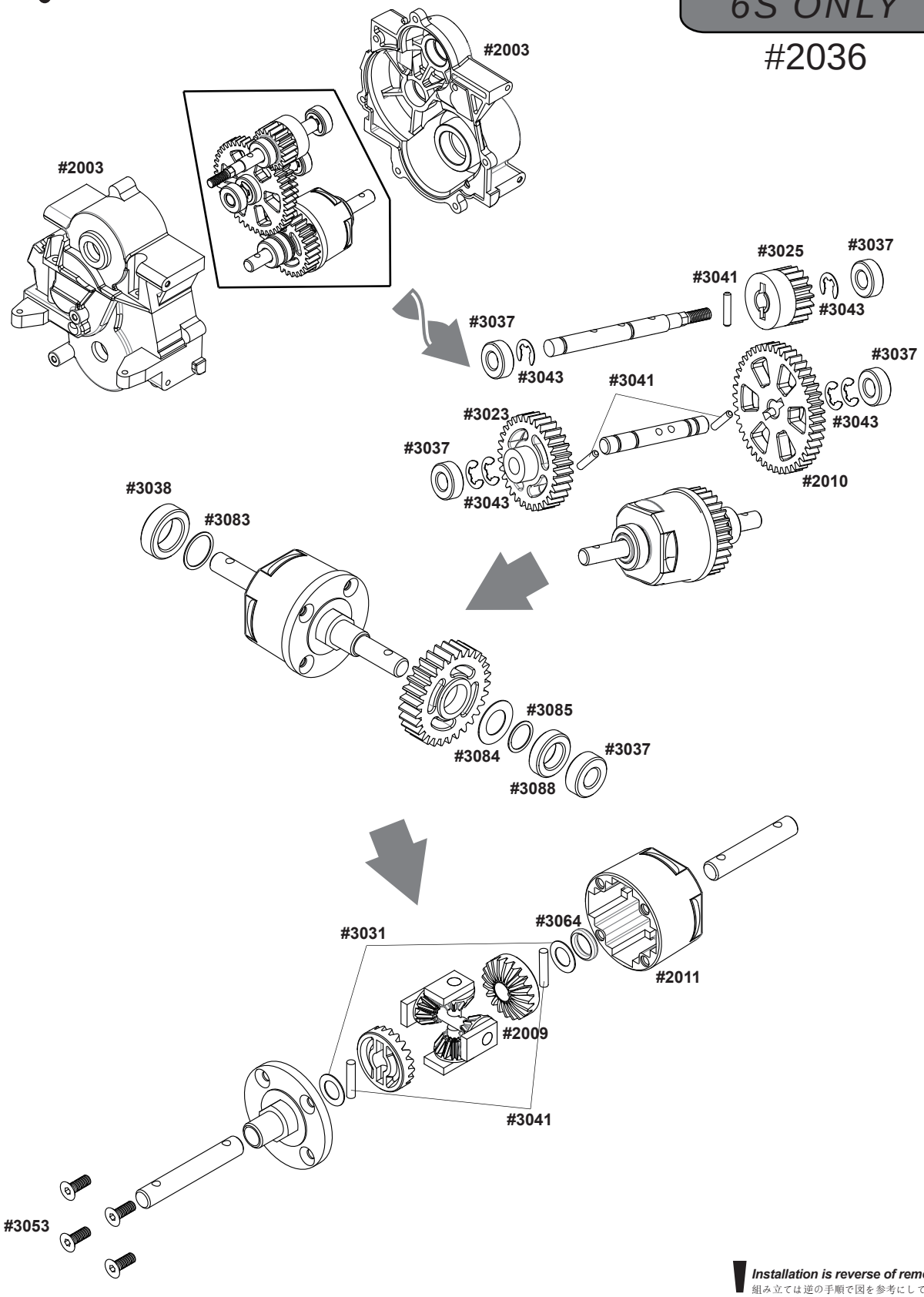


Installation is reverse of removal.
組み立ては逆の手順で図を参考にしてください。

Center Diff 6S ONLY

#2036

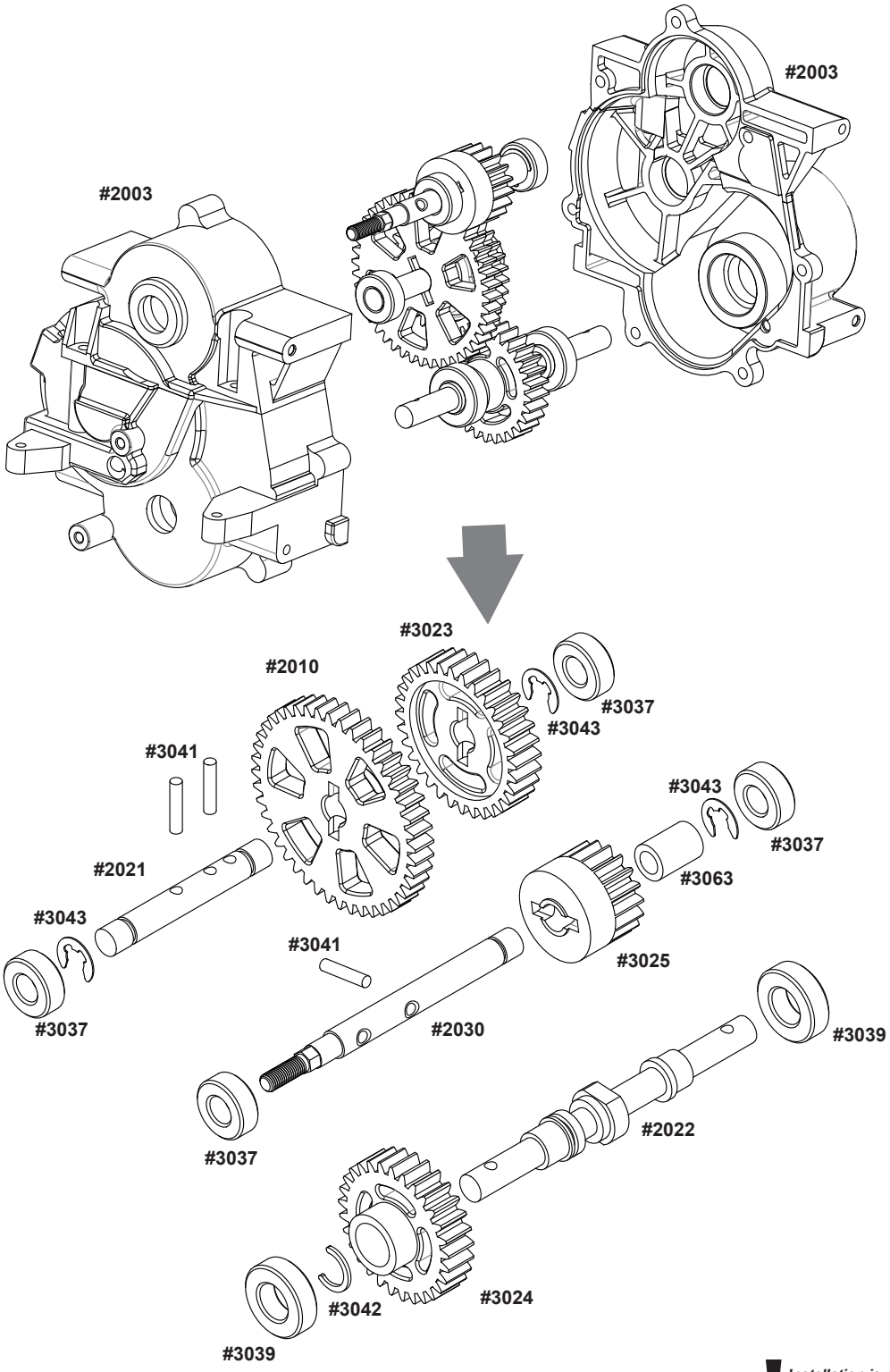
If parts are damaged, repair or replace them according to the instruction below.
消耗した部品を交換します。



Installation is reverse of removal.
組み立ては逆の手順で図を参考にしてください。

If parts are damaged, repair or replace them according to the instruction below.
消耗した部品を交換します。

Direct Shaft 4S ONLY



Installation is reverse of removal.
組み立ては逆の手順で図を参考にしてください。

DIGITAL PROPORTIONAL SYSTEM

2.4GHZ MT-303

SYSTEM FEATURES

Unique and functional pistol grip transmitter design
Well balanced for precise control
Non-slip foam steering wheel
Well placed digital trim & D/R levers
Optimum third channel switch location
Low Battery warning
Quick Binding and Fail Safe Setup
High performance micro 3 channel receiver
Ni-Cd charger jack in transmitter
Sound Beep

SYSTEM SPECIFICATIONS

Transmitter

Model: **MT-303**

FHSS Output Power: <100mW

Operating Voltage: 4.8 or 6V

Power Supply: 4 Cell Alkaline/Ni-Cd/Ni-MH

Weight: 15.2oz(433g) with Alkalines

Frequency/Modulation Type: 2.4GHz FHSS

Receiver

Model: **MR-300 or MR303**

Frequency: 2.4GHz FHSS

Operating Voltage: 4.8 or 6V

Weight: 0.26 oz (7.4g)
0.4 oz (11.6g)

Dimensions: 1.38 x 1 x 0.5 in (35.1 x 25.3 x 13 mm)
1.34x1.02x0.63in (34x26x16mm)

Fail Safe: Yes (All Channels)

FEATURES DESCRIPTIONS

Receiver Antenna Wire: The antenna wire receives the transmitter signal. The antenna wire should be installed through a nylon tube (antenna tube) in the vertical position for the best reception.

Auxiliary Channel 3 Switch: Controls Auxiliary Channel 3 High and Low servo travel.

Battery Compartment: Houses the 4 'AA' Alkaline batteries that power the transmitter.

Bind Button: Used in the process of Binding the transmitter and receiver.

Bind LED: Displays the current status of the transmitter and receiver pair.

Steering Dual Rate(D/R): The Dual Rate Keys are used to adjust the Steering Dual Rate quickly and easily during use.

Grip: The Grip is molded in an ergonomic shape for increased comfort, control and feel.

Power Indicator: Indicates that there is Power to the transmitter.

Power Switch: Turns the transmitter ON and OFF.

Steering Trim Lever (CH1): Used to adjust the center Trim of the Steering servo.

Steering Wheel(CH1): Proportionally operates the model's right and left steering control. The Steering Wheel features a molded grip for increased comfort, control and feel.

Throttle Trigger(CH2): Controls the speed of the model, both forward and backward, or the model's brake.

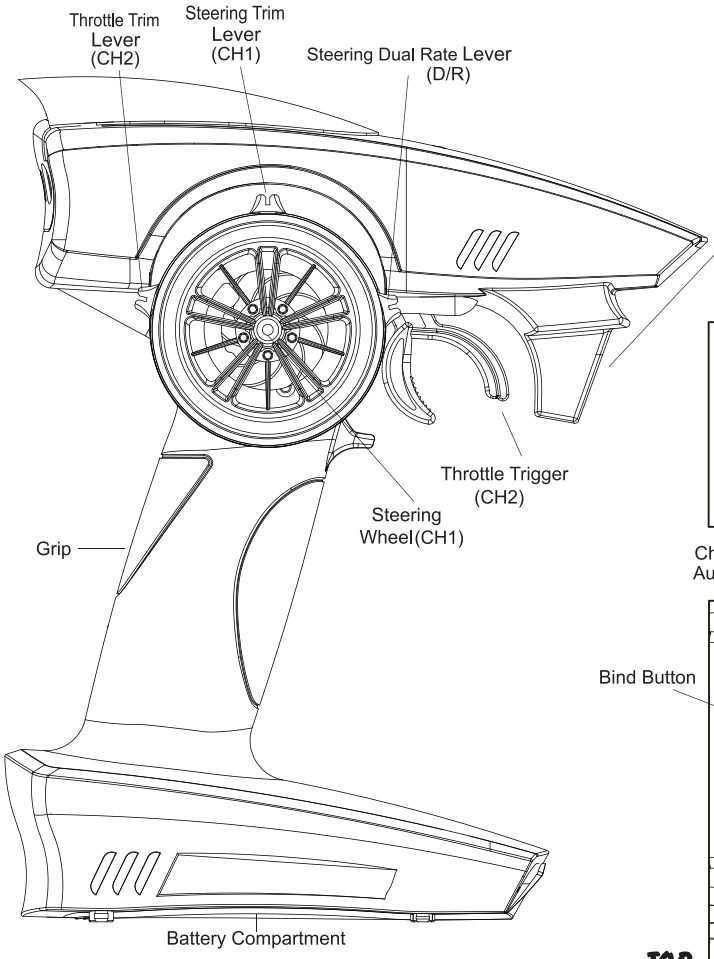
Throttle Trim Lever (CH2): Used to adjust the center Trim of the Throttle servo.

TRANSMITTER AND RECEIVER DIAGRAMS

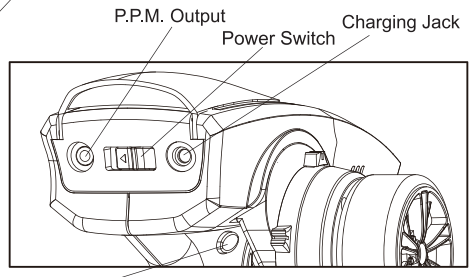
Use the diagram below to familiarize yourself with the different parts of your **MT-303** transmitter and **MT-303(MR-300)** receiver.
Descriptions of these parts can be found in the transmitter and receiver layout.

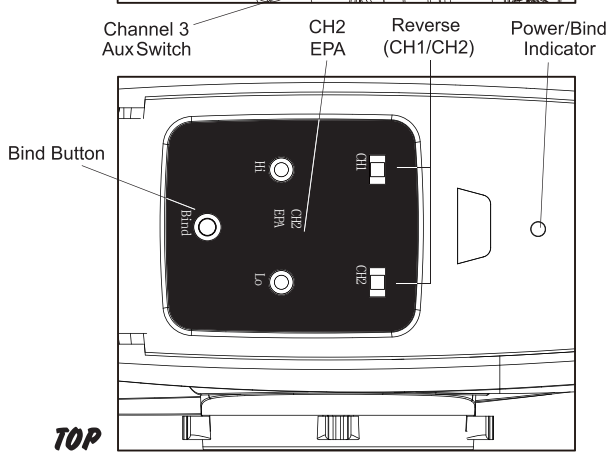
⚠ The transmitter antenna is mounted internally and is located in the front portion of the transmitter. When you're driving your model, hold the transmitter so that it's orientated as close to vertical as possible at all times and try not to 'follow' your model with the transmitter. This provides the best RF signal between the transmitter and the receiver. Do NOT cover the front of the transmitter in any way during use! Doing so can block the RF signal, resulting in the loss of control of your model.

FRONT



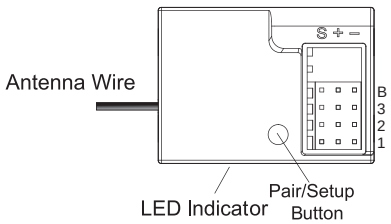
BACK





TOP

RECEIVER

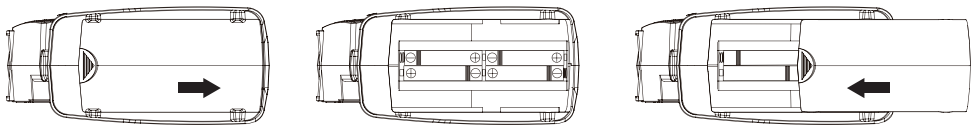


Channel Output

"1": Steering(CH1)
"2": Throttle(CH2)
"3": AUX (CH3)
"B": Power

TRANSMITTER BATTERY INSTALLATION

To Open slide cover | Install Batteries | To Close slide cover



1. Press down on the battery cover and slide in the direction of the arrow to remove.
2. Install 4 AA alkaline cells (or Ni-Cd, or Ni-MH) as indicated inside the battery compartment. Make sure to match the polarity (+ and -) as shown in the battery compartment or the transmitter will not function.
3. Install the battery cover in place and slide to close.

WARNING: Improper installation of transmitter batteries can cause serious damage to your system.

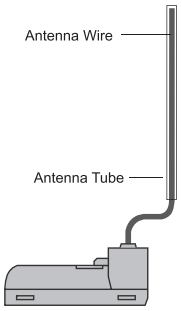
RECEIVER CONNECTIONS AND MOUNTING

Use the diagram below to familiarize yourself with how to connect the switch harness, servos (available separately), and the 4 cell battery holder to your **MT-303(MR-300)** 3-Channel receiver.

1) Install four fresh 'AA' Alkaline batteries into the battery holder, making sure that the polarity is correct. The direction that each battery should be installed is molded into the battery holder (+ Positive and - Negative).

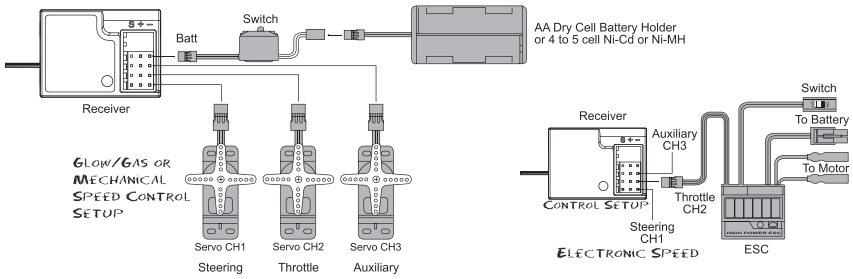
⚠ The **MT-303(MR-300)** 3-Channel receiver's Nominal Input Voltage is 3.6v~7v, therefore, the receiver can be powered powered using a 4 or 5 cell Ni-Cd or Ni-MH battery pack (available separately).

- We suggest Binding the transmitter and receiver and setting the Fail Safe position, prior to mounting the receiver in your model.
- The receiver should be mounted as far away from any electrical components as possible.
- Route the antenna wire up through a plastic tube so that it is in the vertical position.
- To protect the receiver from vibration and other damage, we recommend wrapping the receiver in shock absorbing foam rubber when installing it in your model.



⚠ Set your model on a stand so the wheels are off the ground before turning on your radio control system or connecting your motor for the first time.

⚠ The receiver does not feature BEC circuitry. If using an electronic speed control, verify that it features BEC circuitry to drop the receiver voltage between 3.6v~7v.

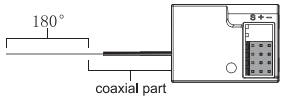


RECEIVER'S ANTENNA INSTALLATION

The wave length of the 2.4GHz is much shorter than that of the conventional frequencies, it is very susceptible to loss of signal which results in a receiving error.

To obtain the best results, please refer to the following instructions;

1. The antenna must be kept as straight as possible. Otherwise it will reduce the effective range.
2. The antenna should be perpendicular to the model. Larger models can have large metal objects that can attenuate the RF signal. In this case the antennas should be placed at sides of the model. Then the best RF signal condition is obtained at any attitude.
3. The antennas must be kept away from conductive materials, such as metal and carbon by at least a half inch. The coaxial part of the antennas does not need to follow these guidelines, but do not bend it in a small radius.
4. Keep the antennas away from the motor, ESC, and other noise sources as much as possible.



*The main purpose of the photo demonstrates how the antenna should be placed. For actual installation the receiver must be wrapped with a sponge or placed with floating material to protect it from vibration.

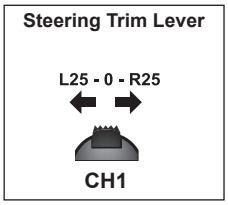
The receiver contains precision electronic parts. It is the most delicate radio component on-board the model and should be protected from vibration, shock and temperature extremes. To protect the receiver, wrap it in R/C foam rubber or other vibration-absorbing material. If appropriate, waterproof the receiver by placing it in a plastic bag and closing the open end with a rubber band before wrapping it in foam. If moisture enters the receiver, intermittent operation or a failure may result. Wrapping the receiver in a plastic bag also protects it from fuel and exhaust residue which, in some models, can work its way into the model.

STEERING TRIM(CH1)

Steering neutral adjustments can be made by moving the steering trim lever to the left or right.
When you install a servo, always check to be sure the servo is at its neutral position. Adjust the servo horn position and linkage so both are parallel. Be sure the steering trim on the transmitter is at the neutral position.

Trim Operation And Maximum Travel
Changing the trim can affect the overall settings. When adjustments are made with the trims, recheck your installation for maximum travel. (Steering D/R at 100%)

When Trim Usage Is Extreme
If it takes most of your trim movement to get a servo to the neutral position, reposition the servo horn on the servo and inspect your linkage installation.

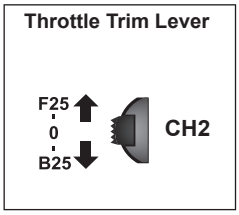


THROTTLE TRIM(CH2)

Throttle neutral adjustments can be made by moving the throttle trim lever to the up or down. When using an electronic speed control, set the throttle trim to neutral and make adjustment to the speed control. On a gas powered model, set the trim to neutral and adjust the linkage to the point where the carburetor is fully closed in accordance with the engine instruction manual.

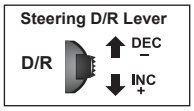
Trim Operation And Travel
Trim adjustments will affect the overall servo travel. Check the brake side (backward) movement when changes are made.

When Trim Movement Is Extreme
If you use most of the trim movement to get the servo to the neutral position, recenter the servo horn closer to the neutral position and inspect your throttle linkage.



STEERING DUAL RATES(D/R-CH1)

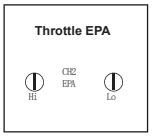
Use this function to adjust the steering travel of your model. If the model understeers while cornering, add steering by pressing the lower side of the D/R button. When the model oversteers, take away steering by pressing the upper side of the D/R button.



THROTTLE END POINT ADJUSTMENT(EPA-CH2)

This function is used to adjust the forward and brake side servo travel. Each direction can be adjusted independent of each other. Use this feature to set the throttle servo travel.

⚠ Be sure that your throttle linkage does not apply excessive force to the servo. If your linkage installation causes an unreasonable amount of force to be applied to the servo, the servo may be damaged and result in loss of control.

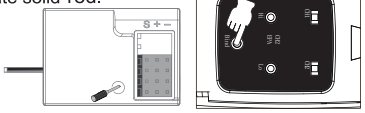


TRANSMITTER AND RECEIVER BINDING

The Binding function allows you to Bind the transmitter and receiver pair. When new, it is necessary to pair the transmitter and receiver to prevent interference from radio controllers operated by other users. This operation is referred to as 'binding'. Once the binding process is complete, the setting is remembered even when the transmitter and receiver are turned OFF. Therefore, this procedure usually only needs to be done once.

⚠ Before beginning the binding process, connect the switch harness, servos, and the receiver battery to your **MT-303(MR-300)** 3-Channel receiver, using the diagram on page 5. Make sure that both the transmitter and the receiver receiver are turned OFF.

1) Turn the transmitter ON. The Power Indicator on the transmitter will illuminate solid red.
2) Press and hold the receiver setup button,then turn the power switch on the ON position. The receiver LED will flash quickly. Release the setup button after 1 second.
3) Press and hold the binding button on the transmitter for 1 second until the LED on the receiver is continuously lit.



⚠ When the binding process is successful, the Bind LED on the receiver will stay solid red when both the transmitter and receiver are turned ON. If the Bind LED on the receiver is flashing rapidly or not illuminated at all, the transmitter and receiver are not paired. In this case, turn both the transmitter and receiver OFF, then repeat the binding process.

⚠ Under some circumstances, the receiver may not operate after turning the transmitter and receiver ON. If this occurs, perform the binding process again.

FAIL SAFE SETUP

Please note the setup must based on pair procedure well.

1. Turn the power switch on the transmitter & receiver to the ON position, the LED on transmitter & receiver are continuously lit.
2. Move the steering wheel or throttle trigger to the position where you want the servo to move, press and hold the receiver setup button for 2 second until the red LED on the receiver flash slowly, then press and hold the receiver setup button again within 5 seconds (Note: after 5 seconds F/S setup will reset, you have to start over at step one above) until the receiver LED is continuously lit, that's mean the F/S function has been correctly set.
3. Verify if the failsafe function has been correctly set. Turn off the transmitter, then check if the servos moves to the position that you set.
4. Any new binding (pair procedure) will clear the preset Fail-Safe.

ESC Instruction

【DECLARATION】

Thanks for purchasing our Electronic Speed Controller (ESC). The power system for RC model can be very dangerous, so please read this manual carefully. In that we have no control over the correct use, installation, application, or maintenance of our products, no liability shall be assumed nor accepted for any damages, losses or costs resulting from the use of the product. Any claims arising from the operating, failure of malfunctioning etc. will be denied. We assume no liability for personal injury, consequential damages resulting from our product or our workmanship.

【FEATURES】

Completely water-proof and dust-proof. The ESC works properly even under water.
(Please remove the cooling fan when running car in water, and after running, please make the ESC clean and then dry it to avoid the oxidation of copper connectors)
Excellent start-up, acceleration and linearity features, suitable for truggy (especially short course trucks) and buggy.
The built-in switching mode BEC has powerful output to supply all electronic equipments.
There is a mounting stand for installing the ESC on chassis easily and firmly.
Proportional ABS brake function with 5 steps of maximum brake force adjustment, 8 steps of drag-brake force adjustment. Also compatible with the mechanical disc-brake system.
Multiple protection features: Low voltage cut-off protection / Over-heat protection / Throttle signal loss protection / Motor blocked protection
Easily programmed with the SET button of the ESC, and also compatible with pocket-sized Program Card.
External Programming Port (EPP), easy to connect with program card, and also works as power port for cooling fan.

【Specifications】

Model	WP-SC10-RTR	WP-SC8-RTR	WP-SC8-ADV-RTR	WP-S8A-RTR	WP-S8B-RTR
Cont./Burst Current	80A / 520A	120A/760A	120A/760A	100A/650A	150A/950A
Motor Supported	Sensorless brushless motors				
Cars Applicable	1/10 SCT/Truggy/ Buggy/Monster	1/10 SCT/Truggy/Buggy/Monster 1/8 SCT/Buggy Incl. Traxxas 1/10 Truggy/Buggy		1/8 SCT/Buggy/Truggy Incl. Traxxas 1/10 Truggy/Buggy	1/8 Truggy/Monster
Motor Limit	2S Lipo: KV≤6000 3S Lipo: KV≤4000	2S Lipo: KV≤6000 3S Lipo: KV≤4000 4S Lipo: KV≤2600			4S Lipo: KV≤3000 6S Lipo: KV≤2400
Resistance	0.0007 ohm	0.0004 ohm		0.0005 ohm	0.00035 ohm
Battery	6-9 cells NiMH 2-3S Lipo	6-12 cells NiMH 2-4S Lipo			9-18 cells NiMH 3-6S Lipo
BEC Output *Note 1*	6V/3A Linear mode	6V/3A Switch mode			
Dimension	59.3(L) × 38.4(W) × 33.6(H)			59.5(L)×48(W)×42(H)	
Weight (With Wires)	110g	113g		173g	178g

***NOTE1** : The cooling fans of ESC is supplied by the built-in BEC, so it is always working under 6V .*

【Begin To Use The New ESC】

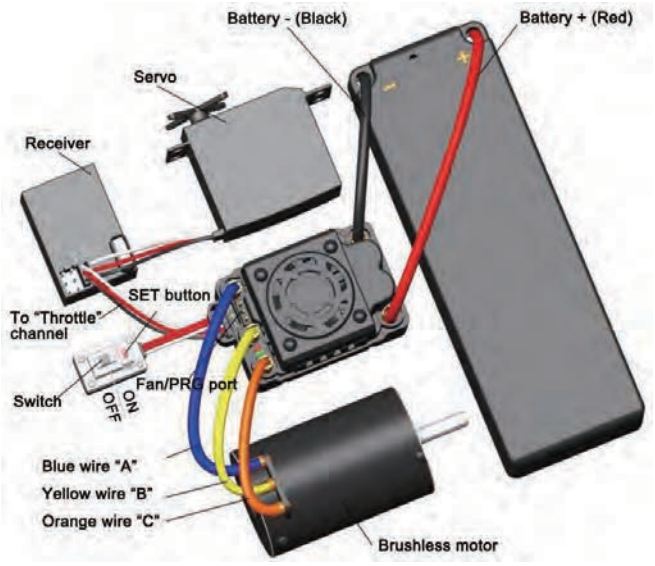
WARNING! For safety, please always keep the wheels away from the track when switching on the ESC.

1. Connect The ESC, Motor, Receiver, Battery And Servo

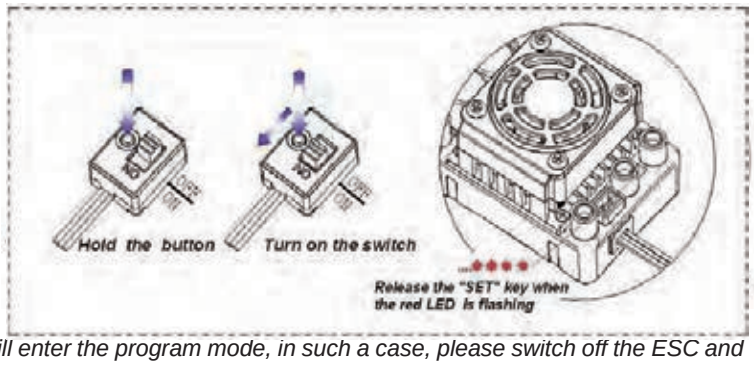
The #A, #B, #C wires of the ESC can be connected with the motor wires freely (without any sequence). If the motor runs in the opposite direction, please swap any two wire connections.

2. Throttle Range Setting (Throttle Range Calibration)

In order to make the ESC match the throttle range, you must calibrate it when you begin to use a new ESC, or a new transmitter, or change the settings of neutral position of the throttle stick, ATV or EPA parameters, etc.
The following pictures show how to set the throttle range with a **Futaba**™ transmitter.

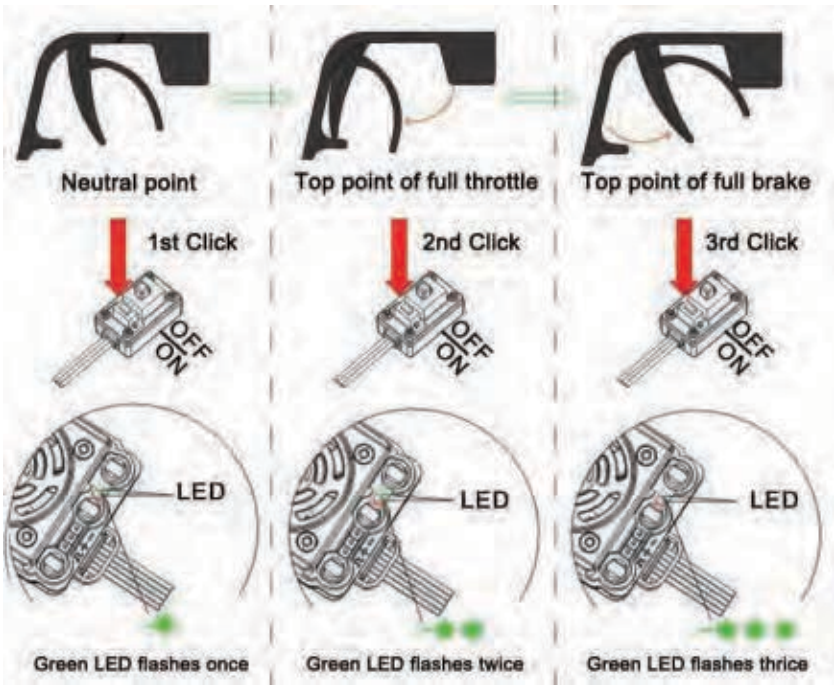


A) Switch off the ESC, turn on the transmitter, set the direction of throttle channel to "REV", set the "EPA/ATV" value of throttle channel to "100%", and disable the ABS function of your transmitter.
B) Hold the "SET" key and then switch on the ESC, and release the "SET" key as soon as possible when the red LED begins to flash. (***Note2***)



Note2: *If you don't release the "SET" key as soon as the red LED begins to flash, the ESC will enter the program mode, in such a case, please switch off the ESC and re-calibrate the throttle range again from step A to step D.*

C) Set the 3 points according to the steps shown in the pictures on the right side.
1) **The neutral point**
Move the throttle stick at the neutral point, and then click the SET key, the green LED flashes 1 time.
2) **The end point of forward direction**
Move the throttle stick at the end point of forward direction, and then click the SET key, the green LED flashes 2 times.
3) **The end point of backward direction**
Move the throttle stick at the end point of backward direction, and then click the SET key, the green LED flashes 3 times.
D) Throttle range is calibrated; motor can be started after 3 seconds.



3. Check LED Status In Normal Running

When the throttle stick is in the neutral range, neither the Red LED nor the Green LED lights up.
When the car moves forward, the Red LED solidly lights; the Green LED also lights up when the throttle stick is at the top position (100% throttle).
When the car brakes, the Red LED solidly lights; the Green LED also lights up when the throttle stick is at the bottom position and the maximum brake force is set to 100%.
When the car reverses, the Red LED solidly lights.

【PROGRAMMABLE ITEMS LIST】(***The italics texts in the following form are the default settings***)

Programmable Items	Programmable Value								
	1	2	3	4	5	6	7	8	9
1. Running Mode	Forward with Brake	*Forward/Reverse with Brake*	Forward and Reverse						
2.Drag Brake Force	*0%*	5%	10%	20%	40%	60%	80%	100%	
3.Low Voltage Cut-Off Threshold	Non-Protection	2.6V/Cell	2.8V/Cell	*3.0V /Cell*	3.2V /Cell	3.4V /Cell			
4.Start Mode(Punch)	Level1	Level2	Level3	Level4	*Level5*	Level6	Level7	Level8	Level9
5.Max Brake Force	25%	*50%*	75%	100%	Disable				

1. Programmable Values

1.1. **Running Mode:** In "Forwardwith Brake" mode, the car can go forward and brake, but cannot go backward, this mode is suitable for competition; "Forward/Reverse with Brake" mode provides backward function, which is suitable fordaily training.
Note: "Forward/Reverse with Brake" modeuses "Double-click" method to make the car go backward When you

Parts List

Parts #	Description
2000	MOUNTED MT4x4 TIRE S COMPOUND ON REV WHEEL BLACK(2pcs)
2002	COMPOSITE GEAR BOX CASE
2003	CENTER GEAR BOX CASE
2004	ADJUSTABLE UPPER ARM SET(2pcs)
2005	STEERING CRANK/SERVO SAVER/ESC MOUNT SET
2006	RADIO BOX SET
2007	BIG BORE SHOCK SET (ASSEMBLED/4pcs)
2008	SKID PLATE/BUMPER SET
2009	4 BEVEL GEAR SET (GEAR DIFF)
2010	IDLER GEAR 44T / SHAFT SET
2011	ALLOY DIFF CASE
2012	MOTOR PLATE 3.0mm (BLACK)
2013	STEERING POST 12x47mm (BLACK)
2014	MOTOR MOUNT PLATE 8mm (BLACK/DIECASTING/2pcs)
2015	MOTOR MOUNT BRACE 7x7x80mm (BLACK)
2016	HELICAL TYPE DIFF BEVEL GEAR 29T/9T SET
2017	HELICAL TYPE DIFF UNIT
2018	PINION GEAR 20 TOOTH (1M / 5mm SHAFT)
2019	17mm HEX WHEEL HUB CONVERSION UNIT (FRONT/2pcs)
2020	17mm HEX WHEEL HUB CONVERSION UNIT (REAR/2pcs)
2021	DRIVE SHAFT 6x45mm (BLACK)
2022	GEAR SHAFT 6x12x78mm (BLACK)
2023	CUP JOINT(FRONT/REAR DIFF/2pcs)
2024	CUP JOINT(CENTER DIFF/2pcs)
2025	STEERING CRANK POST 6x49mm(BLACK/2pcs)
2026	CUP JOINT HOLDER SET(2pcs)
2027	SHOCK PARTS SET(2pcs)
2028	BATTERY BOX SET (RIGHT/LEFT)
2029	MAIN CHASSIS SET 2.5mm (BLACK)
2030	HEAVY DUTY SPUR GEAR 44 TOOTH
2031	SUPER HEAVY DUTY AXLE 8x11x44mm (2pcs)
2032	BATTERY BOX HOLDER/ROD END/GEAR BOX MOUNT SET
2033	SHAFT 3.85x51mm (SILVER/2pcs)
2034	SHAFT 3.85x61mm (SILVER/2pcs)
2035	17mm HEX WHEEL HUB SET（BLACK/2pcs)
2036	CENTER DIFFERENTIAL SET
2037	MT4x4 PAINTED BODY (RED/BLACK/SILVER)
2038	MT4x4 PAINTED BODY (GREEN/BLACK/SILVER)
3000	BALL 3x6mm (BLACK/2pcs)
3001	STEERING ROD END(4pcs)
3002	BODY MOUNT(2pcs)
3003	REAR HUB (2pcs)
3004	UPRIGHT (2pcs)
3005	C HUB (2pcs)
3006	SUSPENSION ARM (2pcs)
3007	SHOCK MOUNT
3008	SHAFT 3.85x78mm (SILVER/2pcs)
3009	SHAFT 3.85x36mm (SILVER/2pcs)
3010	JOINT POST 4x6x74mm (2pcs)
3011	TURNBUCKLE M5x71mm (2pcs)
3012	DIFF SHAFT 9x11x34mm (2pcs)
3013	SHOCK SHAFT 3.5x90mm (2pcs)
3014	SUPER HEAVY DUTY DRIVE SHAFT 11x130mm (2pcs) Rear
3015	SUPER HEAVY DUTY DRIVE SHAFT 11x135mm (2pcs) Front
3016	DOGBONE 8x84mm (BLACK) Center Front
3017	DOGBONE 8x93mm (BLACK) Center Rear
3018	STAINLESS STEEL SLIPPER PLATE
3019	UPPER ARM BRACE 4x54x3mm (BLACK/2pcs)
3020	LOWER ARM BRACE 4x54x3mm (BLACK/2pcs)
3021	BULKHEAD LOWER PLATE 2.5mm(BLACK)
3022	SLIPPER CLUTCH HUB
3023	DRIVE GEAR 32 TOOTH (1M)
3024	IDLER GEAR 29 TOOTH (1M)
3025	DRIVE GEAR 18 TOOTH (1M)
3030	CAP HEAD SCREW M3x40mm (6pcs) 2.5mm Hex Socket
3031	WASHER 6x11x0.3mm (10pcs)
3032	ALUMINUM STEERING SERVO HORN (25) Futaba/HPI/FDM
3033	SHOCK SPRING 1.8*20*125mm (STANDARD/2pcs)
3034	BODY PIN (8mm/BLACK/LARGE/10pcs)
3035	SCREW SHAFT M4x2.5x12mm (BLACK/2pcs) 2.5mm HexSocket
3036	BALL BEARING 6x10x3mm (4pcs)
3037	BALL BEARING 6x13x5mm (4pcs)
3038	BALL BEARING 10x16x5mm (4pcs)
3039	BALL BEARING 8x16x5mm (4pcs)
3040	PIN 3.0x16mm (5pcs)
3041	PIN 2.5x12mm (10pcs)
3042	C CLIP 8mm (5pcs)
3043	E CLIP E5mm (10pcs)
3044	E CLIP E3mm (10pcs)
3045	LOCK NUT M4 (10pcs)
3046	LOCK NUT M3 (10pcs)
3047	O-RING 3.75x5x1.8mm(BLACK/10pcs)
3048	WASHER 3.0x7.0x1.0mm (10pcs)
3049	CAP HEAD SCREW M4x30mm (10pcs) 3.0mm Hex Socket
3050	CAP HEAD SCREW M4x8mm (10pcs) 3.0mm Hex Socket
3051	CAP HEAD SCREW M3x20mm (10pcs) 2.5mm Hex Socket
3052	FLAT HEAD SCREW M3x16mm (HEX SOCKET/10pcs) 2.0mm Hex Socket
3053	FLAT HEAD SCREW M3X8MM (HEX SOCKET/10PCS) 2.0mm Hex Socket
3054	FLAT HEAD SCREW M4X30MM (HEX SOCKET/10PCS) 2.5MM HEX SOCKET
3056	FLAT HEAD SCREW M4X12MM (HEX SOCKET/10PCS) 2.5MM HEX SOCKET
3057	BUTTON HEAD SCREW M4x16mm (Hex Socket/10pcs) 2.5MM HEX SOCKET
3058	BUTTON HEAD SCREW M4x10mm (Hex Socket/10pcs) 2.5MM HEX SOCKET
3059	BUTTON HEAD SCREW M3x16mm (HEX SOCKET/6pcs) 2.0MM HEX SOCKET
3060	BUTTON HEAD SCREW M3x10mm (HEX SOCKET/10pcs) 2.0MM HEX SOCKET
3061	SET SCREW M4x4mm (10pcs) 2.5mm Hex Socket
3062	SET SCREW M4x10mm (10pcs) 2.5mm Hex Socket
3063	SPACER 6x8x11
3064	O-RING 6x9.5x2mm(BLACK/10pcs)
3065	SLIPPER CLUTCH PAD (2pcs)
3066	Nylon Strap (3.5x150mm/Black/20pcs)
3067	WP-S8A-RTR (Hobby Wing)
3068	GEAR COVER
3069	BLADDER 16x5mm (FLAT TYPE/4pcs)
3071	DOUBLE-SIDED TAPE
3072	THREAD LOCK
3073	SILICONE DIFF OIL #1000 60cc
3074	MT303 2.4GHz TRANSMITTER (2.4GHz/3ch) (Merit)
3075	MR303 RECEIVER (2.4GHz /3ch) (Merit)
3076	SD-1 SERVO (METAL GEAR/15.0kg-cm 6.0V)
3077	2200Kv BRUSHLESS MOTOR
3078	WP-S8B-RTR (Hobby Wing)
3079	SPRING 4.9x8x7mm
3080	WASHER 4.3x10X1.0mm
3081	WASHER 4x9x0.8mm
3082	1900KV BRUSHLESS MOTOR
3083	WASHER 10x12x0.3mm
3084	WASHER 8x14x0.3mm
3085	WASHER 18x10x0.3mm
3086	WASHER 4.2x7x12mm
3087	O-RING 3.75x1.8mm(BLACK/10pcs)
3088	BALL BEARING8x14x4mm (4pcs)

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