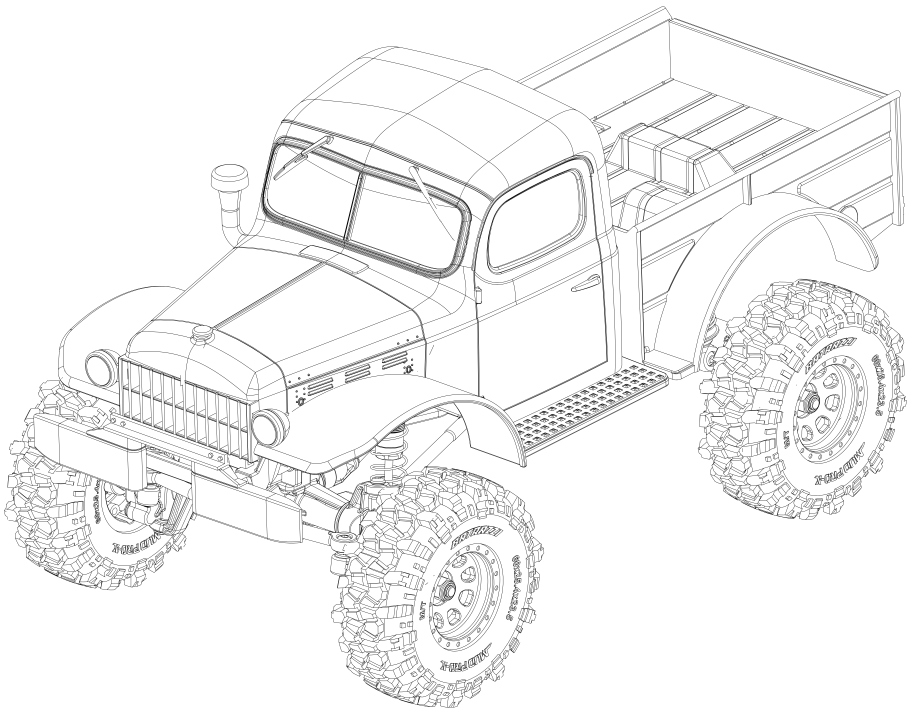




1:24 FCX24 POWER WAGON



Instruction Manual
操作手册

MAN-G0218



SAFETY PRECAUTIONS 安全保障措施

Introduction 指引

Thank you for purchasing our products.

This manual is written to assist you in properly operating, maintaining and repairing the vehicle. As many of the components used are unique to this product, please retain this manual as a future reference. Composed of precision-made components, this product is not a toy, thus it is not suited for children under 14 years of age. Minors should be accompanied by an adult when operating. Failure to operate or maintain this product in a safe manner can result in bodily harm. It is the owner responsibility to operate this product in a safe manner. FMS and its distributors are not responsible in any way for any and all bodily harm and/ or property damage that may result from the use of this product.

感谢您购买我们的产品。

本手册旨在帮助您正确操作、维护和修理车辆。由于本品所涉部件多数为特有部件，请保留本手册作为未来参考之用。

本产品由精密部件组成，并非玩具，因此不适合 14 岁以下的少年或儿童使用。未成年人操作时应有人陪同。未能以安全的方式操作或维护本产品可能会导致人身伤害。以安全的方式操作本产品是所有者的责任。FMS 及其分销商对使用本产品可能导致的任何和所有人身伤害和/或财产损失概不负责。

Safety, precautions and warnings 安全、预防措施及警告

- Replace damaged components with original factory-parts.
- Pay special attention to the polarity of all vehicle wiring.
- Use common sense when selecting the environment to operate your vehicle. Do not operate near power cables, cellular/radio towers, water or unstable terrain. The operator is solely responsible for their actions.
- The product is composed of precision electrical components. It is critical to keep the product away from moisture and other contaminants.
- Always check the radio range of the vehicle prior to operation in order to prevent radio loss or interference.
- Operate this product within your ability. If the vehicle is dangerous to retrieve, it never worth the risk.
- Always turn on the transmitter before connecting the battery on the model. When turning off the model, always disconnect the battery first, and then turn off the model, always disconnect the battery first, and then turn off the transmitter. If this order is reversed, the model may become uncontrollable and cause serious damage.
- Never allow transmitter batteries to run low as it may cause loss of vehicle control.
- Plastics on the vehicle are susceptible to damage or deformation due to extreme heat and cold climate. Do not store the model near any source of heat such as oven or heater. Store the model indoors, in a climate-controlled, room temperature environment.
- 请使用原厂部件更换损坏的部件。
- 特别注意所有车辆接线的正负极。
- 务必选择合适的环境操作遥控模型，所选环境需远离电缆、无线电台、水域及不稳定地形。本品操作者对其行为全权负责。
- 本品由精密电子部件构成。请勿将本品暴露于潮湿的环境或者其他污染物中，以免损坏。
- 确保每次操作前检查车辆的无线接收范围，以防止无线信号丢失或受干扰。
- 在您的能力范围内操作此产品。在任何时候，如果车辆操作有危险，则绝对不值得冒险。
- 通电方式：务必先开遥控器再将车通电。断电方式：务必先将车断电再关遥控器。以上顺序如逆转，则可能引起遥控模型失控，导致人身伤害或财产损失。
- 遥控器电池电量不足时，不要操作模型车，以免失控。
- 模型产品上的塑胶件容易因极冷或极热气候出现变形或损坏的状况。所以请将模型产品存放在气候受控的室温环境中，切勿靠近任何热源，如烤箱或暖器等。

This product is not a toy! (14+) Recommended for ages 14 and up. Adult supervision required for ages under 14 years old. Contains small parts, keep out of reach of children 3 years of age and younger.

使用前请仔细阅读本手册。我们不对任何故意损坏或不当使用负责。这个产品不是玩具！建议14岁及以上者使用。14岁以下的用户，需要在成年人监督下使用。本产品部分包含小零件，请务必保证3岁及以下儿童不能接触本产品。



MADE IN CHINA

Certifications 认证相关

DoC Declaration DoC 自我说明

Hereby, we declare that the Radio Equipment [【FMS-G3&FMS-R3A】] is in compliance with RED 2014/53/EU.
特此，我们声明无线电设备【FMS-G3&FMS-R3A】符合 RED 2014/53/EU。

CE Warning CE 警告语

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

发射机的天线必须距离所有人员或其他发射机至少 20 厘米的间隔距离。必须将天线安装说明和满足射频讯号辐射的发射机操作规范提供给终端用户和安装人员。

Appendix 1 FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example use only shielded interface cables when connecting to computer or peripheral devices).

This equipment 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.

Caution!

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user authority to operate the equipment.

1. Move all your channels to the desired position.
2. Select [All channels] and then [Yes] in the confirmation box.

Environmentally friendly disposal

Old electrical appliances must not be disposed of together with the residual waste, but have to be disposed of separately. The disposal at the communal collecting point via private persons is for free. The owner of old appliances is responsible to bring the appliances to these collecting points or to similar collection points. With this little personal effort, you contribute to recycle valuable raw materials and the treatment of toxic substances.



RADIO SYSTEM 无线电系统

Safety symbols 安全符号

Pay close attention to the following symbols and their meanings. Failure to follow these warnings could cause damage, injury or death.

仔细阅读以下符号及其相关说明，如不按照以下指引进行操作，可能会导致设备损坏或人员伤亡。

 Attention 注意	Not following these instructions may lead to minor injuries. 如果使用者不按照说明方法操作，有可能导致操作者或他人受到轻微伤害。
 Warning 警告	Not following these instructions may lead to major injuries. 如果不按照说明方法操作，可能导致操作者或他人遭受较大伤害。
 Danger 危险	Not following these instructions may lead to serious injuries or death. 如果不按照说明方法操作，可能导致操作者或他人严重受伤，甚至遭受生命危险。

Safety Guide 安全信息

- Do not use the product at night or in bad weather like rain or thunderstorm. It can cause erratic operation or loss of control.
- Do not use the product when visibility is limited.
- Do not use the product on rain or snow days. Any exposure to moisture (water or snow) may cause erratic operation or loss of control.
- Interference may cause loss of control. To ensure the safety of you and others, do not operate in the following places:
 1. Near any site where other radio control activity may occur
 2. Near power lines or communication broadcasting antennas
 3. Near people or roads
 4. On any body of water when passenger boats are present
- Do not use this product when you are tired, uncomfortable, or under the influence of alcohol or drugs. Doing so may cause serious injury to yourself or others.
- The 2.4GHz radio band is limited to line of sight. Always keep your model in sight as a large object can block the RF signal and lead to loss of control.



Prohibited 禁止

- 请不要在夜晚或雷雨天气使用本产品，恶劣的天气环境有可能导致遥控设备失灵。
- 请不要在能见度有限的情况下使用本产品。
- 请不要在雨雪或有水的地方使用本产品。如果有液体进入到系统内部，可能会导致运行不稳定或失灵。
- 信号干扰可能导致设备失控。为保证您和他人的安全，请不要在以下地点使用本产品：
 - 1、基站附近或其他无线电活跃的地方
 - 2、人多的地方或道路附近
 - 3、有客船的水域
 - 4、高压电线或通信广播天线附近
- 当您感到疲倦、不舒服，或在摄入酒精或服食导致麻醉或兴奋的药物后，不要操作本产品。否则可能对自己或他人造成严重的伤害。
- 2.4GHz无线电波段完全不同于之前所使用的低频无线电波段。使用时请确保模型产品在视线范围内，大的障碍物将会阻断无线电频率信号从而导致遥控失灵模型失控。



Mandatory 强制

- Misuse of this product may lead to serious injury or death. To ensure the safety of you and your equipment, read this manual and follow the instructions.
- Make sure the product is properly installed in your model. Failure to do so may result in serious injury.
- Make sure to disconnect the receiver battery before turning off the transmitter. Failure to do so may lead to unintended operation and cause an accident.
- Ensure that all servos operate in the correct direction. If not, adjust the direction first.
- Make sure the model stays within the systems maximum range to prevent loss of control.
- 遥控设备使用不恰当可能导致操作者或他人严重受伤，甚至死亡。为保证您和设备的安全，请仔细阅读使用说明书并按照规定要求进行操作。
- 使用前必须确保本产品与模型安装正确，否则可能导致模型发生严重损坏。
- 关闭时，请务必先关闭接收机电源，然后关闭发射机。如果关闭发射机电源时接收机仍然在工作，将有可能导致遥控设备失控或者引擎继续工作而引发事故。
- 操控时，请先确认模型所有舵机的动作方向与操控方向一致。如果不一致，请调整好正确的方向。
- 当遥控距离较远时，有发生失控的可能，请适当缩短遥控距离。

Background 产品背景

The MUD MASTER is held every June in Manchac, near New Orleans, Louisiana, where there are dense swamps, rugged rocks, and dead woods, making it difficult for off-road vehicles to move.

Legend has it that this area was cursed by the Queen of Voodoo Mary Poppin, and there is a mysterious singing that attracts people to get lost in the jungle, and there is no return. The swamp is also home to giant alligators that can devour adults..The stories were chilling, but they drew waves of young people who ventured into this no-man's land, deep into the swampy hinterland, and garnered attention by sharing their location on Twitter. There are many people going in, and there are occasional unfortunate disappearances. But instead of deterring people from entering, it acts like a magnet to attract more visitors.

In fact, this is a very beautiful ancient forest. The founder of the race, Chandler Bing, was born and raised on a nearby farm. He believes that no matter how powerful the vehicle is, it is difficult to pass here, and no matter how deep the rut is, it is difficult to maintain a week. Human beings are insignificant in front of nature and should live full of humility and awe under the protection of nature. Therefore, in 2007.01.01, the MUD MASTER cross-country race was established to test the limits of people and machines, and at the same time, let the audience feel the pure power of nature. Mary Poppin is his college teacher and his second wife, alligators are a traditional local delicacy, and Gator Tail Bites is the most popular dish among racers.

The race is open to anyone with a minimum FIA C1 licence. However, it does not accept registrations or sponsorships from car manufacturers' teams, and does not allow the manufacturer's logo to be exposed. The purpose is to limit the entry of large capital and high technology, and to make the competition pure and simple. A significant portion of the competition's operating income is donated to local active environmental organizations for conservation and earth science education.

After 12 years of development, the scale and influence of the event has expanded year by year. In 2019, it was absorbed by the Amazon Rainforest Challenge and became the largest off-road racing carnival in the world. In recent years, with the advancement of electric vehicle technology, the proportion of hybrid racing cars is getting higher and higher, and pure electric vehicles have begun to join in 2021. Due to the extremely complex environment, most racing cars choose to install tractor tires. The huge herringbone pattern has a good mud removal effect. The customized short wheelbase chassis ensures the longitudinal passability of the racing car, and the portal axle is just starting line.

The initial participants were mostly local farmers, ranchers and crocodile breeders who had years of experience scrambling around in the mud, which is why their cars looked so much like tractors. William Butch is a newcomer to the event in 2020. His father is a large local cattle farmer, and he himself is responsible for the slaughter and beef sales. People nicknamed him Butcher. His car uses a lot of parts from agricultural vehicles, and the casing comes from the legacy of his uncle Douglas Butch, a 1949 POWER WAGON.

Because of the sturdy driving style, not playing cards according to common sense, and being familiar with the local climate and terrain, he has repeatedly won by surprise. Soon, the name of "Butcher Butch"spread.

To be continued...

PRODUCT INTRODUCTION 产品信息

作为曾经FCX24系列的第一款产品，小奇给我们带来了无数的快乐回忆。很高兴跟大家宣布我们迎来了小奇全新版本，焕然一新的涂装，搭配后车斗造型设计，加上全新造型的轮毂与Batrazzi泥地轮胎，更融入了FMS的无刷动力系统，令人充满期待！

底盘基于 FCX24 平台构建，保留了早期小奇车型的微型两速机械变速箱。此版本引入了全新的 1212 外转子无刷电机，提供显著更大的扭矩和异常平滑、精确的线性控制。外转子设计减少了噪音和振动，同时提高了高速性能和爬行能力。门式车轴是另一个突出特点，增加了离地间隙，显著提升了越野能力，尤其是在低速穿越极端障碍物时。

为了提高耐用性，底盘包括金属连杆。此外，还有各种升级部件可供选择，如金属差速器、万向节传动轴、金属齿轮和黄铜车轮配重，以定制和提升车辆性能。凭借无数的升级选项，这款模型旨在让每位爱好者都能充分享受并个性化他们的体验。我们迫不及待地想看到你如何将其打造成自己的专属车型！

About Model 产品介绍

As the first product in the FCX24 series, Power Wagon has brought us closer to the original Wagon. It features a completely refreshed paint job, paired with a rear cargo box design, coupled with brand-new styled rims and Batrazzi mud tires. It also incorporates FMS's brushless power system, which is truly exciting!

The chassis is built on the FCX24 platform, retaining the micro two-speed mechanical transmission from earlier Power Wagon models. This version introduces a brand-new 1212 outrunner brushless motor, delivering significantly greater torque and exceptionally smooth, precise linear control. The outer-rotor design reduces noise and vibration while improving high-speed performance and crawling capability.

The portal axles are another standout feature, increasing ground clearance and significantly enhancing off-road capability, especially when navigating extreme obstacles at low speeds.

To enhance durability, the chassis includes metal steering linkages. Additionally, a variety of upgraded parts—such as metal link rods, metal differentials, universal joint drive shafts, metal gears, and brass wheel counterweights—are available to customize and boost the vehicle's performance.

With endless upgrade options, this model is designed to let every enthusiast enjoy and personalize their experience to the fullest. We can't wait to see how you make it your own!

PRODUCT INTRODUCTION 产品信息

FCX24的定位是高性能攀爬底盘，车架采用高强度尼龙一体成型，相比金属侧梁加塑胶桁架拼接的梯形大梁，整体重量更轻，强度更高。中置动力总成重心低，将2档变速机构、分动箱和130电机整合为一体。动力通过万向节传动轴传输到前后两个车桥，车桥装有轮边减速器，俗称“门桥”，可以加大差速器牙包的离地间隙，提高通过性。

攀爬车一般搭配前后直轴，模拟真车差速器锁止状态，以提高越野通过能力。FCX24默认搭载直轴，但也可以更换行星齿差速器，搭配高粘度硅油，模拟LSD限滑差速器的行驶效果。安装差速器后极限攀爬能力将会降低，但可以获得更小的转向半径，更稳定的高速行驶品质。简单的说直轴适合极限攀爬，限滑差速器适合高速越野，任君选择。

两档变速箱使用遥控器第三通道，通过一颗9G舵机操作，低速档减速比99，大于目前市面上的同类产品，低扭输出强劲，极限攀爬游刃有余。高速档减速比24.75，车速大于目前市面上所有同类产品，可以体验高速冲破，小跳，甚至抬头的乐趣。

作为FCX24系列的第一款产品，车壳是1949年的POWER WAGON，以泥地越野卡车的形态亮相，这其中的缘由和未来的发展我们放在这个故事里和大家分享。

2.4GHz 数字比例遥控系统，除了正常行驶、转向控制外，第3通道用于控制换挡。此还搭载有灯光控制模组，另外还预留了尾灯、转向灯的连接供玩家改装。

和FMS以往产品不同，FCX24更偏重运动性能，包括金属齿轮、避震器、高性能电机、散热器、轮毂配重等重大升级改装零件会同步推出，世界各地的玩家，期待你们打造出自己独一无二的FCX24。

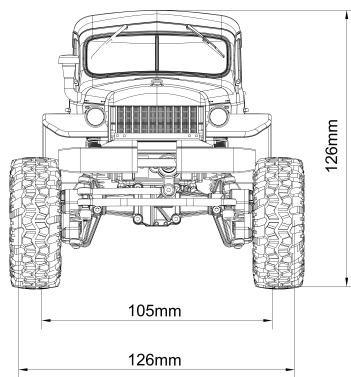
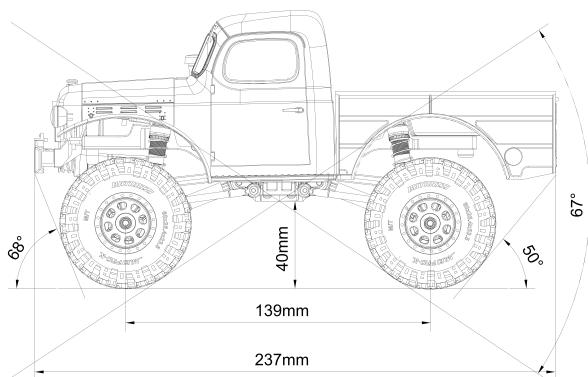
Features 产品特点

- Metallic green car body
- brand-new appearance, rims and tires
- Outrunner brushless motor for enhanced torque and smooth performance
- Full ball bearings
- Metal components: linkage, solid axle gears, and gearbox
- Micro two-speed mechanical transmission
- Remote-controlled light system
- Portal axles with metal gears for increased ground clearance
- Steering servo with metal gears for durability
- 4-link suspension for better articulation
- High-strength mixed-fiber nylon unibody frame
- Quick-release structure for easy assembly

- 金属绿色车身涂装
- 全新的外观、轮毂与轮胎
- 外转子无刷电机
- 全金属滚珠轴承
- 金属部件：金属连杆、金属车桥齿轮
- 两档机械变速箱
- 遥控灯光系统
- 带金属齿轮的门式车轴，增加离地间隙
- 带金属齿轮的转向伺服电机，耐用性强
- 四连杆悬挂，提高车轮活动能力
- 高强度混合纤维尼龙单体车身框架
- 快速释放结构，便于组装

PRODUCT INTRODUCTION 产品信息

Specification 产品参数



- Length: 237mm
- Width: 126mm
- Height: 126mm
- Wheelbase: 139mm
- Tire F/R : $\Phi 60 \times 20$ mm
- Minimum Ground Clearance: 26mm
- Approach Angle: 68°
- Departure Angle: 50°
- Reduction ratio: (High Gears) 24.75
(Low Gears) 99

- Motor: 1212 brushless motor 3200KV
- Battery : 2S Lipo 7.4V 380mAh x1
- Remote control distance: 30m
- Approx. operating duration time: 20mins
- Remote control: 3 IN 1 Min Brushless System
Combo Set(RX/ESC/Motor)&
Mg44 Transmitter BS
- Key functions: Two Speed Transmission/Smart light effect

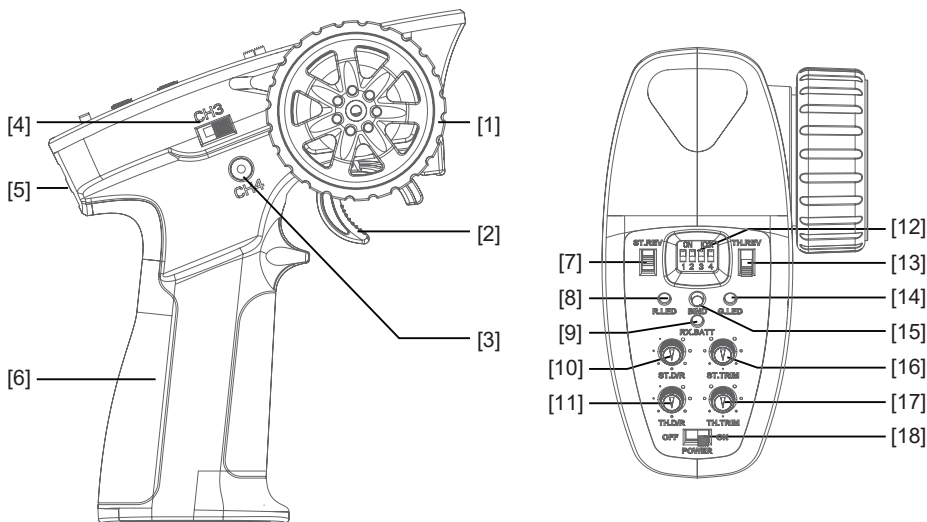
- 车长: 237mm
- 车宽: 126mm
- 车高: 126mm
- 轴距: 139mm
- 轮胎: $\Phi 60 \times 20$ mm
- 离地间隙: 26mm
- 接近角 Approach Angle: 68°
- 离去角 Departure Angle: 50°
- 减速比: 高速挡24.75 低速挡99

- 电机 : 121外转无刷电机 3200KV
- 电池 : 2S Lipo 7.4V 380mAh
- 遥控距离 : 30m
- 续航 : 20mins
- 遥控 : 3 IN 1 MIN 无刷系统套装 (RX/ESC/
MOTOR)和MG44发射器BS
- 主要功能 : 两档变速/灯效切换

Transmitter instruction 发射机介绍

The MG44 is a simplified 4-channel transmitter that adopts the 2.4GHz 2A-BS Automatic Frequency Hopping Digital System. The transmitter is lightweight and compact in design, comfortable and ergonomic. It has a beginner mode and is easy for beginner players to use.

MG44 是一款采用 2.4GHz 2A-BS 协议自动跳频数字系统的简版 4 通道双向发射机，外观设计轻便小巧，手感舒适，符合人体工程学，可通过发射机设置电调参数。该款发射机还具备初学者模式方便入门玩家使用。



- | | |
|---|--|
| [1] Steering Wheel, 35 degrees on each side (CH1)
方向手轮，左右各 35 度 (CH1) | [10] ST.D/R, to adjust the D/R for steering channel.
方向通道舵量调节旋钮 (ST.D/R) |
| [2] Throttle Trigger, 25 degrees forward and 12.5 degrees backward (CH2)
油门扳机，前 25 度后 12.5 度 (CH2) | [11] TH.D/R, to adjust the D/R for throttle channel
油门通道舵量调节旋钮 (TH.D/R) |
| [3] Push button switch (CH4) [Push button function is flip type]
按键开关 (CH4) [按键功能为翻转式] | [12] Toggle Switch, to set the related function of ESC.
拨码开关 (切换电调的工作模式) (预留功能) |
| [4] Three-position toggle switch (CH3)
三档拨动开关 (CH3) (预留功能) | [13] TH.REV, Throttle Channel Reverse Button
油门通道反向开关 (TH.REV) |
| [5] Lanyard hole
挂绳孔 | [14] G.LED, Status Indicator
状态指示灯绿色 LED (G.LED) |
| [6] Handle, 4*AAA battery compartment
手柄，4*AAA电池仓 | [15] BIND Button
对码按键 (BIND) |
| [7] ST.REV (Steering wheel reverse)
方向通道反向开关 (ST.REV) | [16] ST.TRIM, to adjust the trim of steering channel.
方向通道微调旋钮 (ST.TRIM) |
| [8] R.LED(Power indicator)
电源指示灯红色 LED (R.LED) | [17] TH.TRIM, to adjust the trim of throttle channel.
油门通道微调旋钮 (TH.TRIM) |
| [9] RX.BATT, ESC Battery Power Indicator
电调电池电量显示指示灯 (RX.BATT) (预留功能) | [18] POWER ON/OFF, Power Switch
电源开关 (POWER OFF/ON) |

Transmitter Battery Installation 发射机电池安装

Before operation, install the battery and connect the system as instructed below.
开始操作前，请按照本章的顺序和指引安装电池、连接设备。

 Danger 危险	Only use specified battery (X4 AAA batteries). 仅使用厂家指定的电池。
 Danger 危险	Do not open, disassemble, or attempt to repair the battery. 请勿打开、拆卸或自行维修电池。
 Danger 危险	Do not crush/puncture the battery, or short the external contacts. 请勿挤压、刺穿或接触电池的金属端子。
 Danger 危险	Do not expose to excessive heat or liquids. 请勿将电池置于高温环境或液体中。
 Danger 危险	Do not drop the battery or expose to strong shocks or vibrations. 请注意防止电池跌落、碰撞或振动。
 Danger 危险	Always store the battery in a cool, dry place. 请将电池存放在干燥阴凉的环境中。
 Danger 危险	Do not use the battery if damaged. 如果电池损坏，请立即停止使用。

Battery Type: AAA

Follow the steps below to install the batteries:

1. Open the battery compartment cover.
2. Insert 4 AAA batteries with the correct polarity. Make sure it is connected with the correct polarity to avoid damage.
3. Replace battery compartment cover.

Low battery alarm: When the battery is lower than 4.2V, the transmitter will give a alarm with the LED flashing slowly.

*Note: When installing the batteries, be careful to handle the positive and negative poles. (As shown in the picture on the right)

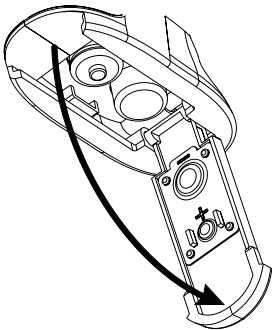
电池类型使用：AAA 电池

请按照以下步骤安装发射机电池：

1. 打开电池仓盖。
2. 将 4 颗电量充足的 AAA 电池装入电池仓内，注意正负极方向并确保电池上的金属端子与电池仓内的金属端子接触。
3. 盖好电池仓盖。

低电量报警：当电量低于 4.2V 时，发射机即发出声音报警同时 LED 慢闪

*注：安装电池时，请留意电池正负极，避免安装错误。（如右图所示）



Receiver and Servo Installation 接收机与舵机安装

Make sure that the receiver is mounted in an appropriate location within the model, to ensure a stable signal, maximum range and to mitigate external interference, follow these guidelines:
Pay attention to the following when installing the receiver:

1. "Make sure the receiver is not installed near motors or sources of electrical noise.
2. Keep the receiver's antenna away from conductive materials such as carbon or metal. To ensure normal function, make sure there is a gap of at least 1cm between the antenna and the conductive material.

请结合相应模型的结构选择合适的位置安装接收机，同时为了确保接收机的性能和遥控距离的稳定，并防止外界干扰，请注意以下操作事项：

1. 确保接收机安装在远离电机，电子噪声过多的区域。
2. 接收机天线需远离导电材料，例如金属棒和碳纤维物质。为了避免影响正常工作，请确保接收机和导电材料之间至少有 1 厘米以上的距离。



Caution
小心

To prevent damage do not power on the receiver during installation.
准备过程中，请勿连接接收机电源，避免造成不必要的损失。

Instructions 操作指引

After setting up, follow the instructions below to operate the system.

准备操作完成后，您可以按照本章指引开始使用本产品。

Power On 开机

Follow the steps below to turn on the transmitter:

1. Check to make sure that the battery is fully charged and installed correctly.
 2. Toggle the switch to the [ON] position. When active the R.LED will be lit.
 3. Connect the receiver to power.
- For safety always power on the transmitter before the receiver.

请按照以下步骤进行开机：

1. 检查系统状态，确保电池电量充足且安装正确。
 2. 将电源开关拨到 [ON] 位置，R.LED 灯常亮。
 3. 连接接收机电源。
- 为保障模型及人员安全，使用时请先打开发射机再给接收机上电



Note
警告

Operate with caution in order to avoid damage or injury.
此时系统已启动，请谨慎操作，否则可能导致产品损坏或人员伤亡。



Note
警告

Make sure that the throttle trigger is at its neutral position and the switches are set to their proper position.
为了您的安全请将发射机开关和油门打到安全位置。

Getting Started 使用前准备

电池类型使用：AAA 电池

请按照以下步骤安装发射机电池：

- 1. 打开电池仓盖。
- 2. 将 4 颗电量充足的 AAA 电池装入电池仓内，注意正负极方向并确保电池上的金属端子与电池仓内的金属端子接触。
- 3. 盖好电池仓盖。

低电量报警：当电量低于 4.2V 时，发射机即发出声音报警同时 LED 慢闪

Operation Guide 操作指引

Power-on 开机

Follow the steps below to turn on the transmitter:

- 1. Check to make sure that the batteries are fully charged and installed correctly.
- 2. Toggle the Power Switch to the [ON] position, and the LED will be solid on.
- 3. Connect the receiver to power.

Note: For safety always power on the transmitter before the receiver.

请按照以下步骤进行开机：

- 1. 检查系统状态，确电池电量充足并正确安装；
- 2. 将开关拨到 [ON] 位置，指示灯常亮；
- 3. 接收机通电。

注：为保障模型及人员安全，使用时请先打开发射机再给接收机通电



Operate with caution in order to avoid damage or injury.
此时系统已启动，请谨慎操作，否则可能导致产品损坏或人员伤亡。

The LED Status of the Transmitter 指示灯

The LED status indicates the power supply state of the transmitter and its working state.

Off: The transmitter is not powered on.

Fast flashing: The transmitter is in the bind mode.

Slow flashing: Low voltage alarm

Gradual: The transmitter is in Sleep mode or in Idle alarm state.

Three-flash-one-off: The transmitter is in standby state, while the bound receiver is powered off, unbound, or nosignal.

发射机状态指示灯用于指示发射机的电源及工作状态。

灭：发射机电源未接通。

快速闪烁：发射机处于对码状态中。

慢速闪烁：低电压报警。

呼吸灯闪烁：发射机处于休眠模式或闲置报警状态。

三闪一灭：发射机处于待机状态，但对码的接收机未开机、已关机或掉码。

Binding 对码

The transmitter and receiver have already been bound at the factory.

However if the receiver needs to be replaced or additional receivers bound follow these steps:

- 1. Turn on the transmitter while holding the bind button to put the transmitter into bind mode. Meanwhile the LED will flash quickly, and release the bind button.
- 2. The receiver will power on and wait for 1 second,if without connection, it will enter the binding state automatically;
- 3. The receiver's LED is solid on, indicating the binding is successful.
- 4. Check to make sure the transmitter and receiver functions are working correctly, repeat steps 1 to 3 (binding process) if any problems arise.

Note: If the binding is not completed within ten seconds, the LED of the receiver will enter its slow flashing state.

LED Indicator LED 指示

1. R.LED: The red power indicator;
2. G.LED: The green status indicator;
3. RX.BATT: ESC battery power indicator.
 - When the power is high, the RX.BATT LED will be solid on in green.
 - When the power is medium, the RX.BATT LED will be solid on in orange.
 - When the power is low, RX.BATT LED will be solid on in red.
 - When the power is ultra low, the RX.BATT LED will be flash slow in red.
 - When the receiver is not connected, "the RX.BATT LED will maintain the last indicated state.

1. R.LED: 红色电源指示灯;
2. G.LED: 绿色状态指示灯;
3. RX.BATT: 电调电池电量指示灯
 - 电量高: 指示灯绿色常亮
 - 电量中: 指示灯橙色常亮
 - 电量低: 指示灯红色常亮
 - 电量过低: 指示灯红色慢闪
 - 接收机掉码: 指示灯保持最后的指示状态

Binding 对码

The transmitter and receiver have already been bound at the factory.

However if the receiver needs to be replaced or additional receivers bound follow these steps:

1. Turn on the transmitter while holding the bind button to enter bind mode. G.LED will start flashing quickly.
 - Once in bind mode release the bind button.
 2. The receiver will power on and wait for 1 second ,if without connection, it will enter the matching code automatically;
 3. Once the binding is successful, the receiver LED and the G.LED of the transmitter will be solid on.
- *Note: When binding, put the transmitter into bind mode first, then the receiver. If the binding is not completed within ten seconds, the LED of the receiver will enter its slow flashing state.

发射机和接收机在出厂前已对码成功。

如需更换其他的发射机或接收机, 请按照如下步骤进行对码:

1. 将发射机按住对码按键 (BIND) 开机即进入对码状态, 此时 G.LED 快闪, 松开对码按键;
2. 接收机上电等待 1 秒没有连接即自动进入对码状态;
3. 对码成功后, 接收机及发射机指示灯常亮;

*注: 对码时请先将发射机进入对码状态, 再将接收机进入对码状态; 若 10 秒内对码没有完成, 接收机 LED 指示灯进入慢闪状态。

Stick Calibration 摇杆校准

This function is used to set the neutral position for throttle and wheel.

Every transmitter is calibrated before leaving the factory, however if recalibration is required, please follow these steps:

1. Turn and hold the wheel as far clockwise as it will turn, hold the throttle all the way forward, then turn on the transmitter in calibration mode.
 - The R.LED and G.LED will flash twice.
 - The RX.BATT LED will be solid on in yellow.
2. Calibrate steering wheel: Turn the steering wheel to max and min travel point in clockwise and counterclockwise.
 - The R.LED will be off.
 - The RX.BATT LED will be solid on in red.
3. Throttle trigger calibration: Push/pull the throttle trigger to forward/backward as far as it will go.
 - When the calibration is completed, the G.LED will be off.
 - The RX.BATT LED will be solid on in green.
4. Both steering wheel and throttle trigger have finished the calibration.
 - The RX.BATT LED will be off.
5. Once the calibration is finished, press the BIND button to save and exit.

该功能可以用于方向手轮和油门扳机的中位角度修正。

发射机在出厂前已校准完成，如需要重新校准，请按照以下步骤执行。

1. 同步将手轮顺时针打到最大、扳机往前推到底并开机，进入校准模式功能；
 - R.LED 指示灯和 G.LED 指示灯二闪一灭
 - RX.BATT 指示灯黄色常亮
2. 方向手轮校准：将手轮顺时针和逆时针转到最大最小；
 - R.LED 指示灯灭
 - RX.BATT 指示灯红色常亮
3. 油门扳机校准：将扳机向前向后推到最大和最小；
 - G.LED 指示灯灭
 - RX.BATT 指示灯绿色常亮
4. 方向手轮油门扳机均校准通过；
 - RX.BATT 指示灯灭
5. 校准完成后按“BIND”键退出并保存数据。

Power Off 关机

Follow the steps below to turn off the system:

1. Disconnect the receiver power.
2. Toggle the transmitter's power switch to the off position.

请按照以下步骤进行关机：

1. 断开接收机电源；
2. 将电源开关拨到 [OFF] 位置，使发射机关闭。



Make sure to disconnect the receiver power before turning off the transmitter. Failure to do so may lead to damage or serious injury.
关闭时，请务必先关闭接收机电源，再关闭发射机，否则可能导致模型损坏、人员受伤。

Channel Description 通道说明

The transmitter outputs a total of 4 channels, which are assigned as below, as well as the functions.

- CH1 : The assigned control is the steering wheel. CH1 controls the steering to enable a car to turn left or right.
- CH2 : The control is the throttle trigger. CH2 controls the throttle to enable a car to move forward or backward.
- CH3 : The control is the CH3 three-position switch. Users can customize the channel function. For example, function as a fast /slow-position servo channel.
- CH4 : The control is the CH4 button switch. Users can customize the channel function. For example, control the car lights (short-press to switch the car light mode), and switch the drive control/ four-wheel steering function.

该发射机共输出 4 个通道，控件分配和相应功能如下：

- CH1 通道：控件为方向手轮，功能为方向，控制车子左右转向。
- CH2 通道：控件为油门扳机，功能为油门，控制车子前后行驶。
- CH3 通道：控件为 CH3 三档开关，可自定义通道功能，如可作为快慢档舵机通道。
- CH4 通道：控件为 CH4 按键开关，可自定义通道功能，如可控制车灯（短按切换车灯工作模式）、可切换驱动控制 /四轮转向功能。

Channel Reverse 通道反向

This function is used to adjust the action direction of the servo or motor

The ST.REV / TH.REV switches are the reverse buttons for CH1 and CH2. If the switch is up it indicates reverse, and the down indicates normal.

该功能用于调整通道的动作方向。

旋钮 ST.REV/TH.REV 分别为 CH1、CH2 通道反向按键，开关上拨表示反向，下拨表示正常。

Trims 微调

The ST.TRIM switch is used to adjust the trim for CH1 (steering), and can also adjust the trim for CH3 as multiplexing mode. The TH.TRIM switch is used to adjust the trim for CH2(throttle), and can also adjust the trim for CH4.

Refer to [Mode Switching] for multiplexing switching mode.

ST.TRIM/TH.TRIM: Counterclockwise adjustment to increase the trim value. The maximum value is 120us.

ST.TRIM/TH.TRIM: Clockwise adjustment to decrease the trim value. The minimum value is -120us.

Note: After the throttle trim is changed, the receiver needs to be re-powered on to recognize the new throttle neutral. Otherwise, an exception may occur during vehicle reversing.

ST.TRIM 为 CH1 方向微调，可复用为 CH3 通道微调；

TH.TRIM 为 CH2 油门微调，可复用为 CH4 通道微调；

以上具体复用切换方式见 [模式切换]。

调节范围：-120us ~ +120us；

ST.TRIM/TH.TRIM：逆时针调节，增大微调值，最大为 120us；

ST.TRIM/TH.TRIM：顺时针调节，减少微调值，最小为 -120us。

注：CH2 油门微调调整后，接收机须重新通电以识别新的油门中位，否则可能会出现倒车异常的现象。

D/R 舵量调节

The ST. D/R switch is used to adjust the servo travel amount CH1(Steering Trim), and can also adjust the travel amount for CH3 as multiplexing mode.

The TH.D/R switch is used to adjust the servo travel amount for CH2(Throttle), and can also adjust the travel amount for CH4 as multiplexing mode.

Refer to [Mode Switching] for multiplexing switching mode.

Adjustment range: 0-120%;

ST.D/R: Counterclockwise adjustment to increase the servo travel amount. The maximum value is 120%.

ST.D/R: Clockwise adjustment to decrease the servo amount. The minimum value is 0%.

TH.D/R: Counterclockwise adjustment to increase the servo amount. The maximum value is 120%.

TH.D/R: Clockwise adjustment to decrease the servo amount. The minimum value is 0%.

ST.D/R 为 CH1 方向舵量调节, 可复用为 CH3 舵量调节;

TH.D/R 为 CH2 油门舵量调节, 可复用为 CH4 舵量调节;

调节范围: 0 ~ 120%;

ST.D/R: 逆时针调节, 增加舵量, 最大为 120%;

ST.D/R: 顺时针调节, 减小舵量最小为 0%。

TH.D/R: 逆时针调节, 增加舵量, 最大为 120%;

TH.D/R: 顺时针调节, 减小舵量最小为 0%。

Mode switching 模式切换

This function is for reusing the ST.TRIM and ST.D / R buttons for different channels setting:

Under normal power-on condition, press the BIND button twice (within 1S) to switch between mode 1 and mode 2. By default, mode 1 is used.

Mode 1: R.LED is always on. G.LED is off. ST.TRIM is for CH1 trim. ST.D/R is for CH1 servo adjustment . TH.TRIM is for CH2 throttle trim. TH.D/R is for CH2 throttle servo adjustment .

Mode 2: R.LED and G.LED are flashing alternately. ST.TRIM is for CH3 trim. ST.D/R is for CH3 servo adjustment . TH.TRIM is for CH4 trim. TH.D/R is for CH4 servo adjustment .

此功能用于将 ST.TRIM 及 ST.D/R 旋钮复用于 CH3、CH4 通道 (详见 [微调]、[舵量调节])。

功能设置:

正常开机状态下快速短按两下对码按键 (BIND) (1 秒 内) 即可循环切换模式一、二, 开机默认为模式一。

模式一: R.LED 指示灯常亮, G.LED 示灯不亮, ST.TRIM 调节 CH1 微调, ST.D/R 调节 CH1 舵量;

TH.TRIM 调节 CH2 油门微调, TH.D/R 调节 CH2 油门舵量;

模式二: R.LED 指示灯和 G.LED 指示灯交替闪烁, ST.TRIM 调节 CH3 微调, ST.D/R 调节 CH3 舵量;

TH.TRIM 调节 CH4 微调, TH.D/R 调节 CH4 舵量。

Transmitter Specifications

发射机规格

Product : Model FS-MG44-BS	产品型号：FS-MG44-BS
Channels : 4	通道个数：4
Model Type : Car or Boat	适配模型：车、船
RF : 2.4GHz ISM	无线频率：2.4GHz ISM
Maximum Power : <20dBm (e.i.r.p.) (EU)	发射功率：<20dBm
2.4GHz Protocol : 2A-BS	无线协议：2A-BS
Resolution : 1024	通道分辨率：1024 级
Input Power : 6V/DC or 1.5AAA*4	输入电源：6V DC 1.5AAA*4
Charging Interface : None	充电接口：无
Distance : >150m	遥控距离：>150m (空旷无干扰地面距离)
Life time : According to Battery Type	续航时间：依电池类型
Low Voltage Warning : <4.2V	低电压报警：< 4.2V
Antenna Type : Single Built-in Antenna	天线类型：内置单天线
Data Interface : None	数据接口：无
Temperature Range : -10℃ ~ +60℃	温度范围：-10℃ ~ +60℃
Humidity Range : 20% ~ 95%	湿度范围：20% ~ 95%
Online Update : None	在线更新：无
Dimensions : 118*73*145mm	外形尺寸：118mm*73mm*145mm
Weight : 130g	机身重量：130g
Certifications : CE, FCC ID: N4ZMG400, MIC:R210-167762, IC: 25584-MG4BS00	认证：CE, FCC ID:N4ZMG400, MIC:R210-167762, IC:25584-MG4BS00

Receiver Overview

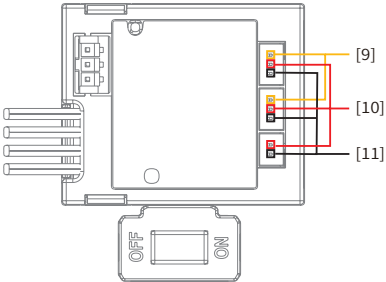
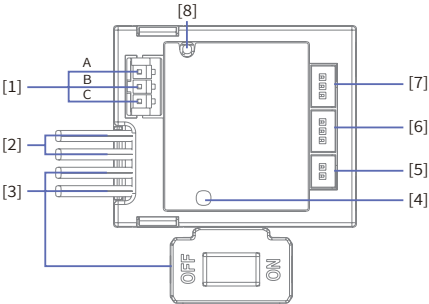
接收机概览

Introduction

产品介绍

The FS-R3ABL-ESC-BS, in compliance with the 2A-BS protocol, is a 3-Channel 2-in-1 receiver with 10A brushless ESC and LED light set. The receiver, equipped with a single external antenna, can output PWM signals and LED light control signals, featuring 2-way transmission, auto-bind upon power-on, compact design, and adaptation to a variety of model cars.

FS-R3ABL-ESC-BS 采用 2A-BS 协议，是一款集 10A 无刷电调和 LED 灯组的三通道二合一接收机。本接收机外置单天线，输出 PWM 信号和车灯控制信号，支持双向传输，采用上电自动对码，设计小巧紧凑，可适配多款模型车使用。



[1] Motor Connector	[8] Antenna	[1] 马达接口	[7] CH3
[2] Battery Connector	[9] Signal Pin (CH Connector)	[2] 电池接口	[8] 天线
[3] Power Switch	[10] + (Anode of LED	[3] 电源开关	[9] S (通道接口信号端)
[4] LED	Light/CH Connetor)	[4] LED	[10] + (通道 / 车灯接口正极)
[5] LED Light Connector	[11] - (Cathode of LED	[5] 车灯接口	[11] - (通道 / 车灯接口负极)
[6] CH1	Light/CH Connetor)	[6] CH1	
[7] CH3			

Notes:

The spec of motor connector: PH2.0*3Pin female connector

The spec of battery connector: Molex51005 female connector

The spec of CH1/CH3 channel connector: 1.25mm*3Pin connector

The spec of the LED light connector: 1.25mm*2Pin connector

注：马达接口为 PH2.0*3Pin 母座端子；电池接口为Molex51005母座接口；CH1 和 CH3 通道接口为标准 1.25mm*3Pin 端子座；车灯接口为标准 1.25mm*2Pin 端子座。

Product Specifications 产品规格

• Product Model: FS-R3ABL-ESC-BS	• 产品型号: FS-R3ABL-ESC-BS
• Compatible Transmitters: MG44 V6	• 适配发射机: MG44 V6
• Compatible RC Models: 1/24 crawlers	• 适合模型: 1/24 攀爬车
• Applicable Motors: FS-MD1212 brushless motor	• 适配电机: FS-MD1212 无刷电机
• Number of Channels: 3	• 通道个数: 3
• Number of LED Light Connectors: 1	• 车灯组数: 1
• RF: 2.4GHz ISM	• 无线频率: 2.4GHz ISM
• RF Protocol: 2A-BS	• 无线协议: 2A-BS
• Antenna: Single external antenna	• 天线类型: 外置单天线
• Operating Voltage: 2~3S LiPo	• 工作电压: 2~3S LiPo
• BEC Output: 5V/1A	• BEC 输出: 5V/1A
• Continuous / Peak Current: 10A/40A	• 持续 / 峰值电流: 10A/40A
• Distance: More than 100m	• 遥控距离: > 100 米 (空旷无干扰地面距离)
• Data Output: PWM	• 数据输出: PWM
• Temperature Range: -10℃ ~ +60℃	• 温度范围: -10℃ ~ +60℃
• Humidity Range: 20% ~ 95%	• 湿度范围: 20% ~ 95%
• Waterproof: PPX4	• 防水等级: PPX4
• Online Update: None	• 在线更新: 无
• Dimensions: 33.0*27.4*14.0mm	• 外形尺寸: 33.0*27.4*14.0mm
• Weight: 13g	• 机身重量: 13g
• Certifications: CE, FCC ID: 2A2UNR3ABL00	• 认证: CE, FCC ID: 2A2UNR3ABL00

Binding 对码

This receiver is compatible with two-way binding, and is to automatically enter the binding mode upon power-on.

- The receiver will enter the waiting-for-connection status upon power-on, waiting for the connection to the bound transmitter.
- If the receiver does not connect the bound transmitter within 2 seconds, it will automatically enter the binding state. This state lasts for 10 seconds.
- If the binding with the transmitter is successful, it will enter the normal communication status, otherwise, it will exit the binding state and return to the waiting-for-connection status.

Note: In case of binding, the receiver LED flashes quickly. In case of waiting-for-connection, the receiver LED flashes slowly. In case of normal communication, the receiver LED is solid on.

The binding steps are as below.

- 1.Put the transmitter into binding mode.
- 2.Turn on the receiver, and it will wait for connection. If without connection, the receiver will enter the binding mode automatically.At this time, the receiver LED will be flashing fast.
- 3.After the binding is successful, the receiver LED is solid on.
- 4.Verify that the transmitter and receiver are working properly. If you need to re-bind, repeat the above steps.

Note: Set the transmitter to its binding state first, and then set the receiver to its binding status. If the binding is not finished within 10 seconds, the receiver LED will enter its slow flashing status.

本款接收机支持双向对码，通电自动进入对码状态：

- 接收机上电即进入等待连接状态，等待与已对码的发射机建立通信；
- 若 2 秒 未与已对码的发射机建立通信，则自动进入对码状态，此状态持续 10 秒；
- 若与发射机对码成功，即进入正常通信状态；否则退出对码状态，回到等待连接状态。

注：对码时，接收机 LED 灯快闪；等待连接时，接收机 LED 灯慢闪；正常通信时，接收机 LED 灯常亮。

对码步骤如下：

1. 将发射机进入对码状态；
- 2.接收机通电等待 2 秒没有连接后自动进入对码状态，此时接收机 LED 快闪；
- 3.对码成功后，接收机 LED 指示灯常亮；
- 4.检查发射机、接收机是否正常工作。如需重新对码，请重复以上步骤。

注：对码时请先将发射机进入对码状态，再将接收机进入对码状态，若 10 秒内对码没有完成，接收机指示灯进入慢闪状态。

Protection 保护功能

The receiver has low and high voltage protection function.

- Low Voltage Protection: When the voltage is detected to be low, CH2 will no output and the LED light will flash slowly for prompt.
- High Voltage Protection: When the voltage is detected to be high, all channels will not output. The LED light will flash fast for prompt.

The receiver ESC has overheating protection function.

- Overheating Protection: When the internal temperature of the ESC is detected to be too high, CH2 will not output and the LED light will flash fast for prompt. When the temperature is normal, the channel resumes output.

The receiver can return the battery voltage (high, medium, low, ultra-low) back to the transmitter side.

- The transmitter can indicate the battery power status of the receiver.

Receiver Overview 接收机概览

本接收机具有电池电压过低和过高保护功能。

- 电压过低保护：当检测到电池电压过低时，CH2 通道无输出，车灯慢闪提示。
- 电压过高保护：所有通道无输出，车灯快闪提示。

本接收机电调具有过热保护。

- 过热保护：当检测到整机温度过高时，CH2 马达无输出，CH1 和 CH3 正常输出；当温度正常后，通道恢复输出。可将电池电压（高、中、低、过低）回传到发射机端。
- 用于发射机端指示接收机电池电量状态。

LED Light Control 车灯控制

When the transmitter is in normal communication with the receiver, press the BIND button of the transmitter to turn on or turn off the LED light. By default, the LED light is off.

Note: After the receiver is turned on, the LED light will be on for one second and then go out.

在发射机与接收机正常通信状态下，按发射机的 BIND 按键以打开或关闭车灯。默认为关闭状态。

注：接收机每次通电开机瞬间车灯长亮一秒后灭。

ESC & Motor Instruction 电调与马达介绍

This receiver ESC function supports the settings of drag brake (0%, 50%, 75% or 100%) and running mode (forward/reverse or forward/reverse/brake) at the transmitter side.

After the motor is connected, the connected battery type will be prompted by sounding, and then the throttle neutral calibration information.

- When the connected battery type is lithium-ion, such as 2S LiPo, the motor fast beeps twice (3 beeps represent 3S LiPo).
- When the throttle neutral is recognized, the motor will long beep once.

If the throttle neutral is not recognized, the motor will continue to beep quickly. There is no power output from the motor at this time.

Note: The drag brake force is set to 0% by default, and the running mode is set to forward/reverse/brake by default.

本接收机电调功能支持在发射机端设置电调拖刹力度设置（0%、50%、75% 和 100% 四个等级）及运行模式（正转 / 反转、正转 / 反转 / 刹车）的设置。

马达连接后，会以声音先提示连接的电池类型，再提示油门中位校准信息。

- 当接收机连接的电池类型为锂电时，若连接 2S 锂电，马达快响两声提示，若快响 3 声，则代表连接的电池是 3S 锂电。
- 当油门中位识别通过后，马达长响 1 声提示。

若未识别油门中位，马达持续快响提示，此时马达无动力输出。

注：电调拖刹力度默认为 0%，运行模式默认为正转 / 反转 / 刹车。

Failsafe 失控保护

The fail-safe function is used when radio signal connection is lost between the transmitter and receiver. The receiver performs channel output according to the set fail-safe value to protect the safety of the model and personnel.

- By default, the failsafe for CH2 is enabled, and the ESC will enter the brake status when the receiver is out-of-control. By default, the CH1 and CH3 channels are not set, and these two channels will maintain the last output in case of out-of-control. You can set the failsafe value for CH1 and CH3 channels at the transmitter side.
- The LED light will remain in the same status as before the out- of-control.

此功能用于当接收机无法正常收到发射机的信号不受控制时，接收机按设置好的失控保护值进行通道输出以保护模型及人员安全。

- CH2 失控保护默认开启，失控后电调进入刹车模式；CH1、CH3 通道默认为未设置，未设置时保持最后输出。可在发射机端设置CH1、CH3 通道失控保护值。
- 车灯保持失控前状态。

Attention 注意事项

- Make sure the product is installed and calibrated correctly, failure to do so may result in serious injury.
- Make sure the receiver's battery is disconnected before turning off the transmitter, failure to do so can result out of control. Unreasonable setting of the Failsafe may cause accidents.
- Make sure the receiver is mounted away from motors, elect electrical noise.
- Keep the receiver's antenna at least 1cm away from conductive materials such as carbon or metal.
- Do not power on the receiver during the setup process to prevent loss of control.
- If the throttle trim is changed on the transmitter side, the receiver needs to be re-powered to recognize the new throttle neutral. Otherwise, an exception may occur during vehicle reversing.
- 使用前必须确保本产品与模型安装正确，否则可能导致模型发生严重损坏。
- 关闭时，请务必先关闭接收机电源，然后关闭发射机。如果关闭发射机电源时接收机仍然在工作，将会导致遥控设备失控。失控保护设置不合理可能引起事故。
- 确保接收机安装在远离电机，电子调速器或电子噪声过多的区域。
- 接收机天线需远离导电材料，例如金属棒和碳物质。为了避免影响正常工作，请确保接收机天线和导电材料之间至少有 1 厘米以上的距离。
- 准备过程中，请勿连接接收机电源，避免造成不必要的损失。
- 若在发射机端调整油门通道微调后，接收机须重新通电以识别新的油门通道中位，否则可能会出现倒车异常的现象。

Charging the Battery 电池充电

Car Battery: 2S Lipo 7.4V 380mAh

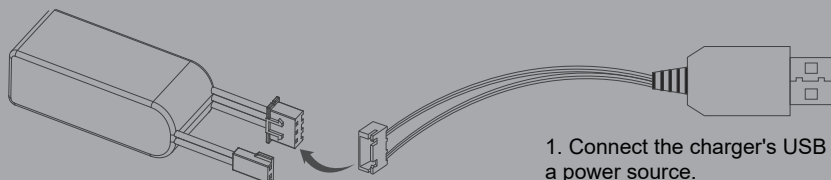
Charger: USB balance charger, charging time 30-45 minutes.

1. Connect the USB port of the balance charger to a power source, and then connect the battery to the balance charger to start charging
2. When charging, the LED light will be red, and when charging is complete, the LED light will be green.
3. Do not charge unattended!
4. If you notice that the battery or charger is overheating, immediately disconnect the battery and charger, as this may be caused by an internal short circuit.

车用电池: 2S Lipo 7.4V 380mAh

充电器: USB平衡充, 充电时长30-45min.

- 1.将平衡充USB端口连接至电源, 然后将电池连接至平衡充, 充电开始。
- 2.充电时, LED灯状态为红色; 充电完成时, LED灯状态为绿色。
- 3.请勿在无人看管的情况下进行充电!
- 4.如果发现电池或充电器过热, 请立即断开电池和充电器, 因为这可能是由内部短路引起的。



2. Connect the battery to the charger.
- 2.将电池连接到充电器上。

1. Connect the charger's USB port to a power source.
- 1.将USB充电器端口连接到电源。

Vehicle Setup 车辆设置

Connecting the battery 连接电池

Step 1: With the bottom of the vehicle facing up, release the four buckles (opened inward) indicated by the arrows to separate the car shell from the chassis.

Step 2: Place the battery in the battery compartment on the frame and fix it with the attached silicone rubber band. Connect the battery plug to the female end of receiver/ESC (2-in-1) unit.

Step 3: Lock the four buckles to fix the car shell in place.

Caution: Do not crush or damage the wiring when attaching the car shell to the chassis.

步骤1: 如图所示, 翻转模型车使之底部朝上, 将箭头所示的四个卡扣分别向内掰打开, 分离车壳和车架。

步骤2: 在图示电池舱位置放入电池, 并使用所附硅胶扎带固定。连接电池插头至接收机/电调二合一装置的母头。

步骤3: 锁紧卡扣固定车壳。

注意: 锁紧车壳时切勿挤压电线。

VEHICLE SETUP 车辆设置

Connecting the battery 连接电池

Step 1: Separate the car shell, the two buckles in the front of the car shell are opened inward, and the two buckles at the rear of the car shell are opened inward.

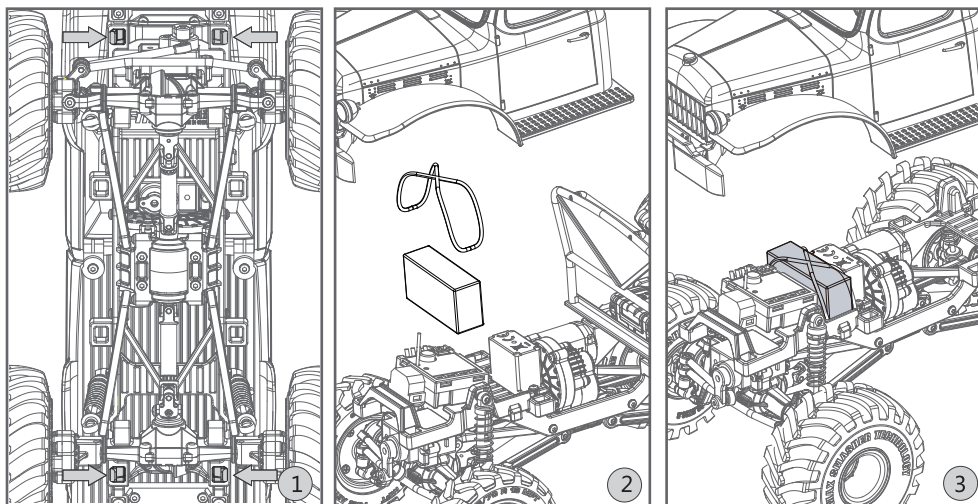
Step 2: Place the battery in the battery compartment on the frame and fix it with the attached rubber band.

Step 3: Connect the battery plug.

步骤1：分离车壳，车头前面的两个卡扣，向内掰打开，车头后面的两个卡扣，向内掰打开；

步骤2：将电池放置在车架上的电池舱位，用附带的橡皮筋固定；

步骤3：连接电池插头。



NOTE

1. If it is not in use for a long time, unplug and take off the battery to prevent battery leakage.
2. Do not open, disassemble, or attempt to repair the battery.
3. The battery needs to be disconnected from vehicle before it can be charged
4. Do not charge battery in vehicle.

VEHICLE SETUP 车辆设置

注意：

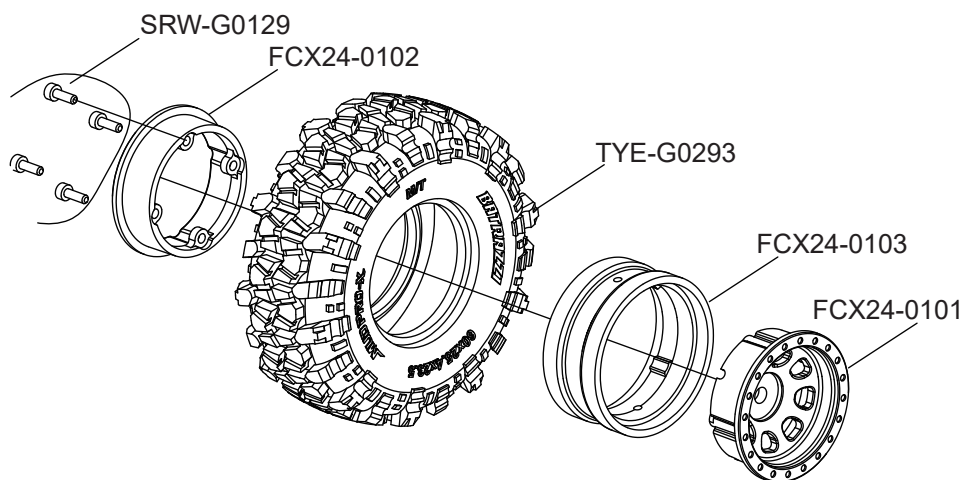
- 1、如果长时间不用，请拨下电池，以防电池损坏。
- 2、不要打开、拆解或试图维修电池。
- 3、在给电池充电之前，需要先断开电池与车辆的连接。
- 4、请勿在车内给电池充电。

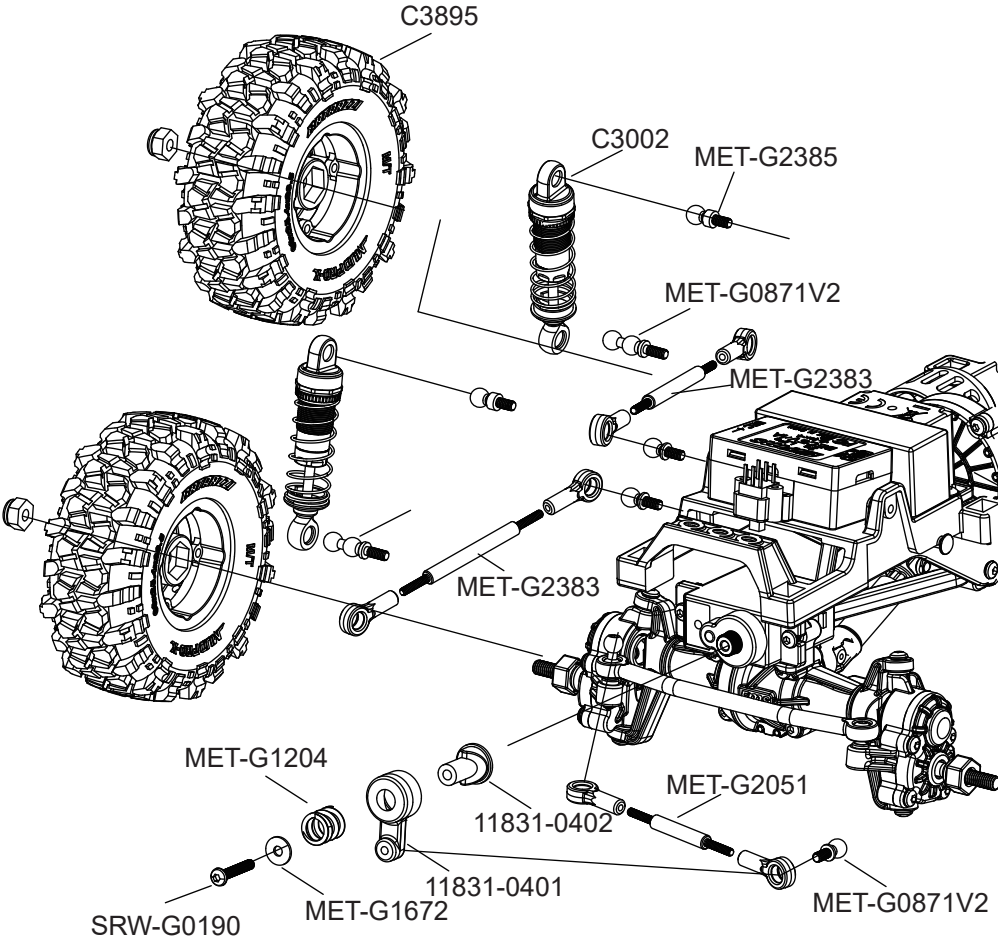
Battery Precautions 电池注意事项

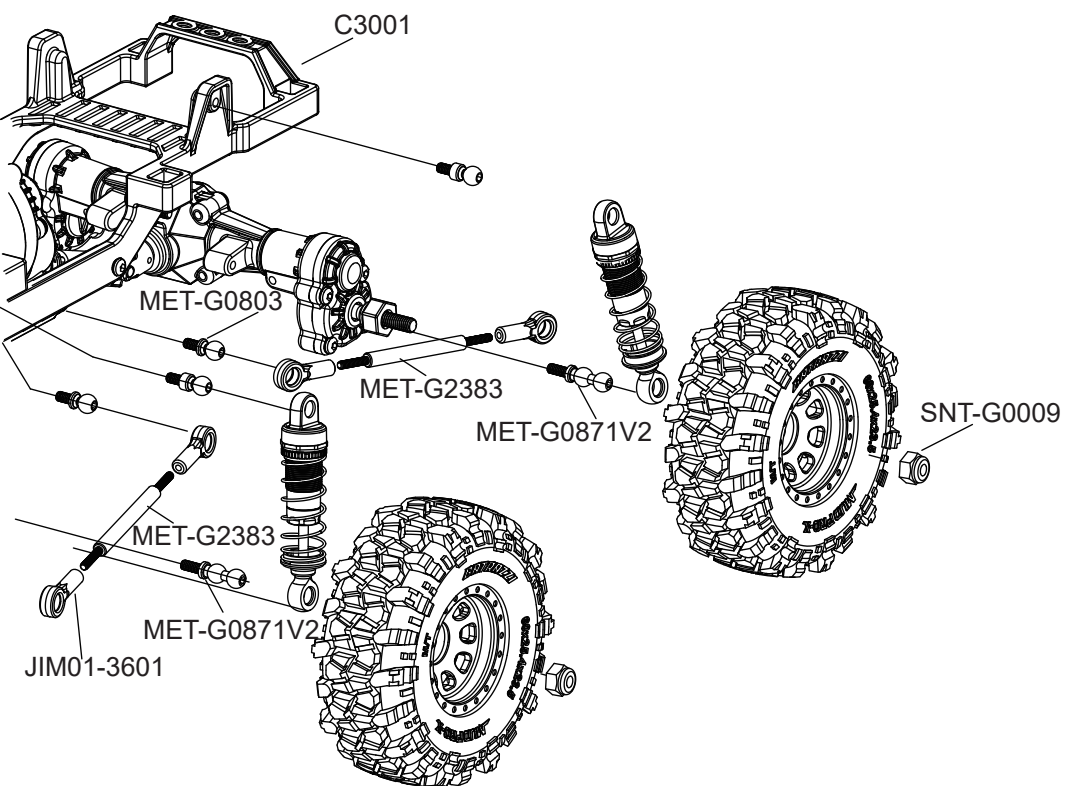
- Never charge a lithium polymer battery with a charger designed for Nicd, NIMH, or any other type of battery chemistry. Use ONLY charger designed for LiPo battery.
 - Do not leave LiPo battery unattended during charging.
 - Do not overcharge the battery.
 - Always charge LiPo batteries on non-flammable, heat-resistant surfaces.
 - Always use a LiPo-safe bag or container while charging. Do not allow LiPo cells to overheat at any time. Cells which reach greater than 140 Fahrenheit(60℃) will usually become damaged and will catch fire.
 - Do not charge the LiPo pack while it is still in the model. Never charge or store battery packs in a vehicle.
 - Do not discharge LiPo, doing so will damage the battery.
 - Do not expose LiPo cell to water or moisture at any time.
 - Do not store battery near open flame or heater.
 - Do not assemble LiPo cells or pre-assembled packs together with other LiPo cells or packs.
 - Always store LiPo battery in a secure location away from children.
 - Always remove the LiPo battery if model is involved in any kind of crash.
 - Carefully inspect the battery and connectors for even the smallest damage.
 - CAUTION: Cells may become hot after usage. Allow the pack to cool to room temperature prior to recharging.
 - Do not allow the electrolyte to get into eyes or on skin. Wash affected areas immediately if they come into contact with electrolyte.
 - Do not alter or modify connectors or wires of a LiPo battery pack.
 - Always inspect the condition of the battery before charging and operating.
 - Do not short circuit the LiPo battery.
 - Do not have contact with a leaky/damaged battery directly.
 - Do not charge battery out of recommended temperature range(0℃-45℃).
-
- 不要使用Nicd、NIMH或任何其他类型的充电器给LIP0锂聚合物电池充电。请使用LIP0锂聚合物的专用充电器给LIP0锂聚合物电池充电。
 - 请勿在无人看管的情况下充电。
 - 电池请勿过充。
 - 请勿将电池放置在易燃、不耐热的表面上充电。
 - 总是使用安全袋或安全容器给电池充电。保证电池在任何时候都不过热。电池温度超过140华氏度（60℃）则易造成损坏，甚至引发火灾。
 - 请勿将电池长期置于模型产品内，更勿在模型产品内直接充电。
 - 请勿给电池放电，以免损坏电池。
 - 任何时候请勿将电池暴露在水或湿气之中。
 - 请勿在明火或加热器附近存放电池。
 - 请勿与其他未组装或预组装的电池混用。
 - 需将电池存放在远离儿童的安全位置。
 - 模型如出现任何碰撞，需立刻拆除电池。
 - 即使出现微小的损坏，也需仔细检查电池和连接器。
 - 注意：使用后电池可能会发热，需让电池冷却到室温后再进行充电。
 - 请勿让电解液接触眼睛或皮肤。如电解液不慎接触到身体的任何部位，请立即进行清洗。
 - 请勿替换或修改电池组的连接器或电线。
 - 在进行充电或其他任何操作之前需检查电池的状况。
 - 请勿造成电池短路。
 - 请勿直接接触已泄漏或已损坏的电池。
 - 请勿超出建议温度范围充电电池（0度-45度）。

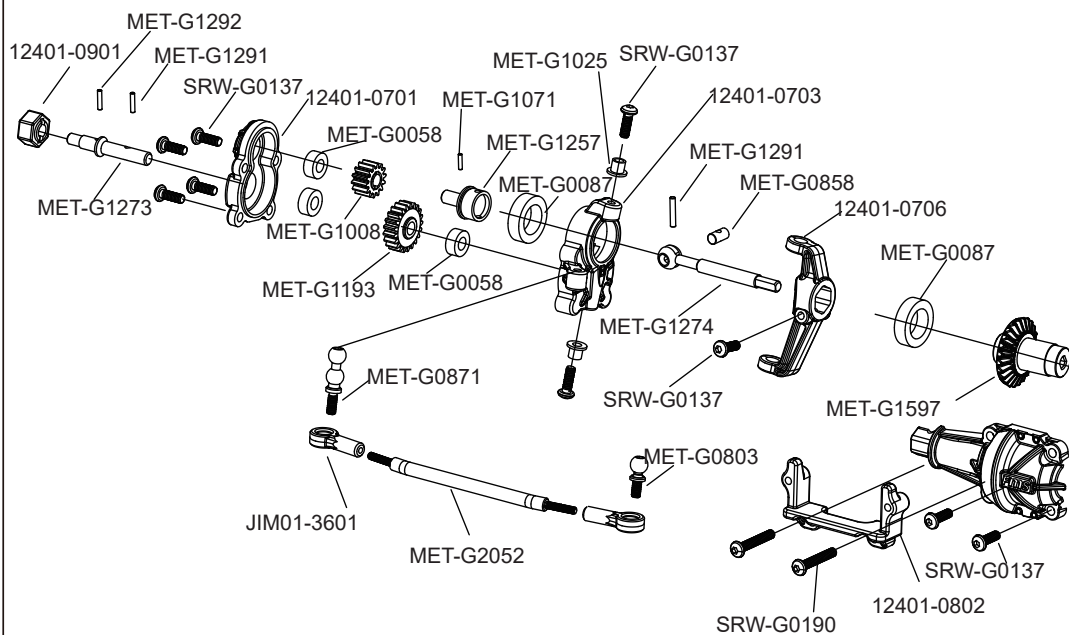
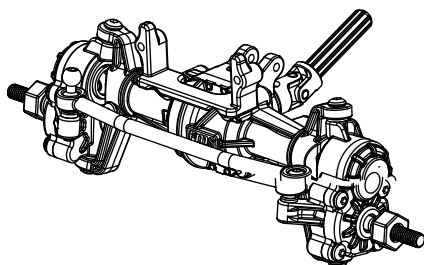
Spare parts list 配件列表

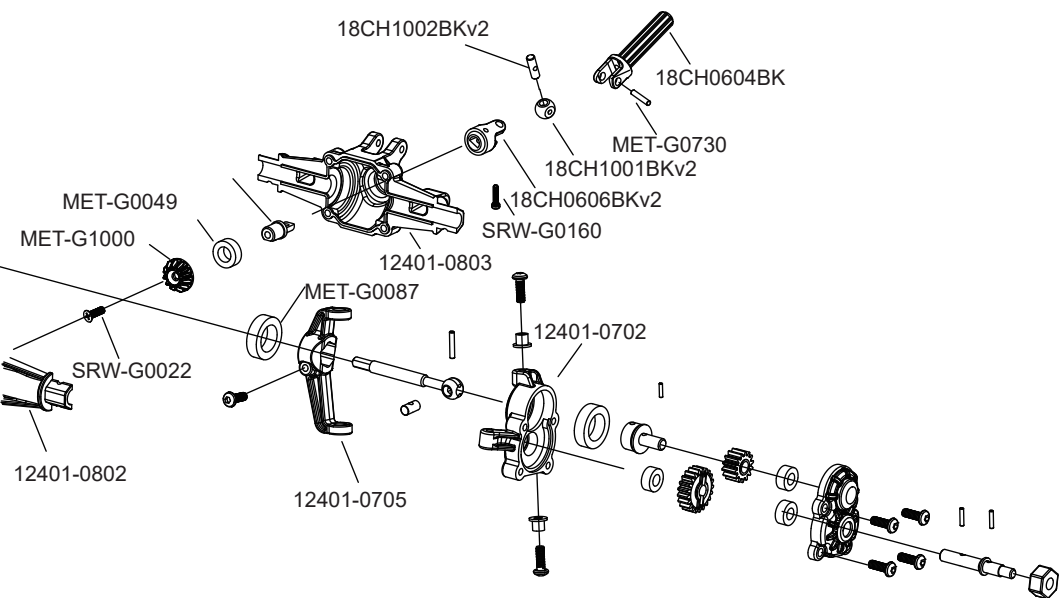
C3000	Front bumper	前防撞	C3059	Portal axle metal gear	门桥金属齿轮
C3002	Oil shock absorbers assembly	避震器	C3063	CVD axle set A	传动轴A
C3003	Wiper	雨刷	C3074	Ball head screw	单球头螺丝
C3004	Car boby w/o painted	车壳	C3075	Double ball head screw	双球头螺丝
C3005	Windows	窗玻璃	C3080	M4 aluminium ball head	M4铝波头
C3006	Lens set	灯片	C3081	Shift lever	换挡拉杆
C3008	Snokle	涉水喉	C3111	Servo saver set	转向舵机保护套装
C3009	Side panel	踏板	C3024	POM differential set	赛钢差速器
C3010	Exhauastion plate	面罩	C3068	Brass wheel counterweight	黄铜轮毂配重
C3011	Window frame	车窗支架	C3105	Car hopper	车斗
C3038	Car decal sheet	贴纸	C3060	All terrain wheel	全地形车轮成品
C3041	Fuel tank	油箱	C3061	Metal differential	金属差速器
C3042	Anti roll bar	防滚架	C3062	Metal transmission gear	变速箱金属齿
C3043	Spare tire bracket	备胎架	C3064	Metal rod set	金属拉杆
C3043V2	Spare tire bracket	备胎架V2	C3066	Metal drive gear	金属差速器驱动齿轮
C3007	Wheel	轮芯	C3067	130 Motor heat sink	130电机散热器
C3017	Front axle assembly	前桥总成	C3069	Metal universal joint drive shaft	金属万向节传动轴
C3029	Servo horn set	摇臂套装(黑色)	C3070	130 High speed motor	130高速电机
C3106	Car boby with painted red	车壳喷漆红	C3072	2.5 inches wheel with aluminum rim	铝合金轮毂轮胎(对)
C3107	Car boby with painted blue	车壳喷漆蓝	C3073	Aluminum shock absorber	铝合金减震器
C3108	Car boby with painted yellow	车壳喷漆黄	C3083	Metal shape fornt/rear axle connecting rod	金属八字拉杆
C1389	Lipo battery 2S 7.4v 380mAh	电池7.4V 2S 380mAh	C3110	Aluminum axle	铝合金直桥
C3001	Girder	大梁	C2025	USB 2S lipo charger cable	USB平衡充电器
C3013	Transmission box shaft	齿轮箱传动轴			7.4V 1000mA
C3014	Transmission gear box plastic	传动箱胶件	C3133	Brass wheel black	铜轮毂黑
C3015	Gear set	齿轮	C3134	Brass steering servo arm horn black	铜舵机管黑
C3016	Steering link set	转向杆	C3135	Brass steering linkage set black	铜转向连杆黑
C3018	Axle plastic parts	直桥胶件	C3136	Brass rod black	铜桥连杆黑
C3019	Portal axle cover	门桥胶件	C3137	Portal axle cover set black	黄铜金属门桥黑(套)
C3020	C hub set	C座套件	C3806	Steel pin 1.2*6.8	1.2*6.8光轴
C3021	Portal axle set	门桥轴	C3765	Micro brushless combo set	Micro无刷组合套装
C3022	Rear wheel shaft set	后轮轴	C3891	3 in 1 mini brushless system combo set (RX/ESC/MOTOR)	3 in 1 mini无刷系统
C3023	Front dog bone set	狗骨			套装(RX/ESC/MOTOR)
C3025	CVD axle set B	传动轴B	C3657	MG44 transmission BS	MG44发射器BS
C3026	Rear axle assembly	后轮总成	C3896	R3ABL-ESC-BS esc/receiver BS	R3ABL-ESC-BS电调
C3027	Servo mount	舵机座			接收器 BS
C3028	Rod set	连杆	C3893	Car boby with painted green	车漆喷绿
C3030	Pinion gear	电机齿	C3005	Windows brown	窗玻璃
C3033	Screw	螺丝套装	C3677	Transmission gear box assembly	驱动牙箱成品
C3034	Screw nut	螺母	C3894	Wheel assembly	车轮总成
C3036	Variable speed sevo	换挡舵机	C3895	Tire	轮胎
C3037	LED light set	灯线			
C3039	Bearing set	五金轴承			

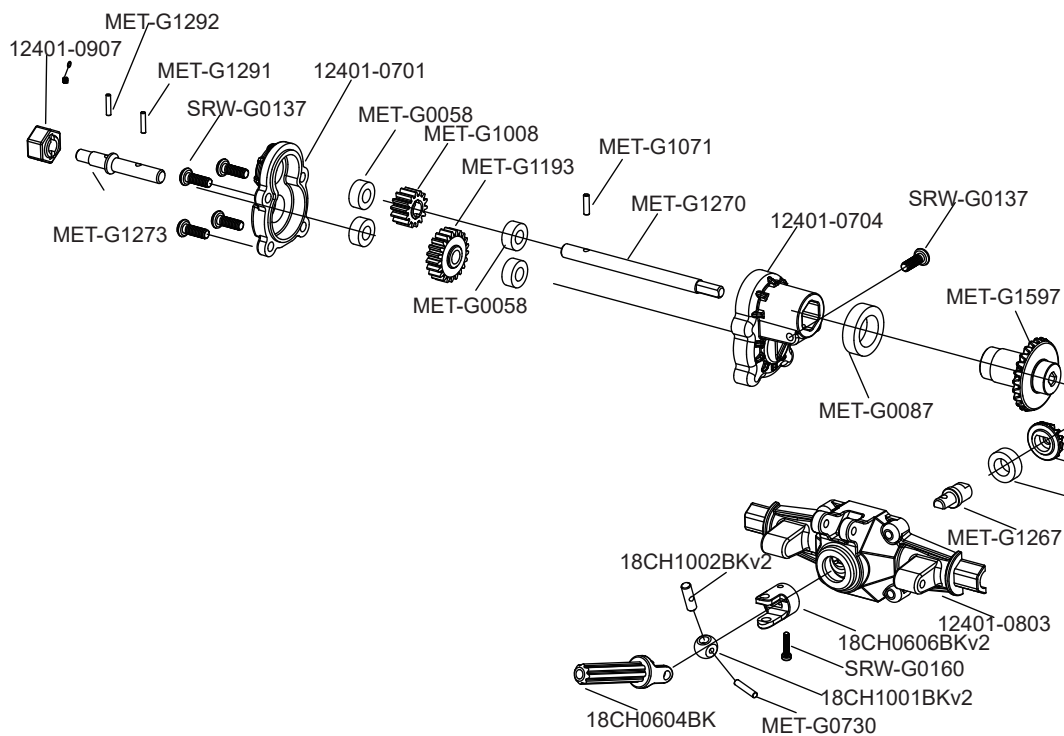
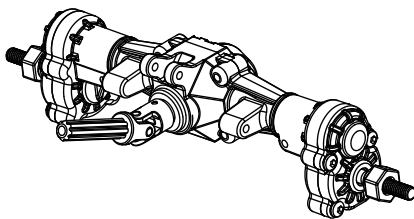


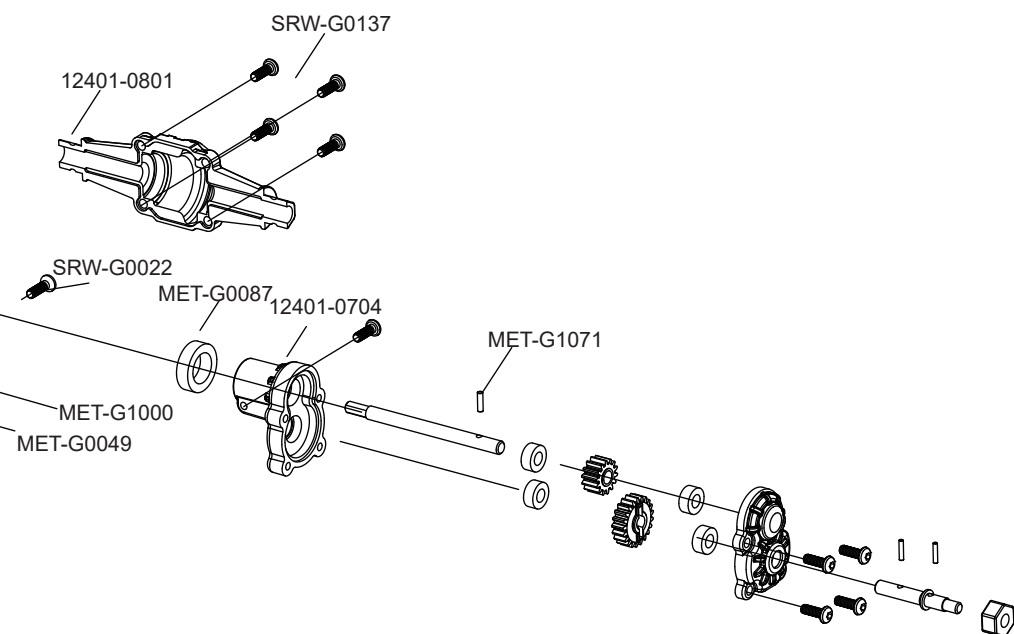


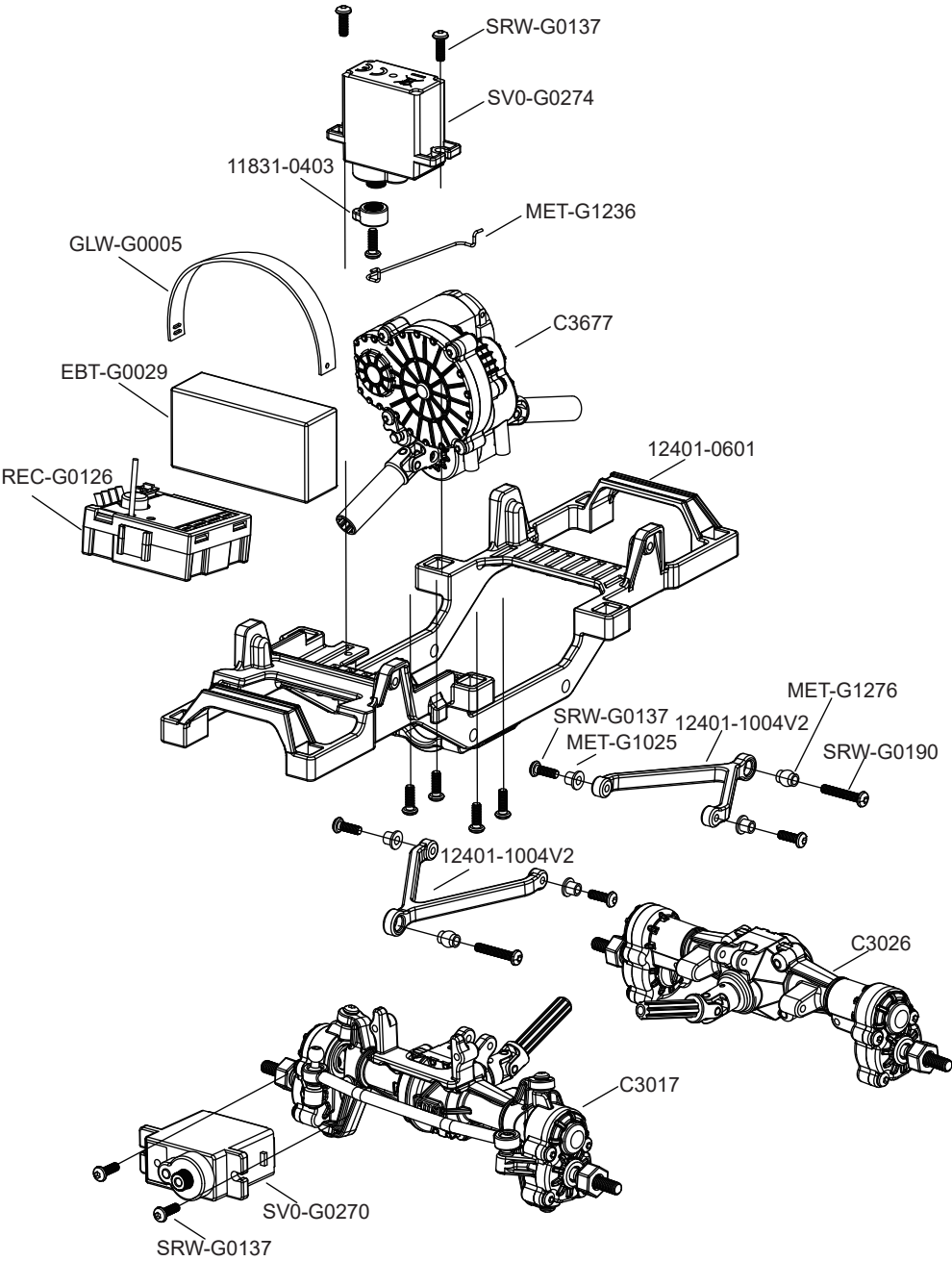


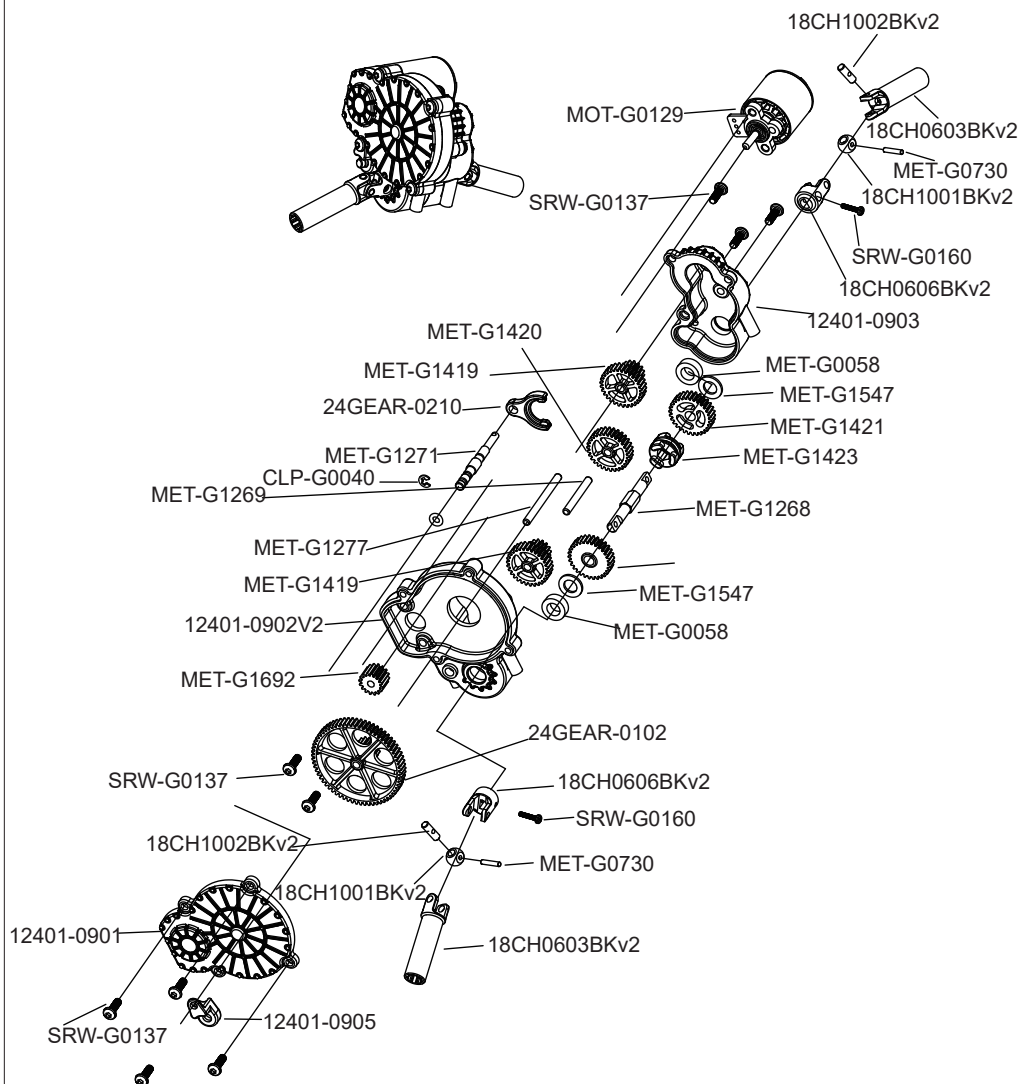


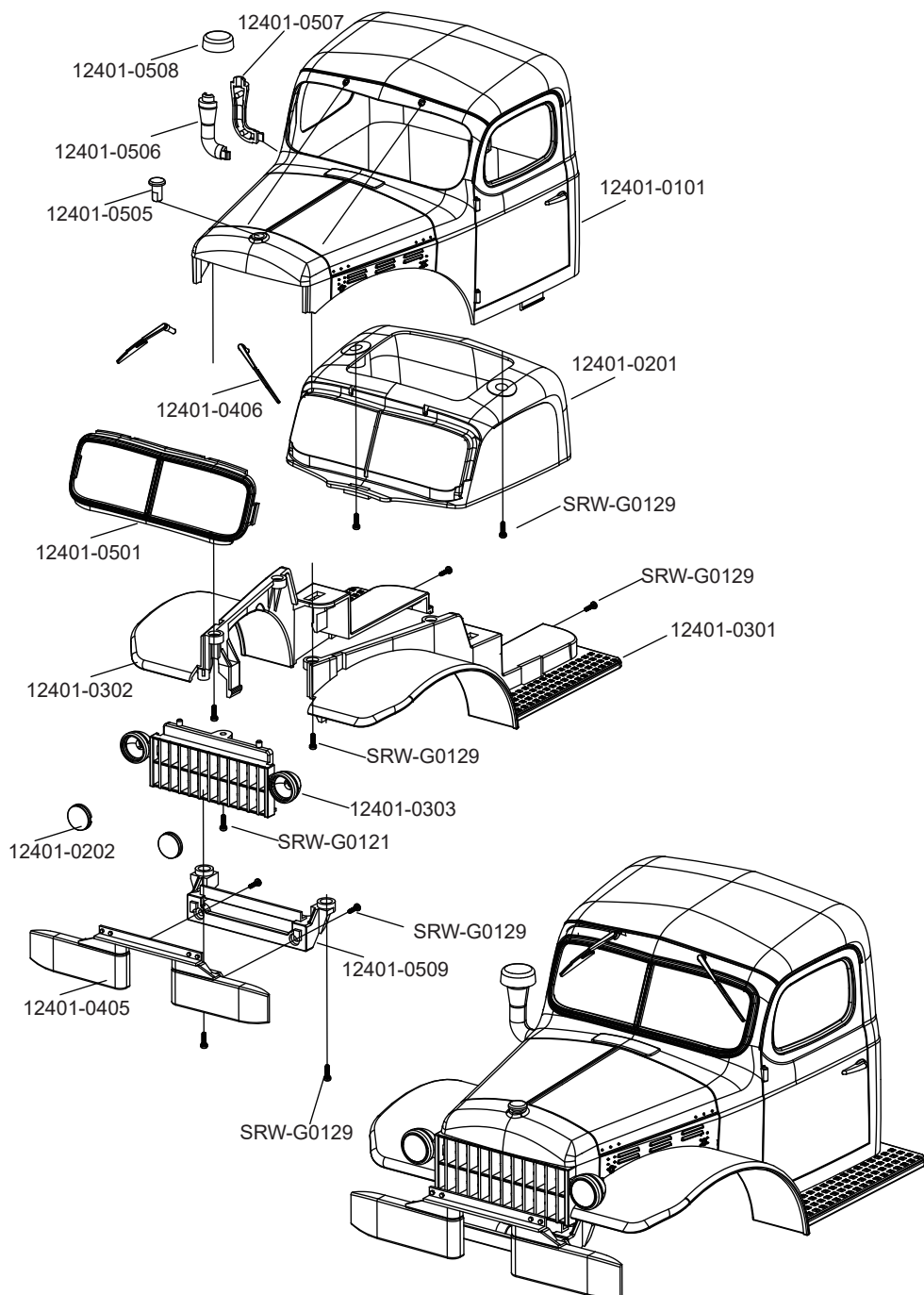






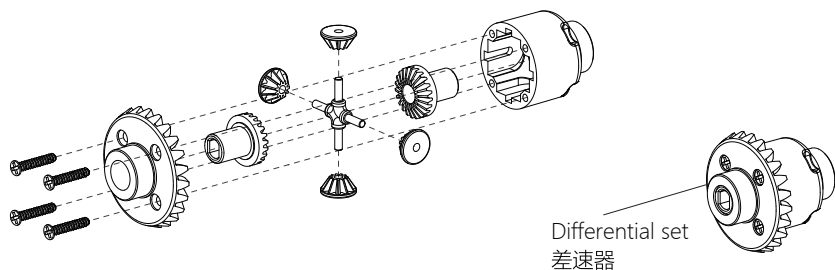






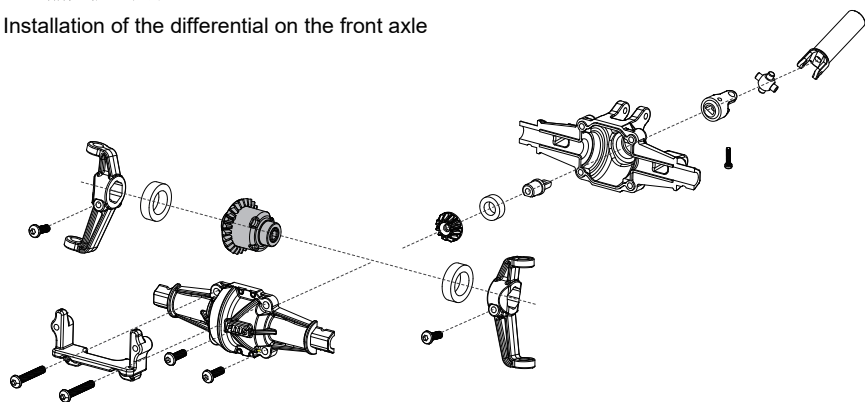
EN: Installation instructions for optional upgrades

CN:升级件安装



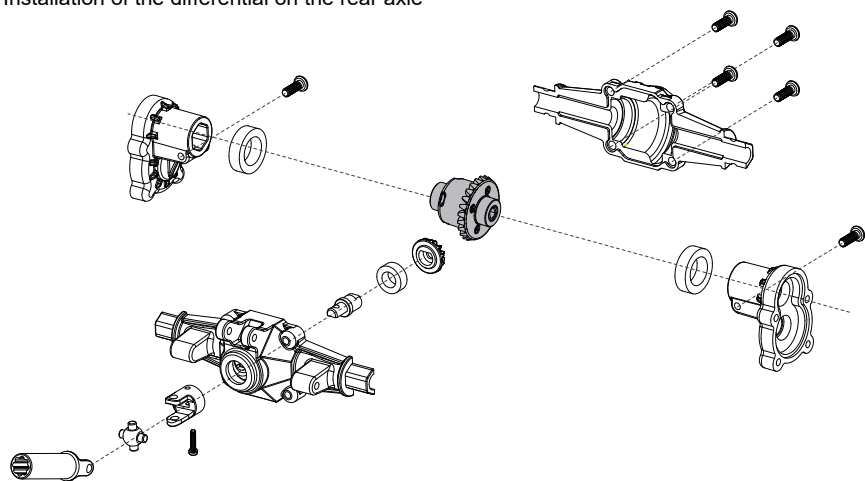
差速器前桥的安装

Installation of the differential on the front axle



差速器后桥的安装

Installation of the differential on the rear axle



Foshan Zhengze Model Technology Co., Ltd.

Tel: +86-0757-26330080

E-mail: support@fmsmodel.com

Add: Unit A, Building 6, Jicheng Science and Technology Innovation Park,

Shunde, Foshan City, Guangdong Province, 528306

佛山市正泽模型科技有限公司

电话: 86-0757-26330080

邮箱: support@fmsmodel.com

地址及电话: 广东省佛山市顺德区北滘镇顺江社区三乐东路25号集成科技园 6栋

